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October 26, 2021

FERC Calls for Change in Southeast While Approving Status Quo

FERC Rejects Bid to Open TVA to Competition

Glick Calls for Congressional Action

By Rich Heidorn Jr.

FERC on Thursday declined a request to open the Tennessee Valley Authority's monopoly to competition, suggesting it was up to Congress to change the rules for the nation's largest public power system.

The commission voted 3-1 to deny a petition by three municipal and cooperative utilities to order TVA to provide them unbundled transmission service so they could purchase cheaper power from outside the TVA "fence." Commissioner Allison Clements dissented.

Athens Utilities Board, Gibson Electric Membership Corp. and Volunteer Energy Cooperative filed their petition in January seeking relief from what they called TVA's excessive rates and anticompetitive practices. They contended TVA does not offer transmission service to "local power companies" (LPCs) such as themselves at rates or terms that are



FERC rejected a request by Athens Utilities Board, Gibson Electric Membership Corp. and Volunteer Energy Cooperative to require TVA to provide them unbundled transmission so they can import cheaper power. But FERC Chair Richard Glick called on Congress to eliminate the TVA "fence," calling it an "anachronism." | TVA

comparable to those TVA charges itself. (See TVA Munis, Co-ops Appeal for Unbundled Tx Service.)

But the commission voted against exercising

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FERC's Christie Accuses Glick, Clements of Prejudice for RTOs

By Michael Brooks

FERC Commissioner Mark Christie on Thursday blasted Chair Richard Glick and Commissioner Allison Clements for opposing the Southeast Energy Exchange Market (SEEM), accusing them of wanting to force utilities in the Southeastern U.S. to form an RTO and contending that their arguments against the proposed market were made in bad faith (ER21-1111, et al.).

The SEEM proposal — which created an energy imbalance market among utilities including Southern Co., Dominion Energy, Louisville Gas & Electric, the Tennessee Valley Authority and Duke Energy — went into effect Oct. 12 by operation of law because FERC had failed to act on it by a 60-day deadline. Christie was joined by fellow Republican Commissioner James Danly

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Phillips, FERC Get Little Attention at Confirmation Hearing



D.C. PSC Chair Willie Phillips (p.6) | Senate ENR

La. Regulators Threaten MISO Departure over Tx Costs

By Amanda Durish Cook

Louisiana regulators last week said they will split with MISO if their ratepayers are forced to fund major transmission built in the northern reaches of the RTO's footprint.

During a Wednesday meeting, Louisiana Public Service commissioners cited concerns over an "offset" of the value MISO can provide to southern ratepayers, if it expects them to shoulder future transmission costs in the Midwest region.

A PSC consultant said the grid operator's long-range transmission plan's primary function is to support large-scale wind farms and solar arrays, not accomplish future reliability as the RTO claims.

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FERC Commissioners Opine on Western RTO

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Texas PUC Names Members to Reliability Council

TVA

MISO Makes Compromise on North-South Transfer Fees

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'Good Riddance' to Old PJM MOPR, Glick Says

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NetZero Insider is now live! See p.5 for this week's coverage.

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Canadian Hydropower, a Clean and Renewable Source of Energy

By Annie Levasseur

Canadian hydropower is one of the lowestemission energy generating options on the planet. This statement is not based on interpretation or extrapolation. It is based on science rigorously developed over decades by independent researchers, including myself. Science that is regularly updated as through my own study published this year.

RTO Insider recently published an inflammatory article in which the claim is made that "scientists say Canadian hydropower is not clean" and that Canadian hydropower's carbon emissions levels compare unfavorably to those of natural gas and even coal-based generation. (See Scientists, First Nations Say Hydropower is Not Clean Energy.)

This is completely inconsistent with the preponderance of scientific evidence.

The study of greenhouse gas emissions from Québec hydroelectric reservoirs began in the early '90s, and these studies show that emissions peak immediately after reservoir creation and decline to natural lake levels within about ten years.

Greenhouse gas emissions from any energy source is expressed in gCO₂-eq/kWh, which represents the amount of GHG emitted per unit of energy produced. For hydropower, the intensity varies according to multiple factors, such as temperature, the density of vegetation flooded, powerhouse energy output, etc. Biological and climatic conditions that prevail in a cold boreal climate such as Québec result in a mean value of 34 gCO₂-eq/kWh for Hydro-Québec's generating fleet (Levasseur et al., 2021). This is low compared to coal power plants, with

mean values higher than 875 gCO₂-eq/kWh.

Additionally, reporter E. Hayes points to scientific studies to support her claims but she does so erroneously. For example, she is using a specific high value of emissions taken from Scherer and Pfister (2016) that is the result of modelling data from the Hertwich (2013) model without any model validation and calibration with field data. Comparing Churchill Falls, situated in cold Canadian boreal zone, to natural gas is incorrect. Bastien et al. 2009 has clearly showed that GHG emissions from that reservoir were very low and similar to surrounding lakes. Similar field values are also observed on Caniapiscau and Laforge reservoirs (Québec) sharing similar biological, climatic and geological characteristics (Tremblay et al., 2005). The reporter should get her facts right.

We are faced with a global climate crisis. Our

society must reduce its carbon footprint and move toward lower-emitting sources. Hydropower generated in Québec is one of those sources. Misinformation will not help us make the right decisions on climate change, but taking bold actions like collaborating across the border to bring clean sustainably developed energy will.

Annie Levasseur is Professor, École de technologie supérieure, Montréal, Canada and Chairholder of the Canada Research Chair on Measuring the Impact of Human Activities on Climate Change.

Levasseur and her co-authors said their study earlier this year "did not receive any specific grant from funding agencies in the public, commercial or not-for-profit sector.

"The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported" in the paper, they added.

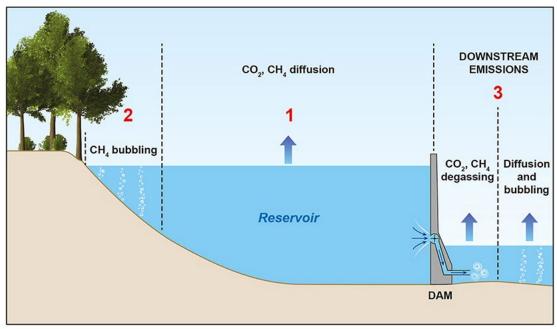


Illustration of methane and carbon dioxide emissions from reservoirs and hydroelectric dams | A.Levasseur, S.Mercier-Blais, Y.T.Prairie, A.Tremblay, C.Turpin, CC BY-SA-4.0

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Stakeholder Soapbox

PJM Markets: More 'Jeopardy,' Less 'The Price Is Right'

By Vince Duane and Tony Clark



Our July whitepaper. Stretched to the Breaking Point: RTOs and the Clean Energy Transition, emphasized the point that if an RTO was going to clear a centralized auction to form a single marginal price payable to all megawatt hours generated, then that

RTO had better "get the price right." Everything else (and we mean that literally) flows from getting price right: reliable operations, demand response and efficient consumption decisions, generator investment and retirement, accurate transmission planning, and an efficient financial transmission rights regime to manage congestion. Textbook economics instructs that the "right" price is a function of the cost of production and supply and demand.

In the real world, prices are rarely perfectly "right." Distortions of various types are introduced. Not to mention the perfectly competitive conditions required to form the "right price" do not always exist. In the realm of RTOs, the term conceding this reality -adescription one used to encounter more frequently in FERC orders and RTO commentary was to aspire to "workably competitive" markets.

The question of price in RTOs surfaced again recently in the commission's split decision on PJM's "focused" minimum offer price rule (MOPR) filing. Last week, FERC Chairman Richard Glick and Commissioner Allison Clements published a joint statement comprehensively explaining why they support the PJM MOPR proposal (the "Joint Statement"). Regardless of whether one agrees with the ultimate conclusion in the Joint Statement, the broader question about RTO market design and its durability to handle industry transformation would benefit from reaching a shared understanding on key points. (See related story, "'Good Riddance' to Old PJM MOPR, Glick Says.")

The first such point is dismissing those that complain about state subsidies that support particular generation as wedded impractically to what the Joint Statement terms an "abstract concept of market integrity." What the Joint Statement calls "market integrity" is what we call "getting the price right." It's

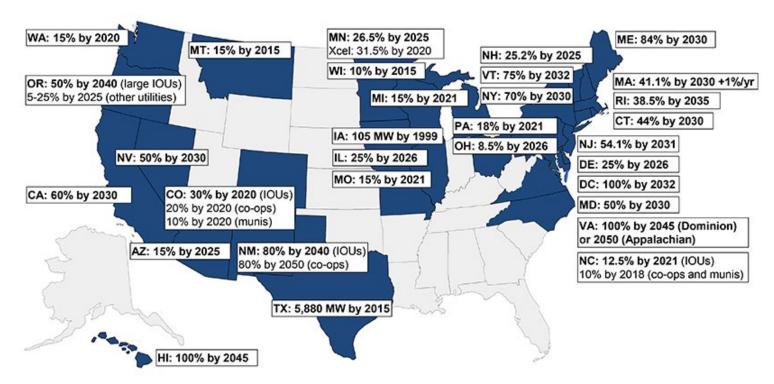
hardly an abstraction. As we've pointed out, it's the heart of the engine that drives RTO markets and it deserves thoughtful consideration.

The second and related point involves state actions that affect this



engine and the nature of these actions. More specifically, it is the need to distinguish actions which are problematic "distortions" from actions that, while they affect price, create no problem for RTO markets. By noting that all manner of public and private action affect price, including actions that increase (as opposed to suppress) price, the Joint Statement essentially throws up its hands and concludes there is no "principled distinction" to be drawn and any effort to do so would result in "arbitrary and burdensome line-drawing."

There is a point here. Toward the goal of "workably competitive" markets, throughout its history at PJM. MOPR tried to separate actionable subsidies from those that could be ignored, or had to be accepted, while conceding all subsidies created price suppres-



As of 2021, 30 states and D.C. have renewable portfolio standards, representing 58% of U.S. retail electricity sales. | Lawrence Berkeley National Labor

Stakeholder Soapbox

sion. We fear the Joint Statement gives up too quickly and justifies surrender based on a false equivalence of subsidy compared to a cost imposed by tax or regulation.

Again, price starts with cost. As noted by the Joint Statement, "Siting policies, tax rules, and labor regulations, for example" or a carbon tax all work to increase the cost of production that will be captured in the generator's offer and ultimately inform the marketplace of the full and true cost of generating a megawatt hour. However, imposing a cost through regulation on a negative externality, be it lost workdays in the labor context or carbon in the climate context, is very different from subsidization. Different not just in approach, but in outcome.

For example, the superior efficiency and environmental outcomes that result from putting a cost on carbon as opposed to subsidizing carbon-free activity are well accepted. Undoubtedly, however, the commission's job is not to disfavor subsidies compared to alternatives that economists find preferable. But the commission is an economic regulator and it should be worried about the different economic consequences that a subsidy will

cause to market structures it has sanctioned as compared with regulations or taxes that price the externality.

And here is where we believe the Joint Statement falls short. The commissioners are not wrong to accept that states will prefer certain resources and will take actions to support those resources, regardless of what type of MOPR is in place. But once subsidy is accepted as a given, then the commission must ask whether the RTO market structure, predicated on a single-clearing marginal price. remains able to function as intended — and if not, what changes must occur. This gets to the very heart of the commission's statutory duty to ensure wholesale rates remain just and reasonable.

The fact that RTO markets wholly depend on "getting price right" means offers must reflect accurate costs of production. The Joint Statement appears to contort subsidies as a kind of reduction in the cost of production to then conclude that a market riddled with subsidy "will provide accurate price signals ... by allowing capacity market sellers to include state support in their offers." In reality, what is meant by "include" here is that subsidized

sellers will be able to exclude actual costs of production from their offers.

Nobel prize winning economist William Nordhaus extensively details the economic distortions that separate a subsidy from a regulatory tax or cost in his book, A Question of Balance: Weighing the Options on Global Warming Policies. The distortions from subsidy that he identifies in general markets relative to policies that impose cost by way of tax or regulation also show up, perhaps more acutely, in the designed, single-clearing price RTO markets. Though the Joint Statement's conflation of hand outs and imposed regulatory costs weakens its argument, what we find more troubling is the risk that needed changes to RTO market design — changes we argue will be profound and foundational — may be ignored at the very moment when they most require attention.

Former FERC Commissioner Tony Clark is a senior adviser at Wilkinson Barker Knauer. Vincent Duane is principal of Copper Monarch and the former SVP for law, compliance and external relations for PJM.

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NATIONAL/FEDERAL

Net-zero Pledges Top Issue to Watch at COP26, Researcher Says

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Virginia Touts Port as Offshore Wind Hub

NJ Transit Buys First Electric Buses

Maryland Looks at All-Electric New Building Code

Appalachian Power Refunds Wind Power Revenue to Ratepayers

Virginia Builds out OSW Supply Chain with Turbine Blade Plant

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Developer: Maine Has 'Golden Opportunity' to Demo Voluntary Dual-use Solar

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Phillips, FERC Get Little Attention at Confirmation Hearing

Senators Focus on National Parks Director Nominee

By Michael Brooks

It was a dull day for FERC watchers Oct. 19, as President Biden's first nominee to the commission, Willie Phillips, faced few questions from members of the Senate Energy and Natural Resources Committee at his confirmation hearing.

Those he did receive were mostly vague, nonspecific queries about ensuring reliability and affordability. Though asked several times about transmission planning and operations, Phillips cited FERC's ongoing Advance Notice of Proposed Rulemaking on those topics, a broad inquiry that required him not to prejudge or take any specific positions, he said.

When asked by Sen. John Hickenlooper (D-Colo.) what he could do to improve transmission planning and alleviate transmission congestion, Phillips responded, "You're asking the right questions, senator." He noted that the commission had posed more than 200 questions about its transmission planning process rules and other related topics. "And I do share your concerns. ... If we are going to meet our [climate] goals, I believe that electric transmission will play an important part in doing that."



