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Your Eyes and Ears on the Organized Electric Markets

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ISSN 2377-8016 : Volume 2021/Issue 4 January 26, 2021

Biden Begins Undoing Trump's Legacy

By Rich Heidorn Jr.

President Joe Biden wasted no time beginning to reverse the Trump administration's energy and environmental policies Wednesday, taking action to rejoin the Paris Agreement on climate change, block the Keystone XL oil pipeline and review more than 100 regulations by EPA, the Interior Department and other agencies.

Biden also put a temporary moratorium on oil and gas drilling in the Arctic National Wildlife Refuge and will seek to tighten oil and gas methane regulations, energy efficiency standards for appliances and air toxic rules for power plants.

In his inaugural *address*, Biden called for unity to confront the coronavirus pandemic, racial injustice and what he called "a climate in crisis."

The "cry for survival comes from the planet itself," he said. "A cry that can't be any more desperate or any more clear."

President Joe Biden | *The White House*

Biden signed more than a dozen executive orders Wednesday afternoon, shortly after Vice President Kamala Harris swore into office Sens. Jon Ossoff and Raphael Warnock, both Democrats from Georgia, and Harris' successor, Alex Padilla (D-Calif.).

"We're going to combat climate change in a

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Biden Names Glick as FERC Chair

DOE Announces New Senior Staff

By Michael Brooks

President Biden early Thursday named Commissioner Richard Glick as FERC chairman, replacing Republican James Danly, who held the gavel for little more than two months.

Glick, one of two Democrats on the five-member commission, was the widely expected pick. He needed to only wait half a day before receiving direction from the new president, a far cry from when former President Donald Trump unexpectedly demoted Chair Norman Bay six days after his inauguration in 2017. That led to Bay's resignation and the loss of the commission's quorum for six months. (See *Bay Resigns after Trump Taps LaFleur as Acting FERC Chair*.)

Glick would join later that year in November after serving as general counsel for the Democrats on the Senate Energy and Natural Resources Committee. He served as the lone Democrat on the commission for more than a year after the departure of Commissioner Cheryl LaFleur in August 2019 until the arrival of Allison Clements last month.

Prior to his job in the Senate, Glick was vice president of government affairs for Iberdrola's renewable energy, electric and gas utility, and natural gas storage businesses in the U.S.

"I am honored that President Biden has shown the confidence in me to lead the agency at this critical moment in time," Glick said in a statement. "I look forward to continuing working with my fellow commissioners and the exemplary FERC staff to pursue the commission's

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Sierra Club Pans Utility Climate Efforts

Companies not Replacing Coal, Gas Fast Enough to Meet Pledges, Group Says

By Rich Heidorn Jr.

Despite pledges to reduce emissions, many of the nation's largest utilities plan to continue using coal and natural gas-fired generation through 2030, threatening efforts to mitigate climate change, the Sierra Club said in a *report* Monday.

The environmental group said U.S. utilities must eliminate coal and reduce greenhouse gas emissions by at least 80% by 2030 to limit global warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit), the threshold many climate scientists say is crucial to avoiding the

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Plan	Price
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way we have not before," Biden said at the signing in the Oval Office. But he added, "They are just executive actions. They are important, but we're going to need legislation for a lot of the things we're going to do."

Harris will have the tie-breaking vote in the Senate, which is split 50-50. But unless the Democrats decide to eliminate the filibuster, they will need to win support of at least 10 Republicans to pass most legislation.

The new president received pledges of cooperation from environmental organizations and industry trade groups — including the U.S. Chamber of Commerce, which on Jan. 19 for the first time endorsed a carbon tax.

The D.C. Circuit Court of Appeals also on Jan. 19 vacated the Trump administration's Affordable Clean Energy (ACE) Rule for regulating power plants' greenhouse gas emissions, eliminating a regulatory headache for Michael Regan, Biden's nominee for EPA administrator. (See related story, *DC Circuit Rejects Trump ACE Rule*.)

But the day also came with a reminder that Biden's executive powers will go only so far to meet his pledge to eliminate power sector carbon emissions by 2035 and make the U.S. the leader in electric vehicle production. The Democrats' thin margins in Congress make it unlikely he will win approval for his proposed $2 trillion climate plan. (See *Biden Offers $2 Trillion Climate Plan*.)

Rep. Cathy McMorris Rodgers (R-Wash.), ranking member of the House Energy and Commerce Committee, issued a statement opposing the Paris Agreement, the revocation of the Keystone XL presidential permit and what she called "Green New Deal-style mandates."

"There couldn't be a worse time to double down on these executive orders as our economy recovers from the COVID-19 crisis. They will raise costs on families and also hamper America's global competitive edge to lead a new era of innovation," she said. "To win the future, we should come together on free-market strategies to protect our environment and unleash innovation without job-crushing mandates."

Any legislative success would have to come with the support of Sen. Joe Manchin (D-W. Va.), incoming chairman of the Senate Energy and Natural Resources Committee, who gave measured support for rejoining the Paris Agreement.

"I agree that President Biden must renew America's leadership on climate change through innovation," the coal state senator said in a statement. "It is an issue that threatens every community, in every country across the globe. I also uphold my view that the Paris Agreement must be improved to set all nations on the same stage and hold each to the same standards of accountability.

"We must use every tool, natural resource and technology at our disposal in the cleanest way possible," he added. "We must create jobs in places like West Virginia and wherever traditional energy workers have been left behind; and we must work with our allies and trading partners and hold every nation accountable to our climate goals."

Reaction

On Jan. 19, the U.S. Chamber of Commerce added a paragraph to its position on climate change saying it supports a "market-based approach to accelerate" reductions in GHG emissions.

"We believe that durable climate policy must be made by Congress, and that it should encourage innovation and investment to ensure significant emissions reductions, while avoiding economic harm for businesses, consumers and disadvantaged communities," said the *statement*, which was attributed to Martin Durbin, senior vice president for policy. "This policy should include well designed market mechanisms that are transparent and not distorted by overlapping regulations. U.S. climate policy should recognize the urgent need for action, while maintaining the national and international competitiveness of U.S. industry and ensuring consistency with free-enterprise and free-trade principles."

Todd Snitchler, CEO of the Electric Power Supply Association, also urged Biden to use market-based approaches rather than mandates.

"Well designed power markets and policy approaches that unleash competition and focus on reducing emissions — not fuel- or technology-specific mandates — will create bipartisan opportunities and real solutions that protect customers as our grid evolves," Snitchler said. "An economy-wide carbon price, a well designed Clean Energy Standard or other market solutions allow all resources to compete to reduce emissions at the least cost."

Biden signs an executive order to rejoin the Paris Agreement on climate change. | *CNN*

Abigail Ross Hopper, CEO of the Solar Energy Industries Association, said her excitement over Biden's inauguration was tempered by "feelings of resolve and a sense of gravity for the work ahead. The climate crisis is a threat to everyone on this planet."

Gregory Wetstone, CEO of the American Council on Renewable Energy, praised Biden's "commitment to move America beyond climate denial on his very first day in office, starting with rejoining the Paris climate agreement and initiating a wholesale review of the Trump administration's climate and clean energy rollbacks — including the Department of Labor's misguided anti-ESG investing rule."

Liz Burdock, CEO of the Business Network for Offshore Wind, cited the 30% tax credit included for offshore wind developers in the stimulus and budget bill approved by Congress in December. (See *Wind, Solar, EE, CO2 Storage Win Tax Breaks*.)

"This is the opportunity the offshore wind industry has waited for," she said. "President Biden's unwavering commitment to develop renewable energies will usher in a new era for the offshore wind industry and for the U.S. supply chain. We are excited to work with the Biden administration to build the next great American industry that will inject at least $166 billion into the future U.S. economy."

Jon Goldin-Dubois, president of Western Resource Advocates, said rejoining the Paris Agreement is only a "first step."

"In addition, we must see continued and expanded state action to realize significant reductions in greenhouse gas emissions, and we need additional and more aggressive federal measures, beyond rejoining the Paris climate agreement, to put our nation on track to meet the reductions called for by the science," he said. ■

FERC/Federal News

DC Circuit Rejects Trump ACE Rule

By Rich Heidorn Jr.

The D.C. Circuit Court of Appeals last week rejected the Trump administration's Affordable Clean Energy (ACE) Rule for regulating power plants' greenhouse gas emissions, saying EPA's rulemaking and its repeal of the Obama administration's Clean Power Plan "hinged on a fundamental misconstruction" of the Clean Air Act.

Ruling on the last full day of former President Donald Trump's term, the court also said the ACE Rule's delayed enforcement deadlines were "arbitrary and capricious." It vacated the rule and remanded it to EPA for further action.

The case was decided by Obama appointees Patricia Millett and Cornelia Pillard in a 147-page *ruling*, while Judge Justin Walker — appointed last year by Trump — filed a 38-page opinion concurring in part and dissenting in part (*American Lung Association and American Public Health Association v. Environmental Protection Agency and Andrew Wheeler, Administrator, et al.*).

The court, which consolidated 12 petitions for review of the ACE Rule, agreed with a coalition of state and municipal governments, utilities, and renewable energy and environmental advocates who challenged EPA's contention that Section 7411 of the Clean Air Act only permits emission reduction measures that can be implemented at and applied to the generation source.

The court also ruled in favor of the Biogenic CO_2 Coalition in finding EPA in error for saying states could not count biomass co-firing as a method of complying with numerical emission limits under ACE.

Section 111 of the Clean Air Act, which was added in 1970 (42 U.S.C. Section 7411), ordered EPA to regulate any new and existing stationary sources of air pollutants that contribute significantly to air pollution and endanger public health or welfare.

The court said Section 111 acts as "a catch-all" to prevent gaps in regulations controlling stationary source emissions. Section 111(b)(1)(A) says the EPA administrator "shall" regulate any category of sources that, "in his judgment … causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."

The court rejected an argument that a drafting error in the 1990 Clean Air Act amendments prohibits EPA from regulating carbon emissions under Section 111(d) because the agency already regulates mercury from power plants under Section 112.

President Barack Obama nominated Judge Patricia Millett (right) to the D.C. Circuit Court of Appeals in 2013, along with (from left) Robert Wilkins and Cornelia "Nina" Pillard. | *The White House*

"Policy priorities may change from one administration to the next, but statutory text changes only when it is amended," the court wrote. "The EPA's tortured series of misreadings of Section [111] cannot unambiguously foreclose the authority Congress conferred. The EPA has ample discretion in carrying out its mandate. But it may not shirk its responsibility by imagining new limitations that the plain language of the statute does not clearly require."

The D.C. Circuit heard arguments on challenges to the CPP in 2016 but never ruled on it after Trump's EPA said it planned to withdraw it. (See *Supreme Court Blocks Clean Power Plan*.) The administration said the rule violated the CAA because it endorsed generation shifting and emissions trading among permissible emission-control measures.

EPA contended "the plain meaning" of Section 111(d) "unambiguously" limits the best system of emission reduction to only those measures "that can be put into operation at a building, structure, facility or installation." Based on that interpretation, the agency determined the best system of emission reduction was limited to seven heat-rate improvement techniques for existing coal-fired generators. (See *EPA Finalizes CPP Replacement*.)

EPA predicted that the ACE Rule would reduce CO_2 emissions by less than 1% from baseline emission projections by 2035, a calculation that did not consider potential emission increases from the "rebound effect" — the possibility that coal plants could run more often due to the efficiency gains.

"The EPA left unaddressed in this rulemaking (or elsewhere) greenhouse gas emissions from other types of fossil fuel-fired power plants, such as those fired by natural gas or oil," the court noted.

Best System of Emission Reductions

The court said EPA was ignoring its own precedents. "Nothing that the EPA identifies or that we discern in the relevant history shows the enacting Congress myopically 'focused on steps that can be taken at and by individual sources to reduce emissions,'" it said.

"Where the characteristics of the source category and the pollutant at issue point to emissions trading programs or production shifts from higher- to lower-emitting sources as components of the 'best system,' the EPA has in the past consistently concluded that it had the authority to consider them," the judges wrote, citing the 2005 Clean Air Mercury Rule, which included a cap-and-trade program to reduce emissions from coal-fired generators.

The court said EPA's interpretation "effectively relegates federal regulators back to the sidelines where they stood before Congress overhauled the Clean Air Act in 1970 … [in which] a virtually unanimous Congress dramatically strengthened the federal government's hand in combatting air pollution."

FERC/Federal News

In the 50 years since the amendments, the court noted, combined emissions of six key pollutants regulated under the National Ambient Air Quality Standards dropped by 73%. "The EPA's new reading of Section [111] would atrophy the muscle that Congress deliberately built up."

The court also rejected claims from two coal mining companies that contended the ACE Rule was illegal because EPA failed to make a specific endangerment finding for carbon dioxide emitted from existing power plants, citing the agency's 2015 finding that GHGs "endanger public health, now and in the future."

The statement reaffirmed its 2009 endangerment finding, which followed the Supreme Court's 2007 ruling in *Massachusetts v. EPA* that carbon dioxide and other GHGs are "air pollutants" under the CAA.

Revised Deadlines

The ACE Rule also sought to extend state deadlines for the submittal of their emission-reduction plans from nine months to three years and EPA's deadline to act on those plans from four months to one year.

The court said EPA "failed to justify substantially extending established compliance time frames, including deadlines that it has had in place since 1975," citing the agency's "failure to say anything at all about the public health and welfare implications of the extended time frames."

"The EPA's weak grounds for routinizing additional compliance delays in the amended implementing regulations are overwhelmed by its total disregard of the added environmental and public health damage likely to result from slowing down the entire Section [111](d) regulatory process."

Opponents said the amended rules would allow a delay of up to five years between finalizing an EPA emission guideline and the beginning of emission reductions.

Dissent

Judge Walker, who previously clerked for then-Judge Brett Kavanaugh and Justice Anthony Kennedy, disagreed with Judges Millett and Pillard on EPA's ability to conduct "outside the fence line" regulation. He also rejected EPA's authority to regulate GHGs under Section 111.

"Hardly any party in this case makes a serious and sustained argument that Section 111 includes a clear statement unambiguously authorizing the EPA to consider off-site solutions like generation shifting. And because the rule implicates 'decisions of vast economic and political significance,' Congress' failure to clearly authorize the rule means the EPA lacked the authority to promulgate it," Walker wrote.

"In my view, the EPA was required to repeal the [CPP] and wrong to replace it with provisions promulgated under Section 111. That's because coal-fired power plants are already regulated under Section 112, and Section 111 excludes from its scope any power plants regulated under Section 112. Thus, the EPA has no authority to regulate coal-fired power plants under Section 111."

Walker also said *Massachusetts v. EPA* did not answer crucial questions. "For example, does the Clean Air Act force the electric power industry to shift from fossil fuels to renewable resources? If so, by how much? And who will pay for it? Even if Congress could delegate those decisions, *Massachusetts v. EPA* does not say where in the Clean Air Act Congress clearly did so."

Reaction

Observers differed last week on how the ruling might affect the Biden administration's efforts to address climate change.

"For four years, state attorneys general used every tool at their disposal to reveal the shoddy legal arguments and fudged math behind the Trump administration's anti-climate policies. The so-called 'Affordable Clean Energy' Rule was no exception," said Jessica Bell, deputy director of the State Energy & Environmental Impact Center at the NYU School of Law. "Now the hard work begins to put in place a permanent, legally sound rule that will reduce carbon pollution from power plants as the broader economy continues to transition to clean energy generation. State AGs, the State Impact Center and clean energy allies are ready to get to work."

Dorsey & Whitney attorney Megan Houdeshel, who represents mining, petroleum and chemical industry clients, said the ruling "is just the first example of many we are going to see in terms of industry uncertainty when it comes to Trump era regulations."

"Whether it be courts overturning regulations, or the incoming Biden administration reversing course on executive orders and policy, companies should be ready for changes in environmental regulations applicable to their business and operation," Houdeshel said.

"Quite a loss for [EPA Administrator Andrew] Wheeler and Trump on the way out the door," tweeted Harvard Law School professor Jody Freeman. "Today's decision clears the deck for the Biden EPA team to adopt a strong new rule for power plants and puts pressure back on Congress to pass a climate regime, because a fresh legislative approach would be most cost effective and comprehensive."

But Craig Oren, a Rutgers Law School professor emeritus who specializes in the CAA and environmental law, responded with a caution. "This decision seems to say that Section 111(d) authorizes regulation away from any particular plant and may be used despite the mercury limits under Section 112," he said. "But the Supreme Court is sure to reverse given the stay it issued against the Clean Power [Plan]." ■

Judge Justin Walker (right) and Senate Majority Leader Mitch McConnell (R-Ky.) | *Sen. Mitch McConnell*

FERC/Federal News

Biden Names Glick as FERC Chair

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important statutory missions."

Glick has frequently delivered strongly worded dissents over orders by his Republican colleagues approving natural gas infrastructure without considering their downstream greenhouse gas emissions and what he argues as interfering with state resource mixes through RTO/ISO capacity market rules — positions he also explained at FERC's open meetings.

Despite these strong disagreements, Glick has often said at public events that he gets along with his fellow commissioners and former Chair Neil Chatterjee. While Chatterjee tended not to respond to his comments at meetings, Glick found sparring partners in Danly and Commissioner Bernard McNamee.

Trump named Danly chair two days after the presidential election, demoting Chatterjee after the latter joined with Glick on Oct. 15 in supporting a proposed policy statement inviting states to introduce carbon pricing in wholesale electricity markets to address climate change. (See *Trump Names Danly FERC Chair*.)

Barring any resignations in the interim, Glick and Clements will remain in the minority until at least the end of June, when Chatterjee's term ends, though it could last longer if Biden and the Senate do not immediately appoint a replacement. At the commission's open meeting Jan. 19, Danly's last as chair, Glick praised both Chatterjee and Danly for their leadership. (See related story, *FERC Ends Trump Era with a Busy Agenda*.)

"As everyone who follows this commission knows, I've been a little critical at times over the last couple years for what I believe, at times, was a departure from the commission's normal practice," Glick said in closing remarks. "Instead of back-and-forth discussions and negotiations ... the minority was presented with a take-it-or-leave-it offer on a number of orders. ...

"But I want to say, first under the leadership of Chairman Chatterjee beginning this past summer, and then under Chairman Danly, there has been a noticeable shift in the approach, and I'm very appreciative for that. In my opinion, there has been far more opportunity discussion, negotiation and compromise." He cited FERC Order 2222, which in September directed RTOs and ISOs to open their markets to distributed energy resource aggregations, as an example.

"I'm confident ... this five-member commission will work well together to accomplish this commission's important missions, and I look forward to continuing to work with my colleagues," he concluded.

Numerous energy trade associations, politicians and energy lawyers congratulated Glick on his promotion — and expressed their hope he would address their priorities.

