RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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House Passes $1.75 Trillion Build Back Better Act

Tough Negotiations Lie Ahead in Senate

By K Kaufmann

The U.S. House of Representatives on Friday passed the Build Back Better bill, the $1.75 trillion budget reconciliation package that is key to advancing President Biden's social and climate agenda.

The 220-213 vote came four days after Biden signed a bipartisan infrastructure bill and followed the release of a *report* from the Congressional Budget Office estimating that the bill would add $367 billion to the federal deficit from 2022-2031. One Democrat, Rep. Jared Golden of Maine, joined Republicans in opposition.

The CBO figures have been contested by the Democrats and Biden, who insisted in a *statement* that the bill is fiscally responsible, fully paid for and would reduce the deficit "over the long term."

A central point of contention between the CBO and White House is how much the cost of the bill will be offset by increased taxes and more rigorous tax enforcement on wealthier Americans and corporations. The CBO estimate of $207 billion fell far short of the $400 billion figure cited by Treasury Secretary Janet Yellen in a *statement* released Thursday.

The bill contains $555 billion in spending to help the U.S. achieve Biden's goals of a decarbonized electric power system by 2035 and a net-zero economy by 2050. It is in addition to about $50 billion in climate and energy related spending included in the $1.2 trillion infrastructure bill.

It would be the federal government's largest investment ever to address climate change, dwarfing the $80 billion included in the 2009 economic stimulus enacted under former President Barack Obama.

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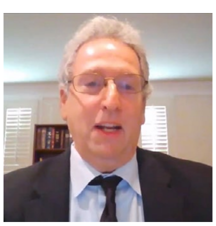
Glick Asserts FERC Authority to Mitigate GHG Emissions

By Michael Kuser and Michael Yoder

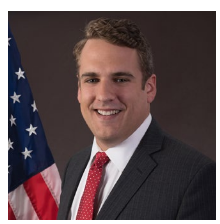
Concerns over FERC's legal authority to mitigate greenhouse gas emissions came up throughout the commission's technical conference on GHG mitigation Friday (*PL21-3*).



FERC Chairman Richard Glick | *FERC*

The first panel featured Commissioner James Danly disagreeing with FERC Chair Richard Glick on the commission's statutory responsibilities under the Natural Gas Act and the National Environmental Policy Act.

"From my perspective, the law is very clear; the court decisions are very clear," Glick said in summing up the day. "The D.C. Circuit [Court of Appeals] has told us that we can in fact mitigate greenhouse gas emissions; that we should in fact examine the impact of these emissions on climate change when we pursue our proceedings in terms of determining whether a pipeline is in the public interest." (See *DC Circuit Slaps FERC on Pipeline GHG Analysis*.)



FERC Commissioner James Danly | *FERC*

Danly said the NEPA analysis required is not as broad as Glick asserts it is, and any mechanism to enforce mitigation regimes would represent non-traditional employments of the commission's powers.

"I really do believe that these legal questions are fundamental and should be determined in the first instance; they're dispositive," Danly said.

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FERC, NERC Release Final Texas Storm Report

Highlights Failure of Gas-fired Generators

February's winter storm in Austin, Texas | *David Kitto, CC0 1.0 Universal, via Wikimedia Commons*

By Holden Mann

FERC and NERC's final report on February's winter storms in Texas and the South Central U.S., issued on Nov. 16, is a "sobering analysis that highlights the significant work that needs to be done" to prepare the electric grid for future cold weather events, according to FERC Chairman Richard Glick.

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In this week's issue

FERC/Federal News

Senate Confirms FERC Nominee Willie Phillips

By Robert Mullin

The U.S. Senate on Nov. 16 voted unanimously to confirm D.C. Public Service Commission Chair Willie Phillips' nomination to FERC, securing the Democrats a majority on the commission for the first time in more than four years.

The Senate voted unanimously to confirm DC PSC Chair Willie Phillips as FERC commissioner. | *Senate ENR Committee*

Phillips has served on the D.C. PSC since 2014 and was appointed chair in 2018 by Mayor Muriel Bowser. President Biden selected Phillips to fill the open FERC seat previously held by Republican Neil Chatterjee, who left the agency at the end of August after his term expired in June. (See *Biden to Nominate Phillips to FERC*.)

FERC Chair Richard Glick offered his "sincere congratulations" to Phillips and expressed appreciation that his appointment fills the last open seat on a commission that has struggled to plug vacancies in recent years.

"As I've said, the Federal Energy Regulatory Commission functions best when it has a full complement of Commissioners," Glick said in statement. "I very much look forward to welcoming Mr. Phillips to the commission and working with him soon."

Sen. Joe Manchin (D-W.Va.), chairman of the Energy and Natural Resources Committee, noted that Phillips' appointment has earned broad support across the political spectrum in Washington.

"I congratulate Willie Phillips on his confirmation to serve on the FERC," Manchin said. "He understands the need to balance affordability and reliability and will bring that outlook to the commission. And his unanimous confirmation, at a time when the Senate is uniquely divided, is evidence that he is supremely qualified and the right person to fully seat FERC."

The newest commissioner has also found favor from the power sector.

"Commissioner Phillips brings valuable experience to FERC and is exceptionally qualified to serve in this role. I commend him for his continued dedication to public service and look forward to working with him," Edison Electric Institute President Tom Kuhn said in a statement.

"I have known and worked with Commissioner Phillips for several years. He is an exceptional leader who will bring a wealth of experience to the commission, which today may be busier than it ever has been before," said EEI Executive Vice President Phil Moeller, a former FERC commissioner.

And while Phillips' nomination had met with a cool reception from environmental groups, who have questioned his ties to the utilities he will be regulating, a key renewable energy organization offered praise for him.

"Mr. Phillips is highly qualified, with a deep legal understanding of the issues at stake and a demonstrated record of championing the benefits of renewable energy in our nation's communities," American Council on Renewable Energy CEO Gregory Wetstone said. "This is a critical moment for our energy transition, and we're pleased to see that FERC will finally be operating at full capacity to address the transmission and power market reforms necessary to unlock America's growing renewable energy economy."

Phillips' term will end on June 30, 2026. ■

FERC/Federal News

Glick Asserts FERC Authority to Mitigate GHG Emissions

Continued from page 1

Willie Philips, newly confirmed by the Senate as the third Democratic member on the five-member commission, would give Glick's position the majority if the issue continues to divide along party lines.

FERC Commissioner Allison Clements | *FERC*

FERC Commissioner Allison Clements said the issue will be litigated "no matter what happens," and that an important component on which the commission now has a full record is procedural: how to determine need, the order of events that take place and providing a legally durable framework.

"I would just say that the biggest issue here is certainty: certainty for stakeholders and for project developers, and I think we've created a lot of uncertainty over the last several years," Glick said. "My goal is a proceeding in which we're hopefully going to have a revised policy statement in terms of how we pursue certification of natural gas plants [and pipelines], and I'm hoping that we can get to that much sooner than later."

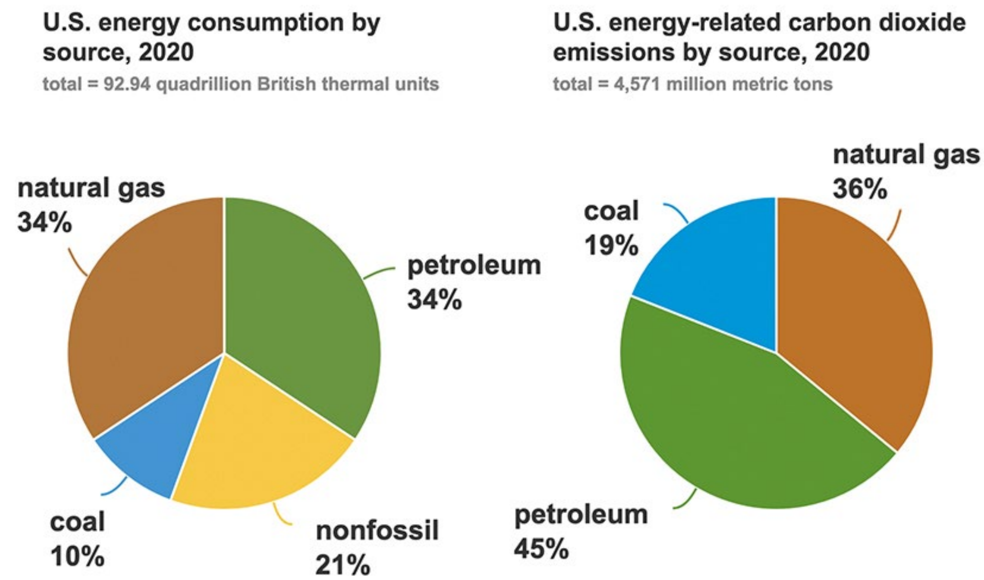
The debate even drew a *tweet* from former Commissioner Bernard McNamee on the "interesting discussion on whether FERC has the legal authority to deny a pipeline certificate based on upstream or downstream emissions," with a link to his 2019 *concurrence* as to why it does not.

The only state regulator to speak at the conference, New York Public Service Commissioner Diane Burman, said that the legal jurisdictional issues are a challenge, but that the threshold issue is something that needs to be addressed because legal uncertainty is going to be a problem.

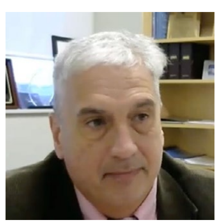
"It's best to collaborate and be reasonable, work with the industry, and you could sit with your other federal agencies or browse state partners," Burman said.

Compliance and Cost Recovery

Currently, FERC's post-certificate environmental monitoring begins at project construction and ends once commission staff deem additional restoration inspections are not necessary. One panel discussed the cost impacts to the industry from implementing GHG mitigation and how project sponsors should recover those costs.



In 2020, petroleum accounted for about a third of U.S. energy consumption but was the source of 45% of total annual U.S. energy-related CO_2 emissions. | *EIA*

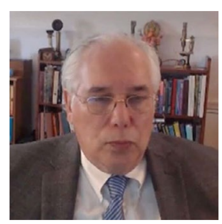


Stephen Mayfield, City of Tallahassee | *FERC*

Cost impact to consumers is consideration No. 1 in evaluating any mitigation regime, said Stephen Mayfield, director of gas operations for the city of Tallahassee, Fla., speaking on behalf of the American Public Gas Association.

Given the higher energy burden borne by low-income households, "we in Tallahassee have shown our commitment to emissions reduction by joining EPA methane challenge programs and incorporating emissions-reduction best practices into our operations," Mayfield said.

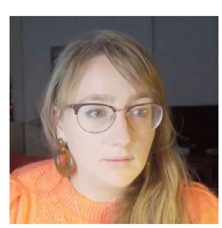
To the extent that mitigation measures are undertaken in a market-based context, whether those costs would be recoverable really depends on whether the investments are prudent, said Carl Pechman, director of the National Regulatory Research Institute at the National Association of Regulatory Utility Commissioners.



Carl Pechman, National Regulatory Research Institute | *FERC*

"So the answer really depends upon the regulatory structure under which investments and operation of the gas facilities are being undertaken," Pechman said.

If project sponsors propose to recover the cost of mitigation measures, FERC should consider factors such as timing, technology, fugitive emissions, transparency of data and project sponsors as beneficiaries of perpetuated carbon industries, said Rachel Dawn Davis, public policy and justice organizer at environmental advocacy group Waterspirit.



Paula VanLaningham, S&P Global Platts | *FERC*

After Davis expressed skepticism about the capacity of carbon capture and sequestration to help reduce GHG emissions, Paula VanLaningham, global head of carbon at S&P Global Platts, said it's premature and coun-

FERC/Federal News

terproductive to claim that it is never going to be a solution to the emissions problem.

"This is an area that is actively being improved and developed quite regularly now, and there are a number of different ways to do that both naturally, but then also in improved technology," VanLaningham said.

People may be against renewable natural gas, hydrogen or carbon capture, but climate change requires an "all-hands-on-deck approach," and the effort should be focusing as much on innovation and technology as anything, Burman said.

NYPSC Commissioner Diane X. Burman | *FERC*

"It's becoming more and more common to see operators employ gas-capturing techniques so that little or no gas needs to be purged to the atmosphere during maintenance activities," Burman said. "The pumped-down technologies allow upwards of 90% of the gas to be captured and reinjected into the pipelines rather than admitted into the atmosphere during pipeline operations and maintenance activities."

Mitigation Types

Finding ways to mitigate GHG emissions in proposed projects will take both technological advances and market-based approaches. Several panelists discussed current mitigation measures employed by project sponsors at facilities or by end users and future technologies.

Caitlin Tessin, director of market innovation for Enbridge, said the company is constantly looking for ways to mitigate GHG emissions in their pipeline operations to reach their targets of a 35% reduction in their GHG footprint by 2035 and net-zero emissions from operations by 2050. Tessin said Enbridge is taking steps to reduce leaks and minimize the volume of natural gas vented during construction and maintenance by using tools like pneumatic value operators, dry seals and electric starters.

Enbridge utilizes a blow-down collection system process, which is designed to pull down and recompress gas that would have been vented. Some of their electric compressors used in new compression capability are powered by solar resources, Tessin said, and Enbridge currently has the only two operating behind-the-meter solar projects powering electric compressors in North America.

"There's no one-size-fits-all solution and physical mitigation techniques," Tessin said. "In deciding what forms of mitigation may be appropriate at a particular site, we must carefully consider a range of factors, including operational limitations to ensure reliability, commercial considerations, customer preferences, regulatory requirements, landowner interest and more."

Anna Scott, chief science officer of Project Canary, a Denver-based energy data company, said the company has been developing continuous emissions measurement and quantification. The company believes independent measurement is needed because of discrepancies reported between "estimations from emissions factors" and the measurements that are taken.

Project Canary's market-based solution includes the installation of continuous and real-time monitoring units that can quantify emissions and alert operators to when emissions exceed normal levels, allowing them to identify and remediate emissions immediately. Data collection allows the operators to identify the largest sources of emissions, Scott said.

"We think this is the type of technology that is not only employable today, technologically feasible and affordable, but it can even be helpful for the American energy industry," Scott said.

Bill Donahue, manager of natural gas resources for Puget Sound Energy, said the company's pipeline replacement programs have been instrumental in mitigation efforts, identifying the most leak-prone aspects of the system and completely replacing out-of-date cast-iron and bare steel pipes. Donahue said the company is also studying value technology to reduce methane emissions and to consider in the viability of a hydrogen blend scenario in pipelines.

Donahue said the utility is also considering market-based mitigation efforts, including platforms to certify, record and account for credits in a "broad category of carbon reduction." He gave an example of the Midwest Renewable Energy Tracking System (M-RETS), a system that records, documents and validates efforts made to reduce emissions.

"In the event that a market has exceeded their requirements, those products can be sold to another party that does not have access to renewable gas or other technologies," Donahue said. "So there are products out there." ■

FERC/Federal News

FERC Seeks Comments on Reactive Power Compensation

By Robert Mullin

FERC on Thursday issued a Notice of Inquiry (NOI) seeking comment on how reactive power capability should be compensated in the face of changing conditions on the nation's electricity grid (*RM22-2*).

Unlike the "real" power generated on the grid, which provides energy to end-users (and is measured in watts), "reactive" power (measured in volt-amperes reactive) is needed to support voltages that allow power to flow along transmission lines, a necessary component of system reliability.

"At times, resources must either supply or consume reactive power in order for the transmission system to maintain the voltage levels required to reliably supply real power from generation to load," FERC staff explained in a presentation during the commission's open meeting Thursday.

FERC *Order 888*, issued in 1996, ruled that the reactive supply and voltage control supplied by generators is one of six ancillary services that transmission providers must include in their open access transmission tariffs. At the time, the commission pointed to two methods that providers used for managing voltage control: either installing equipment as part of the transmission system or relying on generation resources.

"The commission concluded that the costs associated with the first approach would be recovered as part of the cost of basic transmission service and, thus, would not be a separate ancillary service. The second, using generation resources, would be considered a separate ancillary service and must be unbundled from basic transmission service," FERC staff said.

Order 888 was issued at a time when the country's resource mix overwhelmingly consisted of synchronous generators containing mechanical rotors that rotate in sync with system frequency and generates both real and reactive power in response to the needs of the system.

As FERC staff noted Thursday, in 1999, the commission issued an opinion approving American Electric Power's method for separately allocating the costs for synchronous generators between providing real power and reactive power capability, including operations and maintenance costs associated with each function.

"Subsequently, the commission recommended that all resources located in regions that base reactive power capability compensation on a resource's individual costs and that have actual cost data and support documentation should use the AEP methodology when seeking to recover reactive power capability costs pursuant to individual cost-based revenue requirements," staff noted.

But FERC's recommendation did not constitute a mandate, and regions have adopted differing approaches to compensating generators for reactive power, with PJM, MISO and certain non-RTO regions generally relying on the AEP methodology, while ISO-NE and NYISO compensate based on a fixed rate multiplied by a resource's tested reactive capability. CAISO, SPP and other non-organized markets do not compensate at all for reactive capability, FERC staff pointed out.

Existing arrangements for compensating reactive power remained sufficient until "a general shift away" from cost-of-service rates in the electric industry and the increased adoption of nonsynchronous — or inverter-based — renewable and energy storage resources, FERC staff said. Those resources do not use mechanical rotors that rotate in sync with the grid and must have their inverters configured to provide reactive power capability, among other services.

According to FERC staff, "the AEP methodology was designed based on the physical attributes of synchronous resources owned by a public utility that utilized the commission's Uniform System of Accounts and annually submitted a FERC Form No. 1," the annual financial and operating report submitted by regulated utilities.

But the commission is now finding that most of the reactive power rate schedule filings it receives are made by owners of non-synchronous resources exempted from the Uniform System of Accounts and Form 1, although they're still subject to other reporting requirements. FERC staff said that in the last six years, the commission has processed at least 260 reactive power proceedings in PJM and 125 such proceedings in MISO.

"These factors have contributed to customers and the commission facing challenges in evaluating proposed reactive power rate schedules submitted pursuant to Section 205 of the Federal Power Act," FERC staff said. "Therefore, the commission is seeking comment on various aspects of AEP methodology-based compensation; potential alternative methodologies; and reactive power capability compensation through transmission rates for resources that interconnect at the distribution level."

FERC's NOI is seeking to revisit reactive power capability compensation in large part because of the increased adoption of nonsynchronous generating resources such as wind turbines. | *© RTO Insider LLC*

"When I first arrived at FERC, I really didn't have an idea we would be doing so many reactive power cases," Chairman Richard Glick said during the commission's open meeting Thursday. He noted that of the 395 total cases, the commission has sent 135 of them to its administrative law judges for settlement and hearing procedures. "I suspect there's a better, more efficient way, and that is what this Notice of Inquiry is going to look into, among other issues."

Commissioner James Danly thanked Glick for the NOI, saying "we've spent an inordinate amount of time on these cases without having a generic approach to them."

"This is an important way to find efficiencies in the trenches and relieve staff to do other import work," Commissioner Allison Clements agreed.

Comments on the NOI are due 60 days after its publication in the *Federal Register*. ■

FERC/Federal News

House Passes $1.75 Trillion Build Back Better Act

Tough Negotiations Lay Ahead in Senate

Continued from page 1

According to a White House *fact sheet*, Build Back Better's energy spending includes:

- $320 billion for 10-year federal tax credits for a range of clean energy technologies, including residential and utility-scale solar, storage, transmission and cleantech manufacturing.
- $105 billion in "resilience investments" and incentives to address extreme weather — wildfires, droughts and hurricanes — and legacy pollution in communities. The money would also fund a Civilian Climate Corps, which would employ tens of thousands of people to fight climate change through projects such as reforestation and wetland restoration.
- $110 billion in investment and incentives to support the build-out of clean energy supply chains and manufacturing.
- $20 billion for federal government procurement of "next-gen technologies," such as long-duration storage, advanced nuclear reactors and low-carbon construction materials.

With House passage, the bill now heads to the Senate, where Sen. John Barrasso (R-Wyo.), ranking member of the Senate Energy and Natural Resources Committee, said it will meet "a buzz saw of resistance." In a statement released Friday, Barrasso framed the bill as an attack on Wyoming's fossil fuel communities and families.

"Senate Republicans are united in our efforts to plunge a stake through the heart of this Democrat disaster," he said.

With Republicans opposed to it, the bill's fate rests with two moderate Democrats, Sens. Joe Manchin (W.Va.) and Krysten Sinema (Ariz.), both of whose votes will be needed to reach 50 and allow for a tiebreaker by Vice President Kamala Harris.

In an *interview* Thursday with *The Washington Post*, Sinema said the House version of the reconciliation package did not match the Build Back Better framework that had been agreed with the White House in October, so further work would be needed. The House bill includes several provisions that may not survive the Senate, including a paid-leave program, an increase in the $10,000 cap on the deduction for state and local taxes and immigration provisions.

Manchin did not immediately release any statement following passage of the bill on Friday but has previously raised concerns about its potential impact on the already high rates of inflation Americans are experiencing. Earlier this month Manchin *expressed* opposition to a $4,500 federal tax credit for union-made electric vehicles, saying it was "not American."

Robust Investments

Clean energy advocates and other energy industry trade groups quickly issued a flurry of statements on Friday supporting the bill and urging Senate passage.

Gregory Wetstone, CEO of the American Council on Renewable Energy, said the 10-year time frame for clean energy tax credits "finally moves the country beyond years of on-again, off-again renewable tax credits."

The bill will provide "a stable, predictable and long-term clean energy tax platform that will spur critically important investment in renewable power, energy storage and advanced grid technologies. This is America's last best chance to take timely action to address the global climate crisis, and it is imperative we rapidly accelerate the renewable energy transition," Wetstone said.

Similarly, Jim Matheson, CEO of the National Rural Electric Cooperative Association called out provisions that will allow tax-exempt co-ops and municipal utilities to access clean energy incentives through a direct pay mechanism. The bill also includes $10 billion to help co-ops offset the costs of closing coal plants and investing in clean alternatives, he said.

Such measures are, Matheson said, "appropriate recognition of the need to level the playing field for not-for-profit cooperatives, reduce costs and open new doors for innovation."

The bill's support for offshore wind and building up clean energy supply chains earned praise from Liz Burdock, CEO of the Business Network for Offshore Wind.

"Fully harnessing the incredible potential offered by offshore wind requires a concentrated national industrial strategy that lays out clear clean energy goals, supports manufacturers and small businesses, builds up a workforce, and rebuilds our ports," Burdock said. "The Build Back Better Act takes significant steps towards this strategy by providing the long-term support that will spark major investments in new factories manufacturing the blades, foundations and towers that will build the industry."

The Carbon Capture Coalition also applauded House passage of the bill, with External Affairs Manager Madelyn Morris calling it "a package flush with robust investments in clean energy technologies."

"If enacted, the package, in combination with the groundbreaking carbon management provisions included in the recently enacted Infrastructure Investment and Jobs Act, could deliver an estimated 13-fold increase in deployment of carbon management technologies and between 210 [million] and 250 million metric tons of annual emissions reductions by 2035," Morrison said. ■

Speaker Nancy Pelosi announces the passage of the Build Back Better Act in the House of Representatives on Friday. | *C-SPAN*

FERC/Federal News

FERC Enforcement Rebounds from COVID Slowdown

Glick: 'Cop is Back on the Street'

By Michael Brooks

Activity at FERC's Office of Enforcement returned to pre-pandemic levels last fiscal year, as the unit opened 12 new investigations and settled nine pending ones for about $5.9 million in civil penalties and $2 million in disgorgement, according to an annual *report* released by the commission Thursday.