D.C. PSC Chair Willie Phillips | Senate ENR Committee

In response to Sen. Maria Cantwell's (D-Wash.) guestion about whether "we need to do more" to encourage interregional transmission projects, including DC interties, Phillips simply answered, "Yes, absolutely."

And though ranking member John Barrasso (R-Wyo.) used his opening comments on Phillips' nomination to lambast Democrats' proposed provisions in the House of Representatives' pending budget reconciliation bill, he never asked Phillips anything about those provisions. In a previous hearing that featured all four current commissioners. Republicans took it as an opportunity to criticize the Biden administration's energy policies. (See Senate Hearing on FERC Jurisdiction Focuses on Everything

Instead, Barrasso "commended" Phillips, chair of the D.C. Public Service Commission, for "putting reliability first" in his job and opening remarks, and emphasizing a balance among reliability, affordability and sustainability.

Biden announced his choice of Phillips last month. (See Biden to Nominate Phillips to FERC.) In Phillips' opening statement, he highlighted his experience not just at the D.C. PSC, but also as assistant general counsel at NERC.

"I worked with some of the sharpest legal minds in the industry to draft reliability standards for the bulk power system, including Critical Infrastructure Protection standards," he said. "I have a keen awareness of the cybersecurity and physical security threats that we face as a nation. And, as the effects of climate change and extreme weather increasingly challenge the reliability of our grid, it is imperative that we work to ensure that our nation's energy infrastructure is resilient. Reliability depends on our vigilance against these threats."

If confirmed, Phillips would break the 2-2 partisan makeup at the commission that has led to several tie votes and high-profile proposals that have become effective by operation of law, including a new minimum offer price rule for PJM and the creation of the Southeast Energy Exchange Market.

Historic NPS Director Pick

It was not just the nature of the questions that kept Phillips brief: The committee was simultaneously considering two other nominees, including Charles Sams, who if confirmed would not only be the first official



Brad Crabtree, Carbon Capture Coalition | Senate ENR Committee

director of the National Park Service since January 2017, when Barack Obama was still president. He would also be the first person of Native American descent to ever serve in that position.

Former President Donald Trump nominated David Vela to the post in 2018, and the committee soon after advanced him to the Senate floor, but he was never confirmed. Then-Interior Secretary David Bernhardt appointed Vela as director on an acting basis; he served until late 2020.

The unique nature of his nomination led senators to focus on Sams for most of the two-hour hearing, with many seeking commitments about national parks in their home states. The service is understaffed, and parks have been inundated with visitors after COVID-19 restrictions were lifted and more people got vaccinated.

The committee also considered Brad Crabtree, vice president of carbon capture for the Great Plains Institute and director of the Carbon Capture Coalition, to be assistant secretary of energy for fossil energy and carbon management. Though he received more attention than Phillips, he was likewise overshadowed by Sams.



RTOs Take Various Paths to Order 2222 Compliance

By Michael Kuser

In the year since FERC issued Order 2222 to usher distributed energy resource aggregations into the wholesale energy markets, RTOs/ISOs have been creating market rules to comply with the order.

Advanced Energy Economy on Oct. 19 hosted a panel of industry experts and regulators who evaluated the progress and potential of the grid operators' various paths to compliance.

To enable frequently dispatched DERs to participate in the markets, it's important to have a continuous participation model that gives the resources credit for their full capacity value, said Greg Geller, senior director of regulatory affairs at Enel X North America.

"We can just count what those resources can do to reduce their on-site consumption, but a lot of them are going to be able to inject into the grid as well, and ... we need to make sure that they can get credit for that injection," Geller said. While grid operators such as ISO-NE and NYISO allow that now, "PJM does not have that today, and we're hoping that as part of 2222 they will have that that single continuous model."

In January 2020, FERC approved NYISO's DER model, "which actually has a solution to this that we think works pretty well and we'd like to see other ISOs replicate," Geller said. (See NYISO DER Participation Model Gets FERC OK.) The commission said that NYISO's approach enables "heterogenous groups of technologies to aggregate and be compensated for services that they are collectively capable of providing."

Regional Rundown

Both CAISO and NYISO are expecting FERC to fully approve their DER participation models and any subsequent Order 2222 tariff changes by the end of 2022, said Peter Dotson-Westphalen, senior director of market development at CPower Energy Management. But the commission early this month asked both ISOs to clarify details about the treatment of DER aggregations described in their filings (ER21-2455, ER21-2460). (See FERC Asks Details from CAISO, NYISO on Order 2222 Compli-

"We're looking at markets that may not have significant system market model changes, whether leveraging existing market models



Clockwise from top left: Allison Wannop, Voltus; Peter Dotson-Westphalen, CPower Energy Management; Prusha Hasan, Advanced Energy Economy; Greg Geller, Enel X North America; and Tricia Debleeckere, Minnesota

to some degree, and whether or not the changes would actually require any significant software development or require other subsequent system changes already planned or in progress by each of the ISOs/RTOs," Dotson-Westphalen said.

In the case of ISO-NE, stakeholders are currently discussing how the energy and ancillary services market changes would probably not go into effect until 2026, whereas the capacity market changes would be implemented in time for the Forward Capacity Auction 18, which covers the delivery year beginning in June 2027, he said.

In SPP and in PJM, DER aggregations could begin participating as early as 2023, although that could slip to 2024. Both RTOs are currently restricting multi-node aggregations in their proposals, while single-node aggregation may require system changes that could delay implementation, Dotson-Westphalen said.

MISO is currently working on a market system enhancement project, he said.

"This is all information that hasn't really been put down in writing, but has come up in stakeholder discussions, and at this point it's probably at least going to be 2023 before the market system enhancements project is completed and we would expect to see the participation model resulting from order 2222 to be able to be enacted. But depending on the timeline of that project and other factors, that could also slip further on down the line," Dotson-Westphalen said.

The go-live date for the MISO region is likely 2025, said Tricia DeBleeckere, assistant

executive secretary for the Minnesota Public Utility Commission.

"What that does is set a deadline for the states, essentially for our distribution utilities, to ensure that we have the systems in place to operate a reliable grid when this market product goes live," DeBleeckere said. "There is value that we can unlock in all the different ranges of DER that are coming onto our system, and whether we utilize that through retail programs or through the wholesale program, as regulators we want options and choices to make sure that we're picking the most cost-effective resources to participate."

Location and Size

Two specific issues working their way out in the Order 2222 compliance process - and critical to enabling watershed change —are locational requirements and size settings, said Allison Wannop, director of legal and regulatory affairs at DER aggregator Voltus.

"Order 2222 says that each RTO/ISO must establish locational requirements that are as geographically broad as is technically feasible, but what does that mean?" Wannop said. "In California you can aggregate with energy or ancillary services within a [sub-load aggregation point] and a sublap is very large. There are 24 sublaps in California and each of those is about a gigawatt."

California's daily peak load of around 30 to 40 GW provides a very large area over which to aggregate, allowing for a large range of resources that can be brought into those sublap footprints, she said.



"Just to give some real-world context, San Francisco is one sublap, and the East Bay is another one," Wannop said. "New England is pretty similar ... in the size of the aggregations where you can aggregate across a metering domain, which is generally the electric distribution company territory, but then you start to see them get smaller. You have aggregations being limited to a single node and I think that is a really critical point, what a barrier a small geographic footprint for aggregation is."

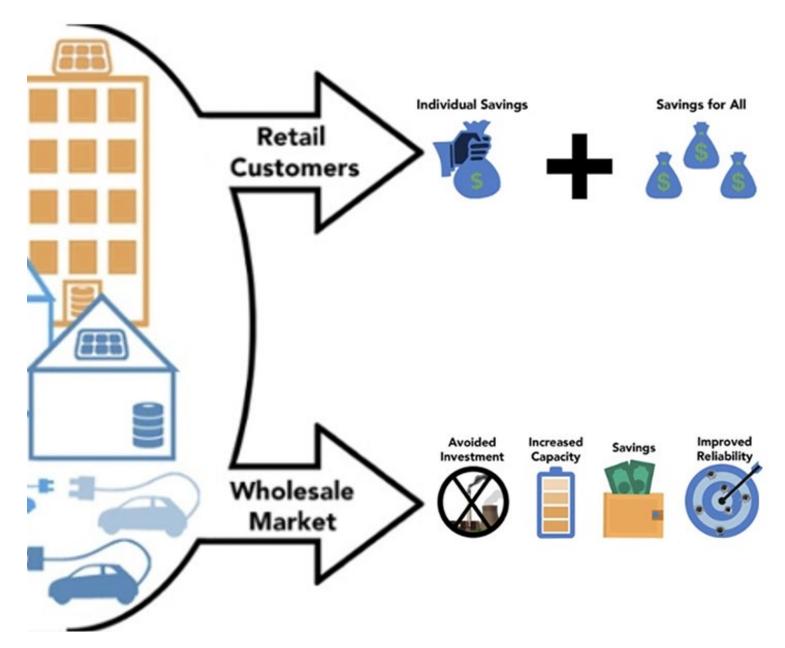
PJM limits energy aggregations to a single pricing node of only 5 to 8 MW compared with a gigawatt for aggregation in California, she said.

"We know that a DER aggregation has a minimum size but ... the core point is, if you're limiting aggregation to a single node or an interconnection point, is it really aggregation or simply a path to market for larger resources on the distribution system?" Wannop said.

On the positive side, PJM has a sampling methodology for demand response, which Voltus would like to see applied to other DERs where a subset within a group of homogeneous resources can be metered

individually – for example, 100 out of 1,000 devices, and performance is determined based on the performance of that representative sample, she said.

"That puts us on a glide path at least for full DER participation," Wannop said. "We want to look not just at what does day one implementation look like, but what does it look like in three years, and ideally, we can write rules that allow participation as technology catches up — this idea of skating to where the puck will be rather than writing rules that lag behind the technology and are stuck to the pace of a stakeholder process."



DER benefits come from getting more use out of resources that would otherwise be limited to meeting onsite needs. | AEE



DOE Panel Discusses Grid Operations Under Order 2222

By Michael Kuser

Coordinating grid operations with distributed energy resource aggregations as directed in FERC Order 2222 demands a bottom-up approach in order to avoid wholesale market inefficiencies, a panel of experts said on Thursday.

The U.S. Department of Energy last week hosted a meeting of its Electric Advisory Committee, with back-to-back sessions focused on transmission and distribution coordination and operational coordination.

"Ultimately, if the idea is to do value stacking — as the industry has been discussing for many years, trying to use distributed resources to provide a range of services then you really need to contemplate what the implication is for each service at each tier, in between each tier and what that's going to look like," said Paul De Martini, managing partner of Newport Consulting.

"For each service there's a different set of actors, a different set of devices operating in a different set of operating mechanisms, whether autonomous or direct physical control, and perhaps a price-based formation that's potentially influencing that same

device, so how do we think about those combinations? How do we think about those architectural issues?"

Integrating DERs into decarbonization modeling involves integrating "market layers," from local to retail to wholesale, said Lynne Kiesling, research professor at the University of Colorado Denver.

One thing that connects the layers is co-optimization models, she said.

"We do a lot of top-down optimal power flow modeling, and perhaps if we think more in terms of co-optimization, that might be a framework for incorporating the perspectives and opportunity cost to the customer and their devices," Kiesling said.

"The challenge is again that if you don't reconcile the bottom-up issues, you can't quite get to the optimization," De Martini said. "You get stuck at the conceptual level. So yes it's possible, but you really need to think through that lower level to see where the overlaps

It's "heartening" to see people promoting a bottom-up approach, said Robert Cummings, president of Red Yucca Power Consulting. "One of our ruling principles was you had to

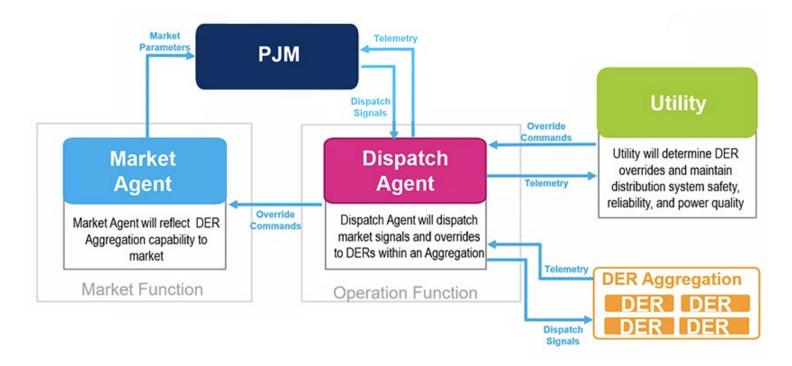
use security-constrained dispatch at all times for aggregated functions, and I think that's something that's so easy to ignore when you start talking from top-down in a market, so it's important that that gets put forward."

PJM may need a lot of flexibility on Order 2222, considering that its jurisdiction is 13 states and D.C., said Donnie Bielak, manager of reliability engineering for the RTO.

"Each of the individual distribution companies is probably going to want to have a different level of involvement with the DER integrations, and they're also going to have different tariffs on file, and have different agreements with their state commissions," Bielak said.

There are going to be times when the distribution system simply cannot handle injections from DERs, and that is going to be identified by the utility, Bielak said.

"The utility really is driving this section of the coordination; they are the ones doing the reliability analysis; they're doing the planning of the distribution systems; so, between them and the market agent communicating with the individual DERs, they need to collectively come up with market offer parameters and outage reporting and submit that to PJM," Bielak said.



PJM Day-Ahead DER Aggregation: PJM models its real-time DER Aggregation operations. | DOE



Congressional Democrats Rally for Budget Bill, Climate Action

Pelosi: Not Passing Bill Would be 'Dereliction of Duty'

By K Kaufmann

With less than two weeks until the Oct. 31 opening of the U.N. Climate Conference in Glasgow, a group of congressional Democrats rallied on Wednesday in front of the Capitol with the goal of cutting through the current political wrangling over the budget reconciliation bill and getting it to President Biden's desk before the summit.

"This is not a time for politics," said Rep. Andy Kim (D-N.J.), noting that he is one of seven Democrats in Congress whose districts voted for former President Donald Trump in 2020. "This is not a time for you, for me or others to be thinking about how is this going to affect my race in 2022."