"I have worked with Rich for many years, and I know he will lead FERC and serve the nation well as chairman," said EEI Executive Vice President and former FERC Commissioner Phil Moeller. "We congratulate him and encourage the commission to address the many key issues impacting EEI member companies and our customers, including making necessary reforms in wholesale electricity markets; enabling the development of the transmission infrastructure needed to deliver more clean energy to customers; and continuing to focus on reliability and energy grid security."

American Council on Renewable Energy CEO Gregory Wetstone said ACORE is "particularly hopeful that Chairman Glick will turn his strong condemnation of the minimum offer price rule in the PJM capacity market and the buyer-side mitigation measures currently imposed in NYISO into immediate action."

FERC Chairman Richard Glick | © *RTO Insider*

"ACORE also looks forward to the commission beginning the process of replacing Order No. 1000 on transmission planning," Wetstone added. "We also encourage the Commission to swiftly finalize its proposed policy statement on carbon pricing and expand and standardize hybrid resource integration across RTO/ISO markets." (See *Wide Support for FERC Carbon Pricing Statement*.)

Glick "understands the need to retool and expand competitive wholesale power markets to align them with state and federal clean energy and climate policies, ensuring that they serve as a platform for a zero-carbon advanced energy future," said Jeff Dennis, managing director and general counsel for Advanced Energy Economy. "We also look forward to Chairman Glick's leadership in optimizing the transmission grid to deliver the cost-effective advanced energy resources that customers are demanding."

Biden's DOE Roster Fills out

Also on Thursday, the Department of Energy *announced* a slate of appointees to senior leadership positions.

Among them is Kelly Speakes-Backman as principal deputy assistant secretary for energy efficiency and renewable energy. Speakes-Backman was the first CEO of the Energy Storage Association, whose board of directors immediately appointed Vice President of Policy Jason Burwen as interim CEO. Prior to ESA, Speakes-Backman served on the Maryland Public Service Commission.

Jennifer Wilcox will serve as principal deputy assistant secretary for fossil energy. Wilcox is the presidential distinguished professor of chemical engineering and energy policy at the University of Pennsylvania, where her research at the Kleinman Center for Energy Policy focused on carbon management, capture and sequestration.

Avi Zevin, formerly a senior attorney and affiliated scholar at the New York University School of Law's Institute for Policy Integrity, was appointed deputy general counsel for energy policy.

Biden, who is moving quickly to put his cabinet in place, has nominated former Michigan Gov. Jennifer Granholm as secretary of energy. The Senate ENR Committee on Thursday announced it will hold her confirmation hearing this Wednesday. ■

FERC/Federal News

FERC Ends Trump Era with a Busy Agenda

Chair Danly Repeatedly Rebuffed on Orders

By Michael Brooks

FERC spent its last open meeting during former President Donald Trump's tenure welcoming a new member and rejecting proposed orders by outgoing Chairman James Danly.

Normally held on the third Thursday of the month, the commission's monthly open meeting was moved to Tuesday, Jan. 19, the day before President Biden's inauguration. It was only one of many unusual aspects of the meeting.

Republican Commissioner Neil Chatterjee and Democratic Commissioners Richard Glick and Allison Clements voted against four proposed pipeline certificate orders brought to a vote by Danly, a Republican. The three also voted against granting rehearing of Order 871 — which barred natural gas pipeline developers from beginning construction before FERC fully acts on challenges to project approvals — and a proposed Notice of Inquiry on the White House Council on Environmental Quality's updates to the environmental review process under the National Environmental Policy Act (NEPA). (See *FERC Revises Pipeline Policy on Landowner Concerns* and *Trump Admin Proposes Streamlining NEPA Reviews*.)

Chatterjee, Glick and Clements also voted against a proposed order regarding PJM's minimum offer price rule (MOPR). Republican Mark Christie, who joined the commission Jan. 4 after serving as chair of the Virginia State Corporation Commission, did not participate in the vote.

Christie also did not participate in orders on the Mountain Valley gas pipeline project, part of which would run through Virginia. With Chatterjee joining Danly, the commission deadlocked 2-2, meaning it did not legally act on them. Christie, however, has not recused himself from either proceeding.

One of the FERC chairman's responsibilities is deciding what items get voted on and discussed at the commission's open meetings. They usually include major actions, such as landmark orders, or topics of particular importance to the chair. Proposed orders are rarely rejected, as chairs usually attempt to build a consensus prior to voting on them. Prior to Danly's chairmanship, the last time an order on the agenda was rejected came as a surprise, when former Commissioner Bernard McNamee announced he would be voting against an order approving the Jordan Cove LNG export terminal in Oregon after state regulators rejected a permit for the project's developers. (See *In Rare Surprise, FERC Declines to Act on Jordan Cove*.)

After he became chair in early November, Danly began bringing to a vote notational orders, such as waiver requests, on which he dissented. And last month's open meeting featured a presentation on a proposed order to show cause requiring CAISO to demonstrate it can meet demand during extreme heat events — a proposal that Chatterjee and Glick rejected. (See *FERC Won't Meddle in CAISO Resource Adequacy, Yet*.)

This month's meeting was also unusual in that Danly responded to each of his colleagues' opening remarks in which they explained why they were voting against certain orders. In doing so, Danly for the first time explained his philosophy for voting on orders he knows will fail.

Chatterjee criticized two proposals to deny requests for rehearing of FERC staff's approval of compressor stations on the Sabal Trail Transmission natural gas pipeline in the Southeast U.S. (CP15-17-005) and the Algonquin Gas Transmission pipeline in the Northeast (CP16-9-011). Chatterjee said that the orders did not "appropriately consider the comments on environmental justice and COVID" or "take into account the comments made by nearby residents on safety."

"The reason why I brought these up for a vote, knowing full well that there would be a great likelihood that they would be voted down, is because ... far from ignoring comments, what I insisted was that there be an order that specifically addressed the comments," Danly said. The Administrative Procedure Act "requires all comments to be responded to. And it is in fact fidelity to legal regimes that required me to offer these for" voting, he said.

Danly, however, also struck items from the

FERC headquarters | © *RTO Insider*

FERC/Federal News

agenda, which had already featured an unusually high number of omitted items. These included acting on its Notice of Proposed Rulemaking on transmission incentives (RM20-10); a complaint by Cricket Valley Energy Center and Empire Generating Co. asking the commission to order NYISO to institute a MOPR (EL21-7); and a power supply agreement between Southwestern Electric Power Co. and Hope Water & Light Commission, a municipal utility in Arkansas (ER20-3040-001, *et al.*). (See *Tx Incentive NOPR Leaves Many with Sticker Shock* and *NYISO, Others Rebut MOPR Complaint to FERC*.)

Footnote 134

The text of the orders that FERC rejected will not be published — at least not as they were drafted as of Jan. 19. That includes an order that commissioners said would have caused further confusion about whether resources procured in state-directed default service auctions are subject to PJM's expanded MOPR. (EL16-49-006, *et al.*).

FERC in October *clarified* that such auctions would not be classified as state subsidies, so resources procured in them would thus be exempt from the MOPR. (See *FERC Acts on PJM MOPR Filing*.)

At last week's meeting, Chatterjee maintained that the order made it clear that "revenue from a state's nondiscriminatory and competitive default service auction would not, and should not, qualify as a state subsidy, thereby triggering the MOPR." He also noted that FERC accepted, without any protests, a compliance filing in which PJM proposed tariff language that specified that default service providers complying with state RPS programs would be exempt from the MOPR.

However, a footnote in the order caused confusion among stakeholders, leading to a rehearing request from several generating companies who said the footnote's language conflicted with that of the order itself.

Footnote 134 reads in part, "While this order accepts the exemption that PJM has proposed, it does not constitute a ruling that any particular state-directed default service auction actually meets these requirements. For example, we note that the New Jersey Basic Generation Service auction appears to give guidance that conflicts with the proposition it is 'nondiscriminatory' or 'fuel neutral.'"

It's unclear what exactly the proposed order on the rehearing request would have done, but Chatterjee said it "neither squarely addresses nor eradicates the confusion and the conflict created by the footnote. Instead, the order doubles down on it, and I can not support such a path. I continue to believe it was the right call to exempt default service auctions from the MOPR and accept PJM's tariff language that did exactly that." He said he would have supported an order that vacated the footnote and further clarified the commission's position.

"This footnote will continue to create unnecessary uncertainty in a proceeding that has had a great deal of that."

—Commissioner Allison Clements

Glick also said the order "doubles down on the matter by refusing to vacate Footnote 134, even though it is directly contrary to tariff language that the commission approved in October. My argument is that you can't have it both ways. ... If the tariff language is valid, we must vacate Footnote 134."

"This footnote will continue to create unnecessary uncertainty in a proceeding that has had a great deal of that," Clements said. "I'm hopeful that the commission will promptly resolve the pending issues in this proceeding in the near term."

Future of FERC Under Biden

During the meeting, Danly indicated he planned to continue serving on the commission "over the next few years," even after his chairmanship ends. His term ends in 2023. Biden gave the gavel to Glick on Thursday. (See related story, *Biden Names Glick as FERC Chair*.)

Both Clements and Christie expressed their eagerness to work on the interaction between state policies and RTO markets.

In concurring on a separate order in the MOPR proceeding, Clements said, "I hope to immediately engage with my colleagues to work with states, the regional transmission operators, independent system operators and the stakeholder community to re-examine the current capacity market constructs and the interplay between state public policies and commission-jurisdictional organized whole electric markets." (See related story, *FERC Partially Accepts PJM MOPR Offer Floor Filing*.)

"I hope that in the months ahead that this commission will examine comprehensively the issues related to state public policies and RTO markets ... in a form in which all interested entities, including the states, of course, can voice their views," Christie said in his opening comments. "This is a complicated issue. It raises several important questions and competing interests and competing values. ... I hope we will examine this issue and all its aspects in a general forum."

Chatterjee also said he looked forward to working on the commission into Biden's term. He expressed hope that Biden, whom he called "a person of enormous compassion," would bring "a return to the high standards of leadership and decency expected of the office."

"It will be steadying to have his experience and leadership in the White House," Chatterjee said.

Glick recalled ribbing Chatterjee at last month's meeting when Chatterjee noted he was voting against an order for the first time. Glick had joked that voting "no" would get easier over time.

With the Democratic commissioners outnumbered at least until the end of Chatterjee's term June 30 — and possibly longer — Glick said, "I hope that changes to a bunch of 'yes-es.'" ■

"It will be steadying to have [Biden's] experience and leadership in the White House."

—Commissioner Neil Chatterjee

FERC/Federal News

FERC Seeks Details on RTO Hybrid Resource Treatment

By Robert Mullin

FERC last week stopped short of ordering RTOs and ISOs to modify market rules to foster participation by hybrid resources, instead directing the grid operators to submit detailed reports about their existing efforts to accommodate the growing number of renewables paired with energy storage (*AD20-9*).

The directive, released Jan. 19, comes six months after FERC convened a technical conference to explore whether it should require rule changes to open organized electricity markets to hybrid resources in the same way Order 841 cut a path for storage-only resources. (See *Hybrid Resource Developers Ask for Uniform Rules*.)

Resource developers participating in the one-day conference had called on FERC to issue a rulemaking. They said existing RTO practices leave too much uncertainty for hybrids, ranging from interconnection agreements that hamper the ability to add storage to projects already in the queue to market participation models that fail to recognize the ways hybrid resources can be configured to provide multiple services to the market.

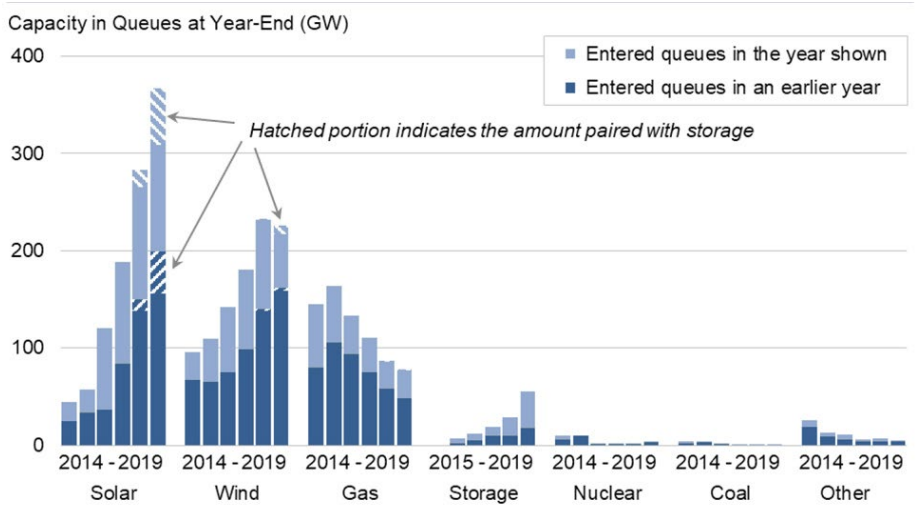
At the conference, Rachel McMahon, senior manager of public policy at Sunrun, called for "clear and consistent workable rules." McMahon said Sunrun did not have a "clear, easy or economically viable path to provide" capacity or energy services even in CAISO, which has the most advanced participation rules in the country.

Speaking at the same conference, CAISO Director of Infrastructure Contracts and Management Deborah Levine acknowledged that grid operators are facing a "tsunamic wave" of storage but also cautioned that "we need to get some more operations under our belt before we start changing the rules."

Request, not Reforms

FERC's order tilted in favor of the grid operators — at least for now. In it, the commission noted that most RTOs and ISOs emphasized in their post-conference comments that they are already working to address the needs of hybrid resources.

"Given these ongoing efforts, several RTOs/ISOs requested that the commission either allow such work to continue before taking additional action, or provide for flexibility in any such action," FERC wrote. "In consideration of these comments, we are not directing specific reforms at this time."



RTO/ISO interconnection queues are seeing a rapid growth in resources that pair renewables with energy storage. | *Berkeley Lab*

Rather than handing mandating rule changes, FERC asked the RTOs to submit reports describing present and pending practices for addressing four hybrid resource issues, including those related to terminology, interconnection processes, market participation and capacity valuation.

On terminology, the RTOs must explain whether their tariffs or business practice manuals contain a definition of a hybrid resource and, if not, how they categorize any existing hybrid resources in their interconnection queues.

"Similarly, if the RTO/ISO does not have a definition, but there are hybrid resources, as described above, participating in the RTO/ISO markets, the RTO/ISO should explain how they have been participating to date — for instance, as a generator or as part of an energy storage participation model" the commission wrote.

Regarding interconnections, each RTO must describe the process for both a hybrid resource newly entering the queue and a resource adding a storage component to an existing interconnection request.

"The description should include details of interconnection request requirements that are specific to hybrid resources (such as parameters necessary for transmission providers to adequately model hybrid resources), how the RTO/ISO models these types of resources both for reliability and market participation, and how an RTO/ISO would treat a request for the addition of storage to an existing interconnection request," FERC said.

RTOs must also provide details about any potential changes to tariffs, business practice manuals or stakeholder processes that could affect interconnection of hybrid resources.

Regarding market participation, RTOs are asked to explain how hybrid resources are currently participating in energy, ancillary services and capacity markets, including a description of what services the resources are allowed to provide and how their participation is modeled.

"Where the RTO/ISO has modeling and bidding provisions unique to hybrid resources, it should enumerate such provisions," the commission said. "If no specific provisions exist, the RTO/ISO should provide an explanation of whether and how hybrid resources have participated in its markets to date. If hybrid resources are not able to provide certain services, the RTO/ISO should provide an explanation of why they are not able to provide such services."

Finally, RTOs must describe what methods they use to determine the capacity values of hybrid resources in their markets — or any changes being planned or under discussion in stakeholder processes.

"The RTOs/ISOs are at various stages of either considering or proposing changes to more distinctly accommodate the unique characteristics of hybrid resources," FERC noted.

RTOs must submit their reports to FERC within 180 days. ■

FERC/Federal News

Sierra Club Pans Utility Climate Efforts

Companies Not Replacing Coal, Gas Fast Enough to Meet Pledges, Group Says

Continued from page 1

worst impacts of climate change.

"There are three key things utilities must do to enable us to avoid catastrophic warming: They must retire existing coal plants by 2030, terminate plans to build new gas plants and build clean energy much faster," it said.

The study was based on a review of integrated resource plans and public announcements by the 50 utilities that hold the biggest fossil fuel generating fleets. The 50 companies, which include 79 operating companies, own half of all remaining coal and gas generation in the U.S.

"We find there is a stark difference between utilities' existing coal and gas generation (1,310 million MWh) and how much clean energy they plan to add this decade (only 250 million MWh)," the group said. "In other words, despite 33 of these companies having a public climate goal, there is an enormous gap between utilities' current practices and what they need to do to protect people and the planet."

The companies in the study own 68% of remaining coal generation but have committed to retire only one-quarter of that capacity by 2030, the organization said.

The club noted that Duke Energy, Dominion Energy and Southern Co., which are responsible for more than 12% of the nation's power sector carbon emissions, each have set corporate climate goals pledging to reach net-zero emissions by 2050. "Yet these companies' investment plans include large amounts of new gas and lack adequate build-outs of clean energy. Duke and Southern Co. both score an 'F' in our analysis, and Dominion scores a 'D.' All three will miss their own decarbonization targets unless they change their plans."

Southern Seeks 'Orderly Transition'

Southern, which has promised to reduce its carbon emissions 50% by 2030 from a 2007 baseline, told *RTO Insider* that it was "embracing an orderly transition" of its coal fleet in a process that considers affordability, reliability, safety, environmental impacts and resilience. It said it expects 2020 to be the first time in modern history that the company obtained less than 20% of its generation from coal.