The number of new investigations was identical to those opened in fiscal year 2019 and double those in fiscal year 2020, during which it relaxed some reporting and auditing requirements. (See *Report: FERC Enforcement Actions down Sharply in FY20*.) Fiscal year 2021 began Oct. 1, 2020.

The number of settlements increased from two in 2019 and three in 2020. And though the amount the office collected from settlements was down about 45% from 2019, it was far more than the $550,000 in 2020. The bulk of the penalties and disgorgements in 2019 came from a settlement with Dominion Energy Virginia, which paid $14 million to settle allegations that it had manipulated PJM's energy market.

"I'm pleased to see that after a lull over the last couple years, the commission is more aggressively pursuing market manipulators," FERC Chair Richard Glick said during the commission's open meeting Thursday. "The message to those seeking to manipulate electric and gas markets or shirk their duties as certificate holders or licensees should be clear: The cop is back on the street, and we will aggressively pursue wrongdoing."

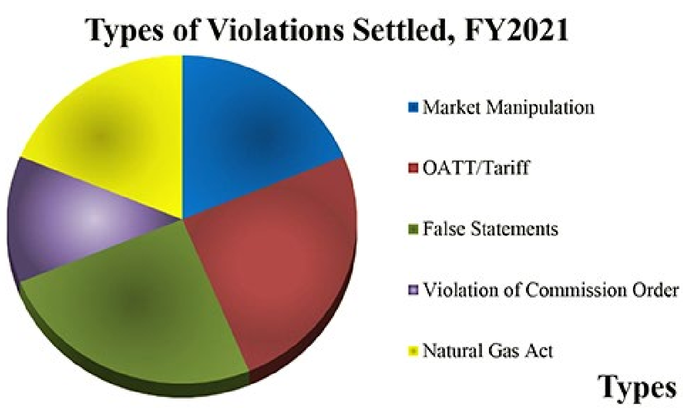
The largest settlement of the year was reached in federal court (IN12-12). The commission resolved its long pending action against Competitive Energy Services and principal Richard Silkman in the U.S. District Court for Maine, with the company and Silkman agreeing in November 2020 to disgorge a total of $1.475 million to ISO-NE and the U.S. Treasury over seven years. The commission had sought a $9 million assessment in August 2013.

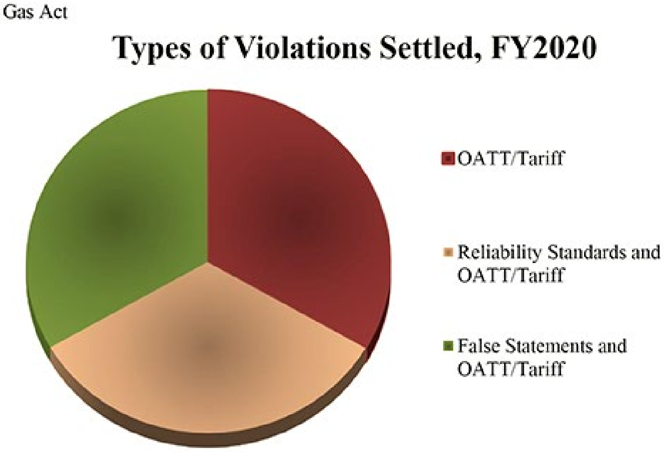
FERC alleged that the company fraudulently inflated client Rumford Paper's energy load baselines in ISO-NE's day-ahead load response program, and then offered load reductions against that inflated baseline. The alleged scheme began in 2007.

Of those settlements reached directly with FERC, the largest was a combined $2.1 in penalties and disgorgement from Algonquin Power & Utilities' Windsor Locks gas plant in Connecticut for violating its must-offer obligations in ISO-NE markets in 2012/13 (IN21-2). (See *FERC Fines Algonquin Plant $1M for Bungled Offers*.)

The report also noted that Enforcement's Division of Analytics and Surveillance conducted 10 inquires into natural gas market participants related to the February winter storm, closing seven of them and referring two to the Division of Investigations. It also conducted four inquiries into SPP and MISO market participants; it closed three of those and is still examining the last one.

FERC and NERC on Nov. 16 released their final report on their joint inquiry into the grid's performance during the storm, but its scope was limited to infrastructure reliability and did not include any information on potential market manipulation or issues with market design. (See related story, *FERC, NERC Release Final Texas Storm Report*.) ■





| FERC

Southeast Renewable Energy Conference

Virginia Clean Economy Act Appears Safe for Now

By Rich Heidorn Jr.

CHARLOTTE, N.C. — Virginia's landmark Clean Economy Act is unlikely to face major changes any time soon despite Republicans' victories in the Nov. 2 election, speakers told attendee of Infocast's *Southeast Renewable Energy Conference* last week.

Although Republicans gained control of the House of Delegates as well as the governorship and lieutenant governor's post, Democrats will continue to hold a 21-19 edge in the Senate, which does not face re-election until 2023.

Cliona Mary Robb, Thompson McMullan | *© RTO Insider LLC*

"The numbers that really matter are not the governor, not lieutenant governor, not the House numbers, but it's the Senate Commerce and Labor [Committee], where the composition is 12 Democrats and three Republicans," said Cliona Mary Robb, director of law firm ThompsonMcMullan and chair of the Virginia Renewable Energy Alliance. "I would posit to you that ... any massive overhaul legislation is not going to get through that roadblock."

Karla Loeb, Arcadia | *© RTO Insider LLC*

Karla Loeb, policy adviser for *Arcadia*, an energy software company, and former chief policy and development officer for Sigora Solar, agreed, noting that the VCEA had bipartisan support in both houses of the legislature, including from Terry Kilgore, the incoming House majority leader. "Yes, there were deals made, as there [always] are. But you know, he's already put his name [behind the bill]. For the past four years, [he] has hosted renewable energy conferences and get-togethers. And he believes that this is coming. Southwestern Virginia, which is his territory, is very excited about the opportunity for clean energy deployment."

"This legislation was not passed by just the renewable energy industry," she added. "We worked in concert with Dominion [Energy], with [Appalachian Power], on a day-to-day basis to get consensus [on] a piece of legislation that we can all live with. [The utilities] are already procuring their [renewable generation] targets. They're already making their plans. … The ship has left the port."

Approved in April 2020, the VCEA requires Virginia to close most of its coal-fired generation by 2024 and makes it the first Southern state to adopt a 100% clean energy standard. It established goals of 5,200 MW of offshore wind and 16,100 MW of solar and onshore wind as "in the public interest." (See *Va. 1st Southern State with 100% Clean Energy Target*.)

The GOP victories showed that predictions that the commonwealth had become a reliably blue state were incorrect and raised questions about its commitment to reaching 100% carbon-free electricity by 2050.

Energy policy was not a central issue in Republican Glenn Youngkin's victory in the gubernatorial race, although he and Democrat

From left: Cliona Mary Robb, ThompsonMcMullan; Karla Loeb, Arcadia; and Scott Gaskill, Dominion Energy. | *© RTO Insider LLC*

Southeast Renewable Energy Conference

Terry McAuliffe differed sharply on the VCEA, with McAuliffe calling for eliminating fossil fuel power by 2035, while Youngkin said even the law's 2050 target is unrealistic. (See *GOP Wins in Va. Raise Questions About State's Climate Policy*.)

Scott Gaskill, Dominion's director of regulatory affairs, agreed that major changes to the law are unlikely.

Scott Gaskill, Dominion Energy | *© RTO Insider LLC*

"Clearly, there's going to be change in the administration in terms of [the Department of Environmental Quality], the Department of Commerce. Those types of things could have some tangential impacts, but a wholesale rollback of VCEA doesn't seem to be in the cards, as long as the Senate" remains in Democratic control, he said.

Limited Supply, Local Zoning Present Obstacles to Solar Goals

But Gaskill said Dominion's efforts to meet its renewable procurement targets are being hampered by local opposition to utility-scale solar and the backlog in PJM's interconnection queue.

"When we're talking about 6 to 8 GW of new solar, that's a lot of land, and you're already starting to see some pushback from localities," he said.

The PJM queue is "quite frankly … a bit of a mess right now," he said. "Their processes worked very well for years [when there were] a few large units coming in. … Now you've got thousands of relatively small [generating projects], and the process isn't geared towards that.

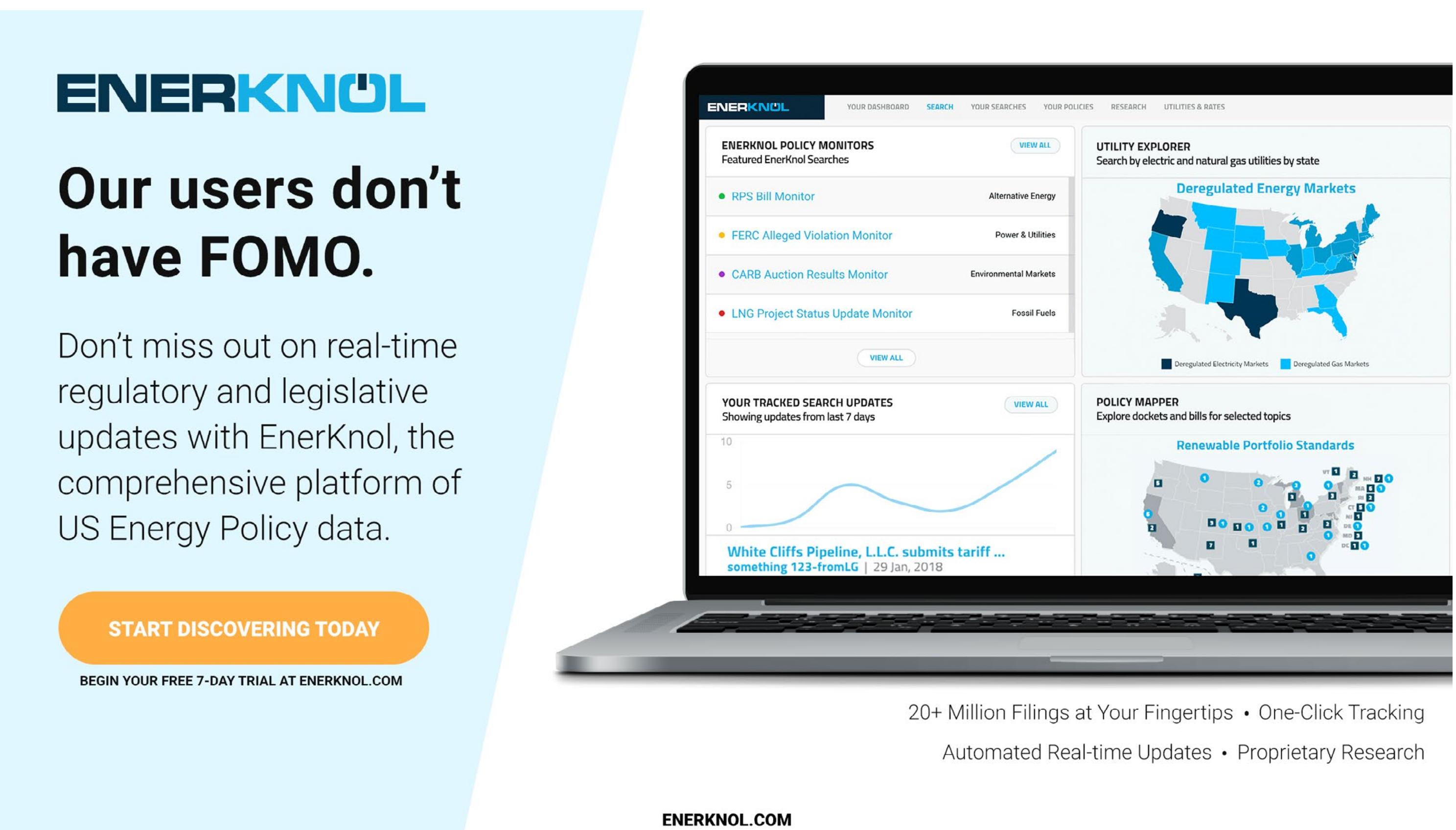
"We just *filed* for 1,100 MW [with the State Corporation Commission]. I mean, that was almost every project that we could find."

Implementation Challenges

Loeb said that while much attention was paid to legislative battles over the VCEA and Congress' infrastructure and Build Back Better bills, the challenges of implementing the legislation should not be minimized.

"It's not just a one and done. The [renewable portfolio standard] has annual filings, on top of [integrated resource plans]; storage, again, also regular filings. And so we're just creating docket after docket after docket, and then, compounding that, with the infrastructure plan, and God willing, Build Back Better … it's just going to compound things," she said. "If you guys have teenagers or college-age students, tell them to please become regulatory attorneys, because we do not have enough of them. We do not have enough electrical engineers. We're grossly understaffed for the transition that we're about to embark on."

Robb said persuading local governments to approve solar projects will be key to meeting the VCEA's goals. "And right now we're finding them not as friendly as certainly as I'd like them to be," she said. "You're [asking permission for] turning over farmland to solar farms for 20, 30, I've seen 40 years. … There's other roadblocks, but nothing happens if you can't get it … through the local board of supervisors. So I think that's where we want to win over the hearts and minds." ■



Southeast Renewable Energy Conference

Southern, Duke Defend SEEM at Renewables Conference

By Rich Heidorn Jr.

CHARLOTTE, N.C. — Renewable developers said last week they don't expect much from the controversial Southeast Energy Exchange Market (*SEEM*), saying it falls far short of the transparency and competition found in RTOs and ISOs.

The developers reacted coolly to representatives of Southern Co. and Duke Energy, who defended SEEM at the Infocast *Southeast Renewable Energy Conference*.

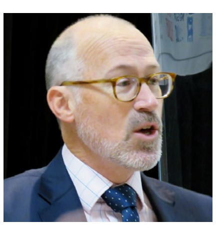
Proposed by more than a dozen utilities and cooperatives including Southern, Duke and the Tennessee Valley Authority, SEEM would automate bilateral trades, allowing 15-minute energy transactions, and use free transmission to reduce rate pancaking. The SEEM agreement took effect Oct. 12, after FERC deadlocked 2-2 on the proposal. (See *SEEM to Move Ahead, Minus FERC Approval*.)

Critics of the proposal say it would only perpetuate the utility monopolies of the Southeast and produce a fraction of the savings that could some from an RTO.

From left: Blan Holman, Pine Gate Renewables; Molly Suda, Duke Energy; Noel W. Black, Southern Co.; and Carson Harkrader, Carolina Solar Energy | © *RTO Insider LLC*

Utilities' Control

"I think there's a lot of concern that participation — controlling who participates — is in the hands of the people developing SEEM. And so whether or not we get the chance to actually participate, we've got a lot of questions about that," Blan Holman, vice president of regulatory affairs for solar developer *Pine Gate Renewables*, said during a panel discussion at the conference.


Noel W. Black, Southern Co. | © *RTO Insider LLC*

Noel Black, vice president of federal regulatory affairs for Southern, responded that SEEM's sponsors are seeking wide participation.

"Participation and liquidity [are] really important for SEEM and how much benefit it brings to customers, so we are eager and excited to have more participants. I want to be clear on that," he said. "The opportunities I believe are fantastic. If you get a giant footprint … 160,000 MW, 50 million customers, 1,000 miles between Savannah and Springfield, Mo., with zero transmission [cost] … the more participants, the more liquidity, the more opportunity we have to bring value … to our customers. So if we buy something, in SEEM, it's cheaper than something we would have run … that goes straight to our energy costs, to our customers. If we [make] short-term opportunity sales, the margin we make flows back through to our customers, either through lower rate base or energy clauses."

Cost, Speed

Black said the cost of establishing SEEM — $5 million to $6 million — is "extraordinarily inexpensive" compared to alternatives such as an RTO.

Molly Suda, associate general counsel for Duke, also touted the speed at which SEEM will be launched, with hopes to begin operations by the end of 2022. "For other market designs, there are substantially longer lead times," she said.

In response to questions, Black and Suda acknowledged SEEM will not offer LMP or provide a clearinghouse for environmental attributes.

SEEM's sponsors said an independent third-party consultant estimated the market will provide members a total of $40 million to $50 million in annual savings in the near term, potentially growing to $100 million to $150 million annually "as more solar and other variable energy resources are added."

"By the utilities' own admission, [comparing SEEM to an RTO is] sort of like comparing a flea to a basketball," Chris Carmody, executive director of the *Carolinas Clean Energy Business Association* (CCEBA), said in a separate session at the conference. "The projected savings that the entire SEEM project would do across these many, many utilities is $40 million a year [and] I think $10 million for North Carolina. … Ten million is less than half of the salary of a significant CEO."

In September, the American Council on Renewable Energy released a report that found an energy imbalance market (EIM) would reduce total resource costs from $64.7 billion in 2020 to $42.1 billion in 2040, a 35% savings, versus a more modest reduction to $53.1 billion (18%) under SEEM. (See *Report: SEEM's Benefits Beaten by Other Models*.)

Black said SEEM's sponsors considered an EIM but rejected it because of its "command-and-control nature" and the cost and time to stand it up. "So the question becomes can you get the same benefits at a much lower cost without the bureaucracy and burdens of some of the other structures? And right now, the answer, in our minds and in our hearts and on paper seems to be 'yes.' [We] can effectuate scope and scale without the bureaucracy and burdens of more complex structures."

Transparency

Transparency is another concern of renewable developers, said Pine Gate's Holman. "If you have a full-blown RTO, you get visibility in the pricing. And here, I think there's concerns about whether or not you can be able to … see the transactions in a way that helps send signals to the market for further investment," he said.

Black said there is a "fine line between transparency and … exposing commercially sensitive information."

"We were trying to thread that needle so that we give enough exposure … to build that trust [and ensure SEEM is] executing the tariff as designed, but also not expose information that participants might find too sensitive. I think we struck the right balance. We'll see. I think time will tell."

Black said the cost-benefit study done for SEEM found that 2% of the energy in the region will flow through the market, which he said, "feels defensible, and maybe a little conservative."

Although only 5% of the Western Energy Imbalance Market's regional energy flows through the market, Black said "you get a sort of cost transparency on 100% [of transactions] off that 5% at the top of the stack."

"I believe that [SEEM] has the potential to bring those sorts of benefits to customers as it grows. And the more participation we have and the transparency and comfort grows, I think we'll see those sorts of benefits. So I feel comfortable coming out of the gate and looking anyone and everyone in the eye and saying, 'Here's what we believe this will do,' … and then having hopes and dreams that it will be much bigger and amazing as we move down the road."

In a *statement* Oct. 20, FERC Chairman Richard Glick expressed concern that because the commission did not issue an order approving SEEM, its sponsors might not honor the promise they made to provide transparency. (See *FERC's Christie Accuses Glick, Clements of Prejudice for RTOs*.)

In response to a FERC deficiency letter, the sponsors promised in June to provide confidential weekly submissions of market data to the commission and SEEM's Market Auditor, "comparable" to the data provided by RTOs under Order 760, including participants, bid/offer prices, quantities and locations. They also agreed to make the "just-and-reasonable standard" the default for most SEEM rules rather than the lower *Mobile-Sierra* public interest standard. (See *SEEM Members Offer Rule Changes*.) In *Mobile-Sierra*, the Supreme Court ruled that when sophisticated parties negotiate at arm's length, their agreement should be presumed just and reasonable unless it can be shown to harm the public interest.

Black said Glick has no reason to worry. "I would say the SEEM members are all comfortable with those commitments, and highly likely — within the next week or two — to file those commitments with FERC in some form or fashion," Black said. The transparency provisions "are there to build trust in the system, for not just participants, but members as well. The more trust in the system, the more likely the system will work and [there will be] liquidity. … So we will be filing something to put those commitments in … place, regardless of whether we were ordered to do that."

No Boon for Solar Developers

Meredith Chambers, EDP Renewables | © *RTO Insider LLC*

Meredith Chambers, general counsel and regulatory compliance officer for *EDP Renewables*, said SEEM is unlikely to affect the plans of the Madrid-based company, which is new to the Southeast market, with 60 MW of generation operational and 350 MW under construction.

"We would like to work with other stakeholders to see a more a more regional approach that includes conversations with all the stakeholders," she said. "I don't know that [SEEM] changes what we do at this at this moment. But I think that there are opportunities over time to have broader conversations about ways to integrate."

Carson Harkrader, CEO of *Carolina Solar Energy*, which develops utility-scale solar projects in North Carolina, Virginia and Kentucky, said large energy consumers share the frustration of renewable developers that the regulatory and market structure of the Southeast doesn't allow them the options they have in RTO territories, such as the ability to sign long-term power purchase agreements. Financing solar projects requires a minimum 10-year PPA, she said.

In RTOs, "we're able to sell for long-term, fixed-price contracts with energy users. … Obviously, SEEM would not enable that kind of transaction. … I think any solar developer would tell you that's what we're hoping for," she said.

"So for new solar, playing in an open market with fluctuating prices, it would be hard, I think, to finance a new solar project," she added. "Potentially for projects that are coming off an initial PPA, that might be an opportunity."

Fight not Over?

Moderator Weston Adams, of Nelson Mullins Riley & Scarborough, noted that rehearing requests have been filed over SEEM's proposal, and that Democrat Willie Phillips has been confirmed as the commission's fifth commissioner, with the potential to break the 2-2 deadlock. "Certainly there are parties that think this fight is not over — that this is going to be litigated into the D.C. Circuit" Court of Appeals, he said.

Duke's Suda said she doesn't see legal obstacles to SEEM.

"In our view, given the recent order earlier this month on the transmission tariff changes … really the only issue holding back a three-vote majority on this is [a dispute over the application of] *Mobile-Sierra*."

Suda was referring to FERC's Nov. 8 order accepting revisions to four SEEM utilities' tariffs that implement the special transmission service used to deliver the market's energy transactions. Chairman Glick, who had opposed the market's creation, sided with Commissioners James Danly and Mark Christie, saying the parties' filings, unlike the SEEM agreement, do not apply *Mobile-Sierra* provisions that would limit FERC's authority to require changes.

Integration, Transmission Costs

Hamilton Davis, vice president of markets and regulatory affairs for *Southern Current*, a developer of large-scale solar and energy storage projects, said SEEM does not address independent power producers' concerns over increasing curtailments and rising integration costs in the Carolinas.

"What Duke and Dominion [Energy] both said in their recent [integrated resource plans] is that SEEM is not actually going to help with integration costs. There are big opportunities to improve the design of this market so that it actually does at scale; some of what Noel has pointed out is nothing more than aspirational right now.

"I don't think from an IPP standpoint [that] we're anticipating participating in that market; the business model is not structured in a way where you would go finance a project based on the ability to sell. … From an IPP standpoint, it looks pretty limited."

CCEBA's Carmody also said SEEM will do nothing to address the "black box" of transmission costs in the Carolinas.

"It is becoming harder to understand. The information is becoming less accessible rather than more accessible," he said. "We've spent a lot of time talking about generation in both states over several years … but if we don't have a transparent and objective process for determining investments in transmission, then we are really in big trouble in a lot of ways, economically and environmentally." ■

Overheard at Infocast Southeast Renewable Conference

CHARLOTTE, N.C. — About 300 representatives from independent power producers, utilities, law firms and regulatory agencies met at Infocast's sixth annual *Southeast Renewable Energy* conference last week to discuss the region's progress in integrating solar power.