"History will not judge us by the [bill's] price tag, however that's debated," said Rep. Kathy Castor (D-Fla.), who chairs the House Select Committee on the Climate Crisis. "History is going to judge us by our determination to do the right thing at the right time before it is too late."

The bill, dubbed the Build Back Better Act, contains many provisions for mitigating climate change sought by the Biden administration and progressive Democrats. As a reconciliation bill, it would not be subject to the Senate filibuster, requiring unanimous Democratic support in the evenly split upper house. But it has encountered opposition from Democratic Sens. Joe Manchin (W.Va.) and Kyrsten Sinema (Ariz.).

Sponsored by the League of Conservation Voters, the press event provided the lawmakers an opportunity to preach about the increasing threats and impacts of climate change. They also underlined the high stakes for U.S. leadership on climate action before the U.N. conference.

Sen. Ed Markey (D-Mass.) said, "The Senate must put together a climate package [so that] Joe Biden can say to the rest of the world that we are the leaders and not the laggards, because you cannot preach temperance from a bar stool. You cannot tell the rest of the world what to do if you, as a country, are not doing it yourselves."

"We must save this planet that we will pass on to future generations. It would be a dereliction of duty to build the infrastructure of America without doing so in a green way that protects the planet," House Speaker Nancy Pelosi (D-Calif.) said, a seeming reference to the Senate-passed bipartisan infrastructure bill that Democrats have refused to pass without first passing the budget bill.

As originally introduced and passed in the House, the \$3.5 trillion budget reconciliation package not only includes strong climate provisions, such as incentives for electric vehicles, but also a raft of social programs, including free pre-kindergarten and community college education and an expansion of Medicare and Medicaid.

But beyond the price tag, the bill's Clean Electricity Performance Program (CEPP), which would pay utilities to accelerate their transition to clean energy, has become a central pain point. Manchin opposes the \$150 billion program, arguing utilities should not be paid for something many are already doing. (See Reports: Clean Energy Performance Program Killed by Manchin.)

As Biden continues negotiations with House progressives and Manchin and Sinema, reports from media outlets including NPR and CNBC suggest that both sides are finding some common ground on key objectives. But it seems likely, reports say, that the final package will come in closer to \$2 trillion and not include the CEPP.

Speaking at the rally Wednesday, Sen. Cory Booker (D-N.J.) called for holding the line on core climate funding in the bill.

"As we look at this bill in the final hours of negotiations, we can't cut funding for natural climate solutions or protecting old growth forests, planting millions of trees in urban areas and restoring our coastal wetlands," Booker said. "We can't cut conservation funding that makes farmers part of the solution leading us out of this crisis. We can't cut environmental justice provisions that are so critical."

Sen. Ron Wyden (D-Ore.) also emphasized the central role that the taxes and tax credits could play if included in the bill, even without the CEPP. Wyden has long supported a carbon tax on polluters and tax credits for clean energy.

"The more you reduce carbon emissions, the greater your tax savings," he said. "And that gets us to 73% of the target we want to get to" on emissions reductions.

Taxes may not be "the most glamorous topic in the world," Wyden said, "But I'll tell you, at the end of the day, the lobbyists are spending all their time on that, trying to pack every single favor they can possibly pack into this package."



The DOE wants to spend \$438 million on improving the energy efficiency of federal buildings like the Capitol, which could benefit from climate controls in individual rooms, said Sen. Jeanne Shaheen (D-N.H.). | Raul654, CC BY-SA 3.0, via Wikimedia Commons



FERC: Mild Winter Ahead, but Severe Weather Risk Remains

By Holden Mann

The upcoming months should be easier on the U.S. energy sector than the "particularly challenging" winter of 2020-2021, according to FERC staff presenting the commission's 2021-2022 Winter Energy Market and Reliability Assessment on Thursday, though they warned that severe weather like February's winter storm remains unpredictable.

Presenting the report at FERC's monthly open meeting, Patricia Schaub of FERC's Office of Energy Policy and Innovation noted that temperatures are expected to be above the 30-year average across most of the U.S., according to the National Oceanic and Atmospheric Administration, with a "small probability that this winter will be slightly colder than last winter."

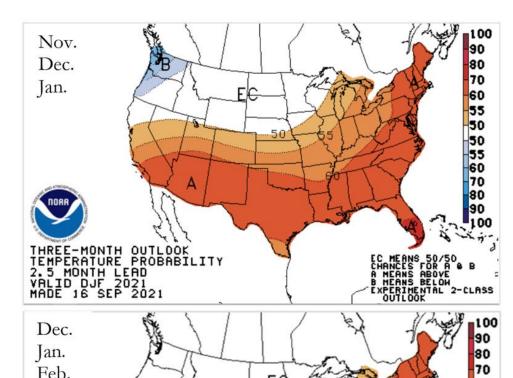
Positive Temperature Forecasts

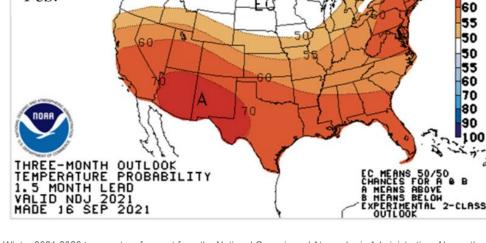
More detailed figures in the report show NOAA projecting a 70 to 80% chance of above-normal temperatures in Arizona, New Mexico and West Texas, and a 60 to 70% chance of above-average temperatures in New England, the Southeast, the Gulf Coast and the Southwest, including California. In the Carolinas, the Ohio River Valley, the Midwest, Ozarks, Rockies, Northern California and Southern Oregon, NOAA assess a 50 to 60% likelihood of above-normal temperatures, while the Upper Midwest and "some of the Northwest" have an equal chance of being below or above normal.

These predictions are stronger than those in last year's report, in which the likelihood of above-average temperatures in most regions was less than 50%, and the report noted that higher winter temperatures "typically imply lower-than-average demand for electricity and natural gas. (See COVID-19, Weather Drive FERC Winter Outlook.)

However, the memory of February's winter storms, which left hundreds of people dead and caused billions of dollars in damages in Texas and the Midwest, led the report's authors to temper their optimism with warnings about "severe cold weather events that drive up energy demand."

"Last year's NOAA forecast showed an even greater probability of milder conditions in regions that were ultimately affected by the February 2021 winter storm," the report said. "Forecasts for arctic oscillation ... are only





Winter 2021-2022 temperature forecast from the National Oceanic and Atmospheric Administration. Above: the three-month outlook for November through January. Below: the outlook for December through February. | NOAA

available 14 days ahead of time, making it difficult to forecast far in advance whether a similar winter storm event will happen again this year."

Speaking at Thursday's meeting, Matthew Adeleke of FERC's Office of Electric Reliability emphasized the need to be prepared for the worst and — with the support of Chairman Richard Glick and the other commissioners - reiterated the preliminary recommendations from the commission's joint inquiry with NERC into February's storm. (See FERC, NERC

Share Findings on February Winter Storm.) That report advised generator owners to:

- identify and protect cold weather-critical components and systems for each generating unit;
- design new or retrofit existing generators to operate to specific ambient temperatures and weather based on extreme temperature and weather data:
- · take into account the effects of wind and precipitation in winterization plans;

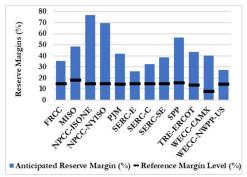


- · create corrective action plans for generator owners that experience freeze-related outages; and
- ensure the system operator is aware of the generating fleet's operating limitations so that they can plan mitigation actions.

Adequate Reference Margin Levels

Outside of the chance of severe weather, however, FERC's assessment portrayed the grid as adequately prepared for normal conditions. Data from NERC, RTOs and ISOs show that anticipated reserve margins (the available electric generation capacity in excess of expected peak demand) exceed reference reserve margins for all markets and regions. SERC-East, which encompasses North and South Carolina, reported the lowest reserve margin with expected reserves of 26%, but this is well above the region's reference level of 15%.

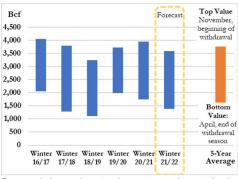
The report cautioned that "reserve margins are not guarantors of reliable operations," which can be affected by many factors such as fuel availability and the performance of intermittent generation resources like wind and solar. The latter is especially important as wind and solar resources represent the vast majority of generation capacity added in



NERC's winter 2021 anticipated reserve margins |

ERCOT, the area most affected by February's cold snap, and where nonfunctioning wind turbines contributed to the generation loss during the storm. (See ERCOT Focuses on Restoration, not Blame.)

NERC is predicting that net demand for electricity will increase by about 1% in the winter months compared to last year. The increase is expected to be highest in the SERC-Florida subregion, ERCOT and the WECC-NWPP subregion, while MISO and SERC-East should see a decrease in demand. Other regions and subregions are expected to remain similar to last year's levels.



Seasonal change in natural gas storage inventories in the lower 48 states over the last five years | EIA

Export Demand to Keep Gas Prices High

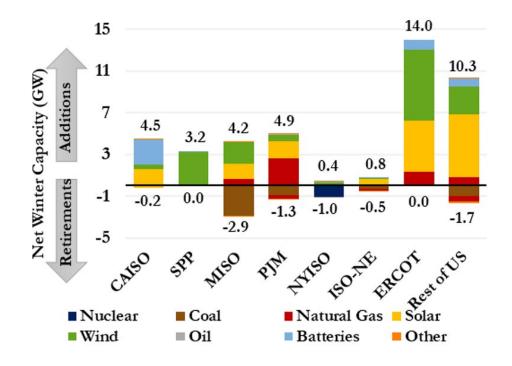
Natural gas production in the U.S. is expected to rise this winter, FERC said, with the Energy Information Administration forecasting an average dry natural gas production rate of 94 Bcfd for the winter, up from 90.8 Bcfd last year. The increase represents the market returning to the growth trajectory experienced over the last decade before the decline in production observed in 2020-2021, which FERC attributed to the COVID-19 pandemic.

Demand for natural gas is also on the rise, with EIA forecasting an average of 111 Bcfd for the winter, up 2.5% from last year. This is in spite of falling demand for gas as a generating resource. Upward pressure on prices is expected because of strong global demand: LNG exports are projected to average 11 Bcfd between November and February, up 21% from the average last winter, while pipeline gross exports will rise 15%, to 9.3 Bcfd.

East Asian countries, particularly China, Japan, South Korea and Taiwan, are the leading drivers of LNG export demand. Natural gas imports will be needed to balance the gas markets during the winter months, with LNG imports averaging 0.3 Bcfd — up 93% year over year — and gross pipeline imports falling 12% year over year to 7.4 Bcfd.

Storage inventory levels for natural gas are predicted to begin the winter withdrawal season — which runs from November to April — at 3,752 Bcf, 5% below the five-year average, because of a lower-than-average injection season between April and October and record withdrawals during February's winter storms.

Propane is also starting with low stocks: For the first week of October, they were 72.3 million barrels, 20% below the five-year average for the same week and lower than any recorded level for the same period in the last five years. ■



Planned and actual capacity additions and retirements from March 2021 to February 2022 | EIA



House E&C Hearing Pits Offshore Wind Against High Energy Prices

Democrats Promote Manufacturing Jobs; Republicans Hammer on Cost and Reliability

By K Kaufmann

Throughout a four-hour session Thursday, the House Energy and Commerce Subcommittee on Energy's Democratic members kept the focus on the economic development potential of the offshore wind industry and its emerging domestic supply chain and jobs. Republicans meanwhile hammered away on current high oil and gas prices and possible threats to the affordability and reliability of the nation's energy supply as winter approaches.

Energy and Commerce Committee Chair Frank Pallone (D-N.J.) cited the positive impacts of the emerging offshore industry in his home state, which is working toward deploying 7,500 MW of projects by 2035. Three projects now moving forward have brought "thousands of jobs and billions of dollars of investment to the Garden State. But to be clear, the economic benefits of offshore wind won't just accrue on the coast; they will impact communities across the country," Pallone said.

He pointed to a recent report from the Business Network for Offshore Wind that found more than 500 supply contracts for offshore components across the country and pitched for the transmission funding in the Democrats' budget reconciliation bill. Pallone also argued that fossil fuels and their volatile price swings are creating uncertainty and unreliability for energy consumers. "Doubling down on existing fossil fuel infrastructure makes little sense."



Rep. Fred Upton (R-Mich.) | House Energy and Commerce Committee

Rep. Fred Upton (R-Mich.), the subcommittee's ranking member, said he was "a little bit troubled by the topic of today's hearing because we are in an energy crisis right now, which is what I believe this committee ought to be focused on. The price of gas and many

energy commodities are at a seven-year high," with the Energy Information Administration anticipating price rises in propane (54%), heating oil (43%) and electric heating (6%) in the months ahead.

He also questioned the feasibility of President Biden's goal of deploying 30 GW of wind off both coasts by 2030. "It's very difficult

to imagine that any projects are going to get built without substantial taxpayer and ratepayer subsidies, and of course, we have the questions of permitting," Upton said. Other obstacles include "poor economics, operating reliability in harsh conditions ... negative environmental and fishery impacts, workforce and labor issues," he said.

These basic positions were replayed, with minor variations, throughout the hearing, reflecting the tension between current concerns over rising energy costs and the planning and investment required to shift the nation's energy supply to clean sources.

Rep. Kim Schrier (D-Wash.) saw the apparent conflict as more of a false dichotomy given the mounting impacts of climate change.

"We need a full portfolio of alternative sources of energy: hydro, nuclear, solar and wind, including offshore



Rep. Kim Schrier (D-Wash.) | House Energy and Commerce

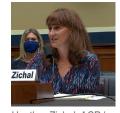
and onshore," Schrier said. "But no natural gas is coming offline until we have enough renewable energy to replace it; so, tying these together, which some of my colleagues are doing, is misleading. It's fear mongering, and it's just making a bunch of excuses for doing nothing."