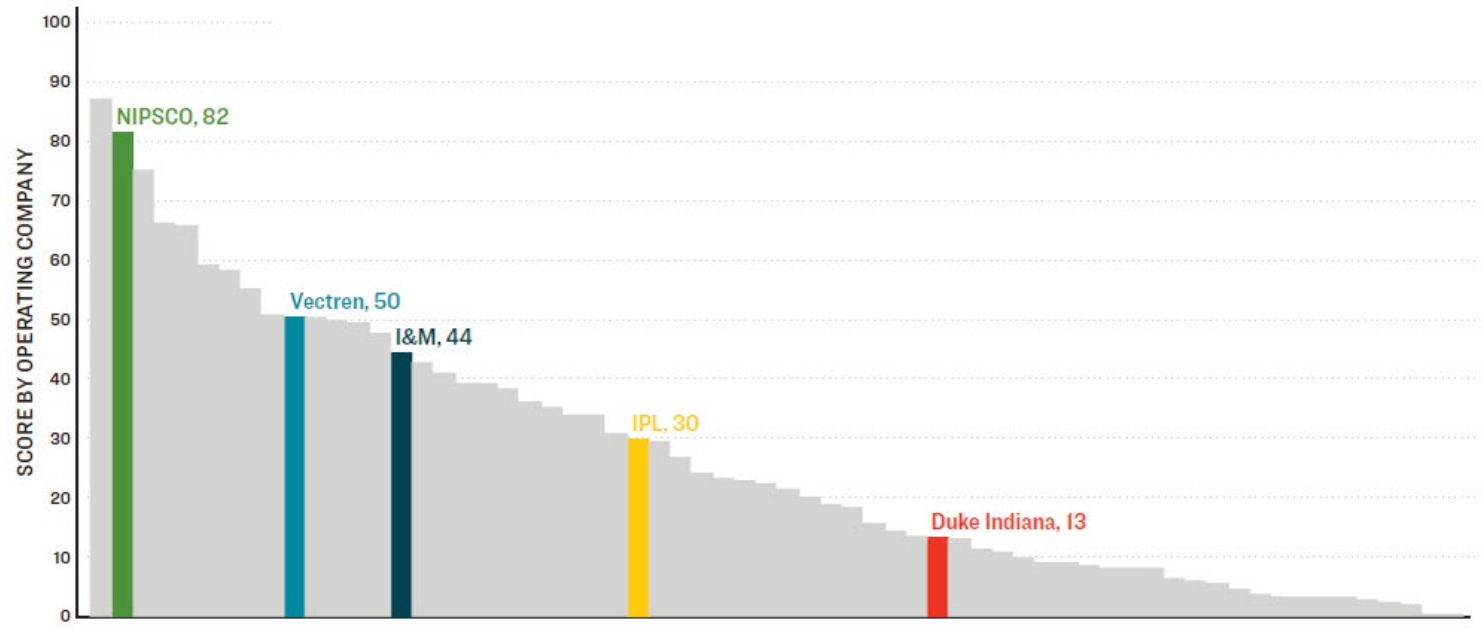
"In employing this robust and analytical approach, GHG emissions have dropped by 44% since 2007, and electricity remains affordable and reliable in our service territories," it said. "We now expect to achieve our intermediate 50% reduction goal well in advance of 2030."

Duke: 'Critical Point'

Duke said the report "fails to recognize all the great progress we're making."

The company has pledged at least a 50% reduction in emissions from 2005 levels by 2030. As of 2019, the company says its reductions totaled 39%, putting it "well ahead of the industry average."

"Our country is at a critical point in addressing the important issue of climate change," Duke CEO Lynn Good said in a *statement* Jan. 19 supporting President Biden's decision to rejoin the Paris Agreement on climate change. "At Duke Energy, we're taking aggressive action to address this challenge while delivering affordable, reliable and increasingly clean energy. This is what our customers, communities and stakeholders expect from us and what we



Indiana's utilities have disparate plans to eliminate fossil fuel generation. Northern Indiana Public Service Co., which pledged to retire its coal plants by 2028 and replace them mostly with clean energy and without building any new gas, received an 82 out of 100 on the Sierra Club's rankings. Duke Energy Indiana received a score of 13 for not retiring its coal and for planning to build new gas generation. | *Sierra Club*

FERC/Federal News

expect from ourselves."

Dominion did not immediately respond to requests for comment on the Sierra Club's critique.

The Future of Gas

The Sierra Club said affordability is not an obstacle to the energy transition, citing a *study* by Energy Innovation Policy and Technology and Vibrant Clean Energy that concluded local wind and solar could replace about two-thirds of the U.S. coal fleet at a lower cost to ratepayers. It also noted a *report* by the University of California, Berkeley and GridLab that found zero-carbon sources could supply 90% of the nation's electricity by 2035 while reducing costs.

While utilities have reached a consensus on phasing out coal — barring a breakthrough in carbon sequestration technology — the future of natural gas remains a subject of intense debate. (See *Gas Going Way of Coal? Not So Fast, Panelists Say*.)

Some utilities say gas-fired generation will be necessary for the foreseeable future to support intermittent wind and solar resources.

Utilities with the most planned new gas capacity (GW) | *Sierra Club*

Some 32 of the operating companies included in the study plan to build more than 36 GW of new gas capacity through 2030.

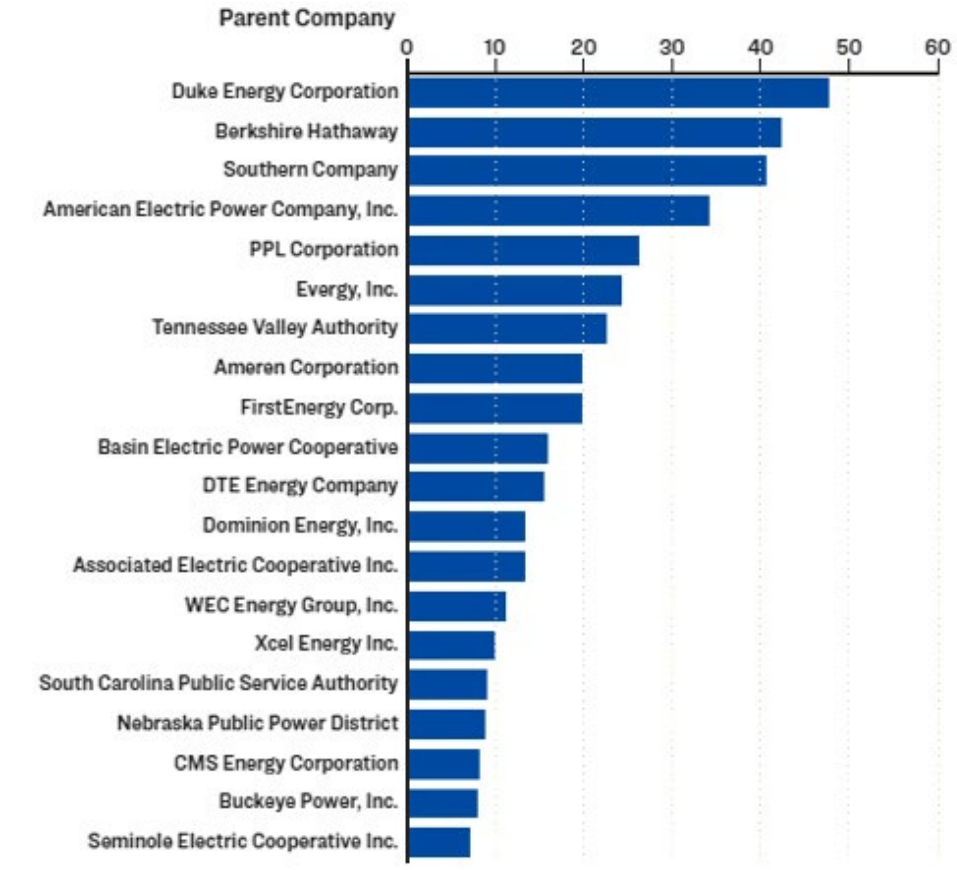
The Sierra Club acknowledged that gas plants' direct carbon emissions are only half as carbon-intensive as coal-fired plants. But when upstream methane emissions from extraction, processing and transportation are included, "the climate impact of a gas plant is doubled," the group said. "Overall, the replacement of coal generation by gas generation is not good news for the climate."

"The scenario of building no new natural gas sounds simple, but it's the most expensive option for our customers and actually requires coal units to operate longer," Duke spokeswoman Erin Cuthbert said. "It also relies heavily on emerging technologies and could present challenges in reliability for the families, businesses and industries who rely on us."

Duke last year *said* it would seek to reach net-zero methane emissions for its natural gas distribution companies by 2030 by eliminating cast iron and bare steel main piping; deploying technologies to increase its measurement and monitoring of methane emissions; and increasing leak surveys from every five years to every three years.

It said it is also directing its gas procurement for distribution and power generation "toward suppliers with low methane emissions, striking a balance between responsible procurement and maintaining affordability for our customers."

Duke is a member of *ONE Future*, a coalition of 37 natural gas production, gathering, processing, transmission, storage and distribution companies working to reduce methane emissions to 1% of total production or less by 2025. ■



Utilities with most remaining coal without retirement commitment by 2030 (million MWh) | *Sierra Club*

FERC/Federal News

TVA Munis, Co-ops Appeal for Unbundled Tx Service

By Amanda Durish Cook

| *Tennessee Valley Authority*

Four Tennessee Valley Authority power companies have filed a complaint with FERC, charging the agency is violating federal energy policy by denying them access to alternative power suppliers through its transmission grid.

The nonprofit municipal and cooperative utilities on Jan. 11 argued that TVA cannot deny them transmission system access to purchase power from suppliers. The utilities — Athens Utilities Board, Volunteer Energy Cooperative, Gibson Electric Membership Corp. and Joe Wheeler Electric Membership Corp. — said they "seek unbundled transmission service from the only transmission provider that can feasibly serve them, in accordance with [FERC's] longstanding open access principles" (*EL21-40*).

Utilities on the TVA system use 20-year bundled power supply contracts that include both power and delivery service. However, the utilities filing the complaint are governed by an older version of the contract that allows for contract termination with five years' notice. Newer versions of the contract permit termination only upon 20 years' notice to TVA. The four utilities say they operate under the older version of the contract and are not eager to sign off on new versions.

The utilities also emphasized that the contract's bundled rates "have steadily risen in past years." In an affidavit, Gibson Electric CEO Daniel Rodamaker said TVA's power costs "do not reflect rates that are reasonable and reflective of other power supply opportunities in the wholesale bulk power market." Rodamaker said that after his co-op recently solicited supply bids, it became clear that TVA "cannot keep pace with the cost of alternative power supply."

TVA spokesperson Malinda Hunter said it wouldn't be fair to TVA's nearly 150 other power companies were it compelled to let munis and co-ops deliver power from other suppliers using TVA's system.

"This request would use the TVA transmission system in a way that would shift their costs for using the transmission system to the other 149 local power companies served by TVA," Hunter said in a statement to *RTO Insider*. "That is fundamentally unfair, and it goes against the foundation of public power."

Hunter confirmed that TVA denied the four companies' request for unbundled transmission service "consistent with the TVA Board's longstanding policy on use of the transmission system." She said TVA's contracts are "partnerships in which the benefits of public power and the related costs are shared" and pointed out that revenues from power sales provide other benefits to the region, including "river operations, flood protection and public lands management, as well as economic development programs that bring good jobs to the region and keep them here."

Atlanta-based consulting firm EnerVision estimated that the four utilities could save $25 million to $480 million over 10 years if they were able to pair unbundled transmission service from TVA with alternate wholesale providers. The utilities, spread out across Kentucky, Tennessee and Alabama, said the savings would be significant to their ratepayers who, by TVA's admission, inhabit some of "the most economically challenged areas of the country."

"Dissatisfied with the excessive bundled rates paid under the power contracts and unwilling to submit to the draconian provisions of the new power contracts, petitioners have actively sought alternatives to their source of power supply for the sole purpose of lowering electric costs to their members/consumers," the utilities wrote to FERC. "At every step, TVA has stymied their efforts and prevented any discussions regarding unbundled transmission service."

Memphis Light, Gas and Water has also voiced discontent with what it deems a comparatively high TVA rate. Last year, it pursued its first-ever request for proposals for new energy sources, including MISO. (See *Memphis Moves Closer to Breaking from TVA*.)

The four utilities told FERC that TVA owns all nearby transmission facilities that can serve their loads.

"Petitioners are scattered throughout the TVA area, and none is particularly close to TVA's interface with another transmission system. Short of taking the very expensive and duplicative step of constructing its own transmission lines, no [local power company] can feasibly reach an external supplier without service across TVA lines," they said.

"Nevertheless, TVA made clear, in its transmission service guidelines, in a newly restated TVA Board policy and in letters directly to petitioners, that it would not provide unbundled service across TVA transmission facilities to enable alternative power suppliers to serve [local power companies'] loads under any circumstances."

The utilities said TVA has created a "supply monopoly within its considerable footprint that stifles all competition."

"TVA has taken advantage of this arrangement to charge unreasonably high bundled rates, with no incentive to efficiently manage the costs it imposes on its captive wholesale customers," they argued.

They explained that even though their current power contracts allow for termination, without open access to the TVA system, they "would have no choice but to duplicate the local existing transmission system" or sign the new power contracts, which "perpetuate" TVA's monopoly on 20-year evergreen terms.

The utilities pointed out that "avoidance of duplicating bulk transmission systems" is fundamental to FERC's open access policies. Further, they claimed that TVA members thwarted Warren Rural Electric Cooperative's attempt 15 years ago to build transmission facilities that connected with external supplier East Kentucky Power Cooperative. ■

CAISO/West News

Calif. Lawmakers Focus on Building Decarbonization

By Hudson Sangree

Legislators in Sacramento introduced a spate of bills this session to ban natural gas from new construction, promote hydrogen as an alternative fuel source and increase demand response to head off future blackouts.

A number of bills deal with building decarbonization, including measures by Sen. Dave Cortese, a Democrat who represents much of Silicon Valley. Cortese introduced a package of measures to electrify public and private structures.

"California must commit to the rapid decarbonization of our buildings to remain a global leader in the face of our climate crisis," Cortese said in a statement.

The bills he put forth would mandate that state buildings become carbon neutral by 2035 (Senate Bill 30), instruct state agencies to develop new building decarbonization standards (SB 31), and require all cities and counties to update their general plans with the aim to decarbonize buildings (SB 32).

Other decarbonization measures include Assembly Bill 33, which would ban new gas connections in public buildings after Jan. 1, 2022, and prohibit utilities from extending gas lines to new customers. The measure by Assemblyman Phil Ting, a San Francisco Democrat, was sent to the Assembly Committee on Utilities and Energy for consideration.

The move toward building decarbonization in California and other Western states is gaining momentum as state and local governments seek to reduce carbon emissions from natural gas furnaces, water heaters and stoves. (See *CEC Explores Building Design Role in Decarbonization* and *Cap-and-trade Bill Emerges in Wash. Senate*.)

Utilities such as the Sacramento Municipal Utility District are partnering with developers to build all-electric homes and communities.

More Calif. Measures

Additional 2021-22 bills deal with grid reliability after last summer's rolling blackouts and the continued use of public safety power shutoffs to prevent electrical equipment from sparking wildfires.

Sen. Bill Dodd, a Democrat who represents Napa Valley and serves on the Senate Energy, Utilities and Communications Committee, introduced SB 99, the Community Energy Resilience Act of 2021, to require the state to implement a grant program for local governments to develop community energy resilience plans and ensure that a reliable electricity supply is maintained at critical facilities and in areas most likely to experience a loss of electrical service.

Another Dodd bill, SB 204, seeks to bolster demand response by large industrial users during times of tight supply, including by increasing incentives for curtailing energy use.

"The bottom line is that blackouts due to imbalanced supply and demand are completely unacceptable," Dodd said. "We need to be proactive to prevent the risk of future blackouts."

Sen. Nancy Skinner, D-Oakland, introduced SB 18 to boost adoption of hydrogen produced using renewable power sources such as solar energy.

"Green hydrogen offers many climate and energy co-benefits, including better utilizing curtailed power and better integrating renewable resources into the electrical grid to achieve greater than 100 percent zero-carbon energy and put renewable electricity to use to decarbonize many other sectors of the economy," the bill says.

Skinner's bill seeks a state "strategic plan for accelerating the production and use of green hydrogen" and recommendations on "how to overcome market barriers and accelerate progress in green hydrogen production and use."

The fuel source is a potential competitor to battery-powered electric vehicles and could supplement natural gas in existing pipelines, advocates say.

Bills introduced in the 2021-22 session may fare better than energy-related measures in the previous session. In 2020, the start of the pandemic meant many bills died in committee as lawmakers stayed home or focused on measures to fight the coronavirus outbreak when they were in session. ■

The Sacramento Municipal Utility District is working with developers to build all-electric homes. | *Riverland Homes Inc*

CAISO/West News

Western EIM Questions Performance in Summer Shortfalls

By Hudson Sangree

The Western Energy Imbalance Market Governing Body waded into the discussion over CAISO's summer energy shortfalls on Wednesday, asking questions of CAISO management and pondering how the EIM could better serve participants in times of system stress.

Governing Body Vice Chair Anita Decker asked whether the EIM, an interstate trading market run by CAISO, had provided a level playing field for its participants during the capacity shortfalls in mid-August and over Labor Day weekend — or whether it had favored the ISO.

In addition, she said, the root-cause analysis of the rolling blackouts Aug. 14-15 — prepared by CAISO, the California Public Utilities Commission and the state Energy Commission — had paid little attention to the role of the EIM. (See *CAISO Issues Final Report on August Blackouts*.)

"The EIM is mentioned, but it's almost like we're mentioned in passing," Decker said. "That left me a little not sure that the EIM benefits were really demonstrated in the [root-cause analysis]. I'm sure they're there, but I thought it was a little light."

Member Carl Linvill questioned why demand response resources had not contributed more to heading off the shortfalls. And member Robert Kondziolka, a former management consultant for the Salt River Project, requested further analysis of the EIM's behavior in the severe heat waves that hammered the West in August and September.

"We should be asking ourselves did the EIM perform as designed and expected? Did it meet requirements? And maybe, importantly, were there any anomalies identified?" Kondziolka said. "Did the EIM help reliability for the system during the summer's heat waves, and was the EIM effective in helping acquire resources within the operating market time frame? And then lastly, could the EIM have done more during the times of highest stress on the system?"

CAISO COO Mark Rothleder addressed the concerns one by one.

In response to Decker's comments, Rothleder said he believes the EIM does provide a level playing field for its 11 members across the West. The root-cause analysis, he said, "didn't dive deeply into [EIM performance] because, first and foremost, the EIM was not identified as any root cause to the events leading to the need to shed load in the California ISO on Aug. 14 and 15."