Michael B. Woodard, a partner with McGuireWoods, introduced a panel of regulators by showing a chart of states' growing solar capacity since 2016, with Florida now in the top spot, having supplanted North Carolina. The Sunshine State trails only California and Texas nationally as of the second quarter of 2021, according to the Solar Energy Industries Association.

Other states in the Southeast, however, are playing catch-up, speakers said. Here's some of what we heard.

State Regulators Panel

Arkansas regulator Ted Thomas joined Georgia's Lauren "Bubba" McDonald and Mississippi's Brandon Presley (participating virtually) in a panel on issues facing their states.

Ted Thomas, Arkansas PSC | © *RTO Insider LLC*

Thomas, chairman of the Arkansas Public Service Commission, said state regulators must be flexible to respond to the pendulum swings of federal clean energy policy. "We don't know what's going to happen. What happens might, in fact, change in four years," he said. "What we're trying to do is be prepared regardless of which of the scenarios happen."

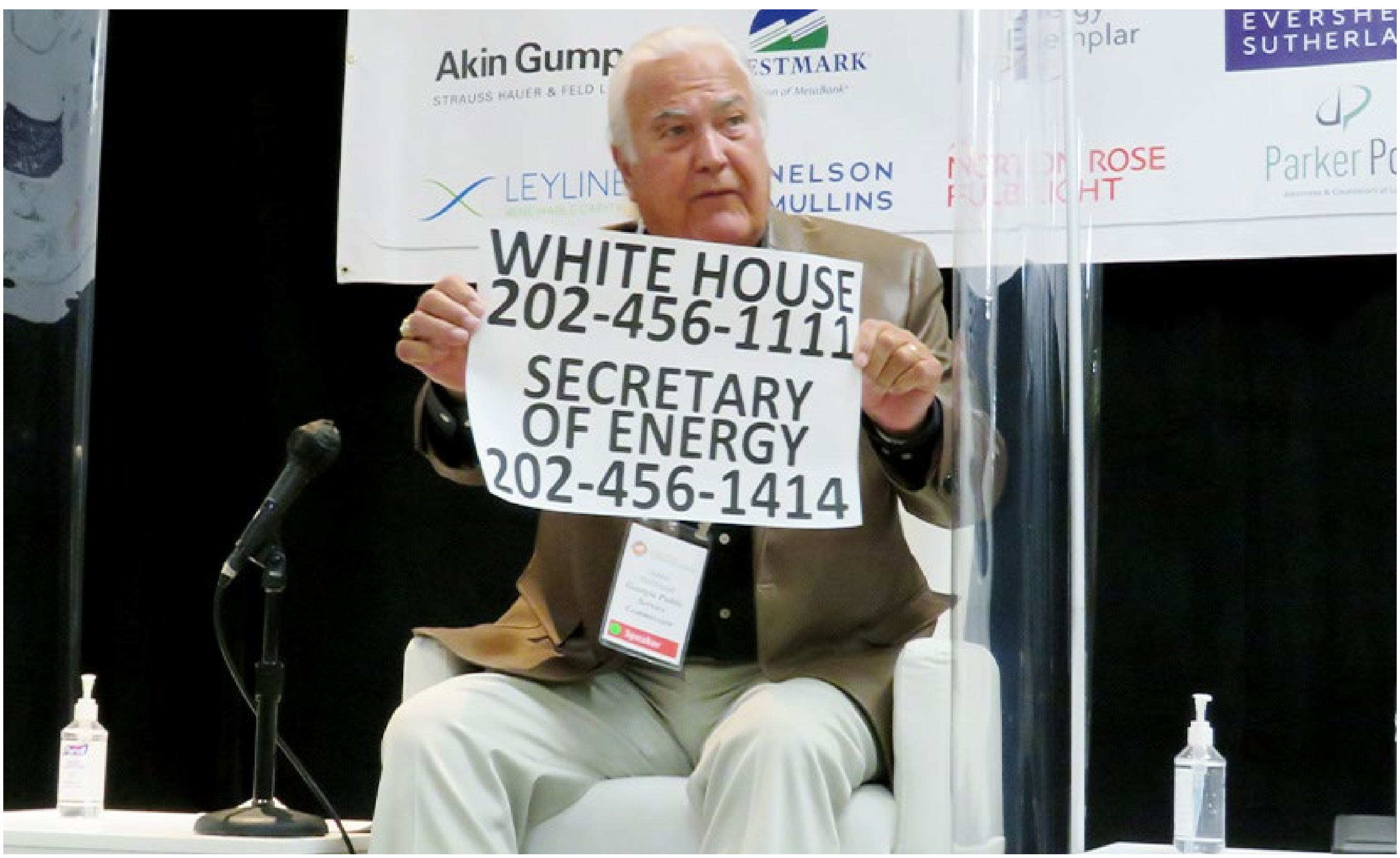
Thomas said regulators look to entrepreneurs to help them judge emerging technologies. "We don't know what the customer wants. We don't know what the feds are going to tell [us we] have to have," he said. "But entrepreneurs test demand."

McDonald, re-elected to the Georgia Public Service Commission last year, defended his support of the delayed and overbudget Vogtle Units 3 and 4, which he proudly noted are the first new nuclear plants built in the U.S. in more than three decades. The cost of the project has nearly doubled from early estimates of $14 billion to about $27 billion.

"It hasn't been easy, [but] I've committed to it," he said. "Nuclear is the best friend that solar energy has, because [it] runs 24/7 [at] 99.8% [capacity factor]. And it's cheap, and it's clean."

McDonald acknowledged Vogtle's cost overruns and delays. "My personal preference as a regulator is the least regulation is the best regulation. But we do have to intervene sometimes when a project gets out of hand. We'll have to spank somebody a little bit and straighten it back up."

Presley, a Mississippi Public Service Commissioner, acknowledged his state has trailed in renewable energy development but said the PSC will be issuing "forward-looking" rulemak-



Despite his support for the overbudget, behind schedule Vogtle nuclear plant, the Georgia Public Service Commission's Bubba McDonald, a Republican, said ratepayers should call the White House and the Department of Energy with complaints about high energy prices. | © *RTO Insider*

Southeast Renewable Energy Conference

ings soon on net metering rules and community solar in a bid to attract new generation.

"Money, it completely votes with its feet. … The Fortune 100 [companies], the Fortune 50s — in any economic development project — one of the biggest questions on the map is whether or not you have a renewable source of power," he said. "We know that [other] states are ahead of us on [that], and we're working like the dickens to catch up."

He said the PSC is to blame. "For a long time, they did pretty much what Mississippi Power and Entergy and others wanted done, and that has really led over time to things like the Kemper County power plant," he said. Initially estimated at $2.4 billion, the cost of the carbon capture and sequestration plant more than tripled to $7.5 billion before the project was canceled.

"Imagine if we had invested those dollars at that time in renewable energy research, renewable energy projects, where we would be on the rankings today," Presley said. "If the South is going … to pull forward out of the economic morass that we find ourselves in … we've got to attract this development."

Presley said the state's utilities should take full advantage of federal infrastructure funding for upgrading transmission and hardening assets. "There's going to be some dollars in this infrastructure bill that can go to offset that. The utilities are going to have to be aggressive. I really don't want to hear them come in before me and tell me about how laborsome and awful it is to go through and apply for this federal money," he said. "We've got to get this work done. And God forbid that we look back 10 years from now, 15 years from now, and we sat on our hands and did not take advantage of what's on the table today."

Build Back Better Impact

Shariff Barakat, Akin Gump | *© RTO Insider LLC*

Democrats' Build Back Better act, approved by the U.S. House of Representatives and pending before the Senate, was also a subject of discussion.

Akin Gump partner Shariff Barakat said the law's direct pay provisions won't eliminate the need for tax equity investors because of the volume of extended and expanded tax credits and "timing issues," including the inability to offset estimated tax payments. He also said depreciation may be more valuable with a tax equity investor and that projects beginning construction after 2023 will need to satisfy domestic content requirements to use direct pay without penalties.

Solar Panels Increase Resilience in Hurricanes?

PosiGen Solar, which develops rooftop solar for low- and moderate-income residents, has 12,000 systems in Louisiana, many of them along Interstate 55 — coincidentally the path that Hurricane Ida took in August. More than 3,000 houses suffered storm damage, but less than 50 systems had to be replaced, CEO Thomas Neyhart said.

Thomas Neyhart, Posigen Solar | *© RTO Insider LLC*

"The solar systems reinforced the roof; the solar systems help harden it," he said, displaying an aerial photo showing blue tarps over damaged roofs beside undamaged roofs with solar.

"We're having a study done right now by [Louisiana State University] on how to harden roofs, not just by putting solar on but then also using the right types of shingles and the right types of construction to allow them to sustain direct winds of 130 to 150 mph. We think there's a great future in our ability to help harden roofs in some of these hardest hit areas," he added. "More importantly, though, as you think about the future, we start to think about batteries. … We're working right now with the governor's office and the incoming [City] Council members to try and put together a battery program for the hardest hit people in Louisiana, which is down in New Orleans."

— Rich Heidorn Jr.

State	2016	2021	change (MW)	% change
Florida	312	7,681	7,369	2362%
North Carolina	2,436	7,228	4,792	197%
Georgia	495	3,249	2,754	556%
Virginia	49	2,629	2,580	5265%
South Carolina	85	1,903	1,818	2139%
Tennessee	134	356	222	166%
Mississippi	86	319	233	271%
Alabama	16	283	267	1669%
Louisiana	64	195	131	205%

Southeast solar capacity by state (MW) as of Q2 2021 | *Solar Energy Industries Association*

Southeast

Tenn. Grand Jury Seeks Federal Action on TVA Coal Ash Cleanup

By Rich Heidorn Jr.

A grand jury on Nov. 15 declined to return indictments over the Tennessee Valley Authority's cleanup of the 2008 Kingston Fossil Plant coal ash spill, saying allegations the utility exposed workers to harm should instead be investigated by federal authorities.

The Roane County (Tenn.) grand jury heard presentations from the District Attorney General's (DAG) Office, the Tennessee Bureau of Investigation and a former investigative reporter regarding allegations that dozens of cleanup workers were poisoned by exposure to coal ash after a dike at a TVA ash impoundment collapsed, sending a billion gallons of waste into the Clinch and Emory rivers.

The U.S. Coast Guard conducted the initial response to the spill, which covered 300 acres of farms and homes, along with local responders under the oversight of the Environmental Protection Agency. In 2009, EPA turned the site over to TVA, which hired Jacobs Engineering to oversee the cleanup under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

TVA was found liable for the spill by a federal district court and had to compensate affected landowners. Cleanup costs have totaled about $1 billion.

Jamie Satterfield, a former reporter for the *Knoxville News Sentinel*, asked the grand jury to indict four mid-level supervisors for TVA, Jacobs, and subcontractor Shaw Industries under a state law that allows citizens to present information to grand juries.

The grand jury released a statement saying only two of the 12 jurors supported a state indictment and that "the evidence [was] better suited for federal authorities to investigate and prosecute."

"We found much of the evidence about TVA and Jacobs' handling of the cleanup, relative to worker safety, very concerning," they said.

Covered in Ash

Jacobs employees said they were covered in ash during the work and were not provided adequate safety equipment.

More than 900 workers were involved in the cleanup, 258 of whom sued Jacobs Engineering. More than 50 workers have since died. In 2018, a federal civil jury found Jacobs liable for failing to inform workers and protect them from the dangers of coal ash.

The jury found exposure to coal ash could cause illnesses, including heart disease, lung and skin cancer, leukemia and emphysema. But the damages phase of the suit was delayed following a January 2019 order that the parties engage in mediation, which failed to resolve the matter. Jacobs is now seeking a ruling from

A 25-foot wall of ash stretches for two miles, about 1 mile from TVA's Kingston retention pond. | *Brian Stansberry, CC BY-SA-3.0, via Wikimedia*

Southeast

the Tennessee Supreme Court on its claim for "derivative governmental immunity," according to TVA's latest 10-K filing.

The TBI and DAG's office began investigating the cleanup at the behest of a different Roane County grand jury in 2020. Among the allegations were alterations of air monitor results and other environmental tests and a failure to inform, protect and provide safety measures for cleanup workers.

In a statement, District Attorney General Russell Johnson said investigators couldn't prove the ash exposure caused deaths without autopsies. He also cited the four-year statute of limitations on reckless homicide.

Johnson said that the cleanup was largely completed by 2014. "Therefore, anything that happened from December 2008 through December 2014 was now almost seven years old, making any state criminal charge problematic at best and, from a legal standpoint, impossible due to statutes of limitation."

Johnson said the statement by the grand jury suggested "they were reluctant to hold four site supervisors criminally responsible for something that the grand jurors evidently perceived to possibly be 'sins' of the employers."

"This is really a matter that the U.S. Attorney and the federal Office of Inspector General are better equipped to handle given that the initial cleanup from December 22, 2008 to May 2009 was conducted under the federal EPA, then from May 2009 to December 2014 the cleanup was conducted under a Presidential Order under CERCLA and EPA with TVA responsible for Jacobs Engineering as their selected contractor — all under federal jurisdiction."

The aftermath of the Kingston spill | *TVA*

'Best Available Science'

TVA said in a statement Nov. 16 that its cleanup plan "was created using the best available science on how to perform the work safely" in accordance with CERCLA.

"The state investigation has correctly concluded without any finding of wrongdoing," Jacobs said Nov. 16. "Jacobs stands by its work assisting TVA with the difficult job of cleaning up the Kingston coal ash spill. Jacobs did not cause the spill or cause any workers to be injured, and the allegations were baseless."

Shaw did not respond to a request for comment.

Uranium, Radium

The *Knoxville News Sentinel* reported in stories by Satterfield that the coal ash had *three times* more uranium than documented in public reports. Satterfield also reported that TVA has known since at least 1981 that its coal ash contained radium 226 at levels that could cause cancer but did not inform the public.

The newspaper also *reported* that Tennessee regulators issued a public report on sampling of the coal ash that deleted a reading for radium and reduced readings for uranium by 98%.

Satterfield was fired in August, ending a 27-year career at the paper, after she *spoke* at a public meeting in Anderson County, when she gave officials an emotional warning that TVA had *used coal ash waste* as infill in its construction of a playing field.

Coal fly ash, a byproduct of coal burning, is used in Portland cement and sheetrock.

In 2015, EPA *finalized* regulations on coal ash — also known as coal combustion residuals (CCR) — noting it contains mercury, cadmium and arsenic, which are associated with cancer and other ailments. The agency's rule addresses the risks from leaks into groundwater, exposure to coal ash dust and the failure of surface impoundments such as Kingston.

But EPA has *not classified it as a hazardous waste*.

Satterfield, who said she shared evidence backing her allegations with the Office of Inspector General in September, called the grand jury's action "not a win but not a loss."

"This was as intentional an act as could be," she told *RTO Insider*. "These workers ... didn't ask, 'What am I running into?' They said, 'Where do you need us? There might be bodies under this stuff. Where do you need us?'" ■

A home is swallowed by the flood of coal ash. | *TVA*

CAISO/West News

PG&E Likely Violated Probation, Judge Finds

Charges in Kincade and Zogg Fires Cited as Evidence of New Crimes

By Hudson Sangree

The federal judge overseeing the probation of Pacific Gas and Electric for convictions related to the San Bruno gas pipeline explosion in 2010 said the utility likely violated its probation by starting the Kincade Fire in 2019 and the Zogg Fire in 2020, which killed four people.

Judge William Alsup signed a petition on Nov. 10 submitted by a federal probation officer, who asked the judge for a summons for an "offender under supervision." The officer cited charges by prosecutors in Sonoma and Shasta counties related to the Kincade and Zogg fires as evidence supporting the petition.

PG&E has not responded in court papers but said in a brief statement, "We're aware of the court's action and are currently reviewing."

One of the conditions of PG&E's probation is that it does not commit additional state or federal crimes.

Sonoma County prosecutors filed 33 criminal charges against PG&E on April 6 in connection with the Kincade Fire, a 78,000-acre blaze that injured six firefighters, destroyed 374 structures and led to mass evacuations. The California Department of Forestry and Fire Protection (Cal Fire) determined that a PG&E transmission line sparked the fire.

The complaint accused PG&E of committing five felonies and 28 misdemeanors, including "recklessly causing a fire with great bodily injury" and a felony charge of emitting harmful airborne contaminants, injuring children. (See *Prosecutors Charge PG&E for 2019 Kincade Fire*.)

PG&E acknowledged its line started the fire but has contested the criminal charges.

In September, the Shasta County District Attorney's office charged PG&E with four counts of involuntary manslaughter in the Zogg Fire. The blaze killed an 8-year-old girl and her 46-year-old mother, as well as a 79-year-old woman and a 52-year-old man. It burned more than 56,388 acres and destroyed 204 structures.

Cal Fire concluded in March that the Zogg fire began on Sept. 27, 2020, when a leaning gray pine tree fell onto a PG&E power line near in rural Shasta County. (See *PG&E Equipment Started Zogg Fire, Investigation Finds*.)

PG&E CEO Patti Poppe said on Sept. 24 that the utility had accepted Cal Fire's findings but denied criminal liability in the Zogg fire. "We did not commit a crime," she said. The company is fighting the charges in court. (See *PG&E Denies New Manslaughter Charges*.)

Alsup, however, agreed with the federal probation officer that the charges for the Kincade and Zogg fires meant "there is probable cause to believe there has been a violation of the conditions of supervision" and said he would incorporate a charge of violating probation into future PG&E proceedings.

In such cases, federal law allows the court to extend a defendant's probation, to add new terms, to revoke probation and resentence the defendant, or to do nothing. In prior instances when PG&E violated probation, Alsup has added new conditions related to vegetation management and equipment inspections, among other requirements, but has relented on more severe punishments.

PG&E's five-year probation ends in January, and Alsup has vowed to do what he can to transform the utility's safety culture before he loses authority.

Disasters caused by the utility's equipment have killed at least 108 people since 2010, including 84 residents of Paradise, Calif., in the 2018 Camp Fire. The utility pleaded guilty to 84 counts of involuntary manslaughter in that case. ■

One of the 174 homes in Sonoma County destroyed by the Kincade Fire in October 2019 | *© RTO Insider LLC*

CEC Allocates $1.4B for ZEV Programs

Commission also Approves Spending Plan for EPIC Projects of $150M/year

By Hudson Sangree

The California Energy Commission last week approved spending plans that include $1.4 billion for electric- and hydrogen-powered vehicles over the next three years and $750 million to fund innovations in clean-energy projects through 2025.

The CEC's 2021-2023 *Investment Plan Update* to its Clean Transportation Program increases zero-emission vehicle funding six-fold compared with last year's update. Most of the increase came from this year's state budget, which put $3.9 billion toward ZEVs to help achieve the state's goal of decarbonizing its transportation sector during the next two decades. (See *Calif. Earmarks $3.9B for ZEVs Through 2024*.)

"This plan charts the path for [Gov. Gavin Newsom's] historic budget investments in zero-emission transportation infrastructure and manufacturing," Commissioner Patricia Monahan said in a statement. "These dollars close the 2025 infrastructure funding gap so that access to charging and hydrogen fueling isn't a barrier for those exploring cleaner transportation options including individuals, businesses and public agencies."

Newsom in September 2020 ordered that all new passenger vehicles sold in the state must be ZEVs by 2035. A 2018 order by former Gov. Jerry Brown set a target of putting 5 million ZEVs on the road by 2030. But the state needs a vast expansion of charging and fueling infrastructure to reach those goals. (See *Can California Meet Its EV Mandates?*)

Newsom took advantage of a large budget surplus this year to turbocharge the effort.

About 80% of the funding allocated by the CEC will go to EV charging and hydrogen refueling infrastructure, including $690 million for medium- and heavy-duty infrastructure and $314 million for light-duty.

The $1.2 trillion infrastructure bill that President Biden signed Nov. 15 devotes $7.5 billion to EVs; California expects to receive $384 million over five years to expand charging networks. The state can also apply for some of the $2.5 billion in grant funding dedicated to EV charging in the bill, the *White House* said.

EPIC Funding

In a separate decision, the CEC approved its Electric Program Investment Charge (EPIC) *spending plan* for the next four years.

The commission allocated $150 million per year from 2021 to 2025, totaling $750 million, to fund cutting-edge research and entrepreneurial projects related to clean energy and climate change.

EPIC funding will focus on floating offshore wind turbines, grid reliability during the state's transition to 100% clean resources by 2045, and short- and long-term energy storage. Using EVs as distributed energy resources and enhancing building decarbonization through electric space and water heating also are priorities.

"This is phenomenal," CEC Chairman David Hochschild said following the *staff presentation*. "Just looking at this list, I just feel each and every item address all the key challenges. It feels comprehensive. It feels on point and timely. I'm just incredibly proud of the team." ■

| Shutterstock

Calif. Looks to Cloud Seeding for Hydropower

Disputed Practice Working in the West, Proponents Say

By Hudson Sangree

A California Energy Commission *workshop* last week looked at using cloud seeding to increase winter precipitation and snowpack as a way to boost late spring and summer runoff and hydropower, especially in the current drought.

"Those of us who are based in California are all too aware that the ongoing drought situation makes these issues particularly salient right now," Susan Wilhelm, team leader for energy-related environmental research at the CEC, said Nov. 16 at the workshop. "While hydroelectric power is an important source of zero-carbon dispatchable power in our state, by late summer, hydropower resources are significantly diminished. This is especially so during drought conditions and has been especially so this year."

Most of the state is in exceptional or extreme drought, according to the U.S. Drought Monitor. Major reservoirs behind hydroelectric dams stand far below their averages for November. Lake Shasta, the state's largest reservoir, held 35% of its average content in mid-November and Lake Oroville held 58% of its average. The hydroelectric facility at Lake Oroville stopped producing power this summer for the first time since it opened in 1967 due to low water levels.

"There is a dire situation … [and] so cloud seeding is one of the viable alternatives to mitigate some of the adverse impacts of drought," said Ramesh Gautam, manager of the snow survey program at the California Department of Water Resources. California and other Western states, including Arizona, Idaho and North Dakota, have been seeding clouds for decades, he said.

The Sacramento Municipal Utility District (SMUD) has been seeding clouds over the upper American River watershed southwest of Lake Tahoe since 1969 to increase hydropower production.

"To obtain this, we use glaciogenic seeding techniques, dispersing silver iodide particles when cloud conditions are ideal," said Kaitlyn Bednar, SMUD hydrographer and cloud seeding project manager. The particles can be dispersed from ground units or airplanes, she said.

"Silver iodide is used as a cloud seeding agent because it has a crystalline structure similar to ice crystals," she said. "It acts as an effective ice nucleus at around negative four degrees Celsius and lower. Once seeded, these newly

The Desert Research Institute operates a cloud-seeding generator in the Sierra Nevada near Lake Tahoe. | *Jesse Juchtzer* formed ice crystals then continue to grow at a more rapid rate and fall out of suspension."

Seeding clouds in the right conditions increases snowpack by roughly 3% to 10%, Bednar said.

"So, for example, in an average year if you get 50 inches of snow water equivalent, cloud seeding can increase that value up to 55 inches, translating to a large increase of runoff and power generation," she said.

SMUD expanded its target area in 2017 from roughly 190 square miles to 444 square miles and seeds from November to March, Bednar said. Evaluations in 1975 and again in 2017 showed SMUD's cloud-seeding has had insignificant environmental effects, if any, she said.