Building a US Supply Chain

The current momentum behind offshore wind at the federal and state level comes as the U.S. finds itself lagging in a booming global market. According to the Department of Energy's 2021 Offshore Wind Market Report, while the U.S. offshore project pipeline stands at 35 GW, actual projects in operation total only 42 MW versus the 33 GW of installed capacity

worldwide. Europe and China are the market leaders.

Still, Heather Zichal, CEO of the American Clean Power Association (ACP), provided an optimistic overview of the emerging U.S. industry, with Biden's 30-GW goal and other



Heather Zichal, ACP House Energy and Commerce Committee



Rep. Frank Pallone (D-NJ) | House Energy and Commerce Committee



state targets jump-starting a domestic supply chain that will provide certainty for developers and investors.

Looking ahead, Zichal called for a federal tax credit for offshore wind component manufacturing and federal leadership in planning the transmission and distribution systems that will be needed to meet Biden's target. While some projects will be able to interconnect through existing infrastructure, Zichal said, "sustaining long-term growth of offshore wind will require a coordinated approach to transmission that spans multiple-leased areas, states and regions. Forward-thinking transmission planning will help to expand the market for offshore wind more quickly and benefit the supply chain," she said.

FERC's Advance Notice of Proposed Rulemaking on transmission planning and cost allocation is a good first step, she said, as is PJM's work with New Jersey, integrating the state's project pipeline into its regional planning. (See FERC Tx Inquiry: Consensus on Need for Change, Discord over Solutions.)

David Hardy, CEO of Ørsted North America. began his presentation by noting his firm's Danish parent company started out in fossil fuels but is now fully divested from oil and gas, focusing instead on renewables. In the U.S., the company is taking a two-pronged



David Hardy, Orsted North America | House Energy and Commerce Committee

approach to building the domestic supply chain it needs for projects to be built off the coasts of New Jersey. New York. Connecticut and Rhode Island.

"This includes first building U.S. capability with existing American companies and, second, attracting European firms to build facilities here in the U.S., creating foreign direct investment in new American jobs," Hardy said.

Ørsted has partnered with Kiewit, a Nebraska-based engineering and construction firm, to build an American-made offshore wind substation, which will be manufactured in Texas, he said. Factories in Pennsylvania, North Carolina, Alabama and West Virginia will be producing steel for American-made offshore wind installation and operations vessels, also being built in Texas.

But Hardy cautioned against comparing the nascent offshore industry in the U.S. with its more developed counterpart in Europe, which "has had several decades to build the infrastructure needed to support a mature offshore wind industry. Although we are making considerable progress in building the U.S. supply chain, it remains a challenge that needs regulatory certainty and incentives if we want to achieve 30 GW by 2030," he said.

Speaking as a private citizen, Mark Menezes, former deputy energy secretary under President Donald Trump, was less bullish on offshore wind, acknowledging its potential but arguing the technology still faces too many obstacles and high costs. He pointed to Maine, where Gov. Janet Mills recently signed a new law banning offshore wind projects in state waters — aimed at protecting the state's lobster and recreation industries — while allowing development in federal waters.

Menezes and other Republicans also pointed to the current spike in energy prices in Europe, which they linked to the region's reliance on offshore wind and a lull in North Sea wind speeds in September.

According to WindEurope, an industry trade group, combined on- and offshore wind energy provided 23.4% of the region's power on Friday. The European Commission is pushing even faster deployment of renewables as the solution to high electricity and gas prices, along with targeted, near-term measures to protect the region's most vulnerable populations from the current high prices.

Winter Wind, More Power

Responding to a question from Rep. Cathy McMorris Rodgers (R-Wash.), the full committee's ranking member, Menezes criticized Biden's cancellation of the Keystone XL pipeline and his initial moratorium on oil and gas leasing on federal land. Such actions, he said, may have had a chilling effect on oil and gas investment.

Following a court order, the moratorium was lifted, and a recent Associated Press report found that the Interior Department has approved 2,100 permits for oil and gas drilling on federal land since Biden took office in January, the highest level since George W. Bush was president.

Meanwhile, a question from Rep. Diana De-Gette (D-Colo.) gave Hardy the opportunity to counter Republican concerns about the performance of offshore turbines in harsh weather. In high winds, the turbines will shut down to "protect themselves," he said.

But generally, "the turbines are designed to operate in those environments," he said. "In the cold winters is when the wind blows the most, and that's when we produce the most power. So, specifically up in the Northeast, when these utility-scale projects are on board, we'll actually offset the need for natural gas for heating." ■



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Southeast

FERC Rejects Bid to Open TVA to Competition

Glick Calls for Congressional Action

Continued from page 1

its discretion to act under Federal Power Act (FPA) Section 211A, saying "there are no established requirements under Section 211A that an unregulated transmitting utility must meet, so there can be no 'violation' of Section 211A by an unregulated transmitting utility." The commission also dismissed the petitioners request for interconnection service under FPA Section 210 as moot (*EL21-40*, TX21-1).

At a press conference after Thursday's open meeting, FERC Chair Richard Glick said his hands were tied by the FPA and called on Congress to eliminate restrictions on TVA customers purchasing power from outside the TVA "fence."

"It wasn't appropriate to use 211a to achieve what the TVA customers were trying to achieve here," he said calling the restriction an "anachronism."

"Not only is it unfair to TVA's customers to not allow them to shop for cheaper power or power that has other attributes," such as cleaner resources, but it also "gives TVA carte blanche. They know that they can run up costs if they want to. And no one's there to make sure that they don't gold-plate everything," he said.

TVA's Monopoly

TVA, which serves 10 million people in seven states, owns 36.9 GW of generating capacity and 16,000 miles of transmission. It reported annual revenues of \$10.2 billion in 2020.

Athens Utilities Board, owned by the city of Athens, Tenn., provides power to 13,000 commercial and residential customers. Gibson EMC serves 39,000 commercial and residential customers in western Tennessee and Kentucky. Volunteer serves more than 120,000 commercial and residential customers in eastern Tennessee.

The petitioners say TVA owns all the transmission capable of serving their loads. "Short of taking the very expensive and duplicative step of constructing its own transmission lines, no LPC can feasibly reach an external supplier without service across TVA lines," they said. "...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."

The petitioners said they "wish only to avail themselves of the right to unbundled transmission that is readily available to virtually all of the country's load-serving entities, and to better serve their members/customers at competitive prices."

The petitioners said they have been receiving bundled power and transmission service from TVA for decades under 20-year contracts that require five-years' notice before cancellation.

They sought relief from FERC after refusing to sign new power supply contracts from TVA that allow termination only after 20 years' notice. All but 11 of the 153 LPCs in TVA's footprint have signed the new contracts, according to TVA.

(Joe Wheeler EMC, the fourth largest member-owned electric cooperative in Alabama with more than 43,000 members, also joined in the petition but withdrew its participation on Aug. 30, saying it has reached an agreement on a new power supply arrangement with TVA.)

TVA said its policy is consistent with FPA Section 212(j), enacted by Congress in 1992 to prevent outside power suppliers from "cherry-picking" TVA's customers by using FERC's open access rules to wheel power across TVA's transmission facilities to LPC load. Congress added the section to balance the Tennessee Valley Act's prohibition on TVA selling power outside the "fence."

It contended FERC lacked the authority to provide the petitioners' requested relief, saying "the decision about whether to provide the service the petitioners request lies with the TVA Board," a nine-member panel nominated by the president and confirmed by the Senate.

TVA also challenged the petitioners' claim that they and their potential suppliers are "similarly situated" to TVA transmission customers that serve load off the TVA system.

Because TVA is barred from selling power to customers outside the fence, it is unable to recoup lost revenues that would result from allowing use of TVA's system to deliver alternative supplies to customers inside the fence. "In contrast, this cost-shift problem does not arise when the TVA transmission system is used to deliver third-party power to customers outside the fence." it said.

Undermining the Mission

TVA also said FERC action would undermine TVA's ability to fulfill its mission by causing cost shifts to customers left behind. "It is not hyperbole to say that the petition threatens to destroy the TVA model that has been in place for nearly nine decades," it said.

FERC "is responsible for the just and reasonable regulation of wholesale sales and transmission of electricity in interstate commerce by public utilities, along with more limited jurisdiction over government-owned utilities. TVA is responsible for supplying power to customers in the Tennessee Valley, but it also is responsible for promoting the prosperity of an entire region and of the people who live there," it said. "Last year, for example, TVA took a number of pandemic-related measures, including providing financial assistance, reflecting its mission to promote the general welfare of those who live in the Tennessee Valley in the broadest of ways."

"The TVA board is statutorily required to balance these and other considerations to fulfill Congress' directive to improve the lives of the people living in the Tennessee Valley region. And the TVA board already has balanced all of these considerations."

It cited an affidavit from economist John Reed, who said if the four original petitioners were to obtain wheeling and switch suppliers, it would shift more than \$3.3 billion in costs to the remaining LPCs and their retail customers through 2040. "And if those LPCs obtained the requested wheeling service, it is likely that others would follow suit. If all eleven of the LPCs that have not yet signed new amendments were to shift suppliers [representing 15% of TVA load], that would impose over \$14.9 billion in cost shifts and rate increases on remaining LPCs," TVA said. "Without such rate increases, TVA would not be able to maintain its outstanding debt balance under the statutory \$30 billion cap."

High Prices

The petitioners said the concern over "cherry picking" of TVA customer is an "implicit ... recognition that TVA is charging the LPCs for power supply and transmission at rates that would not stand up to outside competition or commission scrutiny.

"TVA's policy is formal acknowledgement that

Southeast

TVA's current rates grossly exceed those the LPCs would pay to outside suppliers and that LPCs would seek alternative suppliers if given the choice," they said.

They cited Energy Information Administration data that TVA's sales for resale rate increased by almost 10% between 2010 and 2019.

They cited an analysis conducted for them by consultant EnerVision that access to cheaper power would save Athens \$25 million to \$45 million (2025\$); Gibson EMC \$65 million to \$115 million; Joe Wheeler EMC \$75 million to \$110 million and Volunteer Energy Cooperative \$145 million to \$480 million over 10 years.

TVA challenged the petitioners' contention as "unsupported," citing a 2021 assessment by Lazard, which it said concluded that TVA's cost-of-service rates "fall within the secondbest quartile both among the top 100 U.S. utilities based on sales and among its regional peers."

It said TVA retail rates declined by 2.3% between November 2019 and November 2020, and that wholesale rates are expected to decline by 7.2% between 2019 and 2021.

Repealing the Fence

In the late 1990s, Congress heard testimony on legislation to give FERC more authority over TVA's transmission by repealing both the prohibition against selling TVA power outside the fence and the prohibition against wheeling alternative power supplies to TVA customers inside the fence.

But the proposals failed to win support. Instead, Congress in the Energy Policy Act of 2005 gave FERC limited discretionary authority to order "unregulated transmission utilities" to satisfy "comparability" and nondiscrimination principles in the rates, terms and

conditions for transmission service.

In a concurrence, Glick said he believed Congress did not intend to give FERC the authority to ignore the fence, but he said changes since it was erected call for a new look.

"In my view, the fence is a vestige of a bygone era and the region, and particularly its ratepayers, would be far better served by having access to alternative power supplies on a competitive and non-discriminatory basis. The benefits of competition and consumer choice far outweigh whatever benefits the region once derived from the current model. Accordingly, I urge Congress to consider enacting legislation to eliminate the fence and enable utilities in the region to access alternative sources of supply and likewise to allow TVA to make wholesale sales to new customers."

In his concurrence, Commissioner Mark Christie suggested Congress could amend the law to ensure that power costs to TVA's consumers are as "low as feasible" and require it to increase the amount of power supply it procures on a least-cost basis.

"Competitive procurements of power supply versus allowing some customers, often the largest, simply to leave load and shop elsewhere — avoid the potential of costshifting to remaining customers, most of whom are small businesses and residential customers who do not have the bargaining power of very large customers," he wrote. "Every [load-serving entity] has fixed costs, and when large customers leave load, those fixed costs must still be paid."

Clements dissented, saying FERC has the authority to grant the petitioners' request and that doing so would have been in the public interest.

She cited the commission's 2011 order requiring Bonneville Power Administration

to revise its dispatch policy consistent with Section 211A while also meeting its responsibilities under its governing statutes (137 FERC ¶ 61,185).

"The TVA board must adopt policies that follow its mandate to uphold the broad goals of the TVA Act in a manner that complies with any orders the commission may issue under section 211A, which may include requirements that it provide comparable transmission service," she wrote.

TVA spokesman Jim Hopson declined to comment directly when asked if TVA would support a repeal of the fence.

"TVA's mission is clearly established by Congress in the TVA Act and, among other priorities, ensures that we support the public power model within a defined service area," he said. "... Arbitrary changes to this public power model, which has successfully operated for more than 88 years, could unfairly shift costs from some customers to others and negatively impact TVA's mission established by Congress."

Retaliation Claim

On Oct. 15, the three remaining petitioners filed a motion alleging that TVA has made statements that it is refusing to perform needed reliability upgrades due to petitioners' challenge. In an Oct. 19 filing in response, TVA denied any retaliation and accused the petitioners of attempting to "distort the

FERC said it "takes seriously allegations concerning retaliatory conduct" but that the allegations were beyond the scope of the proceeding. Glick said Thursday he has directed the Office of Enforcement to investigate the allegations.

Asked to comment on the allegation, Hopson said "it's important to note that, over the past five years, TVA has invested more than \$2 billion in improving our transmission system, which benefits all 153 local power companies we serve, who currently have received power at 99.999% reliability for 21 consecutive years. That includes the ongoing construction of a new \$300 million System Operations Center located within the service area of one of the three petitioners."

Michael Brooks contributed to this article.

Petitioner	Savings Range Low ¹⁴⁷	Savings Range High ¹⁴⁸
Athens Utilities Board	\$25 million	\$45 million
Gibson EMC	\$65 million	\$115 million
Joe Wheeler EMC	\$75 million	\$110 million
Volunteer Energy Cooperative	\$145 million	\$480 million

An analysis by a consultant for four TVA customers found they could save a combined \$310 million to \$750 million (2025\$) over 10 years by gaining access to cheaper power. One of the four, Joe Wheeler EMC, dropped its participation in the challenge. | EnerVision

Southeast

FERC's Christie Accuses Glick, Clements of Prejudice for RTOs

Continued from page 1

in supporting the proposal. (See SEEM to Move Ahead, Minus FERC Approval.)