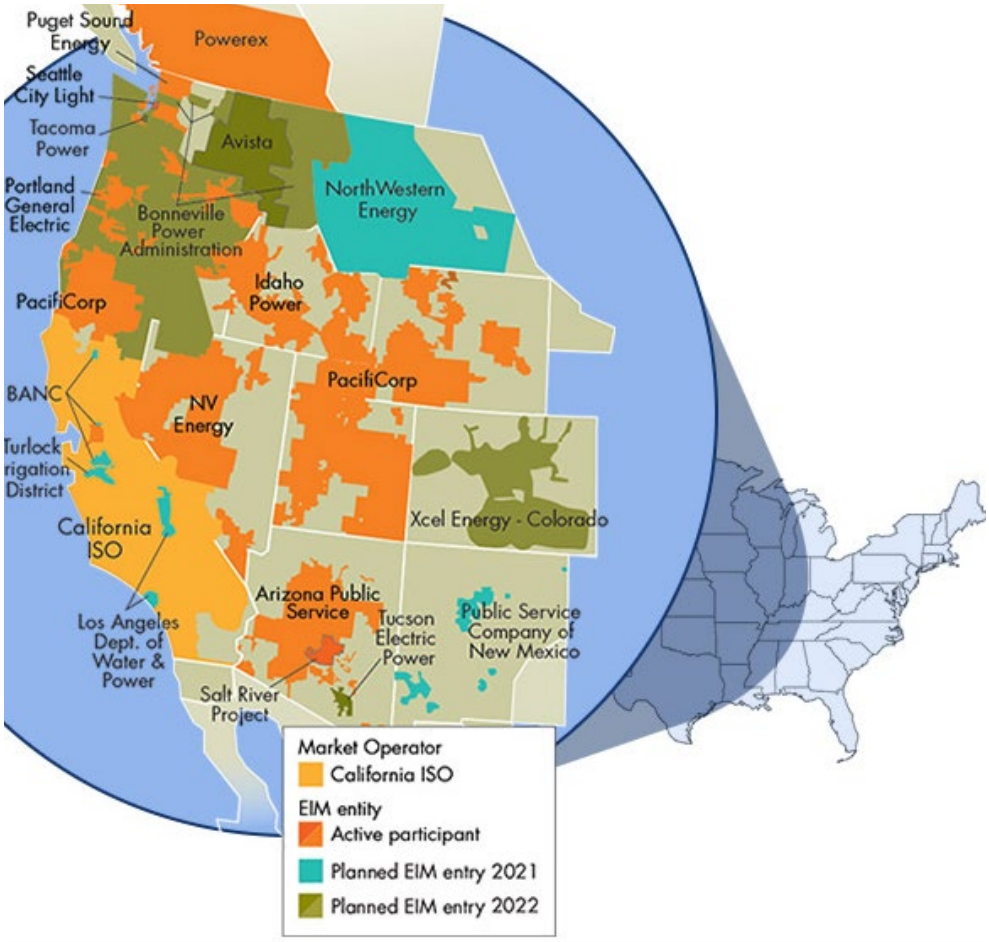
"Our initial review indicated the Energy Imbalance Market generally identified where there was resource sufficiency issues, and more specifically flexibility issues, in the ISO, and it took the designed actions to freeze or limit the amount of transfers the ISO would be getting from other balancing areas that were participating in the EIM at that point," Rothleder said. "And in fact, we saw transfers coming into the ISO, helping alleviate some of the supply issues that we were encountering on Aug.14 and 15. So that's what was addressed in the root-cause analysis."

CAISO has been taking a broader look at how the EIM performed and identified several issues, he said. A capacity test routinely performed on EIM entities had failed to identify capacity insufficiencies in CAISO, but a subsequent flexibility test did identify the shortfalls. The ISO intends to fix the capacity test, he said.

Another issue arose on Sept. 6 when the Pacific DC Intertie linking the Pacific Northwest to Southern California experienced problems, compounded by congestion on the Pacific AC Intertie into Northern California. Rothleder said the ISO is examining whether better interchange coordination or even automation is needed between the EIM's balancing authority areas during times of system stress.

A major goal of the EIM — and one it is trying to refine in the wake of the summer events — is to promote transfers between members during shortages while preventing participants from leaning on the market and dragging other balancing authority areas into crisis.

CAISO is looking at whether current mechanisms need improvement as part of its 2021 summer readiness market enhancements stakeholder initiative. The EIM governing body will take up the proposed initiative, which has been fast-tracked, in its March meeting, followed by the ISO's Board of Governors. ■



Active and pending participants in the Western EIM | *CAISO*

CAISO/West News

California Energy Commission Updates Long-term Forecast

Colleagues Bid Farewell to Vice Chair Janea Scott

By Hudson Sangree

The California Energy Commission updated its 2020-2030 forecast Monday to account for the slowdown caused by the coronavirus pandemic, increased electric-vehicle charging and a projected doubling of battery storage, among other factors.

Commissioners and staff members also paid tribute to Vice Chair Janea Scott, who is leaving for a post in the Biden administration.

In the annual energy forecast update, the anticipated amount of battery storage will double from the previous forecast of 1,300 MW to 2,600 MW by 2030, said Nick Fugate of the CEC's Energy Assessments Division.

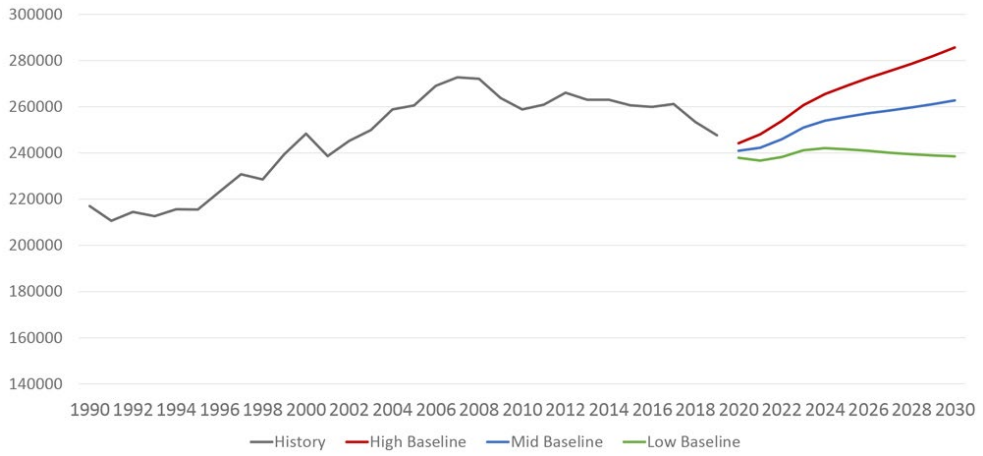
"Battery storage adoption is occurring rapidly," Fugate said. "We see this just in examining the interconnection data."

EVs are expected to proliferate and contribute to load growth over the next decade, he said. However, the economic impacts of COVID 19 have been "disrupting sales across all vehicle classes, EVs included," he said.

The forecast assumes a recovery from those effects over time. It projects there will be 3.3 million zero-emission vehicles (ZEVs) on the road by 2030, mostly battery-powered.

The updated forecast did not account for Gov. Gavin Newsom's order in September that all new passenger cars and trucks sold in California must be ZEVs by 2035, but the next forecast will factor it, Fugate said. (See *Can California Meet Its EV Mandates?*)

CEC Vice Chair Janea Scott is leaving for the U.S. Interior Department. | *California Energy Commission*



The California Energy Commission projects increasing electricity sales during an economic recovery from COVID-19. | *California Energy Commission*

EV charging will account for 14,000 GWh of new demand by 2030 under the current forecast, he said.

Lower growth in population, household formation, employment and income will reduce demand over the next three years, as will decreased commercial and industrial use of electricity, he said.

Forecasting is one of the CEC's core responsibilities and lays the groundwork for procurement and planning at the California Public Utilities Commission and CAISO. The rolling blackouts in mid-August and close calls over Labor Day weekend caused the CEC to re-examine its forecasts as part of a root-cause analysis of the blackouts requested by Newsom.

Commissioner Andrew McAllister said the forecast would not have changed significantly because of the severe heat waves that partly caused the summer shortfalls.

"It really held up well," McAllister said, though the CEC, CPUC and CAISO remain focused on ensuring reliability this summer and beyond, he noted. (See *New CAISO CEO Vows Urgency on Resource Adequacy*.)

Scott Leaving

Commissioners and staff spent nearly 90 minutes at the beginning of Monday's business meeting praising Scott, who is set to become counselor to President Biden's nominee for Interior Secretary, Rep. Deb Haaland (D-N.M.). Monday's meeting was Scott's last.

Scott and most of her fellow commissioners have served together for the last eight years, working as a team to pursue the state's clean energy goals, Chair David Hochschild said.

"It's a bittersweet day for us because it's really hard to lose you," Hochschild told Scott. "You have been at the core of the commission and all that we've done together," including allocating billions of dollars for cutting-edge energy research and development projects, he said. "Everything you've touched, you've made better."

Scott, a well known figure in energy circles, served as deputy counselor for renewable energy from 2009 to 2013 in the Obama administration.

"Her leadership was noticed … and she was recruited by Gov. Jerry Brown and his team to come to California," Natural Resources Secretary Wade Crowfoot said. Few people have been "as consequential to the state's energy vision over the last decade" as Scott, he said.

Her departure means Newsom now has vacancies to fill on the CAISO Board of Governors, the CPUC and the CEC — the three entities largely responsible for energy in California. (See *CPUC's Randolph Named CARB Chair*.) ■

ISO-NE News

ISO-NE Gives First Feedback on 'Future Grid' Study Proposal

By Jason York

ISO-NE said last week that stakeholders' proposed schedule for the Phase 1 *reliability and market analyses* in the *Future Grid Initiative* is "aggressive but achievable" if there are no delays or changes in assumptions or scenarios.

NEPOOL asked ISO-NE in late December to provide feedback on the stakeholder-developed *framework document* that outlines the modeling for the project, which is intended to predict the impact of states' policies to reduce carbon emissions and electrify transportation and buildings.

Carissa Sedlacek, ISO-NE's director of planning services, *told* a joint meeting of the NEPOOL Markets and Reliability committees Jan. 19 that the RTO has the software to perform all four of the Phase 1 studies in the framework document first brought before the committees in December: simulations of production costs and ancillary services, a resource adequacy screen and a probabilistic resource availability analysis. The RTO said, however, that it lacks the tools to conduct the three Phase 2 analyses — revenue sufficiency in the capacity market and transmission thermal and voltage impacts — recommending NEPOOL hire a consultant. (See *New England 'Future Grid' Study Takes Shape*.)

Sedlacek said the RTO's ability to produce a Phase 1 report by May 2022 as requested depends on the "final clarity" of the *assumptions* and the ability to supply necessary model input data in a "timely manner."

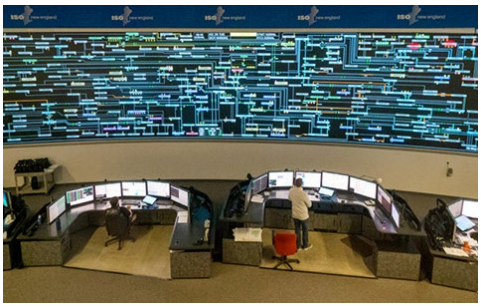
ISO-NE plans to use staff from past annual economic studies for most of Phase 1 but said the work could delay completion of any additional economic studies requested this year. If ISO-NE is asked to conduct another economic study, the RTO said it would be performed after completing the 2020 economic study for National Grid, which has an expected finish date of June 1.

It said that the Future Grid's study's reference to "current state energy and environmental laws" should also mention current market rules and assume the laws and tariff rules in effect as of Dec. 31, 2020.

To aid in comparing study results, the RTO added that it "strongly" recommends using a single target year in studies rather than 2035 for some scenarios and 2040 for others.

ISO-NE said it expects to conduct the Phase 1 work concurrently with its evaluation of the *potential pathways* part of the Future Grid Initiative which will start next month. The pathways being considered are a Forward Clean Energy Market or Integrated Clean Capacity Market, an Energy Only Market, carbon pricing and alternative resource adequacy constructs. (See *Report Outlines NEPOOL 'Pathways' to a Future Grid*.)

Sedlacek said the RTO would continue to review Phase 1 of the framework to identify any needed clarifications, and it may take up to three months to fully develop and define all study inputs. For the February MC/RC meeting, the RTO will develop a detailed plan for conveying updates on the status of the Phase 1 analyses. It plans to report its progress on the work monthly at the Reliability Committee. Detailed presentations of both interim and final results could be held via additionally scheduled MC/RC meetings.



ISO-NE control room | *ISO-NE*

Schedule

Study assumptions for the first phase of the report are expected to be completed by March 1. The final production cost simulation is scheduled for September 2021 to March 2022, and the ancillary services simulation from September 2021 to January 2022. MARS analyses will occur between October 2021 and January 2022. Drafting of a final report is expected to begin in February 2022.

Dates have not been set for the revenue sufficiency analysis and system security analyses in Phase 2, but they will not start before September 2021.

ISO-NE said there is no model for studying the detailed, operational dispatch needs of the future system — with significant inverter-based resources, interaction between transmission and distribution systems, and evolving load profiles. The RTO is developing a model internally but says it will be a "time-intensive … multiyear effort." ■

ISO-NE News

NEPOOL MC Supports Changes to End Price Locks

By Jason York

NEPOOL's Markets Committee voted Jan. 19 to recommend the Participants Committee support tariff changes to remove new-entrant rules for ISO-NE's Forward Capacity Market, which would prevent resources from locking in prices for seven years.

The revisions will bring the tariff into compliance with a December FERC order that found the rules to be an "unreasonable price distortion" and "no longer required to attract new entry." (See *FERC Orders End to ISO-NE Capacity Price Locks*.)

The MC approved the action in a voice vote with one abstention.

The RTO noted that the two tariff revisions will only impact upcoming Forward Capacity Auctions, leaving in place locked-in prices for FCA 15 and earlier auctions. Price-lock elections for FCA 15 were made in June 2020 when suppliers submitted their qualification packages for new resources.

ISO-NE did not propose removing any tariff language because the remaining provisions for price-locked resources need to stay in place until the completion of all elections, which account for any permitted deferrals.

FERC said entry of new resources should be driven "at least in part" by future price expectations, but that the price lock interferes with that dynamic. By eliminating price risk, a new resource may lower its offer price to increase the likelihood of being selected in the auction. FERC said that if that resource represents the marginal resource, the lower clearing price "distorts the price signal sent by the FCM and reduces the price paid to all capacity suppliers in that auction."

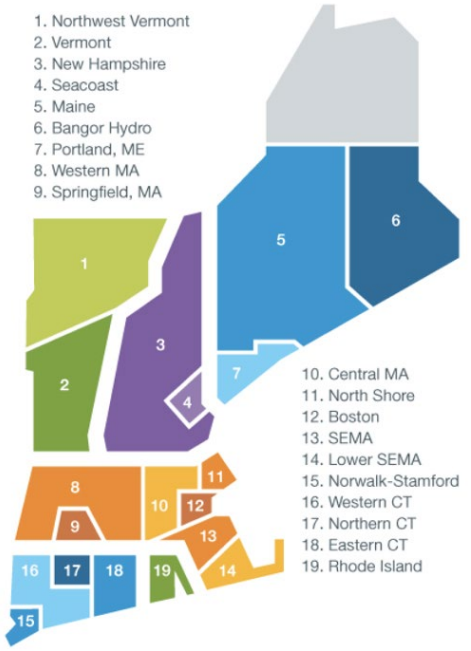
The commission added that it previously recognized that new-entrant rules could result in price suppression but ultimately found that it was "an acceptable byproduct of market rules that would attract new entry through greater investor assurance and protect consumers from very high year-one prices."

Price-lock rules have been in effect since ISO-NE began its capacity market in 2006. The rules allowed capacity resources to sell at the same price for five years — extended to seven years in 2014 — with resources offering in FCAs at $0 after the first year to ensure that they cleared. Although this prevented them from taking advantage of higher prices, it was viewed as a shield against lower prices.

ISO-NE implemented several FCM changes when the price-lock period was extended, including a system-wide downward sloping demand curve to address capacity price volatility. It also implemented enhanced market scarcity pricing that increased reserve constraint penalty factors for 10- and 30-minute reserves and pushed up the price that resources are paid for energy and reserves in real-time during scarcity conditions.

When FERC approved the price-lock extension, it allowed ISO-NE to forego an offer floor for resources, which prompted a legal challenge from Exelon and the New England Power Generators Association. The D.C. Circuit Court of Appeals remanded FERC's approval in February 2018, though the court did not vacate the rules. (See *DC Circuit Orders FERC to Review ISO-NE Auction Orders*.)

ISO-NE must file its compliance filing with FERC on or before Feb. 1. According to a voting *memo* from ISO-NE counsel Chris Hamlen, the RTO is tentatively planning to request an effective date of April 2, 2021, for the proposed revisions, a week before the FCA 16 show-of-interest window. FCA 16 is scheduled for February 2022. ■



New England Dispatch Zones | *ISO-NE*

ISO-NE News

ISO-NE Planning Advisory Committee Briefs

Eversource Details Nearly $500 Million in Replacement Work

Eversource last week presented the ISO-NE Planning Advisory Committee with plans for two projects that would replace *copper conductor and shield wire* and *345-kV structures* at a cost of nearly $500 million.

The copper conductor and shield wire project would cover 673 structures in Connecticut, Massachusetts and New Hampshire at an estimated $311.1 million. The in-service dates on the project range from the second quarter of this year through the fourth quarter of 2023.

The 345-kV replacements include 567 structures in the same states at about $181 million, according to Eversource's Chris Soderman, who put forward both projects to the PAC. The work is expected to take place this year and next.

Soderman said Eversource periodically tests samples of copper conductor and shield wire obtained from existing lines during repairs and maintenance. Both materials are susceptible to thermal degradation as well as deterioration because of environmental factors.

Recent test results indicate that outer copper conductor strands have visible verdigris and black oxide in addition to excessive elongation in some strands, potentially caused by overheating. There was also severe corrosion of shield wire, and copper conductors are no longer an industry standard, making spare parts difficult to obtain. Failure of copper conductor or shield wire presents a safety hazard and creates risks to the transmission system's reliable operation.

Soderman added that Eversource transmission lines with copper conductor or shield wire tend to be old. Copper conductor has not been installed since 1960 and shield wire since 1990. Most of the company's transmission lines containing these materials also suffer from other age-related deficiencies and deterioration such as wood pole asset condition issues, steel lattice tower deterioration and lack of secure, high-speed telecommunications infrastructure. Soderman said many of those issues could be addressed when performing the replacements. Ultimately, Eversource will replace 80.1 miles of copper conductor and 157.6 miles of shield wire.

One stakeholder questioned Soderman about Eversource spending hundreds of millions of dollars replacing 115-kV lines with lines of the same ratings as part of the project and asked if the utility is considering an upgrade to 345-kV lines for future grid needs. Soderman said the company is reviewing possible upgrades but is seeking to strike a balance between current and future grid needs. The utility is also awaiting results of the Future Grid Initiative reliability study to better understand projected grid needs. (See *ISO-NE Provides Initial Feedback on 'Future Grid' Study*.)

An example of pole top rot from Connecticut | *Eversource*

Eversource manages approximately 1,250 miles of 345-kV overhead lines and over 9,000 345-kV structures. The majority of the New England 345-kV system was constructed in the 1960s and 1970s, and the structures targeted by these projects are typically wood, single-circuit structures in an H-frame configuration. Eversource will replace 6.3% of its wooden structures with light-duty tubular steel poles. The new installations must comply with current clearance and strength code requirements.