Pacific Gas and Electric, the state's largest utility, has been seeding clouds in the Sierra Nevada since 1952. It halted one longtime effort over Lake Almanor, in the Sierra Nevada foothills, due to push-back from residents concerned about toxins. But PG&E continues to seed the Mokelumne River watershed in the mountains southeast of Sacramento, as it has been doing for 70 years.

"The Mokelumne cloud-seeding project is one of the oldest continuous cloud-seeding projects in the world," said Kenneth Ericsson, a PG&E meteorologist who works in the utility's cloud-seeding program.

PG&E uses ground-based burners to send silver iodide particles into cold, water-laden clouds, resulting in precipitation increases of 6% to 15%, Ericsson said.

"With a 6% increase, this can add approximately 8,700 acre-feet of water per year over the long term for the Mokelumne project," he said.

PG&E has been studying a proposal to seed clouds in the watersheds of the Pit and McCloud rivers near Mount Shasta in an area with 7 million acre-feet of natural underground aquifer storage, Ericsson said. Lake Shasta holds about 4.5 million acre-feet in comparison.

During severe or prolonged droughts, the aquifer could produce about 10% of usable water in California, he said. A 5% increase in precipitation from cloud seeding could add approximately 210,00 acre-feet of water per year to the aquifer, rivers and Lake Shasta, increasing hydropower production, he said.

Does it Work?

The efficacy of cloud seeding has been debated for decades, with increases in precipitation difficult to measure scientifically or with statistical accuracy.

Sarah Tessendorf, a project scientist with the National Center for Atmospheric Research in Boulder, Colo., said supercomputing advances have allowed the "development of a new cloud seeding modeling capability that simulates the physics of cloud seeding." Radar tracking and snow-gauge measurements have correlated with the computer predictions, Tessendorf said.

"One of the benefits of running the model is we can have a controlled experiment where we can see it in a simulation, and we can run the same simulation without seeding and look at the differences," she said. "Something that we've been struggling with for decades is to have a truly controlled experiment in order to quantify the impacts of cloud seeding, so this modeling capability really moves us forward in that regard."

In Idaho, an airplane distributed silver iodide while flying a zig-zag pattern. It resulted in precipitation falling in the same distinctive pattern, she said.

Frank McDonough, a former NASA scientist who heads the cloud-seeding program for the Desert Research Institute in Reno, Nev., said human air pollution has lessened rainfall and snowfall, making it more difficult to determine if cloud seeding works.

"Potentially, the challenge of finding the cloud-seeding signature is we're seeding in a time when precipitation efficiencies are decreasing," McDonough said. "So what we might actually be doing is keeping the storms the way they were by doing the cloud seeding."

Additional comments and materials can be found on the CEC's website at docket *19-ERDD-01*. ■

CAISO/West News

Calif. Utilities Show Mixed Results on RPS Goals

Big IOUs on Track, but Some Smaller Utilities and CCAs Behind

By Hudson Sangree

California's three large investor-owned utilities are on track to meet the state's goal of serving retail customers with 60% renewable energy by 2030, but some smaller utilities and community choice aggregators (CCAs) are lagging, a *report* issued Friday by the California Public Utilities Commission concluded.

The CPUC's annual report on the state's renewable portfolio standard assessed the progress made by electricity retailers — IOUs, CCAs, small and multijurisdictional utilities (SMJUs) and electric service providers (ESPs) — on procuring 33% of energy from renewable sources by 2020 and 60% by 2030, as well as interim periodic goals.

The CPUC and the California Energy Commission oversee the state's RPS program, the most ambitious in the nation. CPUC-jurisdictional load-serving entities serve approximately 75% of in-state load.

Senate Bill SB 100, signed by former Gov. Jerry Brown in 2018, established the 60%-by-2030 mandate, as well as the requirement that all retail customers be supplied with 100% carbon-free energy by 2045.

"As of 2021, the investor-owned utilities have executed renewable electricity contracts necessary to meet 2021 RPS requirement and are forecasted to have excess renewable procurement through 2027," the CPUC said in a statement. "The small and multijurisdictional utilities, electric service providers and community choice aggregators collectively need to procure additional renewable resources to meet the 2021-2024 compliance period requirements, as well as future requirements."

The IOUs — Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric — are expected to "continue to surpass RPS requirements as they are forecasted to have excess procurement for the next seven years," the report said. "The IOUs may choose to apply excess renewable electricity procured in prior and future years to meet their RPS requirements in future compliance periods. Alternatively, they may sell the energy and renewable energy credits" to other retail providers.

Millions of customers departing the IOUs to join CCAs and adopting rooftop solar have bolstered the big utilities' RPS statistical performance, the CPUC said.

"A variety of market factors have contributed to the IOUs being procured beyond their minimum RPS requirements," the commission said. "These market factors include the initial need to hedge against early program experience with project failure; the continued trend of load departing from IOUs; and the increase in behind-the-meter solar generation."

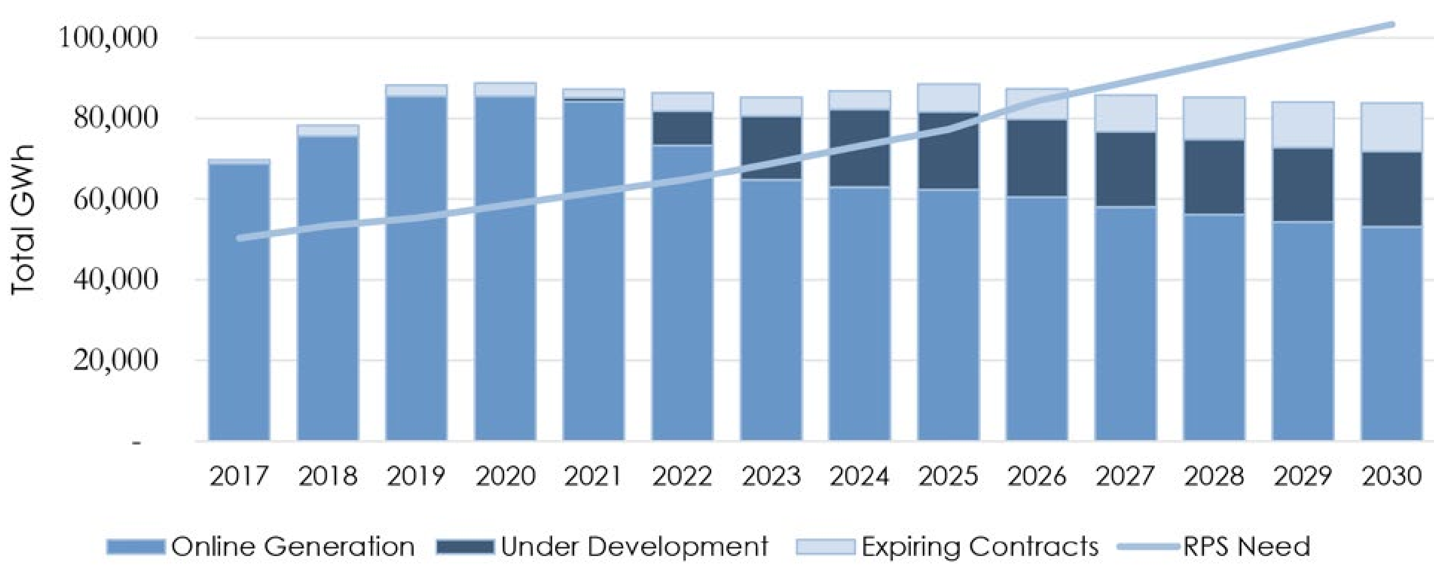
That leaves the CCAs and others needing to ramp up their efforts.

"All of the SMJUs must procure additional resources to meet their 40% RPS requirement for the 2021-2024 compliance period … [and] 19 CCAs and six ESPs were notified by the CPUC that their RPS compliance reports show a risk of not meeting RPS requirements in the current or next compliance period based on a compliance risk analysis of their procurement quantities and/or progress toward the long-term contracting requirement," the report said.

The three SMJUs are Bear Valley Electric Service, which provides electricity service to the Big Bear Valley in the San Bernardino Mountains of Southern California; Liberty Utilities, serving counties in the Lake Tahoe Basin; and PacifiCorp, a multistate utility that serves four rural counties in far Northern California.

CCAs are local government entities certified by the CPUC to buy and provide electricity for their communities instead of getting it from the IOUs. The growing number of CCAs "play an increasingly significant role in meeting the state's renewable energy and CPUC-jurisdictional greenhouse gas reduction goals," the commission noted.

Those falling behind "must procure more RPS resources and sign additional long-term contracts in the near term to meet the RPS requirements," the CPUC said in its statement. ■



Combined progress of utilities toward meeting the state's 60%-by-2030 renewables goal. | *CPUC*

ERCOT News

Twitter Blows up over ERCOT Communications

Winter Resource Assessment, Director's Resignation Draw Social Media Notice

By Tom Kleckner

Ever since a pair of run-of-the-mill conservation alerts in April and June spooked Texans still reeling from February's winter storm, ERCOT and the Public Utility Commission have dialed back their communications efforts.

ERCOT has used social media twice since June, tweeting out the only two press releases the grid operator had issued in the interim. The most recent seasonal resource adequacy assessment (SARA), usually issued in a release and followed by a conference call with state and industry media, was quietly distributed in a market notice. (See *ERCOT: Sufficient Capacity to Meet Fall Demand*.)

A similar effort with the highly anticipated *winter SARA*, the first since the February storm, fell flat when the report was posted on the ERCOT website early Friday afternoon, only to disappear shortly thereafter. But it was taken down too late. Social media users had already taken notice, with one twitterer downloading the assessment and offering it to others.

The SARA was eventually posted before the close of business Friday.

ERCOT's communications staff said that "to the best of [their] knowledge," they didn't post the initial report that was subsequently pulled down and were working to figure out what happened.

"There wasn't any conspiracy or planned effort to post and pull down," said Chris Schein, ERCOT's interim communications director.


Elaine Mendoza | *Texas A&M University*

Matters were compounded later Friday when word began to spread on Twitter that Elaine Mendoza, one of ERCOT's newest board members, had abruptly resigned. The PUC responded to media requests but did not issue a press release in what some saw as a pre-Thanksgiving news dump.

Texas Monthly's Russell Gold *broke the news* of Mendoza's resignation while he was stranded at Houston's William P. Hobby Airport.

"It's a bad look for ERCOT [and] Texas politicians who promised us reform [and] transparency [and] competency," Gold said, expressing frustration with the radio silence.


ERCOT and Texas are still dealing with the aftereffects of February's Winter Storm Uri. | *Xcel Energy*

Doug Lewin, a consultant with Stoic Energy and close observer of the ERCOT market, agreed.

"I'm deeply frustrated and concerned about the assessment of winter resource adequacy," he told *RTO Insider*. "Everyone agreed communication and planning needed improvement, but [Friday] demonstrated little has changed; it might be worse."

It's not that communications has taken a back seat at ERCOT since the winter storm. A dozen of interim CEO Brad Jones' 60-point "Roadmap to Improving Grid Reliability" items deal directly with communications and others tangentially touch on it. No. 33 deals with educating the public and news media about energy emergencies and operational notices and reviewing existing practices around conservation alerts to "minimize false alarms and public fatigue."

Jones is also in the middle of a listening tour across the state, visiting city councils and holding town halls. The tour continues in December with seven more stops, including Dallas, San Antonio and the Rio Grande Valley, where ERCOT has placed an emphasis on adding transmission infrastructure.

Since Jones' arrival, ERCOT has reduced the number of media interviews and cut back on the number of press releases and their social media activity. Officials have said they are focused on "making the necessary changes to protect Texans against the next winter storm."

ERCOT Sees 62 GW of Peak Demand

ERCOT said assuming "typical winter grid conditions," it anticipates having 85 GW of installed generating capacity to meet a forecasted winter peak demand of 62 GW. The latter is about 10 GW less than the grid operator's peak demand before it began to lose generation resources during the winter storm.

The grid operator said it included additional low-probability, high-impact scenarios in the winter SARA as part of its "aggressive grid-management planning." The assessment assumes nearly 9 GW of thermal outages based on historical data from the past three winters but excludes unplanned outages from last February because of the storm's "exceptional impact."

The extreme risk scenarios were expanded to include a new "extreme low" renewables out-

ERCOT News

put assumption and estimated renewable and thermal and outage improvements, ERCOT said, citing the PUC's new weatherization standard and the natural gas industry's "voluntary weatherization activities." (See "Weatherization Rules in Effect," *Texas PUC Nears Market Redesign's Finish Line*.)

Twitter users were quick to poke holes in ERCOT's assessment. Andrew Dressler, an atmospheric sciences professor at Texas A&M University and a climate scientist, has *concluded* that hourly peak demand was actually 82 GW at one point during the storm.

"[ERCOT staff] never show how they arrive at that number, and they have an incentive to low-ball the estimate," *tweeted* Dressler, who was the first to notice the initial posting of the assessment.

"No rules, no enforcement, no fines from the [gas regulatory Texas Railroad Commission], just 'voluntary efforts' from an industry that made $11 [billion] in one week, but sure, they probably winterized [and] voluntarily gave up those profits this winter, right?" Lewin said in another *Twitter thread*.

Despite the lack of publicity, the ensuring media coverage still resulted in the same headline officials may have been working to avoid: "*Texas grid vulnerable to blackouts during severe weather*"; "*ERCOT report says Texans face steep shortfalls in power capacity if extreme event hits this winter*"; and "*Extreme weather still threatens Texas' electric grid*."

While ERCOT did not publicize the SARA report, it did issue a *market notice* to its participants.

A&M a Market Participant?

Mendoza's departure leaves ERCOT four directors short of a full board before its annual meeting of members on Dec. 10. She was only named to the board on Nov. 1. (See *Three More Directors Added to ERCOT Board*.)

PUC spokesman Michael Hoke confirmed Mendoza's resignation from the board on Friday. He said a "re-examination" of her role as a regent of Texas A&M University found a potential conflict with her ability to serve on the ERCOT board.

Texas A&M has a 50-MW generation facility that primarily serves the campus but also has the ability to offer into the ERCOT market as a resource entity. That makes Texas A&M a market participant, Hoke said, and new legislation prohibits market participants from serving on the board.

"This was done out of an abundance of caution," Hoke said in a statement to *RTO Insider*.

Schein said ERCOT is not involved in board selection or communications around the appointment. That responsibility lies with the Board Selection Committee, a three-person group selected by Texas' political leadership and that coordinates appointment announcements through the PUC.

Mendoza is founder and CEO of Conceptual MindWorks, a medical informatics company in San Antonio, where she has been involved in expanding educational opportunities, health care and economic growth.

Senate Bill 2 replaced the five unaffiliated directors and eight market segment representatives with eight independent directors chosen by the selection committee. The ERCOT CEO, the PUC chair and the Texas Office of Public Utility Counsel's CEO sit on the body as non-voting members.

The law requires each board member to be a Texas resident with executive-level experience in finance, business, engineering, trading, risk management, law or electric market design. When the winter storm nearly brought the ERCOT system to total collapse, Texans frustrated with the ensuing long-term outages directed their ire toward the six board members who lived outside the state. (See *ERCOT Chair, 4 Directors to Resign*.) ■

ERCOT News

FERC, NERC Release Final Texas Storm Report

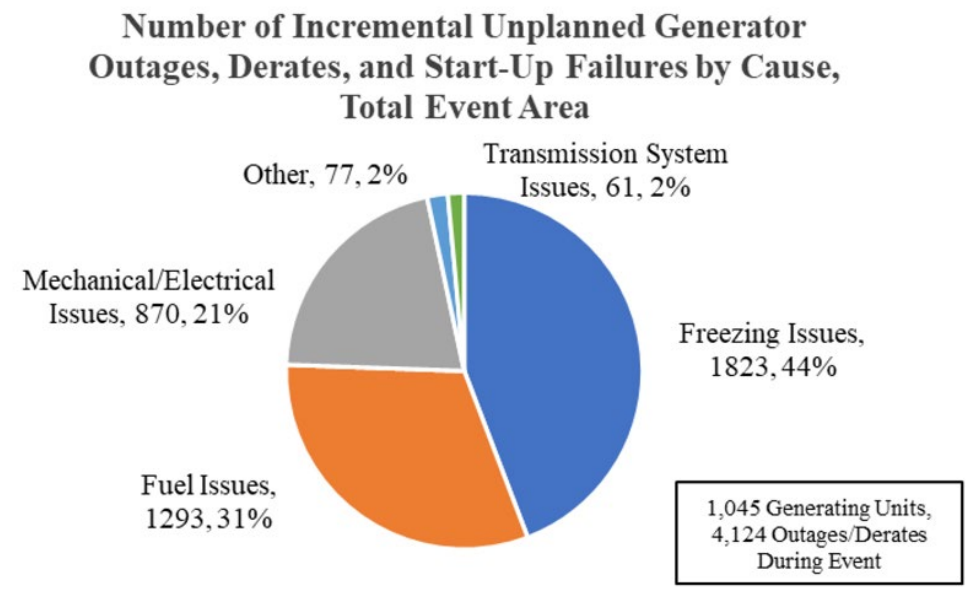
Highlights Failure of Gas-fired Generators

Continued from page 1

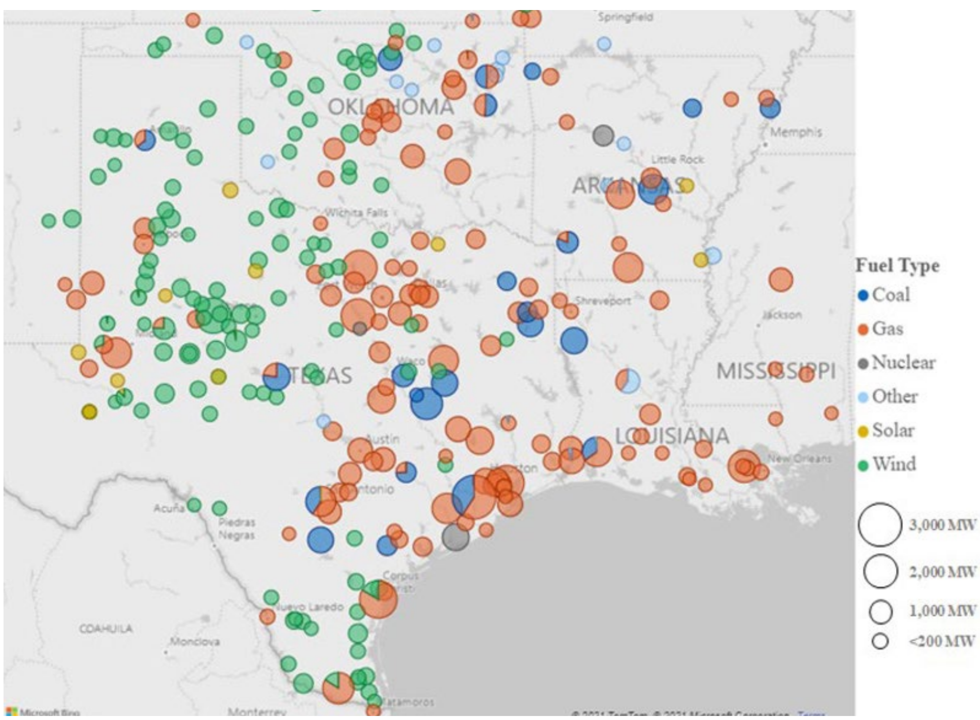
The report, released nine months to the day after the commission announced it in the middle of the 12-day crisis, detailed how the severe cold impacted bulk electric system reliability, leading to widespread generation outages, derates or failures to start and forcing more than 23,000 MW of manual firm load shed. (See "FERC, NERC Announce Joint Inquiry," *Slow Storm Restoration Sparks Anger in Texas, South*.) Residents of several cities were ordered to boil drinking and cooking water because of lack of power for water treatment plants, and multiple deaths occurred from hypothermia, carbon monoxide poisoning and heating fires that grew out of control.

ERCOT, in whose territory the crisis was most severe, has not yet provided a response to the report. In an email to ***RTO Insider***, SPP said it is "currently evaluating" the joint report while also plugging its Improved Resource Availability Task Force, which is working to "address recommendations found in" the commission's preliminary report. (See *FERC, NERC Share Findings on February Winter Storm*.)

The preliminary report, issued at the commission's open meeting in September, highlighted the role of natural gas supply disruptions in the outages and listed recommendations for preventing another disaster. The final report provided the same overall conclusions but with more detailed data and recommendations.



Incremental unplanned generating unit outages, derates, and failures to start for the total event area, by cause, fuel type, and MW of nameplate capacity | *FERC*



Location and fuel type of unplanned generation outages and derates during the event (outaged capacity in MW) | *FERC*

Gas Accounted for Most Outages

The report showed that all types of generation experienced failures in the cold weather event, but the greatest share of outages by far occurred among natural gas facilities. Both in terms of the number of units that experienced unplanned outages, derates and failures to start, and in their total nameplate capacity, gas units accounted for more than 50%. Next in both categories was wind, accounting for 27% of generating unit outages and 22% of total capacity. Coal came third, with 6% of generating units and 18% of capacity.

Freezing issues caused 44% of the generating unit problems, which the report blamed on the facilities being unprepared for cold temperatures, wind and freezing precipitation. These conditions caused certain components and systems to freeze; for example, transmitters, sensing lines and instrumentation, valves and inlet air systems, and wind turbine blades. The report found many of the generator outages — 67% in ERCOT, 47% in SPP and 55% in MISO South — could have been avoided if these components had been properly prepared for the freezing weather.

Another major cause of generator outages was fuel issues, at 31%, of which natural gas alone accounted for 87%, with other fuels such as coal or fuel oil making up the rest. The issues with natural gas included drops in production and low pipeline pressure because of cold-related equipment failures, and the "terms and conditions of natural gas commodity and transportation contracts" that caused gas needed for electric generation to be prioritized for heating instead.

An additional 21% of generator outages were caused by mechanical and electrical issues. These were also from the cold, but they were not classed under "freezing issues" because the temperature did not reach freezing. The report's authors once again laid the blame squarely at the feet of registered entities that failed to prepare their systems for the coming cold.

"Despite multiple prior recommendations by FERC and NERC, as well as annual reminders via regional entity workshops, that generating units take actions to prepare for the winter (and providing detailed suggestions for winterization), 49 generating units in SPP … 26 in ERCOT … and three units in MISO South still did not have any winterization plans," the report said.