In a separate order, Glick and Clements also called for TVA to open its transmission system to competition, although Glick said it would require action by Congress. Christie suggested Congress require TVA to increase its use of competitive bidding for generation (EL21-40, TX21-1). (See FERC Rejects Bid to Open TVA to Competition.)

In a statement published Wednesday, Glick explained that he was prepared to vote to approve SEEM, despite his personal belief that an RTO would serve Southeastern consumers better than the proposed market, because proposals filed under Federal Power Act Section 205 require the commission to evaluate them on their own merits. But he said SEEM's use of the Mobile-Sierra doctrine, which presumes that any freely negotiated wholesale energy contract is just and reasonable, will inhibit FERC's ability to monitor for abuses of market power.

"I believe that the commission's monitoring capabilities, enforcement authority and ability to institute an FPA Section 206 action provide adequate protections should any Southeast EEM members or participants engage in any conduct that may transgress the FPA or commission regulations," Glick wrote. "That is true, however, only if the commission's Section 206 authority is not hamstrung, for instance, by the improper application of the Mobile-Sierra presumption."

Clements was more harsh in her criticism of the market, writing that it "fails to abide by the bedrock principles of open access and non-discrimination that were crystallized in the commission's landmark Order No. 888, and fails to ensure "just and reasonable rates."

"The filing parties proposed the Southeast EEM with neither any quantitative analysis demonstrating an inability by participants to exercise market power or manipulate the market, nor adequate safeguards to protect against these abuses on a going-forward basis," Clements wrote. "It is insufficient to rely on participants' existing market-based rate authorities given the new market structure and new market footprint of the Southeast EEM."

During FERC's monthly open meeting Thursday, Christie dismissed these arguments. He

noted that Glick and Clements had supported PJM's focused minimum offer price rule (MOPR) proposal, on which the commission also deadlocked and which also automatically went into effect. Pointing to the PJM Independent Market Monitor's argument that the new MOPR would open the door for market power abuse, Christie said during the meeting that he "can't really take seriously [Glick's and Clements'] concerns about market power" in SEEM. (See related story, 'Good Riddance' to Old PJM MOPR, Glick Says.)

"What was going on here, and let's not kid ourselves ... the opposition [to SEEM] was about one thing and one thing only," Christie said. "And that was a well organized campaign by numerous special interest groups to force all states into federally regulated RTOs, both the Southeastern states and the Western states."

He said both Glick and Clements "have both been very vocal about supporting this effort to push states into RTOs. Now if you want to have an open and serious debate whether consumers do better in RTO states versus non-RTO states ... then bring it on. I'll be happy to have that debate. There's no doubt that there's a lot of special interests who think they're going to do a lot better and make a lot more money in an RTO construct, but consumers don't necessarily do better. ...

"It's the choice of the states' elected legislators whether their utilities should join an RTO; it's not for FERC to force them or pressure them into them. ... The market power issue is a dodge." He also noted that none of the states in the SEEM footprint opposed the proposal.

Speaking at his post-meeting press conference, Glick said that "Commissioner Christie kind of lumped me in with opponents of the proposal, and I wasn't an opponent of the proposal; I was going to vote for it. But unfortunately, my two colleagues attempted to change the commission's precedent with regards to the Mobile-Sierra standard. ... On that point I think Commissioner Christie misunderstood what I was saying."

Clements said during the meeting that the member-controlled SEEM Operating Committee's veto power over who could become a member of the market violates Order 888's open-access principles.

"Since the issuance of Order 888 [in 1996], the commission has time and time again



Logo of the proposed Southeast Energy Exchange Market | SEEM

reiterated its commitment to open access as the cornerstone of the Federal Power Act's consumer-protection directive," she said. "The commission's response to the SEEM filing should have affirmed yet again the noncontroversial proposition that any type of market development and transmission service must follow a just and reasonable path and avoid undue discrimination."

Clements also called Christie's arguments in his statement "a strawman."

"To be crystal clear, my opposition to accepting the filing is not because I would prefer a different market structure," she said. "My concerns are grounded in Order 888, the commission's duty is ensure nondiscriminatory access and our obligation to ensure rates are just and reasonable."

Danly made a similar argument in his statement about why Glick and Clements opposed the proposal, though he was not as accusatory as Christie.

"While some may have preferred that the utilities in the Southeast create [an RTO], that is not the filing the parties submitted," he wrote. "My colleagues detail a litany of objections to the Southeast EEM proposal that, I presume, stem from just such a preference, since the establishment of an ISO or RTO would bring with it open access throughout the Southeast in accordance with Order Nos. 888, 719 or 2000. But that decision is not ours to make. That choice is reserved wholly to the states and their utilities."

Clements responded during the meeting: "This rather head-scratching interpretation of my position would suggest a belief that Order 888 has not already required open access across the country for over two decades."

FERC Commissioners Opine on Western RTO

Western Regionalization a Main Theme of Fall CREPC-WIRAB Meeting

By Hudson Sangree

The possibility of forming a Western RTO with or without California was a central topic at last week's joint meeting of the Committee on Regional Electric Power Cooperation and the Western Interconnection Regional Advisory Body (CREPC-WIRAB).

Held in San Diego and virtually, the three-day summit brought together stakeholders and state regulators from across the West for panels on markets and transmission and to hear from three FERC commissioners.



FERC Chairman Richard Glick addressed the CREPC-WIRAB meeting by video. | CREPC-WIRAB

Status Quo

In his presentation, FERC Chairman Richard Glick restated his opinion that one or more RTOs would benefit the region. (See Glick Says West Should 'Finish the Job' on RTO.)

Utah Public Service Commission Chairman Thad LeVar asked Glick whether California

could be part of an RTO given its size. States with loads that "significantly overshadow" neighboring states — California, Florida, New York and Texas — are not in RTOs, he pointed

"None of those areas have successfully created multistate RTOs with that kind of load difference," LeVar said.

Glick acknowledged CAISO's governance issues had "stunted" an RTO in the West, causing prior attempts to expand the ISO to fail. California's governor appoints the members of CAISO's Board of Governors, and state lawmakers have been unwilling to expand CAISO's governance to include out-of-state representatives or to consider allowing California to join a multi-state organized market.

That might need to change for California to avoid resource adequacy problems like those it experienced during the past two summers, when heat waves and wildfires limited electricity imports from the Pacific Northwest and the Desert Southwest.

"California can't do it alone," Glick said in a virtual appearance. "It would be a mistake

for people to say, 'Well, I'm a lot bigger, and therefore we should set our own rules and ignore everyone else. It just doesn't work that way, at least in the West. It hasn't worked that way in the past."

He said other RTOs have been able to cope with a mix of larger and smaller states.

"There are some relatively big states in PJM, for instance, that work with a lot smaller states, and I would argue they get significant benefit from doing that," Glick said.

"It also won't work for policymakers in California to continue saying, 'We're California. We're going to appoint our board members and have our own governance," the FERC chairman said. "I understand why that's attractive if you're in California, but I don't think it is sustainable."

In her in-person presentation, Commissioner Allison Clements said the fact that three of the four sitting FERC commissioners decided to speak at the CREPC-WIRAB meeting showed the importance of events taking place in the West, where multiple regionalization efforts are underway.

The Northwest Power Pool has launched its Western Resource Adequacy Program (WRAP), the topic of a presentation by NWPP and Pacific Northwest utilities at the meeting and a panel discussion of state regulators on its governance. SPP is administering the program. (See SPP to Operate NWPP's Resource Adequacy Program.)

CAISO is seeking to expand its Western Energy Imbalance Market (WEIM) from a real-time to an extended day-ahead market (EDAM), which CAISO CEO Elliot Mainzer touted in San Diego and in an Oct. 13 stakeholder forum. (See CAISO Promotes EDAM Effort in Forum.)

And a group of utilities have formed the Western Market Exploratory Group (WMEG) to look at "regional market solutions." (See Western Utilities to Explore Market Options.)

In addition, SPP has been pitching its plan to include Western utilities in its RTO along with its Western Energy Imbalance Service (WEIS). SPP CEO Barbara Sugg promoted those efforts at CREPC-WIRAB and presented a new SPP proposal called "Markets+," which the RTO says is "more than just a day-ahead market offering."

"It's a conceptual bundle of services proposed

Two Market A

Studied in 2020 and 2030

One Market

Only studied in 2030 timeframe

Two Market B



Only studied in 2030 timeframe

*Announcements that were made before the end of 2019 are included in the Status Quo footprint.

EIM entities that have

announced intent to sign EIM

Implementation Agreement (or

equivalent)*

A state-led study examined four potential market configurations for the West in 2030. | Utah Office of Energy Development and S&P Global Market Intelligence

by SPP that would centralize day-ahead and real-time unit commitment and dispatch, provide hurdle-free transmission service across its footprint and pave the way for the reliable integration of a rapidly growing fleet of renewable generation," SPP says on its website.

The service is intended to appeal to Western utilities that "aren't ready to pursue full membership in a regional transmission organization at this time" but instead want "a voluntary, incremental opportunity to realize significant benefits," more like the WEIM or WEIS.

Adding urgency to RTO talks, Colorado and Nevada passed bills in June requiring transmission-owning utilities to join an RTO by 2030. (See Talk of Western RTO Intensifies.)

Colorado state Sen. Chris Hansen, a main sponsor of the bill, said at the CREPC-WIRAB meeting that the measure was designed to give utilities a "nudge" toward greater regional collaboration as Colorado and other Western states pursue ambitious clean-energy goals.

And Oregon lawmakers last spring passed a bill requiring the state's Department of Energy (ODOE) to complete a study by year's end exploring the potential benefits and risks of joining an RTO, a potential prelude to a more serious push for membership. ODOE has this fall convened two meetings with an advisory committee on study design and hopes to have a draft report completed by late November. (See Oregon Group Contemplates RTO for a 'Decarbonized World.')

'Neatly Into One Box'

The usual roles of an RTO — operating a wholesale energy market, overseeing transmission and ensuring resource adequacy and reliability — "don't have to all get connected neatly into one box" in the West, Clements said. But the challenges of climate change and a shifting resource mix suggest that "broader integration [and] coordination will



FERC Commissioner Allison Clements | © RTO Insider

better meet the challenges the Western system is facing as well as make it more costeffective," she said.

The division that once existed between California and the rest of the West has dissipated as other states have adopted clean energy mandates like California's and moved to adopt more wind and solar power.

Clements referenced a state-led study funded by the U.S. Department of Energy that showed the development of a single RTO covering the entire U.S. portion of the Western Interconnection could save the region \$2 billion a year in energy costs by 2030.

The study – presented in a separate session at the CREPC-WIRAB meeting — also found that a full Western RTO would be more effective at saving money, reducing renewable resource curtailments and cutting CO₂ emissions than RTO configurations in which the region is broken up into separate markets, including one that divides CAISO from the rest of the West. (See Study Shows RTO Could Save West \$2B Yearly by 2030.)

Should Western states decide to form an organized market or markets, they can learn from the successes and avoid the mistakes of Eastern RTOs, she said.

"I have this desire for you all to take advantage of those lessons learned, which makes me a cheerleader for regional market integration," Clements said.

'Full Buy-in'

Commissioner James Danly, a vocal critic of CAISO's market design and frequent dissenter at FERC, praised the success of the WEIM and said it had altered perceptions of CAISO in the West.

"The distrust that had developed at one point in this region for interactions with California has, to a very large extent, I think, been modified by the positive experiences people have had in the EIM," Danly said. "The value that has been delivered to ratepayers is undeniable, and the scale is vast."

(The latest tally showed the WEIM had saved its 15 participants more than \$1.4 billion since its inception in 2014.)

"On top of everything else, I think there's been a benefit to the EIM that it has allowed utilities that are not typically engaged in complex cooperative endeavors, like this market, to get better and better at it, which I think bodes well for the future for their cooperation, perhaps on a greater scale," Danly said.



FERC Commissioner James Danly | © RTO Insider LLC

He also lauded NWPP's WRAP program, which requires FERC approval. (See RA Program will Require Restructuring of NWPP.)

"I've been very deeply impressed by the thoughtful, incremental and deliberate development of the Northwest Power Pool and their desire to establish what appears to be an absolutely positive value proposition and to do so thoughtfully, with as much buy-in from as many people as possible, which I think is key to any type of market system like this," Danly said. "Having people pushed into it kicking and screaming is the worst possible way of doing it.

"The collaboration that I saw was impressive," he said. "There is a deep commitment from everybody involved to a cooperative endeavor there, and all I can say is ... [that] I am cheering Northwest Power Pool on from the sidelines, and I really hope that that the fledgling effort succeeds as much as it appears that it will."

Some supporters of a full RTO describe steps such as EDAM and WRAP as too incremental and piecemeal, but Danly said smaller steps that foster cooperation can be a model for the formation of a Western RTO.

"I am a true fan of markets," Danly said. "I think they deliver immense benefit to ratepayers, and I want to see them executed but ... properly executed. I do think that the march toward a full RTO, much like the way the Northwest Power Pool is doing things deliberately and gradually, is something also that should be done with full buy-in from everybody."

"I'm a big fan of RTOs, but they're not necessarily right for every region," he added. "I would just suggest that everything be done as incrementally as possible, with as many people at the table to discuss it as we can get." ■



FERC OKs SoCal Edison Battery Settlement

By Hudson Sangree

FERC approved an uncontested settlement between Southern California Edison and a coalition of clean-energy developers and trade associations that reduces potential costs and smooths the way for interconnecting battery storage resources on the utility's distribution system (ER19-2505).

The parties reached the agreement over SCE's Wholesale Distribution Access Tariff (WDAT) in July after two years of negotiations, which resulted in a 60% reduction in the utility's proposed wires charges for standalone energy storage, the Solar Energy Industries Association said in a statement.