Soderman said the use of drones in inspections has resulted in a significant increase in identified defects, which indicate substantial decay and decreased load-carrying capacity of aging 345-kV wood structures. High-definition cameras on drones allow inspectors to see possible damage from all angles and take better photos of insect and woodpecker damage, pole top rot, severe fracturing, and hardware and insulator damage.

Most of the work for both projects will take place in Connecticut, where replacement of 30.1 miles of copper conductor and 70.7 miles of shield wire will cost $151 million and cover 322 structures. The 345-kV replacements in that state will include 414 structures at the cost of $135.4 million.

New Chair

Peter Bernard, PAC chair since October 2016, will step down after February's meeting to spend more time on other duties in the RTO's system planning department, where he is the manager of transmission planning. Bernard joined ISO-NE in 2009, following more than 15 years with National Grid, and has been directly involved in implementing FERC Order 1000 practices and procedures for the RTO during his tenure.

ISO-NE is proposing Jody Truswell to fill the role of PAC chair, according to a *memo* announcing Bernard's departure. Truswell is a senior project coordinator for transmission service at ISO-NE and the project manager for all offshore wind interconnection requests. She would become chair for the PAC's meeting in March. ■

— Jason York

MISO News

Members Send MISO Back to Drawing Board

Stakeholders Question Vague Wording on Removing Attendees

By Amanda Durish Cook

Stakeholders told MISO on Wednesday to rework a proposal that allows the RTO to remove meeting attendees and committee leaders in certain situations.

MISO is seeking to codify in the stakeholder governance guide its ability to remove committee chairs and to unilaterally ban disorderly attendees from meetings, in response to an incident involving a stakeholder in 2019.

However, the Advisory Committee put the proposal on ice during the meeting, with members saying vague language needs wordsmithing.

The grid operator said it should be able to bar stakeholders when they cause a disruption or damage while on MISO property, become physically or verbally abusive, or threaten physical harm to other staff and stakeholders. These threats can be written or spoken, General Counsel Timothy Caister said.

The RTO said it should also be able to remove stakeholders if it is made aware of "information that would justify or otherwise provide a reasonable basis for such an action."

Caister said MISO needs to be able to prevent building damage and physical harm. He said the proposal's language is intentional "because of past experience."

"We do believe it's appropriate to add this in light of findings and lessons learned," Caister said.

In August 2019, MISO removed a stakeholder from its facilities after the individual sent threatening emails to multiple MISO executives. The incident resulted in two MISO executives filing orders of personal protection against the stakeholder.

MISO also wants to list grounds for removing a chair from their committee. It recommended that staff or stakeholders initiate removal when a chair is repeatedly not available for committee meetings, is not fulfilling their leadership role, not observing stakeholder governance rules, or "demonstrating, condoning or otherwise not managing unprofessional behavior during meetings."

MISO's Carmel, Ind., headquarters | © *RTO Insider*

Madison Gas and Electric's Megan Wisersky said she worried the proposed language is too vague and permits MISO "way too much latitude for what could be very subjective reasons."

"I'm not saying it's going to be, but it could be potentially abused," she said, adding that stakeholders can always vote to remove committee leadership.

"MISO already has the ability to oust anyone who's abusive or is doing damage to property," Wisersky added. ■

MISO News

MISO Reports Unremarkable December Ops

By Amanda Durish Cook

Peak demand was lower in December than in years past, MISO executives said during an informational forum Jan. 19.

Rob Benbow, executive director of real-time operations, said peak demand topped out at 91 GW on Dec. 15, despite blizzard-like conditions in MISO North just before Christmas that resulted in the month's coldest temperatures.

The peak was the lowest for December in five years, when it exceeded 100 GW. The year before, December's peak was 96 GW.

Benbow said had the wintry weather shown up outside of the holidays, it probably would have created a larger peak. He said the subdued holiday load patterns lessened demand.

In the fall, MISO projected a 104-GW winter peak would occur in January. Its all-time winter peak came in January 2014 at 109.3 GW during a polar vortex. (See *MISO: Winter Could Get Tricky Despite Forecast*.)

Higher natural gas prices nudged up real-time energy prices in a year-over-year comparison, from about $21/MWh in 2019 to $24/MWh.

Staff said strong winds on Dec. 23 caused MISO to register a new all-time wind peak of more than 20 GW, accounting for about 27% of the load at the time. Just five years ago, MISO was *setting* wind peaks of around 11 GW.

| Madison Gas and Electric

"I'm giving old news when I report on wind peaks. Because by the time I do, invariably another wind peak occurs," MISO Independent Market Monitor David Patton said during this month's Market Subcommittee meeting.

MISO operations continue to be unaffected by the COVID-19 pandemic, Senior Vice President Todd Hillman said.

He said MISO is currently working with state and local officials on employee coronavirus vaccinations and that the RTO supports early vaccine priority for its control-room operators and IT personnel.

In the meantime, Hillman said MISO will keep stakeholders updated on when meetings can transition back to an in-person format.

"We all look forward to the time to get back together," he said. ■

MISO News

Advisory Committee Charts Course on MISO Sector Rules

By Amanda Durish Cook

MISO's Advisory Committee has put the finishing touches on a revamp of the RTO's stakeholder sector setup.

The AC said Wednesday that it will defer to MISO as the final arbiter over whether a new company or organization is entitled to join a certain sector. Members agreed that will prevent a sector from being able to veto an entity's request to join.

The committee also laid out a challenging process for creating a new sector beyond the existing 11 *sectors*.

Members said creation of a new sector should be a "last resort," requiring a written purpose and more than 10 prospective members with documented evidence of active participation in stakeholder meetings. The AC must then recommend the new sector that the Board of Directors would vote on before MISO files tariff changes with FERC.

When some members said the requirements for forming a new sector might not be specific enough, AC Chair Audrey Penner said the vagueness was deliberate so requests for new sectors can be decided on a case-by-case basis.

"I thought of this more as a guideline than something that is hard-coded … enough so that separate circumstances can be considered," Penner said.

MISO has also posted a new *guide* that prospective members can review to get a clearer idea of requirements before joining.

"Obviously someone new would not understand totally what the sectors are … so we hope they will reach out to MISO," AC liaison Bob Kuzman said.

Affiliate Sector not Pleased with Voting Rights

The AC also decided the 11th and newest sector — the Affiliate Sector — should have one vote apiece on the Advisory and Planning Advisory committees. (See *MISO Members Back Voting Rights for New Sector*.) The AC will direct MISO's legal team to incorporate the changes into the tariff with Board approval.

The Affiliate Sector currently can't cast votes, though it can offer opinions during discussions with the Board at the AC's quarterly meetings.

FERC last year ruled that MISO could rely on the Affiliate Sector as a catch-all for difficult-to-define members only on a temporary basis because it had not developed a meaningful way for the new sector to participate in RTO matters. (See *New MISO Sector Gets FERC OK — with a Catch*.)

The non-member Affiliate Sector *contains* North Dakota coal lobbying group Lignite Energy Council, coal trade organization America's Power, chambers of commerce and several mining organizations. It also contains conservative lobbying group Center of the American Experiment and sustainability and conservation trade association Minnesota Forest Industries.

Lignite Energy Council's Jonathan Fortner, also Affiliate Sector chair, said it was unfair that the four other stakeholder sectors that aren't subject to MISO membership dues — the State Regulatory Authorities, Public Consumer Advocates, Environmental and Affiliate sectors — are imbalanced in their voting rights. The Regulatory sector is *represented* by four seats on the AC with a 16% weight in voting matters — the most of any sector — while the Public Consumer Advocates and Environmental sectors each hold two seats apiece at an 8% weight.

Fortner has called for a "level playing field between similarly situated stakeholder sectors" and an "equal number of votes and voices at the table in order to advocate for [sector] interests because there will be challenging votes on the AC board in the near future." He said the AC's recommended voting approach could have potential legal concerns and could be "inconsistent with the Federal Power Act." ■

A MISO Advisory Committee gathering in March 2018 | © *RTO Insider*

MISO News

MISO Re-evaluating VoLL as Monitor Pushes $10,000/MWh

By Amanda Durish Cook

MISO on Friday said it will soon present proposals for reformulating its value of lost load (VoLL) while its Independent Market Monitor once again urged the RTO to nearly triple the current value during a scarcity pricing workshop teleconference.

Monitor David Patton said MISO should bump its VoLL to $10,000/MWh from the current $3,500/MWh, an increase the Monitor has been recommending for more than three years.

Patton said different areas of the footprint place different importance on avoiding interruption of service. Referring to a Lawrence Berkeley Labs model with 2018 data, Patton said MISO residential outage costs range from $3,600 to $3,900/MWh depending on customer income, only "escalating modestly" from the current VoLL. However, commercial and industrial customers place a much higher value on interruptions, ranging anywhere from $32,000/MWh for a non-manufacturing customer to $73,000/MWh for manufacturers. He said commercial and industrial VoLL can go even higher, but those customers would probably have installed backup generation.

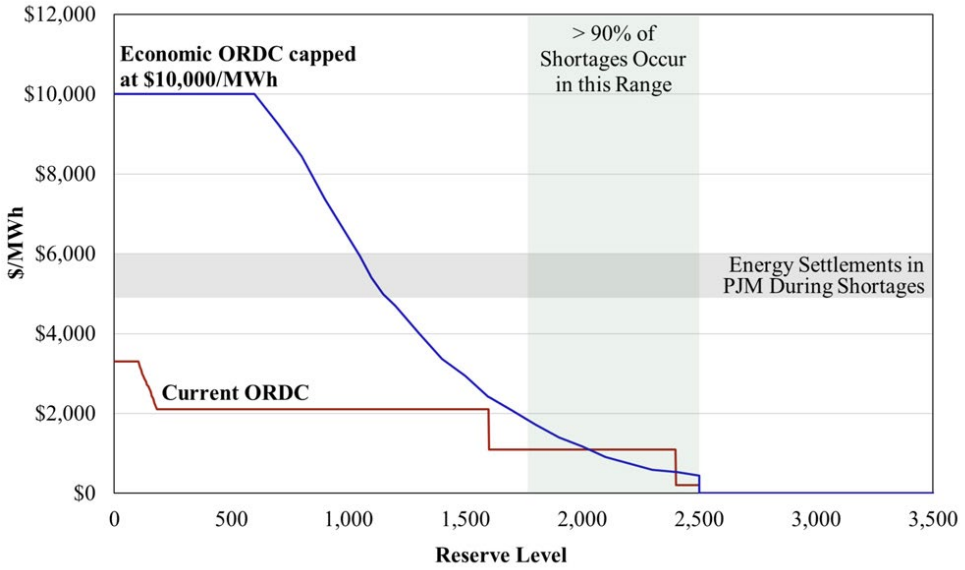
Patton said he weighted those amounts based on MISO load data to identify an average value of $23,000/MWh. However, he said the RTO should use a "more reasonable" and more economic $10,000/MWh.

"Very few shortages will occur in that range," Patton explained of the upper bounds of the operating reserve demand curve (ORDC).

MISO's ORDC based on VoLL, begins at $3,300/MWh, dropping to $2,100/MWh for much of the curve when the RTO clears 8% of its requirement level. At 89%, the level falls to MISO's original $1,100/MWh, remaining there until 96% or more of the requirement is cleared, when the curve flattens at $200/MWh.

The Monitor is calling for a curve that eliminates step-based pricing in favor of a gently sloped descent from $10,000/MWh.

Patton said shortage pricing is important because MISO's capacity market doesn't provide sufficient performance incentives. He said the growth of intermittent resources, which lead to "more output uncertainty and more frequent shortages," means economic reserve pricing will become more critical. Higher scarcity prices will provide a "natural buffer" for non-intermittent resources to stave off retirement, he said.



MISO's current operating reserve demand curve in red and the Monitor's recommended curve in blue | *Potomac Economics*

He added that a higher VoLL will better ensure that MISO can cover its load in shortage conditions, competing with PJM's more attractive pricing.

"When both MISO and PJM are in a shortage, there's no question that generators will sell to PJM, whether the generators are in PJM or MISO," Patton said. "Certainly, it's not completely solved. I think [this] will go a long way in ensuring our prices are more in line."

Patton said even with the increase, PJM will still produce higher shortage prices more of the time.

FERC Filing on the Horizon

MISO Principal Adviser of Market Design Mike Robinson said the RTO is using the Monitor's analysis as a "starting point" for updating pricing but must also account for the footprint's geographic diversity.

The RTO has not updated VoLL pricing since 2009. Robinson acknowledged MISO's reliability-based vertical demand and supply curve "do not meet" in a way that signals new, appropriate price ranges.

Director of Market Design Kevin Vannoy said MISO hopes to file an updated VoLL with FERC in June. He said staff will appear before the Market Subcommittee during spring meetings to discuss alterations and ORDC changes.

Some stakeholders said MISO was on an ambitious timeline considering it hadn't yet decided if VoLL should apply to force majeure events or used to price dead buses. (See *MISO Questions VOLL Pricing During Abnormal Events*.)

"It just seems like MISO is going about reestablishing VoLL without first discussing where VoLL can applied," Xcel Energy's Kari Hassler said.

Great Plains Institute's Matt Prorok asked MISO to consider the increasing electrification of essential services when valuing lost load.

"You're right, those will affect the values," Robinson said.

Akshay Korad, research and development engineer at MISO, said the RTO would have to update its LMP cap when it pursues a VoLL change because LMPs are capped at VoLL. Korad said the cap was a "design decision made at the beginning of the market that was never revisited afterwards." He said MISO and stakeholders should decide whether to continue capping LMPs at the new VoLL or another value or stop capping LMPs altogether. ■

NYISO News

NY Grid Study Pushes Meshed OSW Tx, Coordination

Power Grid Study Covers Utility T&D, OSW and Net Zero Strategies

By Michael Kuser

New York state energy agencies on Jan. 19 released a three-part study that urges faster permitting, planning and approval processes to build the transmission necessary to accommodate the nearly 40 GW of new renewable energy plugging into the grid over the next two decades.

The *Initial NY Power Grid Study Report* recommends that transmission planners increase their reliance on NYISO's stakeholder processes, particularly for developing public policy projects. It says the most urgent needs are to link Long Island's expected 3 GW of offshore wind energy with the mainland and to beef up the infrastructure needed to import 6 GW of OSW into New York City.

The state's Department of Public Service and the New York State Energy Research and Development Authority (NYSERDA) prepared the study, supported by The Brattle Group and Pterra Consulting, among others.

PSC Chair John B. Rhodes | *NYDPS*

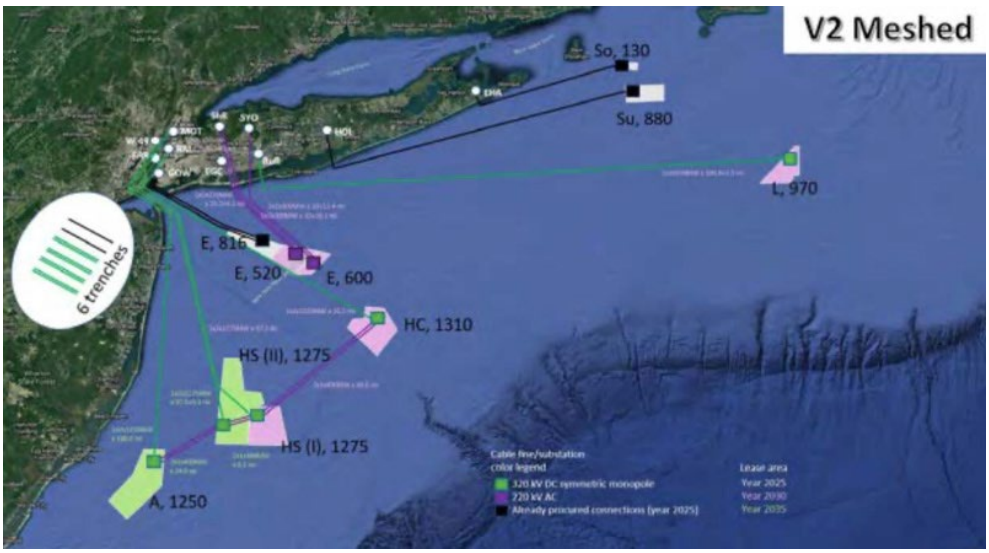
"'Initial' means it's the 2021 installment, and 'full' means it is complete at about 750 pages of work," Public Service Commission Chair John B. Rhodes, said in announcing release of the report at a meeting of the state's Climate Action Council.

The PSC ordered the report last May, as directed by the Accelerated Renewable Energy Growth and Community Benefit Act (Case No. *20-E-0197*). (See *NYPSC Launches Grid Study*.)

The study comprises three components, examining transmission needs for OSW and bulk system needs for land-based renewables out to 2040, as well as needs on the sub-bulk level.

"We think it's very well done. We know it's informative, has many interesting findings and is a major milestone in terms of creating the information foundation for us to craft the right kind of transmission future for the state," Rhodes said.

Procuring 9 GW of OSW by 2035 is vital to meeting the goals established by the Climate Leadership and Community Protection Act, which mandates that 70% of electric power in New York come from renewable resources by 2030 and that electricity generation be 100% carbon-free by 2040.



Map showing "Version 2" meshed OSW transmission scenario | *NYISO*

Local transmission and distribution (Phase 1) projects already under development appear sufficient to integrate land-based renewables, although some might be accelerated, the report said. Other more preliminary (Phase 2) projects might be pushed forward in order to attract investment in solar and wind development Upstate.

"In particular, [New York's] Zero Emissions Study results suggest that additional bulk transmission from Upstate into the New York City area (from Zone H to Zones I, J and K) will likely become cost effective as the state approaches 2040 and congestion costs increase," the report said.

OSW Scenarios

In calling for the start of development of a tie-line between Long Island and Zone I or J, the study said that "all studies indicate that additional tie-line capacity would be needed by 2035–2040 as renewable requirements grow and emissions limits tighten. Advancing such a project would provide additional value earlier if constraints into New York City force more than 3,000 MW of OSW into Long Island and mitigate curtailments associated with real-world operating conditions not captured in the studies' simulations."

The report also urged a multidisciplinary planning and coordination effort for routing up to 6 GW of OSW generation into New York City and interconnecting it with the city's substations.

"However, overcoming cable routing limitations in New York Harbor, space constraints in substations in Manhattan, and permitting complexities in both the Harbor and along the Long Island coastline (including approaches to New York City through the Long Island Sound) will require careful planning of OSW transmission cable routes and points of interconnection," the study said. "Creating the option for a meshed offshore network by linking the offshore substations of several individual OSW plants near each other is valuable because a meshed configuration can achieve a more reliable and resilient delivery of OSW generation."

The study concluded that a decision to implement a meshed system can — and possibly should — be delayed pending federal approval of new wind energy areas, as long as New York officials ensure that any projects with radial connections are built with an option to integrate into a meshed system later.