Report Urges Serious Cold Weather Prep

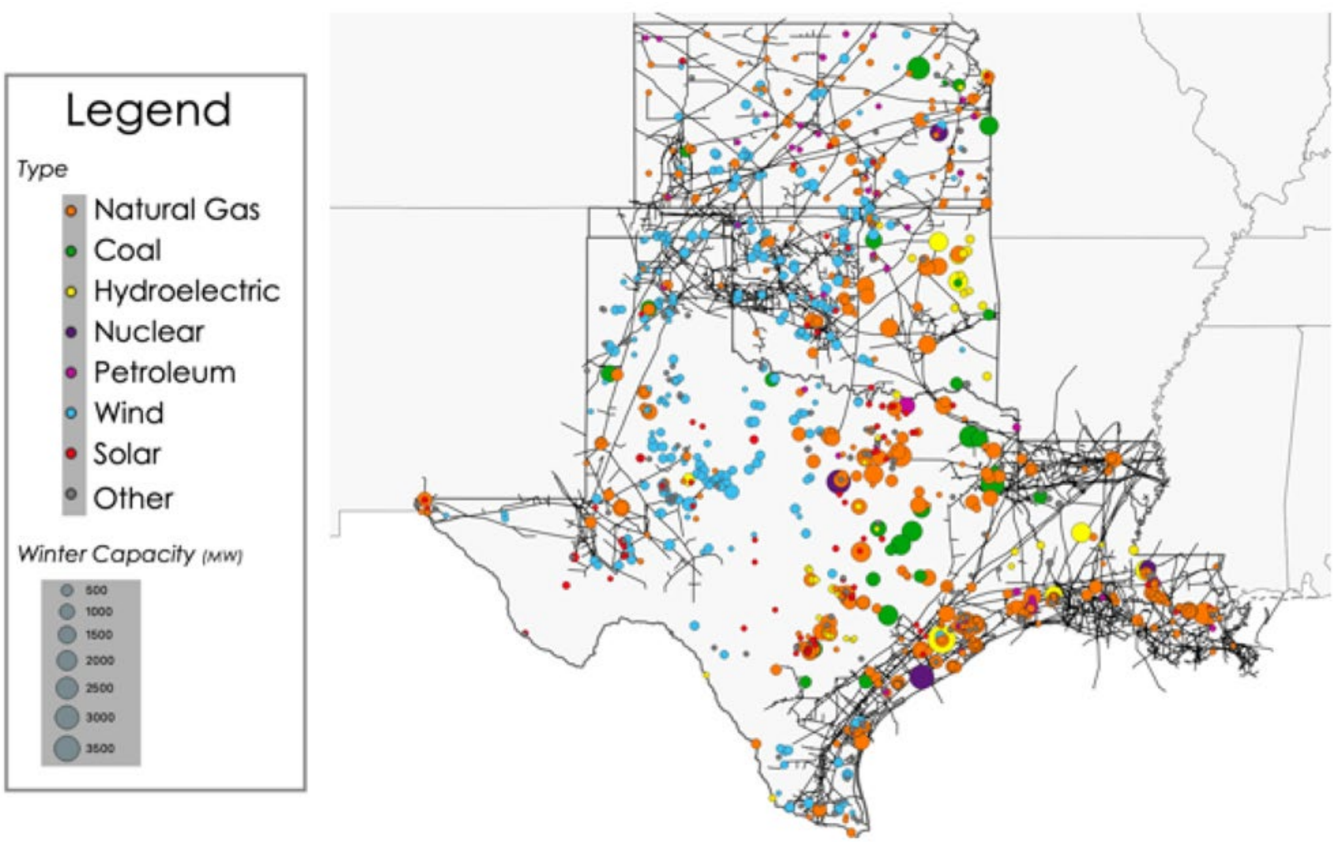
Recommendations provided in the report include significant changes to NERC's reliability standards, requiring generator owners and/or operators to:

- identify and protect cold weather-critical components;
- build new or retrofit existing generating units to operate to specific ambient temperatures and weather based on extreme temperature and weather data, and account for effects of precipitation and wind;
- perform annual training on winterization plans;
- develop corrective action plans if freeze-related outages have been experienced in the past;
- provide balancing authorities with the percentage of the total generating unit capacity that can be relied on during local forecasted cold weather; and
- account for the effects of precipitation and wind when providing temperature data to balancing authorities.

NERC recently passed a set of cold weather standards, but that project began before February's winter storm and was not intended to address any specific problems from that event. (See *FERC Approves Cold Weather Standards*.) The organization is attempting to initiate another cold weather standards project, but the Standards Committee last month decided to wait until the final report was issued before taking action. (See *NERC Standards Committee Delays Action on Cold Weather SAR*.)

The report also recommended that generator owners be compensated for the costs of retrofitting their existing units, or designing new units, to withstand specified ambient temperatures, and that FERC, NERC and the REs host a joint technical conference to "discuss how to improve the winter readiness of generating units before [NERC's] reliability standard revisions become effective" in 2023.

In addition, in light of the interdependencies between the gas and electric sectors and the vulnerabilities in this area exposed by the storm, the team urged Congress, state legislatures and regulatory agencies to require natural gas facilities to implement and maintain cold weather preparedness plans. It also recommended that the facilities themselves "undertake voluntary measures to prepare for cold weather" and that generator owners and operators "identify the reliability risks related to their natural gas fuel contracts." ■



Interdependency of electric and natural gas infrastructure in Texas and the South Central U.S. | *DOE*

ISO-NE News

Negotiations Stall in GlobalFoundries' Bid for Vt. Utility Status

Vermont Solar Tracker Company Files Motion to Dismiss

By Jennifer Delony

Parties to semiconductor manufacturer GlobalFoundries' case seeking utility status in Vermont have been unable to reach an understanding on what the company's emissions-related responsibilities should be.

Regulators granted an extension in the case in October to give the Vermont Department of Public Service (DPS), Vermont Agency of Natural Resources (ANR) and GlobalFoundries more time to reach an agreement on a greenhouse gas reduction plan. But the company said in filing on Nov. 12 that while the parties have "engaged in productive discussions," they have not reached an agreement and discussions will continue.

GlobalFoundries filed a petition in March asking the Vermont Public Utility Commission to grant it "self-managed utility" (SMU) status (*21-1107-PET*) and allow it to purchase electricity in the ISO-NE market instead of from Green Mountain Power.

Vermont students rallied outside the gates of GlobalFoundries in Essex at the end of October in opposition of the company's request to operate as a utility that is exempt from state climate law. | *Sierra Club - Vermont Chapter*

At issue in the case is whether as an SMU, GlobalFoundries would be subject to Vermont's renewable energy standard, a cornerstone of the state's plan to reduce emissions under the 2020 Global Warming Solutions Act. GlobalFoundries has a facility in Essex and is responsible for 8% of the state's electricity load. In its petition, the company said it should be exempt from RES compliance because it does not intend to distribute electricity.

Environmental advocates are adamant that the company's sizeable load requires that it be held accountable to Vermont's clean energy and pollution reduction requirements. The GWSA stood up the state's first *climate council*, which is currently compiling a climate action plan for adoption Dec. 1. As part of the plan, the council is considering increasing the state's RES from 75% by 2032 to 100% in a year to be determined.

The Vermont Public Interest Research Group filed a petition on Nov. 8 that 760 residents signed asking the state to reject GlobalFoundries' request to be exempt from the law.

"If Vermont accedes to GlobalFoundries wishes, it would be putting energy policy authority for 8% of Vermont's electricity usage — more than the amount used by the city of Burlington — in the hands of a multibillion-dollar, multinational corporation," Ben Edgerly Walsh, VPIRG climate and energy program director, said in a letter accompanying the petition.

GlobalFoundries, DPS and ANR agreed to a tentative GHG reduction plan in September, with the potential to reach a definitive memorandum of understanding by the end of October. That plan includes efficiency and GHG reduction obligations for GlobalFoundries that would start in January and a 26% reduction target for 2025 in line with the GWSA. The plan does not define any way to comply with the state's RES.

In granting an extension in the case, regulators asked parties to submit an MOU by Nov. 15, but that did not happen. Should the parties agree on a final GHG framework, GlobalFoundries said, "they may ask the commission's leave to submit a proposal at a later date."

Motion to Dismiss

GlobalFoundries' request for SMU status is unprecedented and has no basis in state law, and regulators have requested comments on whether the PUC has jurisdiction to grant it.

Vermont-based solar tracker manufacturer AllEarth Renewables filed a motion on Nov. 8 asking the PUC to dismiss the case for lack of jurisdiction. GlobalFoundries meanwhile determined that the PUC does have jurisdiction after looking "long and carefully" at the question, according to a Nov. 8 company brief.

The SMU concept is appropriate for public and legislative debate, AllEarth said, but it is "well beyond" commission authority.

"Vermont electric utility franchising and regulation has long been built upon a structure of vertically integrated electric utilities subject to comprehensive rate regulation … and the legislature has not enacted laws that confer the 'retail electricity choice' that comprises a large part of what GlobalFoundries seeks," AllEarth said.

But GlobalFoundries said that a finding that the PUC does not have jurisdiction would prevent it from protecting Vermonters from the negative consequences of such a large user exiting the state's retail electricity market.

The company claimed that it would be allowed to pursue an alternative to regulated service "without any oversight to ensure that the proposed plan, as a whole, will promote the general good of the state and be consistent with the state's energy policy goals."

That scenario, the company said, "would be a unique omission in the fabric of the commission's jurisdiction." ■

ISO-NE News

Overheard at NECA Power Markets: 'Unqualified Reliability' is Out

By Jennifer Delony

In the stakeholder conversations on power market development, the phrases most often used these days are transformation, transition to clean energy and momentous change, said Sheila Keane, director of analysis at New England States Committee on Electricity.

And with big changes comes a lot of uncertainty, Keane said at the Northeast Energy and Commerce Association's Power Markets Conference on Nov. 16. Keane moderated a panel on power market developments in New England with perspectives from experts representing generators, transmission owners, clean energy advocates and consumers.

Vermont Department of Public Service Commissioner June Tierney set the mood for the panel in a keynote speech that highlighted the challenges in current market conditions and set the priorities she sees for market development.

"Reaching our carbon-free future requires that we make new choices in designing the markets that will take us to our decarbonized future — new choices that are more respectful of the laws enacted by our New England states," she said.

Doing so, she added, is complicated and messy, and everyone will not always agree or be happy.

The ISO's core job can no longer be "unqualified reliability," Tierney said. Instead, it must "achieve reliability, fueled by renewability with a keen eye on affordability," she said. "That is what the sovereign New England states want because that is what their people need."

Affordability, she said, is a necessary part of the lexicon for power market development. On the path to what some people call "beneficial electrification," prices must encourage beneficial customer behaviors, such as buying an electric vehicle or heat pump, she said.

Expert Views

ISO-NE acknowledges that "things need to change," as evidenced by its proposal to eliminate the minimum offer price rule (*MOPR*), Andrew Gillespie, director of market development at ISO-NE, said during the panel discussion.

"Our proposal is not only to remove the MOPR, but to adjust the demand curve to account for the impact on the cost of capital to supply, including the existing generators," Gillespie said. "We feel that that is the middle of the road."

The ISO, he said, is trying to find common ground, and it recognizes the "changing nature" of the fleet and that environmental issues are the driver of the change.

As New England states push for electrification in heating and transportation, the grid needs to procure more significant amounts of clean energy to meet climate goals, said Priya Gandbhir, staff attorney at Conservation Law Foundation.

"I think that the ISO is aware of its role in achieving these goals, and it certainly seems on their list of to-dos, but it's unclear whether the level to which the ISO prioritizes these issues is strong enough," she said.

CLF and its partners, she said, are prepared to push the ISO and states to make the necessary changes that will ensure sectoral transitions are supported by a clean grid.

Looking to the future of New England's electricity system, the question will not be whether the generation mix will be clean, said Rebecca Tepper, chief of the Energy and Environment Bureau in the Massachusetts Attorney General's Office. The real question is how to build that mix in the most cost-effective and reliable way, she said.

"We're hoping that we'll be able to use the wholesale markets in a way that will result in a better outcome," she said. "But we're still talking about the same two issues that we've been talking about for years, which is incorporating those clean energies into the market and resource adequacy."

A positive outcome will be tied to valuing resources for the purpose of reliability.

"That needs to be done both for clean resources and for thermal resources," she said.

As it stands, states have a lot of unanswered questions about power market development and the mechanisms for clean energy procurement that may come from it, said James Daly, vice president of energy supply at Eversource Energy.

Largely New England states are relying on utility power purchase agreements and clean energy standards to reach their climate goals, Daly said, adding that the "jury is still out" as to whether they will cede that control to the ISO.

Vermont DPS Commissioner June Tierney says affordability is a necessary part of the lexicon for power market development so that prices can encourage beneficial customer behaviors, such as buying electric vehicles or heat pumps. | *Chevrolet*

For Daly, the priorities for market development are environment, reliability and affordability.

"We need to pay attention to whether we have the generation today secured and operational and with the fuel it needs to get us to that future state and not have market dislocations along the way," he said.

Studies have shown that New England states will need natural gas generation for grid reliability well beyond 2030. And some stakeholders believe carbon pricing is the best option to support the energy transition, said Brett Kruse, vice president of government and regulatory affairs at Calpine.

Carbon pricing, he said, is "politically bad" because states do not support it.

He sees some potential for the market to evolve by 2025 whereby states obtain their capacity through bilateral contracts and the ISO runs a pure reliability market.

But he's not too optimistic about that possibility.

"I'm just not sure you can change the market enough soon enough, which is important to be able to accomplish that in the market-related way," he said. ■

ISO-NE News

FERC Lowers ROE for Exelon's Mystic Plant to 9.19%

By Jason York

FERC on Thursday voted 3-1 to reduce the base return on equity for Mystic Generating Station's reliability-must-run (RMR) contract with ISO-NE to 9.19% following requests for rehearing by Connecticut regulators and plant owner Exelon (*ER18-1639-010*).

The decision, issued during the commission's monthly open meeting, partially modifies its order in July that set the ROE at 9.33%. Exelon must submit a compliance filing within 30 days revising the agreement that begins on June 1, 2022. (See *FERC Sets ROE for Exelon's Mystic Plant at 9.33%*.)

ISO-NE and Exelon in 2018 reached an agreement to continue operating Mystic, and recover associated costs, past a previously sought retirement date of May 31, 2022, into 2024.

In their rehearing request, Connecticut regulators — the Public Utilities Regulatory Authority, Department of Energy and Environmental Protection and Office of Consumer Counsel — said FERC did not correctly apply a "natural break analysis" to results from the discounted cash flow (DCF) model used to determine the ROE rate.

When determining an ROE using the DCF model, FERC uses a proxy group of companies for comparison. A natural break analysis determines whether certain companies in the group screened as outliers, or those almost screened as outliers, truly represent outliers and thus should be removed.

The Connecticut agencies argued that Otter Tail Power should not have been included in the proxy group for Exelon, as its DCF result was far too high: 147 basis points over that of the next highest company in the group. FERC agreed, removing Otter Tail from the group, lowering the DCF calculation and, thus, lowering the resulting ROE.

FERC noted, however, that "while the 147-basis-point gap represents a natural break between potential proxy group companies here, that same gap or even a larger one may not represent a natural break that warrants exclusion of a company in a future case."

Commissioner James Danly wrote in a concurrence that he remains "concerned" with the continued exclusion of Avangrid from the proxy group as in the previous order, though it was not enough to warrant a dissent. As in July's order, Danly argued that FERC's current ROE methodology, "like its predecessors, is too complicated and threatens to cause great uncertainty going forward."

"The inevitable consequence will be the chilling of investment in transmission development," Danly wrote. "I would likely not have voted in favor of our revised ROE methodology had it come before me in the first instance, but I also have not seen the kind of evidence that would be necessary to justify jettisoning it for yet another revised methodology."

In her dissent, Commissioner Allison Clements reiterated her opinion from the July order, from which she also dissented. She argued that FERC's current ROE policy "applies a flawed methodology that does not adequately protect consumers and does not yield just and reasonable rates." She said that while the order addresses the ROE portion of cost-based compensation to keep the Mystic online for two additional years, "our ROE policy extends to all cost-based rates within our jurisdiction, including transmission rates."

Mystic Generating Station, on the Mystic River in Everett, Mass. | *Fletcher6, CC BY-SA-3.0, via Wikimedia*

Clements added that the grid will require tremendous investment in transmission, which "can ultimately be a net win for consumers." However, Clements said, consumers are dependent on the commission's "rigorous scrutiny of the rates charged for transmission service, of which ROE is a central component." She worries that FERC's ROE policy does not meet "this core consumer protection responsibility."

"Smart transmission investment not only enhances reliability and resilience, but it unlocks low-cost power supply, allows more efficient use of existing infrastructure, and minimizes the cost of meeting changing customer demand and public policies," Clements wrote. ■

MISO News

MISO Postpones 1st Cycle of Long-range Projects

By Amanda Durish Cook

MISO last week said it probably won't meet a March deadline to gain approval of its long-range transmission plan's first projects, saying the Board of Directors' action will likely be pushed to May or June.

The RTO said it's also delaying a companion cost-allocation filing at FERC from mid-December to year's end. (See *MISO Schedules Cost-allocation FERC Filing*.)

Aubrey Johnson, MISO's executive director of system planning, said the filing needs to undergo more study and legal review before it's ready for FERC.

The RTO has said it will create two separate but equal cost-allocation designs instituting a 100% postage stamp rate to load for its Midwest and South subregions. The grid operator has also committed to conducting three-year reviews examining whether new Midwestern transmission benefits MISO South.

"We've said at the beginning that this is a very iterative process," Johnson told stakeholders during a special workshop Friday.

MISO leadership previously said it could advance $30 billion or more in transmission expansion for board approval in March, but it's only prepared to propose projects in MISO Midwest. (See *MISO Targets March Approval for Long-term Tx Projects*.)

Stakeholders asked whether the new approval target would push the projects into the 2022 MISO Transmission Expansion Plan (MTEP 22).

Johnson said the projects will still be considered an addendum to MTEP 21. He said staff continues to build business cases for Midwestern projects and will bundle them early next year for stakeholder review. MISO likely won't propose projects above a 345-kV rating under the first of four rounds of anticipated approvals.

In addition to the usual adjusted production cost savings, business cases for long-range projects will include resolved reliability issues, avoided future investments in transmission and generation, reduced risk of load shed, and contributions to MISO's resource adequacy requirements. Staff is also exploring other benefits, such as decarbonization support and heightened grid resilience.

MISO has hypothesized that the first group of Midwest long-range projects won't deliver meaningful benefits to MISO South and won't share their costs between subregions. Some stakeholders remain skeptical that MISO South will benefit from transmission expansion in the north, given the RTO's subregional transfer limit.

"I'm a little concerned right now because what I'm hearing is MISO assuming that there aren't going to be regional benefits," Sustainable FERC Project attorney Lauren Azar said. She said a presupposition of scarce systemwide benefits might find resistance at FERC, which has a duty to ensure that cost assignments are roughly commensurate with benefits.

Louisiana and Mississippi regulators have threatened to leave MISO if the first round of long-range project costs fall on their utilities' ratepayers.

EDF Renewables' Arash Ghodsian asked when the projects' financial numbers will be available. Johnson said planners don't expect to have cost-benefit values until next year.

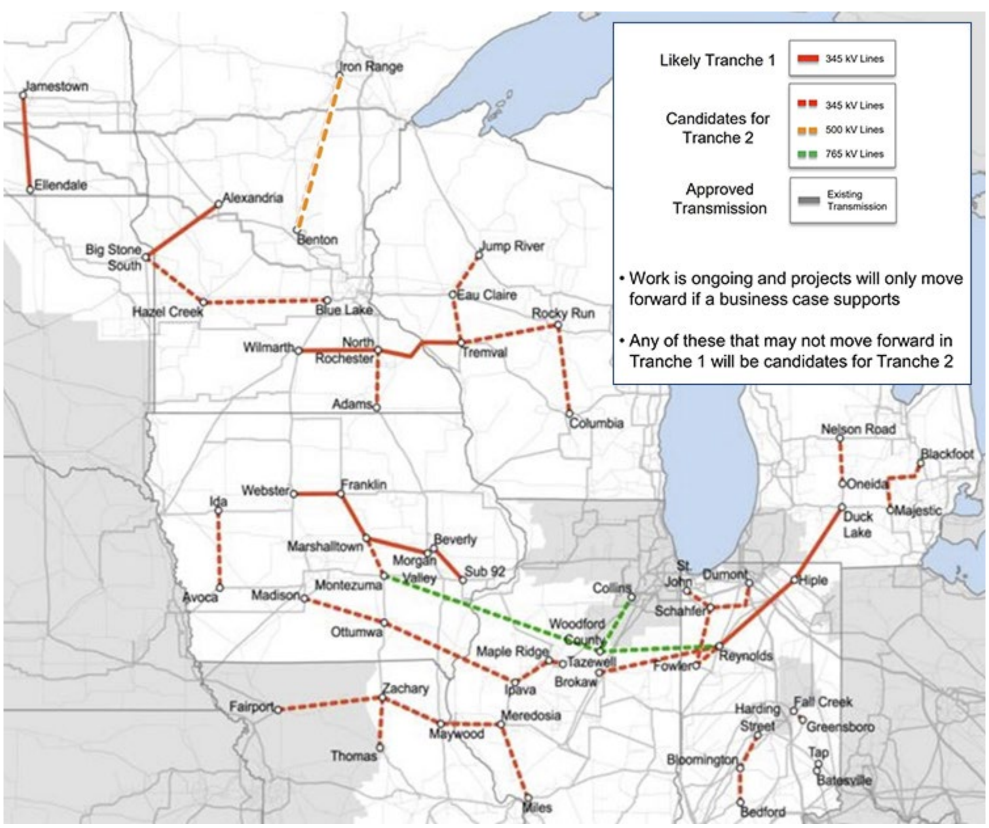
Senior Manager of Transmission Planning Coordination Jarred Miland said stakeholders can expect the first cluster of long-term transmission projects to have near-term in-service dates because MISO is focusing on immediate transmission needs in its first long-range study cycle. The grid operator also said it's giving extra weight to long-range projects that can be built along existing corridors, rather than securing new greenfield rights of way.

"Siting is probably the biggest challenge that we face, especially considering the challenges of the Cardinal-Hickory Creek line," WEC Energy Group's Chris Plante said, referencing MISO's last — and most troubled — Multi-Value Project. (See *Conservation Groups Win Injunction vs. Cardinal-Hickory Creek*.)

But Plante said MISO should pay attention to whether two lines built near one another could be taken out simultaneously by severe weather.

Johnson also said staff will analyze any interregional projects coming from MISO and SPP's joint targeted interconnection queue study to see if there's any overlap with proposed long-range projects.

MISO's next long-range transmission stakeholder workshop will take place Dec. 17. ■



Projects under consideration in MISO's long-range transmission plan | *MISO*

MISO News

Louisiana PSC Defers Vote to Force MISO Exit

By Amanda Durish Cook

Louisiana regulators on Wednesday shelved a vote that might have compelled Entergy Louisiana and Cleco Power to leave MISO for another grid operator.

The Louisiana Public Service Commission deferred an agenda item that could have required Entergy and Cleco to provide MISO a one-year notice of membership withdrawal. The potential vote was postponed to the commission's Dec. 14 meeting and set off a tense exchange between PSC Chairman Craig Greene and Commissioner Eric Skrmetta.

Louisiana regulators in October said they would consider forcing their utilities to leave MISO if their ratepayers are forced to fund transmission built in the footprint's northern reaches. Skrmetta was most vocal about the exit option. (See *La. Regulators Threaten MISO Departure over Tx Costs*.)

According to its membership agreement for transmission owners, MISO requires departing TOs to provide it with a year's advance notice of their intent to exit the system.

Skrmetta said the delay gives the PSC time review MISO's cost-allocation FERC filing for its long-range transmission plan.

The RTO has said it will create two separate but identical cost-allocation designs for its Midwest and South subregions that rely on a 100% postage stamp rate to load. But the grid operator also committed to conducting three-year reviews examining whether new Midwestern transmission benefits MISO South. (See *MISO Schedules Cost-allocation FERC Filing*.)