"By securing this reduced charge, we've helped preserve the regulatory intent of FERC orders 841 and 2222, which pave the way for distribution resources to have fair access to wholesale markets," SEIA Director of Regulatory Affairs Gizelle Wray said in a statement. "SEIA will continue its work to ensure that utilities don't attempt to add more unnecessary and onerous fees for market participants to use their wires."

FERC Administrative Law Judge Stephanie Nagel wrote in her certification of the settlement that it "represents the first tariffed rates, terms and conditions for inbound charging distribution service applicable to energy storage resources interconnected at the distribution-system level and participating in the wholesale market. However, trial staff asserts that this does not constitute an issue of first impression because the establishment of rates, terms and conditions for such service has been approved by the commission in the past."

The case began in March 2018, when SCE, California's second largest utility, filed proposed revisions to its WDAT intended to accommodate storage interconnection on its distribution system. The filing included only an "as-available charging distribution service to account for the needs of energy storage resources" and a "provision that SCE would, when necessary to maintain distribution system reliability, curtail charging demand for energy storage resources ahead of retail and wholesale distribution load," Nagel wrote.

As-available battery charging is allowed when a utility has enough capacity to serve its retail and wholesale customers at the same time.

FERC rejected SCE's proposed approach, saying the utility had failed to show it was just and reasonable and not unduly discriminatory. It urged SCE to come up with a plan to give storage resources the same curtailment priority as the utility's other wholesale loads.

In response, "SCE elected to provide free as-available charging distribution service to customers on a case-by-case, off-tariff basis," Nagel wrote. "However, as a result of the rapidly growing demand for storage and the consequent increased demand for interconnection requests received by SCE for inbound charging distribution service, SCE again filed proposed amendments to its WDAT in July 2019."

SCE proposed to offer both an as-available charging distribution service and a firmcharging distribution service, which is available absent a grid emergency, under different rate plans.

FERC accepted the plan in January 2020 but suspended the proposed WDAT amendments and rates, subject to refund, and established settlement procedures.

In addition to SCE and SEIA, parties to the

proceeding included the California Public Utilities Commission, the Energy Storage Alliance, Calpine, NextEra Energy Resources, Tesla and 10 others. They reached a settlement with SCE under which "more customers are eligible for exemption from the charges applicable to the as-available charging distribution service, and therefore the settlement provides value to more customers," Nagel wrote. "The settlement rates are meaningfully reduced from SCE's as-filed rates for both the as-available and firm-charging distribution services."

The settlement also provides for customers taking firm-charging distribution service to be subject to either a monthly demand charge or the actual cost of facilities, whichever is higher. The parties agreed to the "higher-of" method, the judge said.

Higher-of pricing methods have been approved by the commission in past proceedings. Nagel wrote.

"Therefore, trial staff finds the settled as-available and firm-charging distribution service rates and the higher-of pricing terms fair, reasonable and in the public interest," she said.



The SCE settlement eases storage interconnection. | AES Corp.



West Ponders Roles for Green Hydrogen

By Robert Mullin

There's a growing consensus in the West that green hydrogen could play a key role in decarbonizing the region's energy system, but questions still loom around exactly how the fuel will be applied in that effort.

"There still is a broad range of opinion about hydrogen's role in the clean energy future, and I think as responsible regulators and a policy community, we're trying to figure out what that looks like and how we guide the marketplace in the conversations in our respective jurisdictions," California Energy Commissioner Andrew McAllister said Wednesday at the fall joint conference of the Committee on Regional Electric Power Cooperation and Western Interconnection Regional Advisory Body (CREPC-WIRAB).

Europe is further along in the "conversation" about hydrogen, McAllister said. "We can learn from that."

McAllister has been expressing bullish sentiments over green hydrogen for at least a year. Speaking at the Green Hydrogen Coalition's (GHC) first annual conference last November. he mused that "the planets are aligning" for the fuel source.

At the CREPC-WIRAB meeting last week, he said that observers from outside the industry are starting to pay attention, pointing to a recent article in The Economist that declared that green hydrogen's "moment is here at last" while also "acknowledging it is going to take some big investments."

"There are big bets being made, and I think there's a lot of positive momentum," he said.

McAllister thinks it will take a "generational" investment in infrastructure to elevate hydrogen's position in decarbonization.

"And yet we don't really have time to wait a generation to make it, so we have to sort of figure out what works and then scale that as quickly as possible," he said.

Green Bloom in Utah Desert?

One of the country's biggest green hydrogen investments will take shape at the Intermountain Power Plant (IPP) in Delta, Utah. The Los Angeles Department of Water and Power (LADWP) next year kicks off an ambitious effort to convert the 1,800-MW coal-fired plant into a natural gas-fired generator designed to burn a fuel mix containing 30% green hydrogen that will be produced and stored on site.

The utility's goal is to eventually burn 100% hydrogen after only "modest" modifications to the plant's Mitsubishi turbines, said Greg Huynh, LADWP operating agent manager, during WECC's annual meeting in September.

LADWP envisions IPP as a kind of large storage project, with wind and solar surpluses being used to electrolyze water into hydrogen, which will be stored in salt caverns near the plant and later used to fuel dispatchable



LADWP plans to convert the coal-fired Intermountain Power Plant in Utah into the first electricity generating plant capable of burning a large portion of hydrogen in its fuel mix, starting with 30% in 2025 and eventually rising to 100%. | Green Hydrogen Coalition



firming energy when weather-dependent variable resources taper their output, especially for periods longer than those that can be served by most storage batteries.

"The idea of multiday and seasonal energy storage is going to become very important." Huynh said. "What we're looking at is the seasonal shifting of renewable energy; as energy is being curtailed in the shoulder months of the year, what we could do [is] take that energy and store it in large volumes and for a long time."

With connections to Nevada via a 345-kV AC line and to Southern California through a 500-kV DC line, IPP's location in the Western Interconnection positions it well to perform that reliability function, Huynh said.

At the CREPC-WIRAB meeting, GHC special adviser Laura Nelson lauded the IPP project and echoed the theme of green hydrogen playing a key role in contributing to grid reliability in the West. Nelson said GHC has been "engaging folks that are doing modeling on this front, like [WECC], the National Labs and other stakeholders, that are evaluating the role and potential for green hydrogen to serve as some of that dispatchable and long-duration energy storage."

GHC last year launched the Western Green Hydrogen Initiative to explore the production and use of hydrogen to support policies to decarbonize the Western grid.

"It seems really in our interest to come together as states and as provinces to consider roadmaps or paths forward for developing resources that can address this issue, and green or clean hydrogen certainly shows up as one of those opportunities," Nelson said. "And this isn't going to be specific for any state or province. It really is going to be a significant regional lift in terms of identifying and realizing this opportunity."

Grid Potential

For all his optimism regarding green hydrogen, McAllister last week seemed sanguine about the short-term prospects for applying the fuel to the electric grid.

With a target to decarbonize its grid by 2045, California's modeling has shown that "the need for clean, firm power has really emerged as a gap" that green hydrogen could fill, McAllister acknowledged. But at this point it's still too difficult to estimate the future cost-effectiveness of using hydrogen in the power system, he said. "If you're going to do a production cost model, you need to know what the costs are and what that trajectory looks like."

Instead, California is currently focusing most of its hydrogen efforts on other sectors of the economy.

"We know that transportation is going to be a big focus for hydrogen, and that's where most of our policy and our investments have taken place thus far," McAllister said. "And also in the industrial sector for high-heat applications and difficult-to-electrify sectors."

David Bobzien, director of the Nevada

governor's Office of Energy, said his state is establishing a "beachhead" in the hydrogen economy with Air Liquide's construction of a blue hydrogen plant in North Las Vegas that will produce enough fuel for about 40,000 vehicles, which will be shipped to California.

"But it stands to reason that you can see the next phase for that being fuel availability for transportation needs in our own state," Bobzien said.

"I would maybe suggest focusing on transportation to start as sort of a bite-sized step," McAllister advised, adding that California's efforts have focused on funding programs to build hydrogen fueling infrastructure and help original equipment manufacturers get a foothold into the state to develop the market.

GHC's Nelson also sees opportunity for green hydrogen in the transportation sector, including maritime and air transport, as well as in the natural gas sector. But her emphasis at the CREPC-WIRAB meeting was on the electric industry.

"As we look at these fossil fuel plants that are going to be decommissioned, what are we going to replace them with?" Nelson asked. She sees "significant" opportunities for green hydrogen in the power sector, including in fuel-blending, replacement of existing plants and microgrid applications.

"I think the modeling work that we're going to pursue through the Western Green Hydrogen Initiative will definitely help to continue to inform what that opportunity looks like."

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Texas PUC Names Members to Reliability Council

By Tom Kleckner

The Texas Public Utility Commission on Oct. 19 announced eight appointees to the Texas Energy Reliability Council (TERC), a 25-person, cross-industry group created in the wake of February's devastating winter storm to help guide efforts that address critical infrastructure issues.

Hunt Energy Network CEO Pat Wood, former chair of both the PUC and FERC, was named as one of three "thought leaders" representing energy sectors without an advocate on the council. His company develops and operates distributed energy resources.

The other thought leaders are Thomas McAndrew, founder and CEO of backup power provider Enchanted Rock, and Charlie Hemmeline, executive director of the Texas Solar Power Association.

The PUC also named five members to represent various electric sectors:

• Lori Simpson, Exelon's director of whole-

sale market development, for entities that provide dispatchable energy;

- Liz Jones, Oncor's vice president of regulatory affairs, for transmission and distribution utilities;
- Catherine Webking, general counsel for the Texas Energy Association for Marketers, for retail electric providers;
- Tom Hancock, Garland Power & Light's deputy general manager, for municipally owned utilities; and
- Clif Lange, South Texas Electric Cooperative's manager of wholesale marketing, for electric cooperatives.

Texas Gov. Greg Abbott in September also appointed interim ERCOT CEO Brad Jones and five other members representing industrial concern to the council. (See "Brad Jones Named to Reliability Council," ERCOT Mothballed Resources Return to Year-round Ops.)

TERC was created earlier this year by legisla-

tion to ensure that Texas' energy and electric industries "meet high-priority human needs and address critical infrastructure concerns" and to "enhance [the industries'] coordination and communication."

"It's a very, very broad group of individuals," Lange said during a Gulf Coast Power Association workshop Oct. 19. "Natural gas and electric coordination was certainly an area that was lacking [during the winter storm]. This will facilitate discussion and improve coordination and provide a single location for a lot of this information to be exchanged."

The Texas Railroad Commission (RRC), which regulates the state's gas and oil industries, has five representatives on TERC.

W. Nim Kidd, chief of the state's Division of Emergency Management, has been named TERC's presiding officer. Other senior leaders include PUC Chair Peter Lake; RRC Chair Wayne Christian; Jon Niermann, chair of the Texas Commission on Environmental Quality; and J. Bruce Bugg Jr., chair of the Texas Transportation Commission.



Former FERC, PUC chair Pat Wood is one of three "thought leaders" on the Texas Energy Reliability Council. | © RTO Insider LLC



Consumer Groups Call for Efficiency, DR Measures

Texas Commission to Unveil Draft ERCOT Market Redesign Thursday

By Tom Kleckner

Texas regulators are expected to release a draft blueprint for a redesigned ERCOT market Thursday in response to February's winter storm that will likely focus on increasing the amount of dispatchable generation.

The American Council for an Energy-Efficient Economy (ACEEE) has countered by saying rather than build new power plants or taking other measures, Texas could avert future blackouts at a lower price by instead improving the energy efficiency of its homes and using technologies to shift electricity usage away from peak demand periods.

In a new report, the council said the state could deploy seven residential energy efficiency and demand response retrofit measures over five years that could serve about 9 million households and offset about 7.7 GW of summer peak load and 11.4 GW winter peak load at a cost of \$4.9 billion. That is

below separate proposals by Berkshire Hathaway Energy and Starwood Energy Group Global to build 10 to 11 GW in gas plants for \$8 billion.

"That should be one of the first things the commission does," said Stoic Energy consultant Doug Lewin, who moderated an ACEEE panel discussion Oct. 19 previewing the Public Utility Commission's open meeting Thursday.



Doug Lewin, Stoic Energy | ACEEE

Lewin said Texas was the first state to adopt an energy efficiency resource standard in 1999. Nearly 30 states have now instituted similar standards, he said, but Texas now stands dead last.

"We have not increased energy efficiency programs even a smidge since 2011," Lewin said, adding that demand continues to grow in the state.

"Does [ACEEE's proposal] solve everything?" he asked rhetorically. "One of the biggest criticisms of energy efficiency is that it doesn't solve the whole problem. Nothing solves the whole problem. We aren't looking at silver bullets here. There's a lot of silver buckshot."

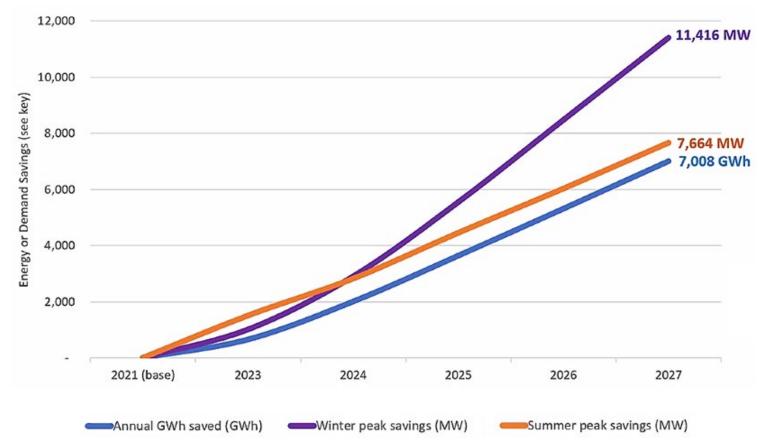


Alison Silverstein | ACEEE

Alison Silverstein, an independent consultant with a career that includes stints with the PUC, FERC and the U.S. Department of Energy, agreed with Lewin. She said she expects more discussion among the four

commissioners, who have been in a "learning mode" since their appointments during the last eight months.