In its comments related to the study, NYISO *said* transmission congestion and curtailment patterns drive bulk transmission expansion, which the study contends will be necessary to integrate all the new renewable energy resources being developed under state clean energy policies.

To inject OSW energy, smaller megawatt amounts at more points of interconnection

NYISO News

could potentially require less transmission expansion, NYISO said.

However, "based on the cable routing study conducted by the DPS's technical consultant, there appear to be limited available cable routings through New York Harbor. If each project has independent radial connections, opportunities for necessary cabling to achieve the full offshore wind goal of 9,000 MW will be limited," the ISO said.

"The study makes clear that to overcome interconnection challenges and achieve this [9 GW] goal, New York needs carefully planned offshore wind cable routes and points of interconnection that will ensure reliable, resilient delivery of offshore wind energy to power New York homes and businesses," Janice Fuller, Anbaric's Mid-Atlantic president, told *RTO Insider*. "Gov. [Andrew] Cuomo has called on the market for creative proposals to meet this critical challenge."

Local T&D Cost Allocation

The report found that Phase 1 local transmission projects would unbottle delivery of an estimated 6.6 GW of renewable generation, while proposed Phase 1 distribution projects could tap another 2 GW. The study estimates that the more preliminary Phase 2 project proposals for local transmission could provide 12.7 GW of renewable integration benefits, based on the headroom calculations, while Phase 2 distribution proposals could support an estimated 2.8 to 4.3 GW.

Both utility and NYISO transmission planning processes should be improved to recognize the unique advantages that advanced technologies such as dynamic line ratings can provide, the study said. For example, commercial-scale applications for dynamic line ratings "have demonstrated a 20 to 30% increase of average annual transmission capacity above static ratings (e.g., with a 10% increase during 90% of the year, 25% during 75% of the year, and 50% during 15% of the year), while maintaining or enhancing system reliability."

The power grid study also recommends allocating the costs of these projects state-wide on a load ratio share basis, as recommended by the state's investor-owned utilities, which in November jointly filed a *report* on transmission and distribution investment. Representatives from each company joined a technical conference to outline their policy recommendations and propose projects to state officials. (See *Meshed OSW Tx Grid May Work Best, NY Officials Hear*.)

The IOUs include Avangrid subsidiaries New York State Electric and Gas and Rochester Gas and Electric; Central Hudson Electric and Gas; Consolidated Edison and its subsidiary Orange and Rockland Utilities; and National Grid subsidiary Niagara Mohawk Power. Collectively the utilities propose to spend $7 billion on transmission and distribution upgrades by 2025 and an additional $10 billion over the following five years.

The IOUs' *comments* on the new grid study reiterated points from their earlier report and incorporated learnings from the technical conference Nov. 23, noting "the fundamental need" for local transmission and distribution investment to support the integration of clean energy resources. "In other words, the zero emissions grid presentation recognized that there is a clear interdependence between the local and bulk transmission system upgrades; without resolving the congestion and curtailments on the LT&D system, the value to customers of new bulk transmission investments and renewable generation will be limited," they said.

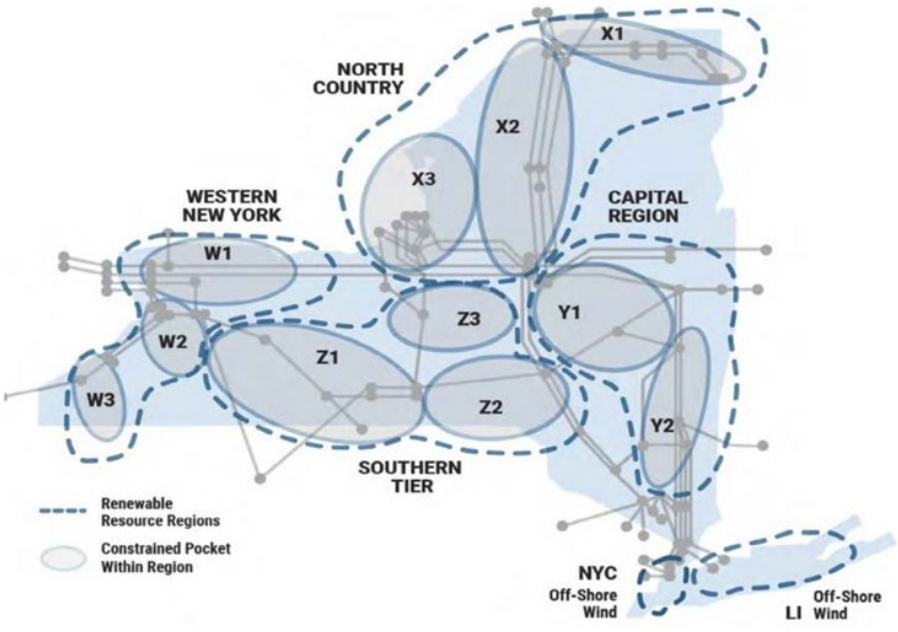
Con Ed identified three immediately actionable projects around New York City, estimated at $860 million. The utility on Dec. 30 filed a *petition* with the PSC seeking approval to recover project costs through its rate plan capital budget and also for up to $4 billion for the second phase of six projects to create points of interconnection, including two new "NYC Clean Energy Hubs," several new feeders and the rebuilding of two area stations.

Multiple Intervenors, a coalition of large industrial, commercial and institutional energy customers, submitted *comments* on the new grid study emphasizing that "customer funds are not unlimited, particularly in the aftermath of the economic recession caused by the COVID-19 pandemic." The group urged the commission "to ensure that customers — and especially energy-intensive/trade-exposed businesses that are price-sensitive — are not burdened with excessive or unnecessary costs."

New York City *said* the PSC should deny Con Ed's requests for pre-approval as the report does "not provide sufficient information to provide a rational basis for such a decision," and should also consider mechanisms for cost containment to help control the costs of the additional infrastructure that will be needed."

The New York Power Authority (NYPA) *said* that a cost allocation approach in which NYSERDA would use System Benefits Charge funds to pay for transmission improvements supporting state policy goals would be "extremely difficult to exercise with NYPA" because its customers do not pay the charge, nor does NYSERDA have legal authority to charge NYPA's municipal customers.

NYPA supports a proposal for the PSC to authorize a retail charge that would be distributed as appropriate among utilities pursuant to a commission-approved adjustment mechanism, which "means cost recovery would be set within retail rates and would not require a proceed-



The figure depicts the generation pockets from NYISO's 70x30 Scenario. | *NYISO*

NYISO News

ing at FERC or any additional approval."

NYISO Views

The state will likely need new transmission system facilities if more renewable resources are assumed to locate in Western New York, Northern New York and the Southern Tier as development trends suggest, the ISO said.

The grid operator said that NYSERDA awards of renewable energy credits to date support the conclusion that renewable investments will concentrate in certain geographic areas, and that its 2019 Congestion Assessment and Resource Integration Study (CARIS), released last July, provides insights into the potential value of additional transmission capability across the state.

"In the 70x30 Scenario simulations, approximately 11% of the annual total potential renewable energy production would be curtailed across the New York system," NYISO said.

The power grid study said that more work will be necessary to quantify existing headroom in various transmission-constrained areas on the local and bulk transmission systems and "to identify high-priority, high-value locations that should be targeted with transmission upgrades. These studies should be based on both a power-flow model that better measures headroom capacity and a production simulation model — ideally aligned with the NYISO's economic planning process assumptions and modeling tools — that can estimate annual curtailments and the extent to which proposed upgrades can reduce these curtailments."

Based on its interconnection queue, over 90% of the land-based renewable capacity proposed outside New York City and Long Island is in NYISO Zones A through E, leaving less than 10% in Zones F and G, NYISO said.

The ISO referred to its own climate change impact and resilience *study* and to a decarbonization pathways *study* by NYSERDA, saying that both 2020 reports support the need for firm capacity to meet multiday periods of low wind and solar output, a need most pronounced during winter periods of high demand for electrified heating and transportation.

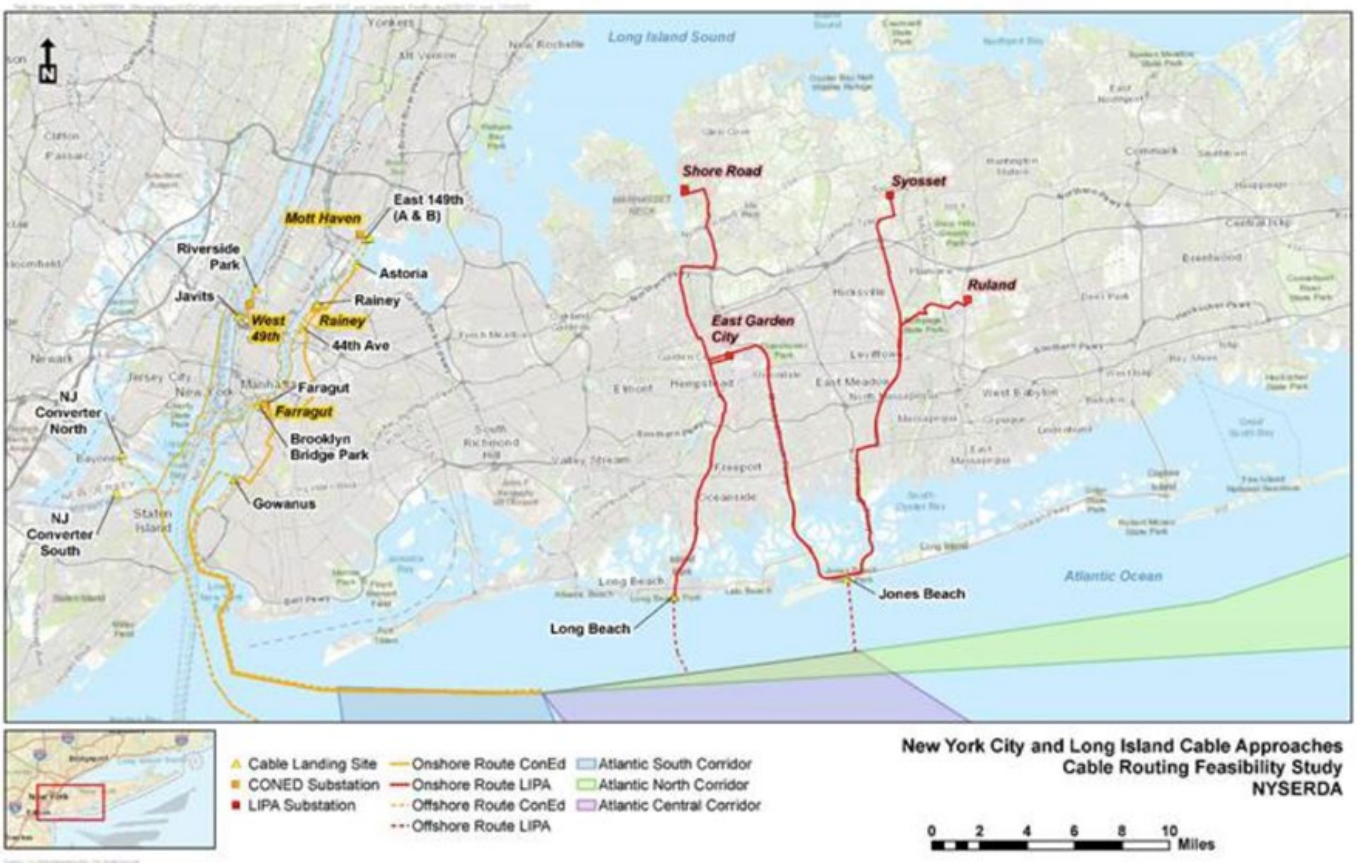
Regarding bulk system storage resources, NYISO said a model should reflect their operational charging and discharging cycles as well as the probability of their availability.

NYISO also supports the use of its public policy process to solicit competitive solutions, a process it says should now take approximately 18 months following the PSC's identification of such a transmission need.

The ISO's Market Monitoring Unit, Potomac Economics, *questioned* NYISO's benefit/cost analysis methodology for local transmission planning, saying that if "it relies on biased assumptions, there is a risk that viable alternative solutions that are more cost-effective or do not rely on ratepayer guarantees will be crowded out."

In particular, the Monitor said that the CARIS 70x30 case was never designed to be an accurate forecast of the power system in 2030 and hence does not provide a reasonable basis for evaluating the benefits of individual transmission proposals.

"First, we recommend developing economic criteria for future resource inclusion in the forecast model and using multiple realistic scenarios when assessing projected curtailment. Second, we recommend changes to the LBMP, capacity value, cost of capital and period of analysis assumptions that will more accurately quantify projects' benefits and risks," the Monitor said. ■



New York City and Long Island POIs and cable approaches | *NYDPS*

NYISO News

NY PSC OKs Utility Storage Deployment, Cost Recovery

By Michael Kuser

The New York Public Service Commission on Thursday approved tariff modifications for energy storage cost and benefit recovery by the state's six major investor-owned electric utilities, authorizing revenue sharing of 30% to utility shareholders and 70% to ratepayers when net wholesale market revenues derived from the storage assets exceed contract costs on an annual basis.

The PSC approved one *filing* by the largest utility in the state, Consolidated Edison Company of New York (CECONY) (Case No. *20-E-0444*), effective Feb. 1, and a separate *filing* by all the other utilities, including fellow Consolidated Edison subsidiary Orange and Rockland Utilities (O&R), effective immediately (Case No. *18-E-0130*).

The other IOUs included Avangrid subsidiaries New York State Electric and Gas (NYSEG) and Rochester Gas & Electric; Central Hudson Electric and Gas; and National Grid subsidiary Niagara Mohawk Power. Their joint filing with O&R was only slightly different from CECONY's.

The commission in December 2018 *set* a goal of deploying 1,500 MW of storage by 2025. It required CECONY to procure and have operational by Dec. 31, 2022, at least 300 MW of energy storage scheduling and dispatch rights, and 10 MW for each of the other IOUs, provided that the bids do not exceed a utility-specific defined ceiling.

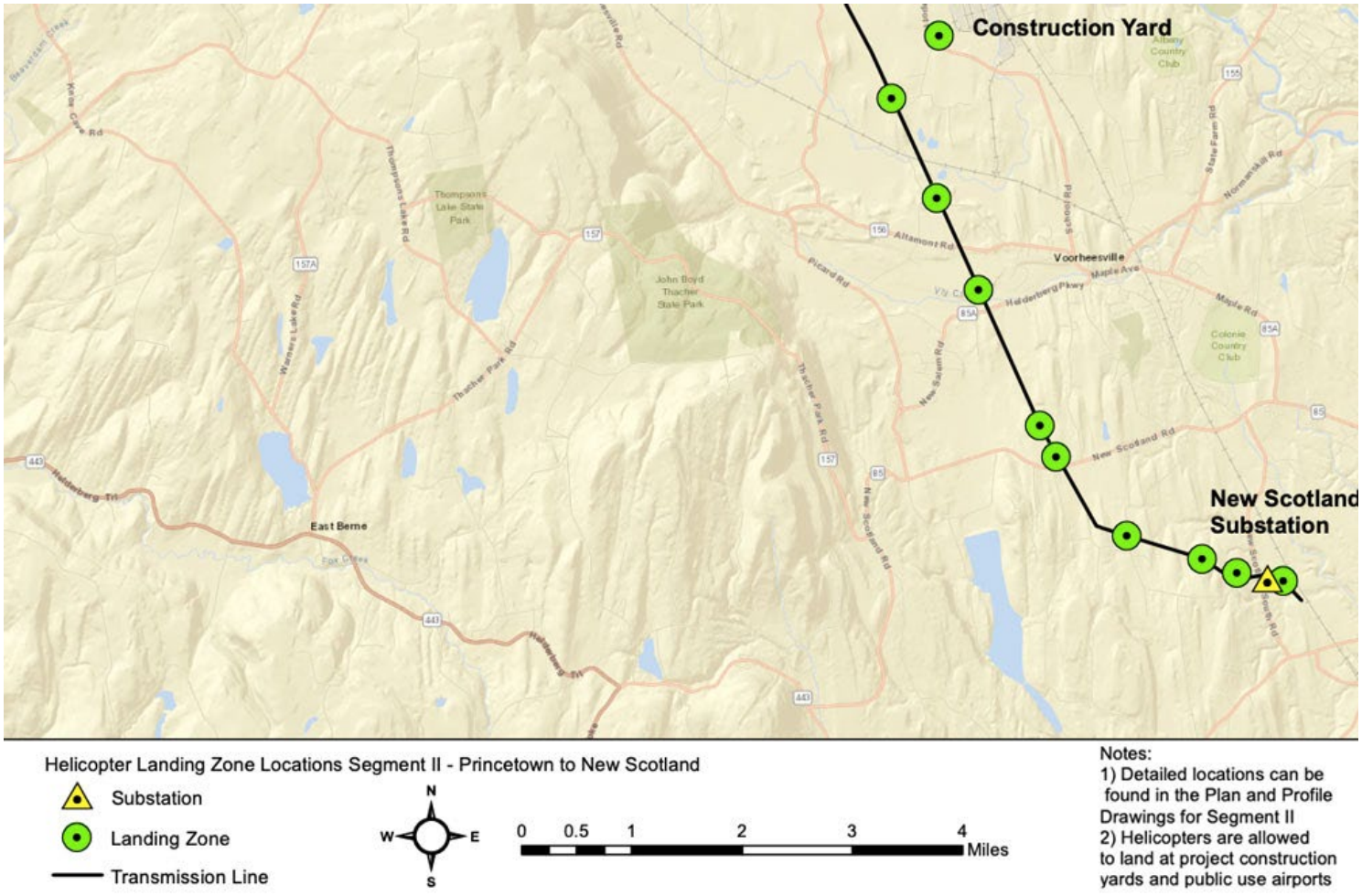
"The order achieves a good balance of consistency, transparency and practicality," PSC Chair John B. Rhodes said. "It is good practice to order these tariff aspects, and it's also important to open up opportunities consistent with our storage order of 2018 in order to support our clean energy goals for the state, our reliability goals for the state and system savings to the benefit of all New York customers."

The utilities last year worked with government officials and project developers to fine-tune the processes and contract terms of state-mandated energy storage solicitations. (See *NY Utilities, Developers Tweak Storage Procurement Terms*.)

"We are at the actual beginning of our baby steps of our enormous goals on storage, and I'm confident that storage will come back to us time and time again as we move forward in compliance with the climate act," said Commissioner John Howard, referring to the state's Climate Leadership and Community Protection Act.

Yes to Marcy-New Scotland

The commission also unanimously granted a certificate of environmental compatibility and public need to the Marcy-New Scotland upgrade project being jointly developed by



Map shows helicopter landing zone locations near the New Scotland terminus of the Central East transmission line being upgraded by LS Power and NYPA. | *LS Power*

NYISO News

LS Power Grid New York and the New York Power Authority. It also approved lightened regulation and flexible financing for LS Power, up to a maximum amount of $478 million (Case No. *20-E-0361*).