"The good news is there are alternative markets available if MISO does not prove to be [an] economic value to the citizens of the state," Skrmetta said during the commission's meeting Wednesday, referring to SPP or the new Southeastern Energy Exchange Market (SEEM).

The Entergy Regional State Committee recently hosted SPP staff and SEEM representatives for presentations on the organization's membership. Louisiana regulators have considered both as alternatives to MISO, although staff has not embarked on a formal study. (See *SPP, SEEM Woo Entergy Regulators at NARUC*.)

Entergy has been part of the MISO grid since 2013. Its membership suspended a federal antitrust investigation into the utility.

Greene, Campbell Balk at MISO Divorce

The vote delay appeared in part because of Greene's hesitation at Louisiana utilities forgoing MISO's market savings. He acknowledged there's currently a lot of "noise" around the RTO's transmission-planning process.

"Participation in the MISO market has delivered hundreds of millions of dollars of benefits to [Louisiana] utility customers over the last seven years by expanding access to more resources," he said. "The more resources available, the better for customers. I do not support walking away from an organized market that provides opportunities to attract private investment to the state."

Greene also said the state hasn't conducted a cost-benefit analysis "indicating we would somehow be better off without MISO."

"So far, I think it's universal that we all agree we want to get the best benefit and value for ratepayers. So far, I think it's only Commissioner Skrmetta's opinion that we should leave MISO, not the opinion of the public service commission, or at least of me," Greene said.

"Speak for yourself," Skrmetta retorted.

"Yeah, I think you have already," Greene countered.

"Well, you're doing a good job on your own. I'm your huckleberry," Skrmetta said.

Greene noted that the commission's concerns with MISO relate to transmission planning and cost allocation. He said he would wait until the grid operator made its cost allocation filing before rendering judgement.

"I look forward to that clarification and removing the uncertainty around this issue in December," Greene said, adding later that it's "pivotal" that Louisiana work with MISO on reliability and affordability.

Greene previously said an organized wholesale market is a "necessity" for Louisiana.

Commissioner Foster Campbell pointed out that ratepayers in his northern Louisiana district are expected to pay for Entergy's storm recovery efforts in coastal and southern Louisiana. He drew parallels between that and MISO South bearing transmission costs from the Midwest.

"The argument is, 'They're doing something up north, and we're paying for it down south,'" he said. "Let me remind you something … we're

Louisiana regulators Craig Greene (left) and Eric Skrmetta at the Nov. 17 meeting | *La. PSC*

paying for: all the storms we never have with Entergy. … We're talking all of this about north and south. Sometimes that happens. ... We pay like we were living in New Orleans."

Campbell said he doesn't support a break with MISO, just like he doesn't advocate splitting Louisiana into separate cost zones.

"You all were bragging about how good it was last year. And this year, you all don't have the religion. I don't know what happened," he told commission staff, referencing previous savings under MISO membership.

Skrmetta reminded commissioners that MISO is considering $130 billion worth of transmission projects.

"That's a monumental element that would attack our rates in a way we've never seen," he said. "So, we need to keep our eye on the issue; we need to keep our eye on what's the best market for our public. It really is about the money."

Entergy Louisiana spokesperson Brandon Scardigli said the utility remains satisfied with MISO membership.

"Since Entergy Louisiana became a member of MISO, our customers have realized significant cost savings and operational benefits associated with MISO membership," he wrote in an emailed statement to *RTO Insider*. "We will continue to actively participate in the MISO stakeholder process to advocate for policies that ensure that our customers' interests are protected and that they continue to receive a reasonable level of benefits from MISO membership.

"We also support the Louisiana PSC's interest in continuing to monitor Entergy Louisiana's participation in MISO to ensure that membership remains beneficial for our customers," he said. ■

MISO News

MISO Resource Assessment: 140 GW Needed Within 20 Years

By Amanda Durish Cook

MISO said last week that its members will need to add almost 140 GW of new capacity within the next 20 years, almost double its current available capacity, to meet carbon-reduction targets while also maintaining reliability.

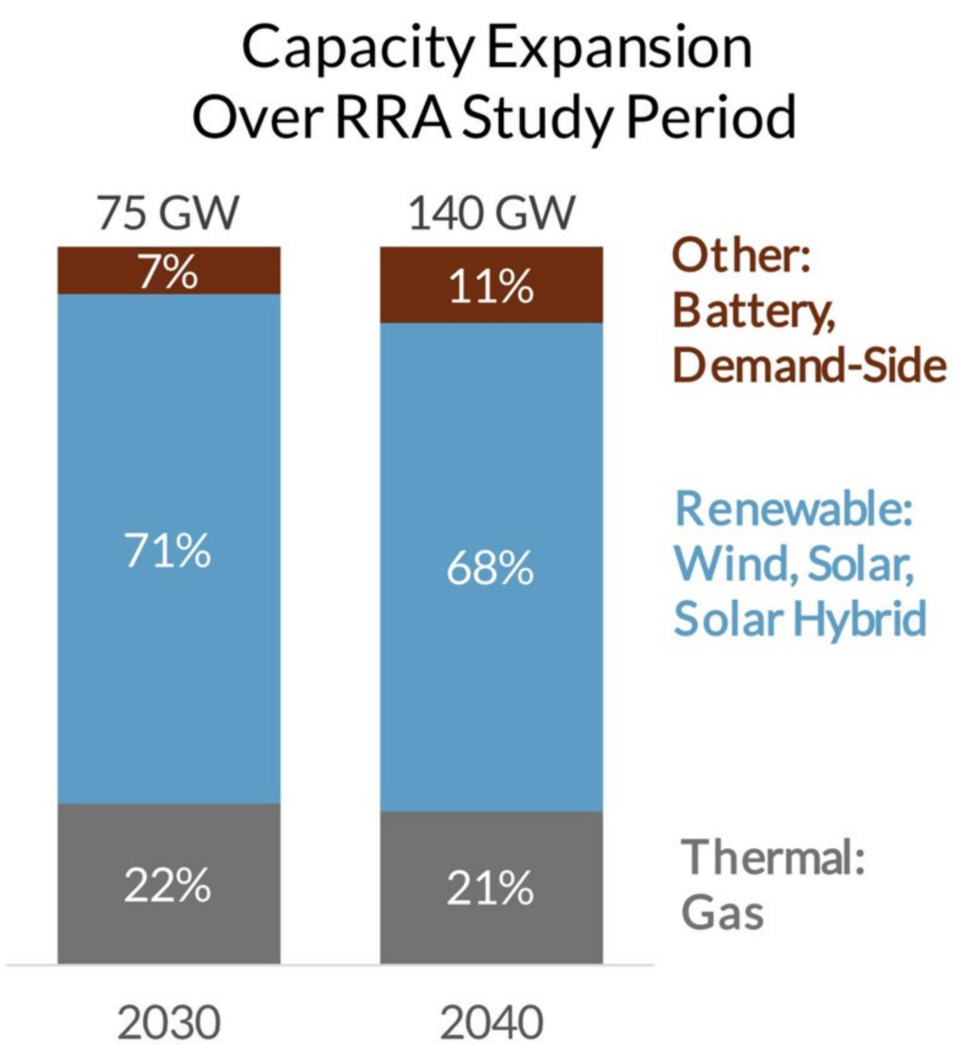
The findings come from a draft of the RTO's first 20-year regional resource *assessment*, which staff plans to make an annual undertaking.

Broken down, MISO anticipates the necessary 140 GW will consist of 68% wind, solar, and solar and storage combinations; 11% standalone battery storage and demand-side resources; and 21% natural gas and other thermal resources.

The projections would nearly double the 146 GW of total available capacity MISO said it had on hand for this past summer. The RTO said the additions could have renewables supplying 40% of energy while halving current carbon emissions by 2040 on a footprint-wide basis.

By 2030 alone, the grid operator estimates that it will need 75 GW worth of new resources.

"In 10 years, 20 years, the resource mix is going to look very different," engineer Aditya Jayam Prabhakar said Wednesday during a workshop to discuss the report. "A lot of renewable resources will be added in the future."



Capacity expansion necessary to meet renewable and decarbonization goals | *MISO*

MISO said that its members' publicly announced generation plans account for less than half of what's needed by 2040 to meet load and decarbonization goals.

The grid operator *said* members' decarbonization goals can be met through 2034 with their current portfolios and publicly known generation additions. After that, MISO said it's unclear how members will stick to their goals.

Jayam Prabhakar said many members have 80% or more carbon-reduction goals by 2030.

Some stakeholders have challenged the need for MISO to produce long-term regional resource assessments, saying information contained in the reports could get misused in state dockets to contest utilities' integrated resource plans. RTO leadership appeared at the Organization of MISO States' annual meeting to garner support for sharing its resource-planning expectations. (See *LSEs, Southern Regulators Pan MISO Resource Assessment* and *OMS Registers its Concern over Supply Insecurity*.)

Jayam Prabhakar said MISO's findings should not be used in investment decisions or formal proceedings.

"That's not the purpose or intent of this," he said. "This is not a plan as to how members should achieve their [emissions] goals."

The assessment is for stakeholders to "collectively have an idea of what's going on around us" and maintain reliability, Jayam Prabhakar said. He said the assessment reinforces staff's recent conclusion that its daily peaks will shift to later in the evening and its system-wide annual peaks will start occurring in winter rather than in summer. (See *MISO Wraps 1 Renewable Study, Promises More Research*.)

Jayam Prabhakar said the 2022 iteration of the assessment will change as members' resource plans evolve with more aggressive decarbonization goals. "The changes are coming; the announcements are happening at a rapid pace. … There's so much change," he said.

Going forward, MISO will survey its members early in the year to collect future generation data, Jayam Prabhakar said. He said MISO plans to publish an assessment report in the fourth quarter of each year.

MISO said it partnered with Applied Energy Group to scour publicly available data on resource decisions. Next year, staff said they will reach out to members directly to inquire about their resource planning. ■

MISO News

FERC Firm on Refunds in Ameren Rate Case

Ameren Illinois must still issue refunds over transmission rate errors uncovered by a central Illinois co-op, FERC ruled last week.

The commission defended its prior ruling that Ameren Illinois must correct its annual transmission revenue requirement (*ER20-1237*).

FERC in March said Ameren overcharged transmission customers by millions for construction-related materials and supplies by misplacing them in its books and likely misclassified about $20,000 worth of transmission operations and maintenance costs under an account meant for regulatory costs. (See *FERC Finds Few Errors in Co-op's Challenge of Ameren Illinois Rates*.)

The commission was reacting to a challenge from Southwestern Electric Cooperative over Ameren's rates. Southwestern has lodged formal rate disputes against Ameren Illinois every year since 2016, often unsuccessfully. (See *FERC Orders Ameren Accounting Changes* and *Challenge to Ameren Illinois Rate Rejected Again*.)

Ameren sought rehearing of FERC's decision, arguing that it hadn't made an error and the commission violated its rule against retroactive ratemaking when it ordered the company to correct inputs to its formula rate.

FERC disagreed that Ameren's "incorrect reporting was minor or ministerial." It said the misclassified materials and supplies costs led to a more than $11.5 million in rate overcharges over multiple years and said it had a duty to order Ameren to recalculate and issue refunds.

The commission said Ameren's formula rate didn't permit the recovery of construction-related materials and supplies but Ameren "nonetheless recovered" them "by incorrectly reporting them." ■

— Amanda Durish Cook

Ameren Illinois line work | *Ameren Illinois*

NYISO News

FERC Again Dismisses Queue Complaint Against NYISO, Central Hudson

By Michael Kuser

FERC on Thursday modified and upheld its July dismissal of a complaint by Hecate Energy that NYISO and Central Hudson Gas and Electric delayed the company's 20-MW solar project in Greene County, N.Y., burdening it with $10 million in unnecessary system upgrade costs (*EL21-49*).

The commission said it continued to find Hecate has not met its burden under Section 206 of the Federal Power Act to show that the respondents violated the tariff or the FPA by failing to use reasonable efforts to process the project's interconnection request.

"The reasonable efforts standard requires 'efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a party would use to protect its own interests.' It does not require best or optimum efforts," the commission said.

FERC in July dismissed the developer's allegation that NYISO and the utility failed to use reasonable efforts in processing the interconnection request for the Greene County 3 project and violated the FPA by applying an "inclusion practice," which was used to determine the firmness of an interconnecting project but is not delineated in the tariff regarding queue position. (See *FERC Denies Solar Queue Complaint against NYISO, Central Hudson*.)

In September, FERC denied Hecate's request to rehear the order but said it would address the company's concerns in a future order — the one issued Thursday.

"Hecate continues to downplay the various features that made the project atypical and contributed to the lengthier than typical study process," the commission said in its latest order.

For example, FERC said Hecate asserted that the project has always been 20 MW. While that statement was true on Jan. 10, 2017, the date of the interconnection request that ultimately sparked the complaint, it does not portray the full picture the commission found. As NYISO explained, and Hecate corroborated, prior to Hecate's submission of the project's interconnection request, the company submitted an interconnection request for a 50-MW facility, which was subsequently withdrawn and split into three separate projects, one of which represents the original the project, the commission said.

The commission said it continued to find that the amount of time between the date the interconnection request and when respondents executed the facilities agreement was reasonable "given the complexities of the project."

The commission also noted that Hecate's request for relief was premature.

"As the project now will enter the subsequent class year, where it will be restudied, the possibility remains that the cost or amount of system upgrade facilities assigned to the project will change as the upgrade costs may be allocated to several projects," the commission wrote.

Nor did FERC agree with Hecate's contention that Central Hudson's inclusion practice "unfairly delayed its place in the queue."

NYISO's tariff "provides sufficient notice that transmission owners will update NYISO regarding facilities that should be included in the Base Case for NYISO's studies of interconnection requests," and the "'rule of reason' does not require the 'inclusion practice' to be explicitly set forth in the tariff," the commission found. ■

Greene County road north of Hecate Energy solar projects in Coxsackie, N.Y. | *Doug Kerr, CC BY-SA-2.0, via Wikimedia*

NYISO News

NYISO Management Committee Briefs

2021 Strategic Plan

NYISO held its first in-person stakeholder meeting Wednesday after a hiatus of 615 days, CEO Rich Dewey told the ISO's Management Committee.

The ISO will continue to assess week-to-week and consult working group committee chairs to determine whether COVID-19 pandemic conditions warrant in-person or virtual meetings, Dewey said.

"My preference by default is we would try to do them in person, but we ... definitely want to take feedback from stakeholders if people are comfortable continuing to meet in person or if people have very specific concerns given the current state of the pandemic and local infection rates, which are on the rise again, unfortunately," Dewey said.

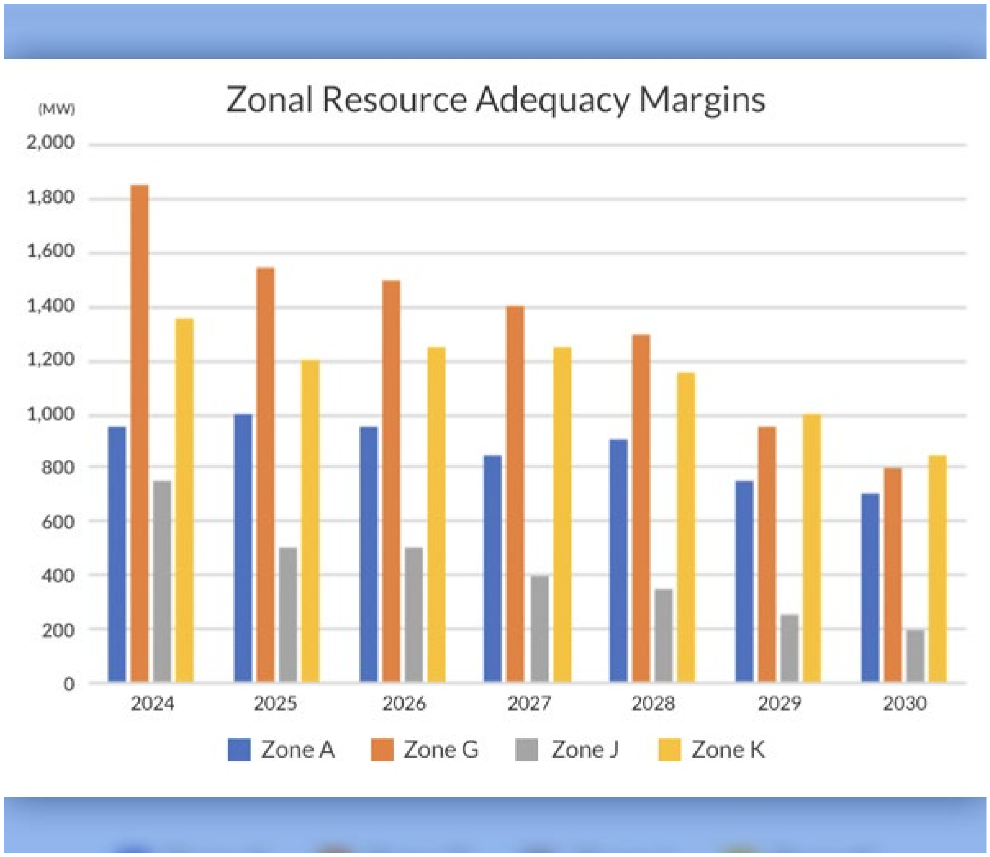
Executive Vice President Emilie Nelson *presented* the ISO's 2021 Strategic Plan, which outlines evolving state and federal policy drivers affecting the grid operator.

NYISO's Board of Directors met with the MC in June to review the ISO's strategic priorities, substantially informed by input from stakeholders, Nelson said.

"There is a rapid change underway on the electric grid, [partly] due to the electrification of other sectors," Nelson said.

The change is framed in New York by the state's Climate Leadership and Community Protection Act and at a national level through efforts such as the substantial infrastructure spending bill and a renewed focus on clean energy legislation, she said. (See *Biden Signs $1.2 Trillion Infrastructure Bill*.)

"Environmental justice and greater public participation are also a prominent part of policy today with respect to reliability and market considerations for a grid in transition," Nelson said. "The magnitude of the change requires us to acknowledge that our collective understanding will be shaped through iterative analysis and work across planning, operations and markets."



NYISO zonal resource adequacy margins are tight following peaker rule implementation, at 500 MW in 2025 and 200 MW in 2030. | *NYISO*

OKs Comprehensive Mitigation Review

The Management Committee approved tariff *revisions* related to the ISO's Comprehensive Mitigation Review (82.03% in favor) and recommended that the board approve the necessary filing under Section 205 of the Federal Power Act. (See "Mitigation Review Moves Forward," *NYISO Business Issues Committee Briefs: Nov. 9, 2021*.)

The MC also recommended that the ISO address capacity accreditation related to buyer-side mitigation (BSM) in the three different phases mentioned throughout the proceeding.

Phase 1 includes tariff changes for the proposed market design and will conclude with FERC acceptance; Phase 2 will discuss the procedures and details of capacity accreditation throughout 2022; and Phase 3 will focus on implementation of the capacity accreditation review.

NYISO intends to implement the updated capacity accreditation rules for the capability year that begins May 2024, said Michael DeSocio, director of market design.

In addition, assessment of financial risk of changes in future revenues is incorporated in the next demand curve reset process beginning in 2023.

The ISO is pursuing BSM reforms in time for the class year 2021 BSM evaluations. The class year study performs a detailed examination of the collective reliability impact of a group of projects, as well as a deliverability evaluation for requested capacity resource interconnection service and identifies and provides binding cost estimates for required upgrades.

2021-2030 Comprehensive Reliability Plan

The Management Committee unanimously recommended the board approve the 2021-2030 Comprehensive Reliability Plan (CRP) as *presented* by NYISO staff.

The ISO prepares a CRP in alternating years with the reliability needs assessment (RNA). Key updates to last year's RNA include one to the load forecast — specifically a decrease in the Zone J peak load forecast by as much as 392 MW by 2030, said Kevin DePugh, senior manager of reliability planning.

Con Edison provided local transmission plan updates, including new 345/138-kV PAR-controlled feeders for Rainey-Corona,

NYISO News

Gowanus-Greenwood and Goethals–Fox Hills. A short-term reliability process solution for addressing a need arising in 2023 included changes to series reactor statuses from summer 2023 through 2030, DePugh said.

"In Zone J we actually had reliability violations until we did the updates, but that's where we're close to the margin right now," DePugh said.

One stakeholder said the CRP report would look much different if it considered the more than 2,500 MW of solar, wind and hydro planned to be brought into New York City.

The state in September selected two transmission line projects to help decarbonize power in New York City, the 1,300-MW Clean Path New York project and the 1,250-MW Champlain Hudson Power Express project, from among seven projects submitted to the Clean Energy Standard Tier 4 solicitation issued in January. (See *Two Transmission Projects Selected to Bring Low-carbon Power to NYC*.)

"There are resources that we're not accounting for here because they haven't met our inclusion rules yet," said Zachary Smith, the ISO's vice president of system and resource planning. "There are some that could have a very positive impact, and that's in the report itself. A lot of the conversation is around that there are a lot of unknowns, and in our opinion the unknowns tip more towards concern than optimism."

The ISO added a "Road to 2040" section to the CRP to give long-term consideration to generation and transmission issues, DePugh said.

For generation, the study concluded that a grid with significant amounts of intermittent resources will need significant amounts of emissions-free, dispatchable resources that can run for multiday periods, and that such resources are not yet available or currently in the NYISO interconnection queue.

In addition, more inter- and intra-zonal transmission capacity will be required to deliver a reliable system with a high level of renewables penetration. Transmission additions would not reduce the amount of dispatchable resource capacity but would decrease the volume of energy needed from them, the report said.

MMU Recommendations

The ISO's Market Monitoring Unit, Potomac Economics, issued a *memo* on the CRP and *presented* its findings that NYISO's markets "are well-designed and generally provide efficient investment signals," but have room for improvement.

The first of three main recommendations concerns the locational signals provided in the capacity market.

"There are four zones in the capacity market, but naturally the details of the power system are more granular than that, so from time to time there are reliability issues at a smaller level," said Pallas LeeVanSchaick of Potomac Economics.