"There's so much ground to cover and a lot of



ACEEE says that Texas could reduce energy consumption by 7 GW annually through energy efficiency and demand response programs. | ACEEE



space between the commissioners to explore," Silverstein said. "There's no single solution here. What the commission needs to adopt is many measures for a layered approach. ... How do we put all these pieces together rather than think one specific recommendation is going to solve all the problems?"

Noting the commission's goals include improving resource adequacy, Silverstein said the market's new design elements should focus on operational reliability and market considerations.

"Let's make sure we have long-term and short-term solutions ... to keep the lights on day-to-day," she said. "The commission is under a lot of pressure. The legislature has already reminded them very explicitly that winter is coming. Don't spare the horses. Let's keep the pedal to the metal."

The PUC has conducted four market redesign workshops since the summer to gather ideas and input from market participants on how to prevent a reoccurrence of the days-long blackouts that followed February's winter storm. During last Thursday's workshop, the commission heard from The Brattle Group, which called for fixes through the market, and Potomac Economics' David Patton, who said increasing ERCOT's capacity margin would

not have effectively addressed last winter's outages.

Suzanne Bertin, managing director for the Texas Advanced Energy **Business Alliance** (TAEBA), pointed out that most of the proposals brought forth have come from the



Suzanne Bertin, Texas Advanced Energy Business Alliance | ACEEE

market's largest players who have proposed increasing dispatchable generation "by raising revenues to fossil fuel generators in particular."

She divided the proposals into three major categories: paying certain plants to stay online instead of retiring because of market economics (Vistra); providing backup service by paying specific generators to run 24 hours straight (Lower Colorado River Authority); and mandatory forward procurements or load obligations of three years (NRG Energy). (See Study Suggests Texas LSEs Can Provide Reliability.)

"We're interested in focusing on those types of solutions that would directly address the problems we faced in February," Bertin said, using rooftop solar, home batteries and electric vehicles as examples. "The cost of electricity grid failure is so high that we need to be thinking about building a whole suite of resources and rules that provide layers of protection for Texans going forward. We also need to be thinking about how we make sure the costs borne by customers in Texas — because they ultimately pay for whatever policy decisions are made ... are bearable."

Bertin compared the result to an orchestra, with all the instruments playing their parts "to draw out the characteristics that make a symphony work."

"Any market design changes made over the next couple of months need to incorporate the best available technologies ... necessary for Texas to retain its energy leadership role and maintain confidence in the electric system," she said.

PUC Chair Peter Lake said during the last workshop that any design decisions will be made quickly and without giving thought to protecting business models.

That is small comfort to Silverstein, who said she is hoping the commission will look at "performance-based, technology-neutral solutions" rather than favoring fossil-fired plants.

"I'm hoping they'll layer multiple options. ... I think they'll pick a few favorites, and I think they'll pick a bunch of them," she said. "I agree [ERCOT] needs a lot of fossil plants in the short-term, but that doesn't mean fossil plants can deliver every solution that we need. They cannot deliver, in fact, many of the solutions we need for operating responsiveness and capacity, as they painfully showed us last February."

A coalition of 24 ERCOT stakeholder groups. including Silverstein, ACEEE and TAEBA, filed a document with the PUC on Oct. 19 offering their "broadly applicable foundational principles" to guide the commission's redesign efforts and their recommendations for prioritizing reforms most likely to prevent sustained load-shed events (52373).

The coalition's principles include protecting customers, fostering competition, and promoting high-quality infrastructure. Its members recommend a phased-in approach by taking "low-hanging fruit" measures to improve operational responsiveness first before expanding low-cost energy efficiency and demand response to buffer bills against unknown future costs for the supply-side proposals.

As Lake promised, the PUC will move quickly after Thursday's meeting. It will hold a fifth workshop on Nov. 4, with stakeholder comments on the draft plan due Nov. 12. A final work session will be held Dec. 9 before the commissioners' target completion date of Dec. 19. ■









NextEra Buying up Water Companies

By Tom Kleckner

NextEra Energy, apparently not content with being one of the biggest kids on the utility block, is now dipping its toe into regulated water utilities.

The company said Wednesday that its NextEra Energy Resources (NEER) subsidiary has entered into a \$45 million agreement to acquire a portfolio of regulated water and wastewater assets in eight counties near Houston that furthers its strategy to build a "world-class" water utility. And that could just be the beginning.

"We're really excited about building a significant presence in the water business," CFO Rebecca Kujawa said during NextEra's third-quarter earnings call with financial analysts. "It's good to be us."

Kujawa said that while the \$45 million pales in comparison to NextEra's annual \$15 billion capital investment program, the company

referenced it in its prepared remarks because of the potential opportunities.

"I think it's a lot like transmission in the sense that it will be built slowly over time and create opportunities for us to continue to have that regulated and long-term contracted base of value creation," she said.

Already generating more electricity from wind and solar resources than any other company in the world with a market capitalization of more than \$100 billion. NextEra has added 5.7 GW to its renewables and storage backlog this year. NEER now has about 18.1 GW of signed contracts in the backlog and is looking to add more in California, where it has nearly 300 MW of projects and is developing nearly 2.4 GW of additional storage projects.

"We are proud to help the state lead the country to a carbon-free, sustainable future," Kujawa said.

Ironically, Bloomberg reported Oct. 18 that NextEra was among three renewable technol-

ogy heavyweights that have been removed from S&P Dow Jones Indices' Global Clean Energy Index because of tightened membership requirements.

NextEra also told analysts that its Florida Power & Light subsidiary has filed a proposed rate-case settlement with regulators that will be heard on Wednesday. The settlement, which includes its recent acquisition of Gulf Power, would result in a \$1.25 billion rate increase over the next two years.

The Juno Beach, Fla.-based company posted earnings of \$447 million (\$0.23/share), compared to \$1.23 billion (\$0.62/share) during the third quarter of 2020. The results included unrealized gains and losses on equity securities held in NEER's nuclear decommissioning funds and other than temporary impairments.

NextEra's shares opened at \$82.03 on Wednesday and shot to \$84.41 before closing at \$83.92, a 2.3% increase. ■



NextEra Energy is developing 2.4 GW of battery storage in California for deployment in 2023-2024. | NextEra Energy Resources



ERCOT Board of Directors Briefs

Mention of 'Conservation Call' Sets off Regulators

Interim ERCOT CEO Brad Jones told his Board of Directors on Friday that tight operating conditions Monday may necessitate a conservation call (which never came to pass), setting off a flurry of comments from the regulators present that the call is just one "tool in the toolbox" for maintaining reliability.

A similar conservation call in April spooked legislators and customers when conditions approached the criteria for a first-level energy emergency alert. (See ERCOT Faces Tight Conditions — Again.)

Unusually high demand and above-normal seasonal generation outages were to blame for the near-emergency. ERCOT had anticipated similar conditions yesterday, when temperatures were projected to creep into the low 90s, while wind production was expected to be low and thermal outages remain above normal. The grid operator expects about 63 GW of demand, 8 GW or so up from last week.

Jones stressed that ERCOT was not calling for conservation, but only monitoring the conditions.

"If we need to call for conservation, we will do that before the event and we will make sure that all Texans are aware of the condition," Jones told the board. "If we need conservation, that is to ensure the grid remains reliable. We won't be drawing ourselves out of an unreliable condition, we will be preparing and communicating to customers in advance if we need to do so."

Public Utility Commission Chair Peter Lake interrupted Jones' CEO report to remind those Texans who might be watching the meeting's video stream that "conservation is another tool in the toolbox ... used in grid operations around the world."

"The PUC's expectations and encouragement is that the EROCT operations team will take all measure necessary to prevent us from getting into an emergency," he said.

Commissioners Will McAdams and Lori Cobos echoed Lake's comments. Jimmy Glotfelty was available by phone but did not offer a comment.

Board Chair Paul Foster said he agreed with the commissioners and added that he expected ERCOT "to take any action necessary under its broad reliability authority to avoid an EEA condition" and to ensure grid reliability.

"Texas expects nothing less than for the grid operator to use all available tools at its disposal, and distribution-voltage reduction is one of those important reliability tools," Foster said, reading from a document in front of him.

He then instructed ERCOT staff to file an urgent revision request giving the grid operator "ultimate flexibility" to use voltage-reduction measures before declaring an EEA. Foster asked that the Technical Advisory Committee bring the measure to the board for its consideration in November.

The TAC last week canceled this Wednesday's meeting because of a lack of time-sensitive items to consider. It is next scheduled to meet next on Nov. 17.

ERCOT has maintained conservative operations since the April event and another in June, when wind generation failed to show up. The grid operator has increased the operating reserves and reliability unit commitments it deploys and has been doing so sooner. It is expecting about 17 GW of thermal outages, which is down from a high of 24 GW last week.

Lake: No-go for TAC's Status Quo

As TAC Chair Clif Lange, with South Texas Electric Cooperative (STEC), wrapped up his update to the board, he was reminded of the political realities overhanging the market participant-driven committee.

ERCOT has rolled out a 60-point roadmap to grid reliability that includes an item ensuring the TAC is composed of "senior-level members from each member organization." The committee, currently comprising 30 members representing seven market segments, engaged in a sometimes testy exchange with Jones during its July meeting over the level of stakeholder involvement. (See ERCOT Technical Advisory Committee Briefs: July 28, 2021.)

Lake complimented the committee on its work before segueing into concerns that market participants wield too much influence in ERCOT.

"We do know that after [legislation passed this year], that status quo is not what the path forward needs to look like. I don't know what the path forward will be with our new board members ... but I'm confident they will be evaluating the stakeholder process to ensure that we make improvements where we need to make them, while also retaining the valu-



South Texas Electric Cooperative's Clif Lange (lower left) presents the Technical Advisory Committee report to the ERCOT board. | ERCOT



able elements of what TAC has done to date," he said, nodding to the three voting members currently on the board.



PUC Chairman Peter Lake explains reliability tools at ERCOT's disposal. | ERCOT

"Stakeholder input is critical to making this market work well, but I also know we can't continue with business as usual." Lake said. "I have full faith in these gentlemen to make improvements that we at the commission expect and that the legislature and the

governor expect."

Foster said he agreed with Lake and that he expected the board will "propose a number of changes while we continue to work with TAC and the whole team."

The board still has room for six new directors following legislation this year that revamped its makeup. The PUC chair and ERCOT's CEO will sit on the board as non-voting members. (See New ERCOT Board Approves Governance Changes.)

Jones to Launch Listening Tour

ERCOT has launched a statewide listening tour, with stops in locations like Odessa in West Texas and Brownsville in the Rio Grande Valley. Jones, who is to meet with business and community leaders in dozens of communities across states, said one of the scheduled stops includes a town hall in Carrollton, a northern suburb of Dallas.

"I know what the conditions were [during the February winter storm]. I know how difficult it was for consumers," he said. "I want them to have the opportunity to tell me directly and hear them out. I want to make sure the people know what we are trying to achieve."

Jones said ERCOT and the rest of the state is well ahead of the recommendations included in FERC and NERC's recent preliminary report on the winter storm.

"We have already been addressing every one of those items," he said.

ERCOT is facing a \$35.2 million negative variance in its 2021 budget, driven by higher legal costs and a \$26.4 million shortfall in revenue. System administration fees are off \$9.2 million, but the grid operator's interest income is down \$19.8 million.

"It's basically gone away," Jones said. He noted staff had expected a 2.5% interest rate. but that is now a "very small fraction" of 1%.

The negative variance is essentially the same as it was in August, when it stood at \$35.6 million.

Non-controllable Load Participation

The board approved 12 revision requests dating back to August, including an other binding document change (OBDRR032) that aligns non-spinning reserve deployment and recall procedures with revisions from a nodal protocol change (NPRR1093). The latter measure allows ERCOT to explore temporary workarounds for non-controllable load resources to participate in non-spinning reserves and provide additional capacity for the grid operator in the coming winter and summer seasons. The non-controllable resources will be deployed after offline units participating in non-spin. (See ERCOT Technical Advisory Committee Briefs: Sept. 29, 2021.)

STEC and Lower Colorado River Authority had both opposed the OBDRR over concerns that it presented a "discriminatory 'last in, first out' preference" for non-controllable resources, reducing the likelihood that they would "actually be called upon" over generation resources providing the same service and being compensated the same amount.

The utilities removed their objection following a recent non-spinning reserve service workshop and discussions with PUC and ERCOT staff that led to NPRR1011 being filed. The proposed measure provides a resource-neutral, deployment-grouping requirements by including generation providing offline non spin with non-controllable load resources proving non-spin reserve.

"The bottom line is this effort brings more resources to bear and increases the margin of safety for the ERCOT grid next summer," Lake said.

Other approved changes included three additional NPRRs, another OBDRR, two changes to the planning guide (PGRRs), two system change requests (SCRs), and single revisions to the nodal operating guide (NOGRR) and the resource registration glossary (RRGRR):

- NPRR1082: changes the testing criteria for emergency response service (ERS) load with obligations less than 100 kW colocated with an ERCOT generator.
- NPRR1087: ensure any critical load in ERS programs can continue to support critical operations if they are deployed by requiring an attestation that the resource is not located behind an electric service identi-

fier (ESI ID) for a critical load. The NPRR also requires a qualified scheduling entity representing an ERS resource to ensure and attest that it is not located behind an ESI ID for a critical load or itself is not the critical load.

- NPRR1090: clarifies that ERCOT has the flexibility to declare when exhausted ERS service types will be renewed for some or all of the ERS time periods and extends the deployment limit of weather-sensitive resources.
- NOGRR232: squares the guide with NPRR1093's revisions.
- OBDRR033: matches the methodology for using the operating reserve demand curve to calculate the real-time deployment price adder with NPRR1093's revisions.
- PGRR093: reinserts three requirements into the board-approved graybox language for PGRR082 that were inadvertently removed in its revisions.
- PGRR094: aligns the guide with current practices by grayboxing language requiring project construction start and completion date submittals until system implementation in the resource integration and ongoing operations-integration services system.
- RRGRR031: amends the glossary to accommodate registration of settlement-only energy storage systems to require the same level of registration detail required for energy storage resources under RRGRR023.
- SCR813: modifies the network model management system to highlight change submissions related to jointly rated equipment, listing other entities that have also provided ratings. The submitter will be asked to confirm that the requested changes have been coordinated with the associated companies.
- SCR814: introduces a limit on the total number of point-to-point obligation bid intervals that can be submitted into the day-ahead market per counterparty.