Lightened regulation under the Public Service Law is intended for companies that operate only at the wholesale electric market level and have no direct impact on the retail customers regulated by the PSC. NYISO selected the nearly $854 million project in April 2019 in a competitive solicitation process to address a commission-approved public policy transmission need. (See *NYISO Board Selects 2 AC Public Policy Tx Projects*.)

The Marcy-New Scotland project involves building 93 miles of a new 345-kV line from Edic to New Scotland on an existing right of way; erecting two new 345-kV lines from Princetown to Rotterdam; decommissioning two 230-kV lines from Edic to Rotterdam; and doing related switching or substation work at Edic, Princetown, Rotterdam and New Scotland.

"This line has been part of my life for most of my life, and in fact, I've lived for over 40 years within a mile or two of the current line," Howard said. "The issue of the need for this line goes way back before this particular proposal. The need for more cross-state interconnection and at the time, the need was to help reduce pricing into downstate regions, which wanted to take advantage of lower-priced assets upstate."

The more environmentally sensitive planning process these days will allow bringing many megawatts of renewable energy into the load areas in downstate New York, he said.

"I don't think the commission really sees projects of this magnitude with this much consensus behind them," Howard said.

NYSEG Dinged for Isaias; Other IOU Cases Pending

The commission reached a $1.5 million *settlement* with NYSEG for its alleged violations regarding its preparation and restoration efforts related to Tropical Storm Isaias, which struck the state Aug. 4 last year (Case No. 20-E-0586).

Isaias caused approximately 1 million customer outages in the state, affecting roughly 1.5 million New Yorkers. Gov. Andrew Cuomo on Aug. 5 directed the Department of Public Service to investigate the electric service providers' performance in response to the storm.

The department evaluated NYSEG's response against the utility's emergency response plan and found that, "while NYSEG's performance was better than its response to past storms, it nevertheless violated its own plans three times," Rhodes said. "As part of the settlement, NYSEG admitted to the three violations and agreed to provide customers with $1.5 million in benefits, the maximum amount allowed under the statute."

Of those million outages, 183,000 were located in NYSEG service territory, mostly in its Brewster Division that serves customers in Dutchess, Putnam and Westchester counties.

As part of its consent agenda, the commission approved further investigation into the Isaias preparation and response by Central Hudson, CECONY, O&R and PSEG Long Island. It also *announced* it was moving to the next phase of the proceeding.

PSEG is not under PSC jurisdiction, so the commission provided recommended enforcement actions to the Long Island Power Authority. The three utilities under its jurisdiction "now face maximum potential penalties of up to $137.3 million, with Con Edison and O&R also facing potential license revocation depending upon a finding of repeat violations," the commission said.

The order to move to the next phase of investigation "misses the mark," Commissioner Diane Burman said, recommending that the PSC rethink its approach to utility performance in responding to storms.

"We're seeking to cure some possible procedural infirmities ... however, we can't really do that if we're not fully examining the substantive information that we've received since the November 2020 orders to show cause," Burman said. "We have the emergency response plan filings. ... We are continually knowing that we have to assess and be ready to prepare for the next storm. We have an obligation to carefully look at the responses that came in as a requirement of the orders to show cause." ■

Trees damaged in New York by Tropical Storm Isaias in August 2020

PJM News

FERC Partially Accepts PJM MOPR Offer Floor Filing

Commission Orders PJM to Remove Added Sentence

By Michael Yoder

FERC last week mostly accepted PJM's tariff revisions accounting for when the default offer price floor exceeds the market seller offer cap (MSOC) under the RTO's expanded minimum offer price rule (MOPR) (*EL16-49-004, et al.*).

In a ruling in October, the commission rejected PJM's revisions to the MSOC, saying it had "never been a subject of" the MOPR proceeding and was beyond the scope of the compliance directive. (See *FERC Acts on PJM MOPR Filing*.)

But it recognized that sellers "may be left without a valid offer under potentially conflicting tariff provisions in circumstances where the default or resource-specific offer price floor for a particular resource is higher than the market seller offer cap for such resource."

FERC directed that, in such a circumstance, the seller should submit an offer using the MOPR resource-specific review process. It directed PJM to make a change to Attachment DD of its tariff to say that any sell offer for a new entry capacity resource with a state subsidy shall have an offer price no lower than the applicable MOPR floor offer price, "unless the applicable MOPR floor offer price is higher than the applicable market seller offer cap, in which circumstance the capacity resource with state subsidy must seek a resource-specific value determined in accordance with the resource-specific MOPR floor offer price process to participate in a Reliability Pricing Model (RPM) auction."

FERC Commissioner Allison Clements | © RTO Insider

PJM Filing

FERC on Jan. 19 found PJM's *compliance filing*, submitted Nov. 13, "consistent with the directives of the compliance order" with the exception of one provision regarding the MSOC.

PJM included the Attachment DD language directed by the commission but also proposed an additional sentence to the tariff, which stated, "In the event the resource-specific MOPR floor offer price is greater than the applicable market seller offer cap, the capacity market seller of such capacity resource may only submit an offer for such resource equal to the resource-specific MOPR floor offer price into the relevant RPM auction notwithstanding the provisions in Tariff, Attachment DD, section 6.4(a) or Tariff, Attachment DD, section 6.5(a)."

Despite changes to the methodology for calculating revenue offsets, the RTO said there could still be instances where a resource's offer floor exceeds its MSOC and that the additional sentence addressed these circumstances.

The Organization of PJM States Inc. (OPSI) protested that the sentence was not directed by FERC and that the commission should not permit PJM to accept an offer higher than the applicable MSOC. The RTO should instead "determine that when the applicable offer price floor exceeds the applicable market seller offer cap, the seller should be permitted to offer at the applicable market seller offer cap."

The commission rejected the additional sentence on the grounds that it exceeded the October compliance order, directing PJM to submit a new compliance filing within 15 days removing the sentence from the tariff.

"As PJM posits, we acknowledge that circumstances may occur where the applicable offer price floor, whether default or resource-specific, may be higher than the applicable market seller offer cap, either default or resource-specific, such as where a resource is treated as new for the purposes of the MOPR and existing for the purpose of the offer cap," the commission said in its ruling. "We also agree with PJM that the compliance order found that, in these circumstances, the resource must use the resource-specific offer price floor."

Other Rulings

FERC also granted PJM's request to reinstate the deadline — 30 days prior to the capacity auctions — for submission of demand seller offer plans. The RTO explained that when it sought waiver of preauction deadlines in its March 18 compliance filing, which the commission granted, the RTO "inadvertently listed the preauction deadline for submission of demand resource sell offer plans as 21 days prior to the start of the capacity auction."

However, PJM said the deadline for the submission of demand resource sell offer plans should remain 30 days prior to each auction, consistent with the provisions of the tariff.

The commission also denied a request from the Independent Market Monitor for clarification on the definition of fixed resource requirement (FRR).

"The compliance order accepted PJM's proposal regarding excluding FRR revenue from the definition of state subsidy and acknowledged that FRR entities can be compensated in a variety of ways, including those recognized as state subsidies," FERC said. "The Market Monitor posits broad hypotheticals regarding how this tariff provision may be applied in specific circumstances. We decline to address hypothetical applications at this juncture, as PJM will need to evaluate each application based on its specific facts."

FERC Comments

The commissioners unanimously approved the order, with new Commissioner Mark Christie not participating in the ruling.

Commissioner Richard Glick said he concurred on the "relatively narrow determinations" in the order, but he wrote separately "to underscore my continuing disagreement with the conclusions that the commission has reached throughout this proceeding."

Commissioner Allison Clements said she also concurred with the narrow determinations in the order because PJM's filing "largely complies with those directives."

Clements said while she didn't participate in the previous orders, she "strongly" disagrees with a strict MOPR.

"I believe the commission must look forward, past the false dichotomy presented in this proceeding that implies that we must choose to either 'protect' the markets within the commission's jurisdiction or to accommodate state public policy goals," Clements said. ■

PJM News

PJM MRC/MC Preview

Below is a summary of the issues scheduled to be brought to a vote at the PJM Markets and Reliability and Members committees on Wednesday. Each item is listed by agenda number, description and projected time of discussion, followed by a summary of the issue and links to prior coverage in *RTO Insider*.

RTO Insider will be covering the discussions and votes. See next Tuesday's newsletter for a full report.

Markets and Reliability Committee

Consent Agenda (9:05-9:10)

B. The MRC will be asked to *endorse* proposed revisions to *Manual 6: Financial Transmission Rights* addressing the enforcement of FTR bid limits at the corporate entity level. Revisions include adding a bullet to Section 6.6 regarding "FTR Auction Business Rules" denoting the rule for FTR auction bid limits at the corporate entity level. (See "FTR Bid Limits Changes," *PJM MIC Briefs: Dec. 2, 2020*.)

C. Members will be asked to *endorse* proposed revisions to *Manual 12: Balancing Operations* resulting from the periodic review. The changes include updating the out-of-date two settlement terminology to day-ahead market terminology in the markets database application and adding references to the Dispatch Interactive Map Application and reliability assessment and commitment tool.

D. The committee will be asked to *endorse* proposed revisions to *Manual 13: Emergency Operations* resulting from the periodic review. Changes include an updated note in Section 2.2: Reserve Requirements increasing the proportion of contingency reserves that can consist of interruptible load from 25% to 33%.

E. The MRC will be asked to *endorse* proposed revisions to *Manual 18: PJM Capacity Market* conforming to the FERC-ordered rule changes in the minimum offer price rule (MOPR) and forward-looking net energy and ancillary services offset calculation. The revisions were unanimously endorsed at the Market Implementation Committee meeting on Jan. 12. (See "MOPR Changes Endorsed," *PJM MIC Briefs: Jan. 12, 2021*.)

F. Stakeholders will be asked to *endorse* proposed revisions to *Manual 38: Operations Planning* resulting from the periodic review. The revisions were unanimously endorsed at the Operating Committee meeting Jan. 13. (See "Manual Endorsements," *PJM Operating Committee Briefs: Jan. 13, 2021*.)

Endorsements/Approvals (9:10-11:30)

1. Manual 14C Revisions (9:10-9:30)

The MRC will be asked to *endorse* proposed revisions to *Manual 14C: Generation and Transmission Interconnection Facility Construction* as part of the biennial cover-to-cover review. Stakeholders voted to delay the revisions at the MRC meeting Dec. 17 after concerns arose over some of the proposed manual language. (See "Manual 14C Delayed," *PJM MRC/MC Briefs: Dec. 17, 2020*.)

2. Real-time Values Market Rules (9:30-9:50)

Members will be asked to *endorse* a solution package addressing real-time values (RTV) market rules and corresponding revisions to *Manual 11: Energy & Ancillary Services Market Operations* and the *tariff and Operating Agreement*. Stakeholders endorsed PJM's package of updates to RTV that call for additional penalties for generation operators that abuse the rules. (See "Real-Time Values Market Rules," *PJM MRC/MC Briefs: Dec. 17, 2020*.)

3. PRD Credits Disposition (9:50-10:10)

The MRC will be asked to *endorse* a proposed solution package addressing the disposition of price-responsive demand (PRD) credits and corresponding revisions to *Manual 11: Energy & Ancillary Services Market Operations*, *Manual 18: PJM Capacity Market*, *OA*, *tariff*, and *Reliability Assurance Agreement*. PJM's settlement rules call for revenues associated with PRD to be credited to the load-serving entity for an area and do not address the roles of electric distribution companies (EDCs) or curtailment service providers (CSPs), meaning some LSEs are paid for PRD service supplied by EDCs and CSPs. (See "PRD Credits Disposition," *PJM MRC/MC Briefs: Dec. 17, 2020*.)

4. Stability Limits in Markets and Operations (10:10-10:50)

Members will be asked to *endorse* a proposed capacity constraint solution package and corresponding OA and tariff *revisions* regarding stability limits capacity constraints. The proposal addresses the allocation of limits to multiple units by stating that the limit will apply to the sum of the output of the affected units plus ancillary service megawatts. (See "Stability Limits Review," *PJM MIC Briefs: Dec. 2, 2020*.)

5. Black Start Unit Testing, CRF, Involuntary Termination, MTSL and Substitution Rules (10:50-11:30)

Stakeholders will be asked to *endorse* proposed solution packages addressing black start unit testing, involuntary termination, substitution rules, capital recovery factor (CRF) and minimum tank suction level (MTSL), and corresponding revisions to the *tariff*, *Manual 12: Balancing Operations*, *Manual 14D: Generator Operational Requirements* and *Manual 15: Cost Development Guidelines*. The black start issue has been lingering for months, leading to heated discussions. (See *Gen Owners Balk at Change to PJM Black Start Rates*.)

Members Committee

Consent Agenda (1:20-1:25)

B. Members will be asked to approve proposed *revisions* to Manual 34: PJM Stakeholder Process addressing the preference for status quo. The change provides clarifying language to affirm that the preference over the status quo 50% requirement is binding. (See "Manual 34 Revisions," *PJM MRC/MC Briefs: Nov. 19, 2020*.) ■

— Michael Yoder

SPP News

SPP Adds Decarbonization Future to 20-year Study

Assumes 65 GW of Wind, 48 GW of Solar, No Coal

By Tom Kleckner

Acknowledging environmental and political realities, SPP staff and stakeholders have added an accelerated decarbonization future to the RTO's 20-year long-term assessment.

Developed by the Economic Studies Working Group, the future is designed to reflect the change of administrations in D.C. and aggressive energy and environmental policy changes. It retires all coal and oil generation, driven by a 93 to 95% emission reductions target in 2042 from 2017 levels. Environmental regulation assumptions are based on changes in federal policy, mandated carbon cuts and a carbon tax.

The future, one of four in the 2022 20-year assessment, also assumes higher solar, wind and energy storage resource additions than SPP's normal Futures 1 and 2 because of changes in environmental policy and technology that lower capital costs and increase energy conversion efficiency.

"It makes good sense for us to study these things, given the political implications and voluntary reduction measures in the footprint," ITC Holdings' Alan Myers, the ESWG chair, told the Markets and Operations Policy Committee during its virtual meeting Jan. 12.

"It's extremely important to consider how fast and aggressive environmental policy changes will affect SPP," said Casey Cathey, the RTO's director of system planning. "We have companies that desire this; the political climate … all these variables are pushing the envelope of renewable energy more than we've seen the last few years."

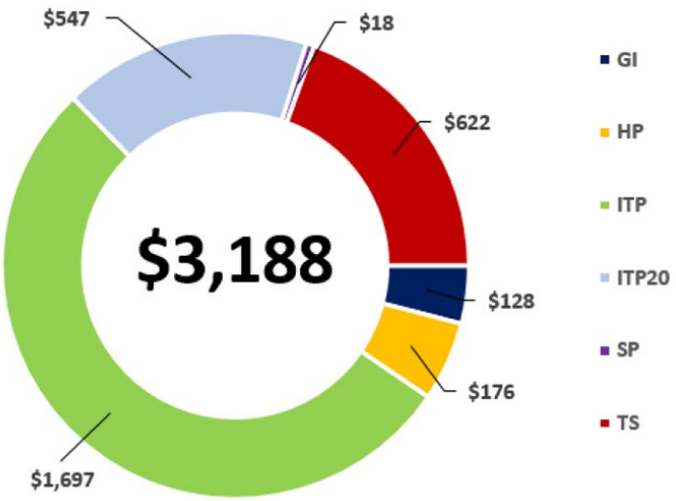
The accelerated decarbonization future assumes that by 2042 SPP will have 65 GW of wind capacity and 48 GW of solar capacity, with almost 17 GW of energy storage. The grid operator already has 26 GW of installed wind capacity on its system and another 39.9 GW of proposed projects are under some form of study in its generation interconnection queue.

Other Futures

The future was one of two added to the two futures developed as part of the 2022 Integrated Transmission Plan (ITP): a business-as-usual reference case (Future 1) that reflects continued industry trends and environmental regulations, and an emerging technologies case (Future 2) driven primarily by the assumption that electric vehicles and distributed generation will affect energy growth rates. Future 1 predicts 41 GW of wind capacity and 19 GW of solar, and Future 2 foresees 50 GW of wind and 27 GW of solar.

"These are good futures to extend out. We're saving additional work on the overworked engineering staff," Myers said.

The fourth future, the SPP-MISO zero hurdle rate (Future 4) focuses on the potential benefit of greater market efficiency between SPP and MISO. Future 4 sets hurdle rates between the two RTOs to zero, with all other input modeling assumptions the same as Future 3.



SPP's 2021 Transmission Expansion Plan has a total value of almost $3.2 billion. | *SPP*

Both Future 3 and Future 4 assume a moderate increase in SPP's load because of increased electric transportation and electric home heating, resulting in the grid operator become a winter-peaking RTO.

Asked how SPP could ensure a quality study when the overall peak load is just over 51 GW, Cathey said the model will adjust solar and wind around conventional resources, filling in the valleys when renewable energy drops.

"It's not just a matter of looking at 51 GW as the overall peak load. It's a process of doing the right siting," he said. "What we're ultimately trying to do is determine what actually will be built … and try to simulate that. We're trying to get ahead of the game and not wind up with congestion costs."

The ESWG developed the futures with input from the MOPC and the Strategic Planning Committee. They will be used to create the year 2042 market economic models that will be analyzed in the assessment.

Additional sensitivities will be performed and eventually scoped out by altering some of the futures assumptions, Cathey and Myers said. Some of the potential sensitivities include load, hurdle rates for exports, gas prices and retirements.

The MOPC unanimously approved the scopes of both the long-term assessment and the 2022 ITP, which adjusts the futures with several assumptions about fossil retirements, storage and renewable capacity. Futures 1 and 2 are weighted 50/50 in the 2022 scope.

Cathey promised a more robust report on the 2022 plan during the governance meetings in April.

STEP Down

The committee also approved the 2021 SPP Transmission Expansion Plan (STEP) *report* that lists the grid operator's endorsed and approved transmission projects for a 20-year planning horizon. The current plan includes all ongoing network upgrades or those where construction has been completed, but not all closeout requirements fulfilled.

The current STEP's value has been reduced to $3.2 billion from $5.2 billion in 2019 and $4.6 billion last year.

"That represents a lot of projects that have closed out," Cathey said. ■

SPP News

SPP Taps FERC Staffer for Policy Position

Leonard Tao | *FERC*

SPP has hired former FERC senior staffer Leonard Tao to serve as its first director of FERC policy, the RTO announced in a *press release*.

Tao will be based in D.C., overseeing FERC filings and working with federal government leaders on energy issues on behalf of SPP, effective Jan. 19.