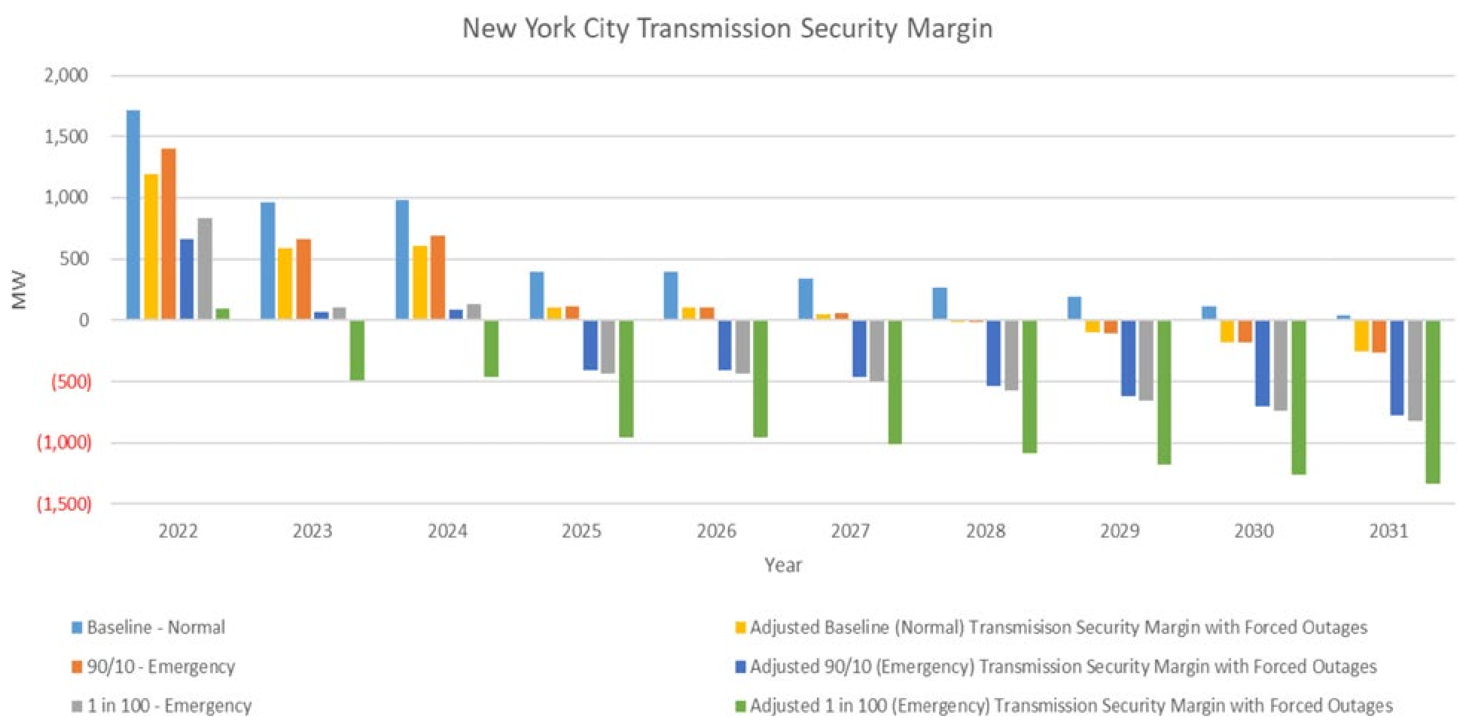
To address possibly misleading market signals resulting from transmission constraints between Staten Island and New York City, for example, or between Zones G and H, the monitor recommends implementing capacity locational marginal pricing (C-LMP) to accurately reflect resource adequacy value at each location.

Other recommendations include implementing marginal capacity accreditation for all resource types; using reasonable assumptions for all resource types in transmission security analyses; and considering discounting capacity payments to resources that do not help address transmission security needs.

Asked by one stakeholder what the ISO thinks of C-LMP, Dewey said, "We've got concerns about how heavy a lift that is or how radical a change that is, and it just hasn't bubbled up to meet the criteria of us thinking it's a good idea moving forward based on the benefits."

C-LMP is part of the set of recommendations that NYISO is considering and, while not specifically on the list for next year, it is something that the organization will include in the prioritization process going forward, Dewey said. ■

— Michael Kuser



NYC transmission security margins are tight following peaker rule implementation, at 394 MW in 2025 and 115 MW in 2030. | *NYISO*

PJM News

PJM Stakeholders Table WVa PSC Attendance at Liaison Committee

By Michael Yoder

What was expected to be a short discussion at Wednesday's PJM Members Committee meeting regarding the West Virginia Public Service Commission's request to attend Liaison Committee meetings turned into a two-hour debate.

In a sector-weighted vote of 3.39 (67.8%), stakeholders indefinitely postponed a vote on allowing the PSC to observe LC meetings, surpassing the 3.33 threshold. An amendment by Public Service Enterprise Group to not produce a voting report was also added to the motion.

The *LC* is a closed-door forum, billed as an opportunity "for direct communication between the members and the PJM Board" of Managers. RTO staff, the Independent Market Monitor, government officials and members of the media are not allowed to observe.

The original motion, advanced by Procter & Gamble and seconded by the Organization of PJM States Inc. (OPSI) on behalf of the PSC, asked, "Do members object to the request of the Public Service Commission of West Virginia (as an *ex officio* non-voting member of the standing committees) to attend the Liaison Committee as an observer?"

Jackie Roberts — the PSC's federal policy adviser and former West Virginia consumer advocate — said some members have "strong opinions" about who can attend the LC.

"This is not about how we feel about it or what we want or don't want," Roberts said. "This is about the language in our governing documents."

Jackie Roberts, WV PSC | © *RTO Insider LLC*

2018 Vote

From 2011 to 2018, PJM had allowed certain non-members — such as state regulators and their staff, FERC staff, PJM management and staff, and the Monitor — to attend the LC, though this was technically unallowed. The MC voted in September 2018 to enforce the committee's charter and keep the meetings private. (See "Liaison Committee Meeting to be Closed to Nonmembers," *PJM MRC/MC Briefs: Sept. 27, 2018*.)

From 2011 to 2018, OPSI and all the state commissions were allowed to participate in the Liaison Committee, but the 2018 vote enforced the charter and limited attendance after some members requested enforcement.

In support of the PSC motion and attendance at the LC, Roberts cited Section 1.4.4 of *Manual 34* that states:

OPSI and its member regulatory agencies are not members of PJM. Under a June 2005 memorandum of understanding between the OPSI and PJM boards, commissioners and their staff participate, deliberate, give input and engage at all levels of PJM stakeholder groups but do not vote on any issue.

But Roberts argued that under PJM's governing documents, as one of the only *ex officio* members in the RTO — along with the Consumer Advocates of the PJM States (CAPS), which is allowed to attend as a voting member — the West Virginia PSC is "entitled" to act as a member on the LC.

"Clearly the Liaison Committee is a stakeholder group," Roberts said. "If we don't have a culture of compliance at PJM, then we don't have a stakeholder process."

Susan Bruce, counsel to the PJM Industrial Customer Coalition, sponsored the motion on behalf of Procter & Gamble; Greg Poulos, executive director of CAPS, seconded it on behalf of the Delaware Division of the Public Advocate.

Bruce said that because conversations impacting states have taken place at recent LC meetings, it's "important" for the PSC to be in attendance. Bruce cited "incredibly informative" discussions on the capacity market, auction revenue rights and financial transmission rights.

"We think there's value if states have the ability to be participating," Bruce said. "We have no objection to their listening to the conversation to inform their advocacy."

West Virginia Public Service Commission | *WV PSC*

Jeff Whitehead of Eastern Generation asked why the motion was necessary if the governing document language was "clear cut" to allow the PSC to attend the LC, as Roberts argued. He said he was uncomfortable with voting on "interpretations" of the governing documents.

Roberts said the PSC informed PJM that it would be attending the LC, but the RTO responded that it was "concerned" over the 2018 vote and "how passionate the members can be" about attendance at the meetings.

PJM General Counsel Chris O'Hara said there is "clearly a difference" between the *ex officio* role of a non-voting member like the PSC and the *ex officio* role of a voting consumer advocate member.

O'Hara said it's also "not clear" that the LC is

Susan Bruce, PJM ICC | © *RTO Insider LLC*

PJM News

a standing committee. He said the committee was created out of a "conversation" between members and the board and not intended to be a committee reporting to the MC.

The 2018 vote at the MC was the clearest indication of member opinions on who could attend the LC, O'Hara said.

Tabled

Ed Tatum, vice president of transmission at American Municipal Power, appealed the decision of committee Chair Erik Heinle to put the motion up for a vote. Tatum said from a "parliamentarian standpoint," the language of the motion was "a bit confusing" because it was written in the negative and is typically not considered at stakeholder meetings.

Tatum said he was "happy" to have a discussion if the PSC should be a part of the LC, but the vote on the motion seemed "inappropriate."

"I'm a little bit confused as to what we're doing here and why," Tatum said.

Jason Barker of Exelon said the OA language doesn't identify the LC as a standing committee, so the *ex officio* status regarding attendance of the LC is "meaningless." Barker said the motion "intended to provide new rights" that are not included in the OA language.

In a sector-weighted vote of 3.28 (65.6%), the motion to reverse the decision of the chair was endorsed with 59 votes in favor, passing the 2.5 threshold.

Bruce offered to amend the language of the motion from "Do members object to" to "Do members support."

Tatum said it was "still suffering from another defect" in that there are differing opinions whether the governing documents allow for ***ex officio*** attendance. He suggested the PSC come back with "explicit, specific changes" to either the OA or manual language.

"It's important to me how this committee does business," Tatum said. "The stakeholder process is important, and we all need to behave to a certain standard."

Barker made a motion to indefinitely postpone the amended motion, with Calpine's David "Scarp" Scarpignato, seconding it. Alex Stern, director of RTO strategy for PSEG Services, requested an amendment to suspend the rules to not produce a voting report generated on the issue, which was accepted.

Roberts said she "doesn't have any idea" why members not impacted by the West Virginia PSC would have a stake in suspending the rules to not generate a voting report.

Ed Tatum, American Municipal Power | © *RTO Insider LLC*

She said she was "really appalled" the rules would be suspended on the voting report, especially at a time when FERC is reaching out to states wanting help in solving resource adequacy and transmission issues. ■

Bankruptcy Court OKs Legal Fees of $65 Million in FES Case

Includes $2.8M for Lobbying Passage of Ohio HB 6

By John Funk

A federal bankruptcy judge in Ohio on Nov. 16 approved of legal fees of more than $65 million and expenses totaling $2.7 million in the FirstEnergy Solutions bankruptcy case. The decision officially closes the case.

FES, a wholly owned generation subsidiary of FirstEnergy, emerged from bankruptcy as Energy Harbor in February 2020 after 23 months of litigation. It was represented by the international law firm Akin Gump Strauss Hauer & Feld, headquartered in D.C.

Akin Gump's fees included about $2.8 million for lobbying work four members of the firm's Public Law and Policy Group did to persuade Ohio lawmakers to approve H.B. 6 in June 2019. The legislation created a $1.1 billion public bailout of two FES nuclear reactors in northern Ohio. The firm's lobbyists also worked closely with FES and FirstEnergy to defeat a referendum petition drive following the bill's passage.

The court delayed approval of Akin Gump's final fees and expenses invoice after learning of the existence of the lobbyists on the ground in Ohio and of the decision by FES to contribute $500,000 to Generation Now, a dark money group at the heart of the lobbying effort.

The court also took notice of the indictment of former Ohio House Speaker Larry Householder (R) and four associates on federal racketeering charges in July 2020, and the dismissal of FirstEnergy's former chief executive and four others in October 2020 over the company's contribution of $61 million in dark money to bankroll Householder's multiyear campaign engineering passage of H.B. 6.

Judge Alan Koschik had delayed his decision for more than a year in the hope that federal prosecutors would let the court know, either in a docket filing or an appearance in court, whether his decision to authorize the final payments, officially closing the bankruptcy proceeding, would conflict with their investigation. He said last week that the Justice Department, nor state authorities, never responded.

Two of the four Householder associates charged with racketeering have pleaded guilty but have not been sentenced. One killed himself in March, while a fourth along with Householder have pleaded not guilty and are awaiting trial. FirstEnergy has paid a $230 million fine in a deferred prosecution agreement.

Koschik last year ordered the four Akin Gump lobbyists to file affidavits explaining their work, but the firm repeatedly asked for delays until *a hearing last month* to avoid having to file the affidavits in the public docket and arrange for a court appearance of the four because of the ongoing federal investigation.

"The question before the court is what to do about the request for final approval of Akin Gump's fees generally, and in particular, its fees for the Government Affairs [division] ... [for] the approximate amount of $2.8 million, in light of the federal criminal investigation and indictments concerning alleged corruption and racketeering involving Ohio politicians and political operatives in connection with the passage of Ohio House Bill 6," Koschik said before announcing his ruling.

"This court observes that despite holding at least four substantive hearing on the application, and two more where the court granted motions to adjourn, very few substantive objections have been filed or raised in court. The court has done all it can to provide breathing space for persons to oppose or question some portion of the Akin Gump fees in light of the criminal investigations." ■

Davis-Besse nuclear plant in northern Ohio | *NRC*

PJM MRC/MC Briefs

Markets and Reliability Committee

Solar-battery Hybrid Resources

PJM has proposed changes to a stakeholder-endorsed proposed on solar-battery hybrid resources after consulting with FERC over a future filing of the issue.

Andrew Levitt, PJM | © RTO Insider LLC

Andrew Levitt, of PJM's market design and economics department, reviewed the RTO's solar-battery hybrid resources issue in a second first read at last week's Markets and Reliability Committee meeting. The proposal, which would update PJM's governing documents and manuals to clarify several aspects of market participation by solar-battery hybrid resources, was originally endorsed at the August Market Implementation Committee meeting with 99% stakeholder support. (See "Solar-Battery Hybrid Proposal Endorsed," *PJM MIC Briefs: Aug. 11, 2021*.)

Tens of gigawatts of hybrid resources are in the PJM queue, Levitt said, and the RTO wants an effective load-carrying capability (ELCC) framework that can accredit such resources as individual assets in the Base Residual Auction.

Levitt said PJM had a prefiling meeting with FERC staff back in September, and they made suggestions to reconfigure the language to increase its chances for approval. Staff suggested that the term "hybrid resource" should be structured as a largely independent resource-neutral category and not specifically about solar-battery resources.

They also suggested removing language dealing with open-loop and closed-loop hybrid resources as new definitions originally endorsed in the proposal.

PJM reconfigured the language as staff suggested, Levitt said, styling it as a friendly amendment. He said the new proposal is "substantively and functionally almost identical" to the language endorsed at the MIC, but there was "a lot" of new tariff language.

Levitt said FERC staff recognized that, for now, certain provisions specific to solar-storage hybrids will be pursued by the RTO before other hybrid types "due to overwhelming presence of solar hybrids in PJM queue," so it made sense to focus the language changes on solar-battery hybrids.

| Shutterstock

Ken Foladare, Tangibl | *Tangibl*

Ken Foladare of Tangibl Group said he objected to the idea that the language changes were a quick fix or something PJM could do unilaterally. He said the changes should go through the proper stakeholder process.

"I'm not quite sure the people I work with are going to be on board with this so easily," Foladare said. "It needs to be fully explained to the PJM stakeholders."

The committee will be asked to endorse the proposal at the December MRC meeting.

Undefined Regulation Mileage Ratio Calculation

PJM presented its plan to stakeholders to get a vote on a short-term solution to the undefined regulation mileage ratio calculation while endorsing a further look at other issues in the regulation market.

Adam Keech, PJM's vice president of market design and economics, discussed the next steps of the undefined regulation mileage ratio proposal after a failed vote at the October MRC. (See "Regulation Mileage Ratio Fails," *PJM MRC/MC Briefs: Oct. 20, 2021*.)

Stakeholders rejected two different proposals to change the undefined regulation mileage ratio calculation in *Manual 28* and the *tariff*, sending the issue back to the MIC for more discussions. (See "RTO to Propose Review of Regulation Market," *PJM MIC Briefs: Nov. 3, 2021*.)

Danielle Croop, senior lead market design specialist at PJM, presented a first read of a new *problem statement* and *issue charge* to create a new senior task force to re-evaluate the current regulation market design. Keech said the language in both documents was similar to language endorsed creating the former *Regulation Market Issues Senior Task Force* that last met in 2017.

Keech said the proposal was in response to stakeholder feedback at the October MRC meeting with the intention to initiate short-term fixes. Members said there were larger issues with the regulation market that need reviewed,, and PJM was supportive of the review.

The key work activities include regulation market education, evaluating the benefits factor curve and proscribed RegA/RegD commitment percentages, and proposing any modifications to the regulation market to address issues raised in the evaluation. Keech said the review would utilize a new senior task force reporting directly to the MRC.

If the MRC endorses the task force at its December meeting, Keech said, it will take another vote on the short-term proposals from PJM and the Monitor that failed last month.

"Our hope is that by committing and moving forward with this broader review of the regulation market, that the stakeholders will reconsider the proposals that failed to pass," Keech said.

Regulation mileage is the measurement of the amount of movement requested by the regulation control signal that a resource is following; it is calculated for the duration of the operating hour for each regulation control signal. PJM's performance-based regulation market splits the dispatch signal in two: RegA for slower-moving, longer-running units; and RegD for faster-responding units that operate for shorter periods, including batteries. If a signal is "pegged" high or low for an entire operating hour, the corresponding mileage would be zero for that hour.

PJM has seen an increased frequency of RegA signal pegging and times the RegA signal is pegged for extended periods, highlighting a potential problem in the regulation mileage ratio calculation. The RegA mileage can be set at zero for a given hour and create a divide-by-zero error in the calculation of the mileage ratio.

PJM proposed setting the RegA mileage floor at 0.1 instead of zero, which would provide a solution for the division ratio and still maintain market design objectives while having no impact on the regulation signal design, operations or regulation market clearing.

The Monitor proposed a cap of 5.5 on the realized mileage ratio in all hours instead of 0.1, indicating the cap would eliminate the current undefined mileage ratio result that PJM is attempting to address.

Monitor Joe Bowring said he was glad PJM was taking up a broader review of the regulation market and that the IMM was prepared to discuss a compromised RegA mileage between 0.1 and 5.5. Bowring said he wanted to get a sense from stakeholders whether they were calling for the IMM to work with PJM to come up with a compromised ratio.

Susan Bruce, counsel to the PJM Industrial Customer Coalition, said the ICC would be interested in PJM and the Monitor trying to find a "midpoint" in the conversation on the ratio. Bruce said the ICC understands the "math problem" PJM has identified, but the short-term solution could be as simple as "splitting the baby" and settling on a number in the middle.

"I would still hope there could be a place of common ground found during the intervening time," Bruce said.

Synchronous Reserve Deployment Stakeholder Initiative

Michael Zhang, senior lead engineer in PJM's markets coordination department, *reviewed* a PJM proposal to improve the deployment of synchronized reserves during a spin event.

Developed from discussions in the Synchronized Reserve Deployment Task Force (SRDTF), the Operating Committee endorsed the proposal earlier this month. (See "Synchronous Reserve Endorsed," *PJM Operating Committee Briefs: Nov. 4, 2021*.)

Synchronized reserve events are emergency procedures triggered by PJM to maintain grid reliability in accordance with NERC's Resource and Demand Balancing (BAL) standards. The RTO invokes those procedures under conditions such as the simultaneous loss of multiple generating units or a sudden influx of load.

The SRDTF examined ways to secure controlled deployment of synchronized reserves throughout emergency events by using tools such as real-time security-constrained economic dispatch (RT SCED) to maintain consistent pricing and dispatch signals. The goal was to ensure BAL compliance during the recovery process and maintain a reliable transition in and out of emergency events and to define clear rules and expectations that address how PJM operators approve RT SCED cases around a synchronized reserve event.

PJM's proposal would create an intelligent reserve deployment (IRD), a SCED case simulating the loss of the largest generation contingency on the system and for which approval of the case will trigger a spin event. The proposal calls for taking the megawatts of the largest generation contingency and adding them to the RTO forecast to simulate the unit loss. The RTO would then be allowed to flip condensers and other inflexible synchronized resources cleared for reserves to energy megawatts and procure additional reserves to meet the next largest contingency.

Zhang said some of the significant changes over the status quo in the proposal include updating the economic basepoints to replace all-call instructions and having active constraints controlled by IRD so that deployed resources don't have negative impacts on the constraints.

PJM is looking to conduct a phased approach of IRD, with the initial phase of six to 12 months beginning in early 2022, Zhang said, possibly by March. Zhang said the phased approach will allow operators to make any fine-tuning adjustments as they gain more experience with the tool.

PJM will reconvene the SRDTF toward the conclusion of the initial phase to review performance metrics, Zhang said, soliciting stakeholder feedback, adjusting and finalizing the deployment approach and adapting to market changes.

"IRD is ready to go," Zhang said. "It does not require any additional development. It can be turned on when ready, and it will integrate into all of our existing applications."

Catherine Tyler of Monitoring Analytics said the IMM still has concerns with the proposal, including that it relies on resources to meet the system needs during a spin event that did not actually clear reserves. Tyler said that if reserves are going to be paid more, it's important that they "have an obligation" and related penalties for nonresponse because they're being counted on in a spin event.

Bruce said PJM may need a better way to address the manual deployment of synchronous reserves, but she argued that "we're not there" in terms of IRD being the correct solution. Bruce said there are many small issues with the proposal that taken together could cause bigger problems.

"There's more work that should be taken here in getting the details right," Bruce said.

The committee will be asked to endorse the proposal at its meeting next month.

Carbon Pricing Senior Task Force Sunset Endorsed

Stakeholders unanimously endorsed the sunsetting of the Carbon Pricing Senior Task Force (CPSTF). A majority of stakeholders have indicated they are not ready to move forward with developing rules on leakage mitigation in carbon pricing. (See "Carbon Pricing

PJM News

Senior Task Force Sunset," *PJM MRC/MC Briefs: Oct. 20, 2021*.)

Eric Hsia, senior manager in PJM's applied innovation department, *reviewed* the recommendation to sunset the CPSTF, which was established in July 2019. The main objective of task force's *issue charge* was to explore the impacts of emissions and price leakage between regions with and without carbon pricing policies, such as the Regional Greenhouse Gas Initiative states, and to develop business rules to manage leakage where appropriate.

The first stage of the task force included education on concepts like a carbon tax versus cap-and-trade programs and an introduction on leakage between states. Analysis in the first stage included *studies* on a range of carbon prices and potential leakage mitigation approaches.

Hsia said there are current efforts in the interconnection process, transmission policy workshops and phase 2 of the capacity market overhaul to include discussions related to decarbonization and the procurement of clean resource attributes.

Jason Barker of Exelon said it was "with reluctance" that the company was accepting the sunset motion of the task force. Barker called carbon emissions from the electricity sector an "imminent problem" that needs to be solved, and PJM stakeholders should continue to discuss the possibility of regionwide carbon pricing and the impacts on the market.

"We believe there are methods to effectively address leakage mitigation," Barker said.

HVDCSTF Sunset Endorsed

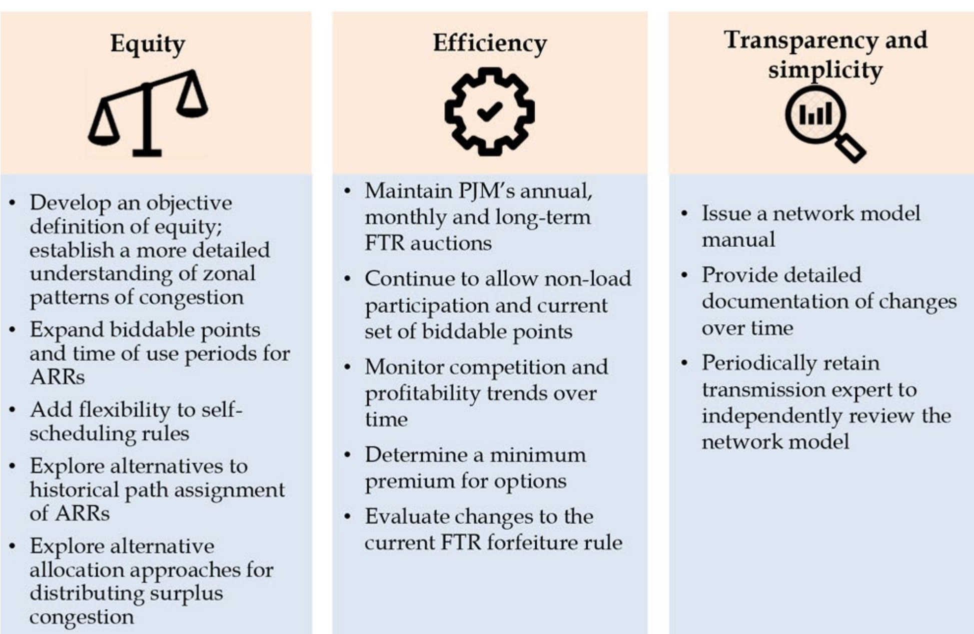
The committee unanimously endorsed the sunsetting of the High Voltage Direct Current Senior Task Force (HVDCSTF), which was created last year to examine integrating HVDC converters as a new type of capacity resource in PJM. (See "HVDCSTF Sunset," *PJM MRC/MC Briefs: Oct. 20, 2021*.)