"He will be a tremendous resource to SPP and our members as we move to a full-time presence in Washington, D.C.," said Paul Suskie, the grid operator's executive vice president of regulatory policy and general counsel.

"I am thrilled to join SPP at this exciting time as it moves forward with its Western real-time balancing market and transmission plans that will bring significant benefits to consumers," Tao said.

Tao has more than 30 years of experience working on energy policy matters. As director of FERC's Office of External Affairs he managed strategic communications with Congress, the states, consumers and industry. He was also a legal adviser to FERC Chairman Joseph Kelliher and represented the commission as a senior legal adviser in the Office of the General Counsel. The latter responsibilities included standards of conduct for transmission providers.

| *WER Architects*

SPP told *RTO Insider* that with the industry's continued evolution and constant change in Washington, this was the right time to join all the other multistate RTOs in maintaining a permanent presence near Capitol Hill.

He previously served as an attorney in the Office of Legal Counsel to the U.S. president and as an administrative hearing officer in the U.S. Department of Energy. He is a graduate of George Washington University Law School and earned an undergraduate degree in economics from the University of Illinois. ■

— Tom Kleckner

SPP News

Stakeholders Approve WEIS Market Launch

Vote Delayed for Last Look at Software Systems

By Tom Kleckner

Stakeholders in SPP's Western Imbalance Service (WEIS) market on Monday unanimously approved its Feb. 1 launch, the last major milestone in a project that began in 2019.

Bruce Rew, SPP's senior vice president of operations, broke the news during the RTO's joint quarterly stakeholder briefing, saying the grid operator is "excited" to be operating a power market in the Western Interconnection.

The WEIS Project leadership team, comprising the eight-member Western Markets Executive Committee (WMEC) and representatives from the Western Area Power Administration's (WAPA) Colorado Missouri and Upper Great Plains West balancing authority areas, met with staff Monday to determine whether to transition from final system testing to a live marketplace.

Following the vote, WAPA *tweeted* its thanks to customers, stakeholders, SPP, fellow participants and employees "for supporting this monumental effort."

SPP now joins CAISO in offering a power market in the Western Interconnection.

The vote on the launch had been delayed from Friday after some participants wanted more time to test the WEIS systems' functions and interfaces.

David Kelley, SPP's director of seams and tariff services, said last week that staff and stakeholders were trying to "button up some final loose ends."

"Giving the weekend for some of that to occur would allow for greater confidence in the decision and the vote to take place," Kelley said on Friday.

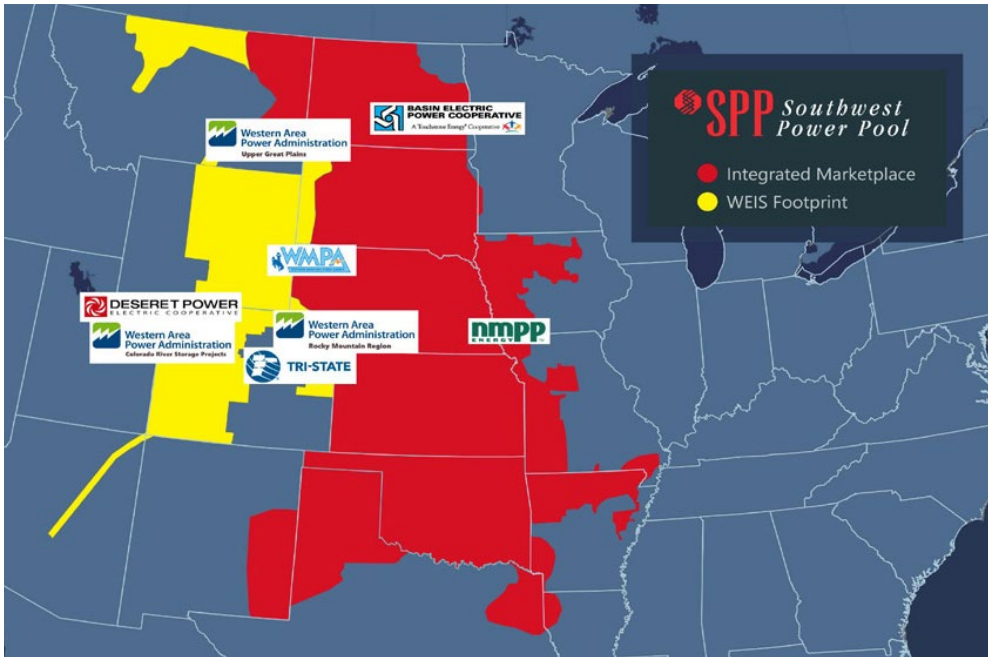
Market participants had asked for additional time to see bid-to-bill data with modeling changes they requested, an SPP spokesperson said. That led staff to extend parallel operations, with the WEIS market system running alongside the participants' current systems, to Jan. 26. Parallel operations had originally been scheduled to end Jan. 14.

Staff has also identified seven "enhancements" that are in yellow status but deemed ready to be addressed after the WEIS market launches.

"We do have plans for those. They're not problematic," Customer Relations Manager Don Martin told WEIS stakeholders Friday.

SPP is managing the WEIS market on a contract basis for eight utilities. However, seven of those — Basin Electric Power Cooperative, Deseret Power Electric Cooperative, the Municipal Energy Agency of Nebraska, Tri-State Generation and Transmission Association, and WAPA's Upper Great Plains West, Rocky Mountain Region and Colorado River Storage Project utilities — have said they are interested in becoming SPP RTO members. (See *Western Utilities Eye RTO Membership in SPP*.)

SPP also serves as an RC for about 12% of the Western Interconnection. It will add about 3.45 GW of generating capacity to its RC footprint — eight generating resources that are part of Gridforce Energy Management's BA in Washington, Oregon, Arizona and New Mexico — effective April 1. (See *SPP Expands its Western RC Footprint*.)



SPP's market footprints in the Western (yellow) and Eastern (red) Interconnections | *SPP*

MMU: No Frequent Constraints

SPP's Market Monitoring Unit told a joint meeting of the WMEC and the Western Markets Working Group (WMWG) Friday that the WEIS market will begin operations without frequently constrained areas (FCAs).

The Monitor analyzed real-time data from Nov. 1, 2019, through Oct. 31, 2020, looking at Western Interconnection constraints monitored by the SPP RC. It found four areas, all in Colorado, with scenarios resulting in at least 100 binding hours.

It defines FCAs as the market footprint areas that both experience high levels of congestion and are associated with one or more pivotal suppliers. It says a supplier is pivotal when some or all of its output is necessary for reliable operations within a defined area.

The Monitor said it will re-evaluate the FCA "designations at least annually."

Last 3 Open WRRs Approved

The WMWG and WMEC both unanimously approved the final three open revision requests to the WEIS protocols:

- *WRR17*: adds documentation to outline how dynamic schedules used to transfer imbalance energy between the market's balancing authorities will be handled in settlements.
- *WRR18*: corrects the real-time loss adjustment factor's description to accurately reflect its true calculation ("total BA state estimated load without losses/total BA state estimated load with losses").
- *WRR19*: corrects the settlement sign conventions to state that supply imbalance energy is positive and obligation imbalance energy is negative. ■

Company Briefs

Ørsted Launches Offshore Wind-to-hydrogen Project

Ørsted issued a final investment decision last week on the H2RES renewable hydrogen demonstration project, a power-to-mobility project that will use 2 MW of offshore wind-fed electrolyzing capacity to produce about 1,000 kg of hydrogen daily.

The project will investigate how to best combine an electrolyzer with fluctuating power supply from offshore wind, using two 3.6-MW turbines at Avedøre Holme in Copenhagen, Denmark.

While H2RES will be Ørsted's first renewable hydrogen project in operation, the company has partnered with different groups on seven other projects in Denmark, Germany, the Netherlands and the U.K.

More: *POWER Magazine*

PepsiCo Buys Portion of Nebraska, Texas Wind Energy

PepsiCo last week announced it has signed two agreements with Ørsted to buy a portion of energy from the 298-MW Haystack wind project in Nebraska, as well as from another in Texas.

The company said sourcing renewable energy is an important step in its goal to reduce greenhouse gas emissions by more than 40% by 2030 and achieve net-zero emissions by 2040.

More: *Norfolk Daily News*

Royal Dutch Shell to Buy EV Charging Company Ubitricity

Royal Dutch Shell last week announced it has agreed to buy electric vehicle charging company Ubitricity as part of its plan to become net-zero on carbon by 2050. The deal is expected to be completed later this year. Financials were not disclosed.

Ubitricity operates the largest public EV charging network in the U.K. with more than 2,700 charge points, while also having growing networks in Germany and France. It has more than 1,000 charging points at 430 Shell retail sites.

More: *Barron's*

Federal Briefs

Avangrid's NECEC Line Halted Once Again

Last week, hours after the Department of Energy issued a presidential permit to begin construction on Avangrid's $950 million New England Clean Energy Connect transmission line, an order from the 1st Circuit Court of Appeals again halted all work with a temporary injunction.

The order was in response to a lawsuit brought by the National Resources Council of Maine and the Appalachian Mountain Club, which said the Army Corps of Engineers had failed to require a full environmental impact statement. The order will stop construction until the parties can argue their appeal, which is expected to be at least 10 days.

The 145-mile transmission line, which would be controlled by Central Maine Power, would deliver 1,200 MW to the grid in Lewiston, Maine, with its cost paid for by Massachusetts customers.

More: *WBUR*

Biden Admin to Take 'Hard Look' at LNG-by-rail Rule

Pete Buttigieg, President Biden's nominee for treasury secretary, signaled last week that the administration would consider rescinding a recently completed rule allowing LNG to be transported by rail.

When asked about his views on the rule during his Senate confirmation hearing, Buttigieg said it was something he wanted to take a closer look at and would take safety considerations into account.

The final rule, which was issued on June 19 under the Trump administration, laid out requirements for LNG transport by rail and allowed broad authorization for train shipments.

More: *S&P Global Market Intelligence*

Biden Picks McCabe as EPA Deputy

President Biden last week announced that he plans to name **Janet McCabe** as EPA's deputy administrator.

McCabe previously served as the acting assistant administrator for EPA's Office of Air and Radiation for much of the Obama administration. In that position, she helped develop the Clean Power Plan, one of former President Barack Obama's signature efforts to reduce emissions from power plants that has since been tied up in court.

McCabe currently works as director of the Environmental Resilience Institute at Indiana University and a professor at the university's law school.

More: *The Hill*

Hanson Named NRC Chairman

President Biden last week designated **Christopher T. Hanson** as chairman of the Nuclear Regulatory Commission. He replaces Kristine Svinicki, who left Wednesday.

Hanson was sworn in as an NRC commissioner in June 2020 and has more than 20 years of government and private-sector experience in the nuclear energy field. Prior to joining the commission, he served as a staff member on the Senate Appropriations Committee, where he oversaw civilian and national security nuclear programs.

More: *Nuclear Regulatory Commission*

Study Says US, Canada Underestimating Climate Risk from Abandoned Wells

Researchers from McGill University last week claimed that methane leaking from

more than 4 million abandoned oil and gas wells in the U.S. and Canada are a far greater contributor to climate change than government estimates suggest.

The study found that Canada has underestimated methane emissions from abandoned wells by as much as 150%, while U.S. estimates are about 20% below actual levels.

It also found that there are about 500,000 wells in the U.S. that are undocumented along with about 60,000 in Canada.

More: *Reuters*

State Briefs

COLORADO

2020 Coal Production Lowest in Decades

State mines produced about 10.3 million tons of coal in 2020, down from 13.6 million tons in 2019, according to Division of Reclamation, Mining and Safety data. It is the lowest amount of production in the state dating back to the late 1970s.

The reduction was driven by production drops at Arch Resources' West Elk Mine and Peabody Energy's Foidel Creek Mine. Production at West Elk fell to 2.402 million tons last year (from 4.16 million tons), while Foidel Creek fell to about 1.2 million tons (from 2.54 million tons).

More: *The Daily Sentinel*

Xcel Wants to Charge Customers to Mitigate Wildfire Risk

Xcel Energy last week said it wants to charge state customers $589.7 million over the next five years to reduce their risk of causing wildfires. Filed with the Public Utilities Commission on July 17, the Wildfire Protection Rider would charge customers based on the amount of electricity used through 2025.

Xcel's subsidiary, the Public Service Company of Colorado, cited the California wildfires started by Pacific Gas and Electric's equipment as motivation for the proposal, which would add less than 1% to a bill's monthly total. The plan would guide projects, including vegetation management and infrastructure updates in a designated Wildfire Risk Zone, that the rider would fund. It would also pay for work the company did in 2019 and 2020.

A PUC administrative law judge is expected to make a recommendation to the commission on both the plan and the rider within a few weeks.

More: *The Colorado Sun*

DELAWARE

Renewable Energy Standards Bill Passes Senate

Senators last week voted 13-8 to pass the state's renewable portfolio standard through 2035. The RPS would require Delmarva Power to provide at least 40% renewable energy by that time.

The bill would not take effect until 2026, when the current renewable energy contracts the state are under are expected to cost the most. After that, the contracts will start to cost less and less until they expire.

More: *Delaware Public Media*

IOWA

Wind Farm Application Approved by Delaware County

Delaware County supervisors last week approved a permit for the CED Manchester Wind farm.

The application was approved after Consolidated Edison officials agreed to drop their request for project variances that would not have complied with county code. The supervisors had told Con Ed they were reluctant to grant variances for the project to move forward.

Con Ed had requested a variance on the county's blade height clearance requirement of 75 feet and asked to be able to use a blade with a 72.2-foot clearance, as it had already purchased a turbine with that length of blade. Also, company officials were reluctant to agree to a performance bond requirement of 130% of the project costs.

More: *Manchester Press*

KENTUCKY

LG&E/KU Proposes Rate Increase

LG&E and KU last week filed a proposal with the Public Service Commission to raise customer rates for the third time in four years.

The average residential customer with both gas and electricity would pay an average of $215 more per year under the proposal. The average electric bill would increase about 12% ($11.74/month), while a gas bill would increase by more than 9% ($6.17/month). It would result in about $334 million in additional revenues per year for the company.

The utility also proposed an economic relief surcredit that would go into effect after the rate increase and reduce the average residential electric bill by about $3/month, and gas by about 33 cents/month, for the first year.

More: *WFPL*

MASSACHUSETTS

Legislature Again Files Climate Bill

House and Senate leaders again filed a climate and emissions reduction bill that was vetoed by Gov. Charlie Baker two weeks ago. The leaders hope to quickly return the legislation to the governor, but they plan to override another veto if it comes.

Baker last week vetoed the bill that would have required the state to become carbon neutral by 2050 and establish an ambitious timeline for carbon emission reductions. While he supports the 2050 net-zero goal, Baker said he was worried that by allowing cities and towns to adopt a new net-zero building code, it could stop housing construction when he is trying to encourage more. The bill cleared the branches last session by veto-proof votes of 145-9 in the House and 38-2 in the Senate.

The bill, which was negotiated last session between the House and Senate over five months of talks, was refiled last week in the Senate. However, Senate President Karen Spilka said there were no plans for a vote on the bill.

More: *WBUR*

MINNESOTA

Gov. Walz Pushes for Carbon-free Electricity

Gov. **Tim Walz** last week issued a set of climate change proposals, including a call for 100% carbon-free electricity by 2040, as his office works to get the state on track to hit its targets for cutting greenhouse gas emissions.

The clean-energy measure proposes to move up the deadline by a decade, from 2050 to 2040. Three other bills are to follow, including one that Walz said would set a goal of cutting greenhouse gases from residential, commercial and industrial buildings in half by 2035.

The rollout of Walz's climate change package follows a report from state pollution regulators that said the state is far off track to meet the emission reductions lawmakers set in the 2007.

More: *Star Tribune*

PUC Fines Xcel over Dispute with Solar Developers

The Public Utilities Commission last week fined Xcel Energy $1 million for multiple complaints over delays in connecting solar projects to the grid.

Almost all of the 128 complaints were filed by All Energy Solar in 2019. The interconnection problems have been with community solar gardens and other smaller projects.

Xcel said it has resolved the All Energy complaints, which the company contends should not count toward its service-quality plan. It says the plan was never intended to include interconnection issues, which have their own review process.

More: *Star Tribune*

NEW JERSEY

State Meets 1st Carbon Emission Reduction Goal

The Department of Environmental Protection last week announced that the state hit its 2020 goal of reducing power plant emissions by 20%. However, acting Commissioner Shawn LaTourette said the target of curbing 80% of carbon emissions by 2050 will be more difficult.

The state is largely dependent on fossil fuels to power its economy and heat its residential and commercial buildings. To transform the state, Gov. Phil Murphy's plan hinges on electrifying the transportation sector, quickly transitioning to renewable energy sources, and converting most homes and businesses for heating. If any of those efforts are compromised, LaTourette said, those goals may not be realized.

More: *NJ Spotlight News*

NEW YORK

Attorney General Sues over Nuclear Plant Shutdown Plan

Attorney General **Letitia James** last week filed a lawsuit against the Nuclear Regulatory Commission for denying the state a public hearing over the dismantling of the Indian Point nuclear power point before approving a sale. The lawsuit asks the court to review the commission's decision, as well as another related to the funds that would be used for decommissioning.

NRC approved Entergy's sale of the plant in November to Holtec International and last week denied petitions from the state for hearings.

More: *The Associated Press*

NORTH CAROLINA

Lumberton City Council Denies Rezoning for Solar Project

The Lumberton City Council last week unanimously denied a rezoning request for Chickenfoot Solar and its proposed solar farm. Denial of the rezoning request also meant a conditional use permit could not be granted.

Councilman John Cantey raised several points about why he felt the solar farm should not be approved and cited a petition against it that had more than 40 signatures. Cantey later said the idea of a solar farm wasn't undesirable, but that the land is not the right location. The request would have rezoned 30 acres of property from residential and agricultural to manufacturing.

Chickenfoot can either submit a different application in six months or resubmit the same application in one year.

More: *The Robesonian*

WYOMING

Critics Say New Bill Could Kill Solar Energy Sector

A bill approved last week at the Corporations, Elections and Political Subdivisions standing committee meeting would repeal the current net metering system and task the Public Service Commission with installing a new system that keeps utility rates fair for all residents.

The state's current net metering system was adopted about 20 years ago and applies to small-scale energy generators. Senate File 16 would effectively scrap the system and move the issue to the PSC. If passed, the legislation would no longer require utilities to compensate customers generating excess electricity. Proponents of the bill argue net metering customers receive a subsidy under the present system, while opponents said the subsidy, when it does exist, is negligible. They also say residents investing in clean energy, or businesses coming to the state to expand the sector, should be encouraged, not deterred, by the state.

The Legislature will reconvene virtually for eight days to consider the committee bills beginning this Wednesday.

More: *Casper Star-Tribune*