Carl Johnson of the PJM Public Power Coalition, speaking on behalf of American Municipal Power, moved to sunset the task force. The MRC had endorsed an *issue charge* by Direct Connect Development in May 2020 to consider establishing HVDC converter stations' eligibility to participate in the capacity market. (See *HVDC Initiative Endorsed by PJM Stakeholders*.)

The change would allow Direct Connect's SOO Green HVDC Link — the 350-mile, 2,100-MW, 525-kV underground transmission line planned to deliver renewable energy from upper MISO to Illinois and the PJM grid — to compete in the market.

The task force stopped meeting last October, and several stakeholders requested that it be sunset earlier this year. (See "HVDC Senior Task Force Update," *PJM MRC/MC Briefs: March 29, 2021*.) SOO Green has brought an official complaint to FERC seeking approval of the proposal. (See *SOO Green Seeks Relief from PJM Rule on External Capacity*.)

"There wasn't a way with the currently approved or a significantly modified approach to external capacity that we could get to where [SOO Green] wanted to go without completely upending where we are with how we do pseudo-ties," Johnson said.



Proposed enhancements to PJM's current ARR/FTR market design. | *London Economics*

Consent Agenda

The committee unanimously endorsed as part of the consent agenda several revisions to:

- Attachment F: Control Center and Data Exchange Requirements of *Manual 1* addressing exceptional circumstances outside of the COVID-19 pandemic. The attachment was originally developed and implemented at the start of the pandemic to provide guidance for remote operations in case of control center staff illnesses. (See "Manual 1 Changes Endorsed," *PJM Operating Committee Briefs: Oct. 7, 2021*.)
- *Manual 3: Transmission Operations* resulting from a periodic review. Updates include minor changes such as removing a reference to NERC standard PRC-001 because of its retirement. (See "Manual Changes Endorsed," *PJM Operating Committee Briefs: Nov. 4, 2021*.)
- *Manual 13: Emergency Operations* resulting from a periodic review. The revisions were endorsed by the OC earlier this month. (See "Manual Changes Endorsed," *PJM Operating Committee Briefs: Nov. 4, 2021*.)
- *Manual 14F: Competitive Planning Process* addressing changes to the Regional Transmission Expansion Plan proposal fee structure to conform to the OA. The updates were endorsed at the Planning Committee's meeting this month. (See "Manual Endorsements," *PJM PC/TEAC Briefs: Nov. 2, 2021*.)
- *Manual 19: Load Forecasting and Analysis* resulting from the biennial review. Changes included adding battery storage to the list of forecasted items in the load forecast model overview. (See "Manual Endorsements," *PJM PC/TEAC Briefs: Nov. 2, 2021*.)
- the 2022 day-ahead scheduling reserve (DASR) requirement to 4.43%, slightly lower than the 2021 requirement of 4.78%. (See "Day-ahead Schedule Reserve Endorsed," *PJM Operating Committee Briefs: Nov. 4, 2021*.)

Members Committee

ARR/FTR Market Task Force Proposal Endorsed

Stakeholders endorsed proposed tariff *revisions* to address changes related to auction revenue rights (ARRs), financial transmission rights and transparency at the Members

PJM News

Committee meeting.

The joint PJM-stakeholder *proposal* was endorsed in a sector-weighted vote of 3.73 (74.6%), surpassing the necessary 3.33 threshold. It was endorsed at last month's MRC meeting after failing an initial vote. (See *Stakeholders Endorse PJM ARR/FTR Market Changes*.)

Brian Chmielewski, manager of PJM's market simulation department, said the changes were the result of a two-year stakeholder process initiated after the GreenHat Energy default in 2018, including a six-month review by the London Economics International (LEI), a consultant enlisted by the RTO to conduct a "holistic review" of the ARR/FTR market that led to a *report*.

The proposal aims to recognize recommendations made in the report and address concerns raised by the Monitor and stakeholders regarding the ARR/FTR market, along with seeking to maintain the consultant's conclusion that the existing FTR product is "reasonable and generally achieving the intended purposes" of serving as a financial equivalent to firm transmission service and to ensure "open access to firm transmission service by providing a congestion-hedging function."

PJM's proposal was broken into three separate areas as recommended in the LEI report, with an ARR track dealing with "equity" issues, an FTR track for "efficiency" issues and a transparency track for a "simplicity" model.

Gregory Carmean, executive director of the Organization of PJM States Inc. (OPSI), highlighted a recent *letter* sent by OPSI to PJM asking for staff to weigh in on whether or not they felt the proposal "fully addressed" the equity, efficiency, simplicity and transparency concerns highlighted in the LEI report.

Carmean said a *letter* OPSI received from PJM indicated that the joint proposal "was a consensus" among stakeholders and that was why the RTO was supporting it. He asked if PJM understands OPSI's concerns so that staff can report to the Board of Managers "that we won't have to revisit this issue again in three years."

Chmielewski said the LEI report and the areas of recommendation were "used as guidelines" for the development of the proposal and that every recommended area in the report was "fully discussed" by stakeholders throughout the process.

"I'm confident that the package that was endorsed last month is comprehensive that increases value for everyone in the ARR/FTR market," Chmielewski said.

Ed Tatum, vice president of transmission at American Municipal Power, voiced his support, saying that when members can come together to support a proposal, the result is better than not coming together on an issue at all.

"Not everybody's crystal ball is clear," Tatum said. "And not everybody's market design takes care of what needs to be taken care of."

Bruce said there have been divergent views as to the right approach to ARR/FTR, but the ICC is glad PJM undertook the "comprehensive review" in the wake of the GreenHat default.

"From a customer perspective, we want to make sure that our load-serving entities have the tools they need in order to help support retail contracting and service to retail customers," Bruce said.

Consent Agenda

As part of the consent agenda, stakeholders unanimously endorsed:

- the 2021 reserve requirement study *results* for the installed reserve margin and forecast pool requirement. The results were endorsed at last month's Planning Committee meeting. (See "Reserve Requirement Study Results Endorsed," *PJM PC/TEAC Briefs: Oct. 5, 2021*.)
- revisions to *Manual 15: Cost Development Guidelines*, the *OA* and the tariff to address incremental and no-load energy offers. PJM said the Cost Development Subcommittee proposed revising the no-load cost and incremental energy offer definitions to clearly define what costs can be included, including operating costs, tax credits and emissions allowances. (See "Manual 15 Revisions Endorsed," *PJM MIC Briefs: Sept. 9, 2021*.)
- tariff *revisions* addressing behind-the-meter generation business rules on status changes. The updates were developed in special sessions of the Market Implementation Committee. (See "Manual 14G Updates Endorsed," *PJM PC/TEAC Briefs: Aug. 31, 2021*. ■

— Michael Yoder

FERC Establishes Paper Hearing on PJM Rate-base Network Upgrades

By Michael Yoder

FERC on Friday ordered a paper hearing on the PJM transmission owners' proposed tariff revisions to add network upgrades to their rate base, requesting more information be provided within 45 days (*ER21-2282*).

The commission accepted and suspended the TOs' filing for five months, to become effective Feb. 1, subject to refund and to the outcome of the paper hearing procedures.

"We find that the proposed revisions have not been shown to be just and reasonable, and may be unjust, unreasonable, unduly discriminatory or preferential, or otherwise unlawful, and that the record would benefit from further information," the commission said.

The commission in August had directed the TOs to provide evidence backing up claims that their ability to raise capital is being threatened because they must absorb the risks of increasing transmission upgrades without earning returns on the assets. The TOs responded in September, arguing that PJM's tariff provides them with the "express authority" to make changes to any of its sections relating to transmission revenue requirements, cost allocation or cost recovery. (See *PJM TOs Respond to FERC Questions on Rate-base Network Upgrades*.)

The TOs had *asked* FERC on June 30 to allow them the option to fund network upgrades and add them to their rate bases. Under PJM's "participant funding" model approved in 2004, generators provide the capital for network upgrades, while the additional infrastructure is added to rate bases at zero cost, allowing TOs to recover only their operations and maintenance expenses from network transmission customers.

According to the TOs, PJM's 2020 Regional Transmission Expansion Plan (RTEP) showed that the total estimated costs of network upgrades to interconnect new generating resources was about $6.5 billion, which included $1.56 billion of upgrades already constructed and in service and $4.9 billion in active projects in the queue.

The TOs argued that even if a portion of the $4.9 billion of network upgrades in the queue were constructed, it would represent a "significant escalation" of the $1.56 billion of network upgrades they currently own or operate and for which they are currently not earning a return.

| © RTO Insider LLC

"They are concerned that this trend will continue as the number of new generation interconnection requests is expected to increase significantly, if not exponentially, in the coming years as the electric power industry continues to accelerate the development and construction of clean renewable energy resources," FERC said.

But the commission said a preliminary analysis of the proposed revisions did not show them to be just and reasonable. FERC requested comments on a series of questions in the paper hearing.

The first question posits that the TOs' proposed revisions are premised on their arguments that owning and operating network upgrades "entails significant risks for which PJM TOs do not earn a return or profit." FERC asked if the risks TOs' argue are associated with owning and operating network upgrades are "already incorporated into PJM TOs' commission-approved ROEs, such that PJM TOs are already compensated for these alleged risks."

FERC also asked what protections the proposed revisions provide against the "potential for undue discrimination" by the TOs in their choice of which network upgrades will be funded.

Another question asked if the proposed revisions could result in increased costs to interconnection customers "relative to the costs to initially fund network upgrades" if those same customers were able to obtain financing at lower or similar rates than the TOs.

Responses to the questions are due 45 days from the date of the order, and reply comments can be submitted 45 days after the due date of initial comments.

FERC Commissioner James Danly issued a concurring statement, saying that the "voluminous record" on the issue led him to the conclusion that the commission already has "sufficient" evidence to accept the tariff changes, but he recognized that his "colleagues still have questions."

"While I have previously expressed concerns over improper delay tactics masquerading as requests for additional, unneeded information, the questions set for hearing are such that I do not oppose obtaining additional evidence here," Danly said. ■

SPP News

FERC Settlement Costs Golden Spread $925K

Cooperative Charged with Market Manipulation over Plant's Commit Status

By Tom Kleckner

FERC on Thursday approved a consent agreement between its Office of Enforcement and Golden Spread Electric Cooperative over charges of market manipulation that will cost the utility almost $1 million (*IN21-9*).

Enforcement alleged Golden Spread offered its gas-fired Mustang Station generating unit in West Texas into SPP's market so that it "improperly targeted" and increased the unit's day-ahead make-whole payments.

Golden Spread neither admitted nor denied the alleged violations but agreed to pay $375,000 in disgorgement funds (profits from the alleged behavior and interest) and a $550,000 civil penalty. FERC also directed the cooperative to strengthen its compliance training program and will subject it to compliance monitoring.

The commission stressed that Golden Spread's market transactions were based on "fraudulent intent" and not on market fundamentals, which are prohibited by its anti-manipulation rule.

"Make-whole payments are not intended to provide an incentive to resource owners to design offers that seek to target and inflate such payments," FERC said.

The commission said Enforcement staff found evidence of an offering strategy at the 521-MW Mustang Station related to make-whole payments for six months in 2016. Golden Spread received $314,151 in make-whole payments from the SPP market during that time by "strategically" offering the facility in self-commit status during certain hours of the operating day, staff said.

Golden Spread's Mustang Station, the object of FERC's investigation | *GSEC*

SPP told FERC that make-whole payments are designed to keep resource owners indifferent to the RTO's commitment decisions by incentivizing them to offer their units in market status so that staff can make and optimize unit commitment decisions for the entire market, as opposed to resource owners self-committing their units.

FERC said the SPP market and its participants bore the cost of Golden Spread's violation and directed the RTO to use its "best efforts" to allocate the disgorgement funds on a pro rata basis to affected market participants.

Commissioner James Danly dissented from the decision, saying the proceeding represented "another instance of the commission penalizing a market participant for doing nothing more than attempting to maximize its revenues in conformity with the provisions of the tariff under which it operates."

"Golden Spread … responded to the incentives established by [SPP's] open access transmission tariff in the very manner in which SPP intended and, in so doing, provided the exact benefit to the market that SPP stated the tariff was designed to achieve," Danly wrote in his eight-page dissent. "Because Golden Spread acted within both the spirit and the letter of the tariff, it could not have committed market manipulation."

During the commission's open meeting Thursday, Danly said the settlement was "totally unjustifiable, and it represented a departure from our precedent in which a jurisdictional entity can comply with both the spirit and the letter of the tariff and still find themselves in the position where they have to buy their way out of enforcement scrutiny with a settlement."

FERC noted that Golden Spread cooperated with Enforcement during the investigation.

Golden Spread did not respond to a request for comment. The Amarillo, Texas-based cooperative's members serves more than 300,000 customers in Texas, Oklahoma, Kansas and Colorado. ■

Company Briefs

ADT to Acquire Sunpro Solar

National home-security company ADT last week announced it has agreed to purchase renewable-energy company Sunpro Solar for $825 million in cash and stock.

ADT will pay $160 million in cash and about 77.8 million shares of ADT common stock, according to a release. The sale, which was announced last week, will be completed later this year.

Sunpro designs, installs and maintains solar panel arrays on homes and businesses and has rapidly expanded since it was founded in 2008.

More: *The New Orleans Advocate*

Canoo Advances Manufacturing Dates for EVs

Electric vehicle company Canoo last week advanced its U.S. manufacturing timeline to begin production before the fourth quarter of 2022 instead of the beginning of 2023.

The company plans to expand to include Arkansas and locations in Oklahoma in addition to Pryor for research and development, software development, customer support and finance centers.

More: *Reuters*

JPMorgan Sues Tesla over Musk's Tweets

JPMorgan Chase last week sued Tesla for $162.2 million, accusing Elon Musk's company of "flagrantly" breaching a contract related to stock warrants after its share price soared.

According to the complaint, Tesla sold warrants to JPMorgan in 2014 that would pay off if their "strike price" were below Tesla's share price upon the warrants' expiration in June and July 2021. JPMorgan said it substantially reduced the strike price after Musk's Aug. 7, 2018, tweet that said he might take Tesla private at $420 per share and had "funding secured," and reversed some of the reduction when Musk later abandoned the idea.

However, Tesla's share price rose approximately 10-fold by the time the warrants expired, and JPMorgan said this required Tesla under its contract to deliver shares of its stock or cash. The bank said Tesla's failure to do that amounted to a default.

More: *CNN Business*

Federal Briefs

EPA Will Not Rewrite Airplane Emissions

The EPA last week said it will not rewrite the first-ever standards regulating greenhouse gas emissions from airplanes; the standards were completed in final days of the Trump administration.

President Joe Biden directed the EPA in January to consider whether to rewrite the rules, which face a legal challenge from 12 states and three environmental groups that say they do not go far enough. The Biden administration said it will press for new international standards at the upcoming round of international negotiations in February at the U.N. International Civil Aviation Organization.

The new rules apply to new-type designs as of January 2020 and to in-production airplanes or those with amended type certificates starting in 2028.

More: *Reuters*

FERC Finds PSCo, Xcel Engineering Not Affiliated

FERC last week accepted a generation replacement coordinator (GRC) agreement between the Public Service Company of Colorado (PSCo) and Xcel Engineering.

The agreement designates Xcel Engineering as the independent GRC responsible for administering PSCo's generator replacement process, which allows interconnection customers to replace existing generators with replacements requiring equal or less interconnection capacity.

The commission found that Xcel Engineering is "sufficiently independent" from PSCo, an Xcel Energy operating company. The engineering firm is wholly owned by a pair of Minnesota engineers, neither of which have any direct financial interests in PSCo, Xcel Energy its affiliates, or any interconnection customer or affiliate of any interconnection customer, the utility said.

More: *FERC*

NRC to Increase Oversight at Vogtle Nuclear Plant

The Nuclear Regulatory Commission last week said it will increase oversight at one of the Southern Company operated Vogtle nuclear power plants under construction in Georgia.

The decision to increase oversight comes after finalizing two inspection findings involving the safety-related electrical raceway system at Unit 3. The commission launched a special inspection in June and found two violations of regulations.

The NRC said the findings fall under a low-to-moderate safety significance, and it will schedule an inspection to verify that Southern Nuclear has taken appropriate corrective actions.

More: *Nasdaq*

State Briefs

COLORADO

Estes Park Power Line Sparked Kruger Fire

Estes Park Power and Communications last week confirmed that one of its power lines sparked the Kruger Rock fire.

In a statement, company public information officer Kate Rusch said a preliminary investigation by the Larimer County Sheriff's Office found the fire was likely sparked after a tree fell onto a distribution line in high winds.

The fire, reported the morning of Nov. 16, forced the evacuation of residents in neighborhoods south of Estes Park.

More: *CPR News*

ILLINOIS

Pritzker Signs Incentive Package Aimed at Boosting EV Production

Gov. **J.B. Pritzker** last week signed into law a package of incentives that he said will boost the production of electric vehicles throughout the state.

According to the governor's office, the measure will create thousands of jobs, help construct facilities, train workers getting into the EV manufacturing or supply field, and further the administration's goal of putting a million EVs on the road by 2030.

Pritzker said President Biden's infrastructure package would allow his state to get $149 million to expand its EV charging network, while the state is also eligible for another $2.5 billion in grants for charging stations.

More: *Chicago Tribune*

LOUISIANA

Entergy Customers Could See Rate Spike Because of Storms

Entergy Louisiana executives last week revealed that customers could see a storm recovery charge of about $11 on their monthly bills for 15 years to help offset costs due to the number of storms over the last two years.

Company CEO Phillip May and Vice President Mark Kleehammer released the estimate at a Public Service Commission meeting, which they attended to seek permission to take out a $1 billion loan that would cover part of their recovery costs. The commission approved that request without objection.

May said the storms over the last two years have cost the company an estimated $4 billion to $4.4 billion in damages.

More: *Louisiana Illuminator*

MAINE

CMP Agrees to Stop Corridor Work

Central Maine Power and its partners last week agreed to halt work on its New England Clean Energy Connect transmission line while a court considers a lawsuit challenging the constitutionality of a referendum to block the project.

The companies continued work despite 60% of state voters voting against the corridor on Nov. 2. That prompted Gov. Janet Mills to send a letter saying that the ongoing construction was "disrespectful to Maine people" and urged them to stop work while the court case and regulatory review play out. CMP President and CEO Thorn Dickinson responded by announcing a temporary suspension of construction.

More: *Maine Public Radio*

PUC Warns Customers to Brace for Rate Hike

The Public Utilities Commission last week warned utility customers that they could see a bill increase of as much as $30 a month starting next year.

The PUC opened bids for the default, standard offer electricity supply for customers served by Versant Power's utility lines. The lowest bid for supply was 89% higher than this year. The PUC recently approved a $5.50 increase to finance investments in Versant's poles and lines.

More: *Maine Public Radio*

MICHIGAN

Plainfield Twp. Approves State's First Floating Solar Project

The Plainfield Township board this month approved what will be the state's first floating solar project near a water treatment plant.

The 800-kW project will consist of panels floating on top of a reservoir. The panels will also decrease evaporation and reduce algae.

The project is expected to produce about 30% of the water plant's needs.

More: *WOOD*

MISSOURI

PSC Orders Spire to Write New Letter to Customers about NatGas Situation

The Public Service Commission last week issued an order for Spire to write a new letter to customers, and submit a draft to the commission, that would explain the natural gas supply situation as "accurately as possible."

A few weeks ago, Spire warned St. Louis area residents about potential outages or disruptions that could come with natural gas this winter. Congress members expressed concern to the PSC, saying Spire was stoking fear that it could lose natural gas supply if FERC does not extend the STL Pipeline's temporary certificate to operate through the winter.

During FERC's recent open meeting, it expressed support to vote on extending the pipeline's certificate before Dec. 13 but did not act on it during the meeting.

More: *KMOV*

OREGON

EQC Greenlights Zero Emissions Truck Plan

The Environmental Quality Commission last week approved a plan to shift heavy trucks and buses away from fossil fuels by gradually replacing the fleet with electric vehicles. The rules will go into effect in 2024.

The Advanced Clean Truck rule will require manufacturers of medium and heavy-duty vehicles, large pickup trucks, buses and tractor-trailer rigs to sell a certain percentage of zero emissions EVs. The commission also voted to require manufacturers to meet tougher emission standards for nitrogen oxides and to update low emissions vehicle rules to align with California's.

The Department of Environmental Quality

says 23% of the state's greenhouse gas pollution comes from heavy-duty trucks and buses.

More: *Oregon Public Broadcasting*

VIRGINIA

Dominion Customers to be Refunded $330M

The State Corporation Commission last week approved a settlement in the state's review of Dominion Energy's earnings between 2017 and 2020 and will refund ratepayers $330 million while reducing the company's annual rates by $50 million.

The average residential customer is expected to receive $67 in refunds in bill credits in the 2022-2223 period and will also see their monthly bill decline by about 90 cents starting in two months. Company shareholders will also see returns rise under the settlement, which raises the utility's return on equity from 9.2% to 9.35%.

More: *Virginia Mercury*

WISCONSIN

Democrats Unveil Bills to Combat Climate Change

Democratic lawmakers last week unveiled a package of 22 bills that seek to reduce the effects of climate change and support a clean energy transition.

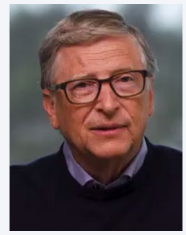
The package of bills from Lt. Gov. Mandela Barnes, Rep. Greta Neubauer (D-Racine) and other lawmakers calls for funding programs and policy changes to support energy efficiency, sustainable farming practices, training for clean energy jobs, and a just transition to renewable energy. The proposals would also support climate change research, planning and education.

The package includes a $10 million annual grant program to support weatherization and energy efficiency in schools. Another proposal would make $1.8 million available to counties to hire staff to do climate resilience work. Other measures would require the Public Service Commission to consider the social cost of carbon when authorizing new energy projects.

More: *Wisconsin Public Radio*

WYOMING

Gates' TerraPower Plans to Build Reactor at Coal Plant Site



Bill Gates and his nuclear power company TerraPower last week announced plans to build a new reactor called Natrium, which will be cooled by liquid sodium, at the site of the Naughton coal plant, which is slated to close in 2025.

The 345-MW reactor is designed to generate electricity around the clock and would be coupled with a molten-salt system to store heat and enable the plant to surge up to 500 MW for more than five hours.

The project's cost will be around $4 billion. Taxpayers, under contract terms, pick up half that, matching private sector spending dollar for dollar. Congress has allocated most of the $2 billion to the Energy Department with most of it in the infrastructure bill recently signed by President Biden.

More: *Inside Climate News*