The directors also signed off on staff's recommendation for a \$101.5 million transmission project that addresses reliability and aging infrastructure needs in the Port Lavaca area on the Gulf Coast. Staff said they recommended a more expensive project to meet resiliency criteria along the coast. (See "Members Endorse \$101M Tx Project," ERCOT Technical Advisory Committee Briefs: Sept. 29, 2021.)

- Tom Kleckner



Texas PUC Nears Market Redesign Finish Line

LSE Reliability Obligation, ORDC Changes Top Commission's List

By Tom Kleckner

Texas regulators are wasting little time in redesigning the ERCOT market as they rush to meet a self-imposed deadline to release a new blueprint by Dec. 19.

The state's Public Utility Commission staff is expected to release a strawman on the new market design this week. Stakeholders have until Nov. 12 to comment on the draft design, with further discussion possible during two PUC work sessions Nov. 4 and Dec. 9

That compares with the years of work that went into constructing the ERCOT market in the late 1990s and the ISO's nodal redesign that was implemented in 2010.

"We've got to choose a path to go down relatively soon," PUC Chair Peter Lake said during a commission work session Thursday. "We don't have luxury of years of study."

The commissioners appear to have consensus on reforming the operating reserve demand curve and emergency response service (ERS) and continuing ERCOT's development of fastresponding regulation service and contingency reserve service products.

However, Lake's push for a load-serving entity reliability obligation met with resistance from all three of the other commissioners over the proposal's uncertain costs and its effects on ERCOT's competitive retail market. The LSE obligation addresses resource adequacy concerns by introducing a formal reliability standard and a mechanism to ensure sufficient resources meet this standard. (See Study Suggests Texas LSEs Can Provide Reliability.)

Jimmy Glotfelty, among those who helped design the ERCOT market 25 years ago, called the LSE obligation a "massive market change." He shared the fears of some that the obligation would result in the state's largest retailers consolidating their positions.

"I don't want to go to four generation retailers that have monopolies in the state," Glotfelty said. "If [the LSE obligation] is detrimental to customers and retail competition, it's going to be really hard to get over that hump. I want to have a robust retail market, and I don't yet have any assurances this will incent new generation."

Lori Cobos, who led the consumer-focused



Texas PUC's Will McAdams shares his thoughts with fellow commissioners and attendees during an Oct. 22 work session. | Texas PUC

Office of Public Utility Counsel before being appointed to the PUC, asked that ERCOT's Independent Market Monitor protect the market should the LSE obligation lead to fewer retailers.

"We've spent a lot of time working ... stabilizing the ERCOT market. Part of that stability is protecting the crown jewel of our retail market," she said. "I want to ensure all this hard work we've put [in] is not destroyed at the back end because we're looking for reliability in all the wrong places."

Doug Lewin, president of Stoic Energy and a proponent of demand response and energy efficiency measures, echoed Glotfelty's comments that the proposed changes "are massive departures from Texas' competitive market."

"As noted by all of the commissioners, they could have negative impacts on competition and increase the already significant market power of the largest 'gentailers'," Lewin said.

"Gentailer" has become a common expression within the ERCOT market for large power providers such as Vistra and NRG Energy that have both generation and retail affiliates. Their retailers, TXU Energy and Reliant Energy, respectively, already control 70% of the market.

"There will be lots of unintended consequences if the PUC doesn't thoroughly vet and understand these proposals before adopting any of them," Lewin said. "No one knows yet what any of the proposed market overhauls would cost."

As he pointed out, several of the proposals add extra costs to renewable energy in favor of dispatchable thermal energy. Lake has suggested imposing a firming requirement of up to 60% of a generator's nameplate capacity.



"Many of these proposals likely won't increase reliability but would certainly raise energy costs for Texans and Texas businesses."

Those costs are expected to be passed on to consumers. Prices on the state's Power to Choose website, where customers can search for electric providers, are up 50% from a year ago to an average of 12 cents/kWh.

Cobos warned that the LSE obligation could turn into a "potentially litigated process."

"All I'm asking is that for the next couple of months we take a look at the LSE obligation," Lake said. "I don't know how we can say we are doing our job without taking a serious, serious look at this."

Lake initiated the discussion with a pre-meeting memo calling for the commission's focus on "refining the concepts that will bring reliability to our grid." He noted his list of recommendations was a starting point "and by no means an exhaustive list."

"This is my version of what an LSE obligation could look at," Lake said. "It's a draft of a draft of a draft. The only thing I'm certain of is I got a lot of this wrong."

Commissioner Will McAdams said he had significant questions about the LSE obligation proposal's effect on the market and that those questions "must be answered before any type of endorsement from the PUC."

The commission agreed it will need further analysis from The Brattle Group and other outside consultants in the few weeks that remain before Dec. 19.

"We have to have breathing room to study firming requirements now for down the road," McAdams said, pointing to the wave of intermittent resources poised to hit the ERCOT market in the next few years.

The commission also discussed whether it could increase ERCOT's budget for the ERS' winter period and whether it could direct the grid operator to deploy the service before an energy emergency alert. The ISO is scheduled to send out a request for winter ERS bids on Nov. 8.

ERCOT staff said they would need a rule change to eliminate the ERS \$50 million budget cap. The ISO procures the service over four contract periods during the ERS year, which runs from December to November.

PUC staff said they would review the rules and work with ERCOT legal and bring back a response this week.

Weatherization Rules in Effect

The PUC approved a two-step plan to ensure generation plants and transmission facilities are properly protected against a repeat of February's severe winter storm that nearly

toppled the ERCOT grid (51840).

Under the new rules, generators must implement winter weather readiness recommendations from a post-event *analysis* of a 2011 winter weather event and fix any "known, acute issues" from last winter. The generation owners are required to file a notarized attestation from their highest-ranking executive that the resource has met its required actions by Dec. 1. (See "Weatherization Rule Published." PUC Workshop Takes First Stab at Market Changes.)

"This is a good first step to ensure the physical resilience of the grid is vastly improved over last winter," Lake said.

Generators will be allowed to submit a "good cause exemption" if they fail to comply. However, the PUC and ERCOT will have to sign off on the exemptions.

The rules also direct ERCOT to inspect generators before the end of the year. Staff plans to inspect nearly 300 units, focusing on those responsible for the 80% of lost megawatts from the February storm. (See ERCOT's Jones Looks Ahead, not Behind.)

Transmission service providers must comply with similar requirements, using a FERC/ NERC report on the 2011 event as a baseline.

Stronger year-round weatherization standards are scheduled to be implemented next year once a comprehensive weather study is completed by the state's climatologist and ERCOT staff. That study is expected in February.

Securitization Orders Finalized

The commission made several minor changes during a brief open meeting on Oct. 13 before approving a pair of orders granting ERCOT's requests for debt-obligation orders that would allow the grid operator to securitize \$2.9 billion in market debt as a result of high charges incurred during February's storm. (See Texas PUC Finances Market Debt over Lt. Gov.'s Objections.)

ERCOT said last week it will begin issuing bonds and collecting default charges from market participants in November to finance \$800 million owed to the market by cooperatives and municipalities (52321).

The grid operator won't begin issuing bonds for the \$2.1 billion uplift balance to the market until the first quarter of 2022, staff told the Board of Directors on Friday. ERCOT has proposed that the bonds be issued through a special purpose entity (52322). ■



PUC Chair Peter Lake explains his memo on the ERCOT market's redesign. | Texas PUC



Maine Regulators Hear from CMP, Residents on NECEC Permit

By Emily Hayes

The Maine Department of Environmental Protection (DEP) held a hearing Oct. 19 to determine whether it should revoke Central Maine Power's (CMP) permit to construct the New England Clean Energy Connect (NECEC) transmission line in the western part of the

There is no deadline for the decision in the DEP proceeding, but the agency has the option to suspend the construction permit temporarily or revoke it entirely, forcing CMP to apply for a new one. DEP Commissioner Melanie Loyzim opened the proceeding after a Maine Superior Court ruling in August vacated a 1-mile public land lease to CMP. Loyzim said the court's decision represented a change in circumstance that could warrant a permit suspension.

CMP argued in the hearing that the decision on the land lease should not hold up or halt construction of the entire 145-mile transmission corridor, presenting two alternative routes the company could take to avoid the lease area.

The company also said it is considering running the transmission line underground, which it argued wouldn't change recreational use of the state public land or potential alternatives.

If the DEP delays the project until an appeal of the court's ruling is settled, which likely won't happen until June 2022, it will cost CMP an extra \$67 million, said Thorn Dickinson, CEO and president of NECEC Transmission, the affiliate running the hydropower transmission project already under construc-

The utility also has a December 2023 target

date for completion of the line, and delays could put negotiated energy benefits for Maine and Massachusetts residents at risk, he said.

Opponents argued that ongoing construction of the transmission line is causing irreparable damage to the jack pine forests of western Maine, while the project could be halted by the legislature or the state land lawsuit.

"Any trees allowed to regenerate in the cleared corridor will be severely limited and will not achieve the middle and older age height diversity needed by wildlife," said Roger Merchant of Glenburn, Maine, a licensed forester.

The same impacts would occur in the proposed alternative routes, which could take the 90-foot-wide corridor about 90 years to recover, Merchant said.

One alternative route would run through the Moosehead Conservation Easement Area, but Karin Tilberg, president of the Forest Society of Maine, said in an Oct. 19 email to DEP and Dickinson that a power line would not be permitted in the area.

However, supporters of the line argue the transmission line, which would bring renewable hydroelectric energy from Québec to the New England grid, benefits the health and environment of Maine.

"Climate change is the most serious threat to Maine's environment," said Tony Buxton, general counsel to the Industrial Energy Consumer's Group.

A suspension or revocation of the construction permit for the line would be "contrary to the public interest," Buxton said.

In a virtual public comment session following the hearing, William Frederic of Starks said if CMP halts construction of the line, he will lose his job and "the chance to make a difference to the future of our planet."

The hearing came two weeks before Mainers will vote on ballot referendum Question 1, which, if passed, would put the project before the state legislature, requiring two-thirds majority in both houses for the project to proceed.

"There are no climate change benefits from a project that can't be completed," said attorney James Kilbreth, representing the Natural Resources Defense Council of Maine. "Voters could decide to stop the project altogether."



The New England Clean Energy Connect transmission line, pictured here, began construction earlier this year, with 108 miles of right-of-way cleared and 58 poles installed. | Roger Merchant



Overheard at REV2021: Cattle, Crops, Bees Trend in Agrivoltaics

By Jennifer Delony

Sheep grazing on solar array lands has been a successful approach in agrivoltaics, but the possibilities are growing for pairing solar with beekeeping, crops and even cattle.

Co-developing agricultural practices and solar has an "incredible amount of potential," Lexie Hain, executive director of the American Solar Grazing Association (ASGA), said Oct. 19 at the annual Renewable Energy Vermont conference.

"Sheep and solar are absolutely the most predominant agrivoltaic integration in the U.S. and surely globally," she said, adding that the practice is "straightforward." The herd's vegetation maintenance prevents crops from creating shade on solar panels, and the array infrastructure doesn't need to be modified to accommodate sheep.

Studies show that the sheep that graze at solar sites don't have to compete for shade, so they drink less water and have lower stress levels, according to Hain. Their grazing activity also benefits local plant species, with one new study pointing to the biodiversity at grazed arrays being higher than mowed arrays, she said.

In the U.S., there are about 12,000 acres of grazed solar, according to Hain, but she said there are other "big, forward thinking" opportunities for agrivoltaics.

The University of Minnesota studied the effects of grazing cattle in the shade of solar PV systems, Hain said. That study concluded that, while more research is needed, agrivoltaics may reduce the stress from heat on dairy cows and increase their wellbeing.

Solar developer Silicon Ranch, which is a Royal Dutch Shell company, received a U.S. Department of Energy grant this year to study cattle and poultry at the company's arrays, according to Hain.

In particular, she said, the company is studying the necessary modifications of solar panel racking systems to accommodate cattle.

Another area of "meaningful" agrivoltaics research that Hain sees growing is pairing vegetable crops with solar. The University of Arizona (UA), University of Massachusetts and Oregon State University are all engaged in solar and crops research, she said.

A group of universities that includes UA will

work on a project funded by a \$10 million, four-year U.S. Department of Agriculture grant announced Oct. 6. The "Sustainably Co-locating Agriculture and Photovoltaic Electricity Systems" project will focus on increasing crop yields, productivity and farmer profits with row, specialty and forage crops.

Putting bee colonies on solar array sites has grown from the level of hobbyists to largescale beekeepers, according to Hain.

"There are a number of commercial beekeepers in the U.S. and one in Canada who have worked to formalize the process by which beekeeping can be a viable practice to produce a value-added solar honey, and in so doing, gain lands that are accessible 24/7 to them that typically are managed with low or no herbicide use," she said.

ASGA recently worked with the American Beekeeping Federation to create a solar beekeeping contract.

"We wanted to understand the agricultural viability of this for our solar beekeepers, and we wanted to provide a structure and framework for our solar companies and hosts to understand what the financial expectation and obligation is," she said.

The contract sets out the basis for which a solar landowner might pay a beekeeper for maintaining an apiary on the solar site. In some cases, co-locating the apiary and solar array would allow the site to qualify as land used in agricultural production under state regulations. The Solar Massachusetts Renewable Target program, for example, offers an additional incentive to solar developers for productive agricultural activity at their projects.

"Most of the states in the Northeast are importers of honey, and this could be another opportunity for value-added production at solar arrays," Hain said.

Nordic Farm

Vermont entrepreneur Will Raap is using his vision for solar to help Vermont's evershrinking dairy farms. He wants to make his latest project, Nordic Farm, "the most carbonnegative farm in Vermont."

Part of that vision includes using agrivoltaics to create a profit stream for the dairy farm, which went through bankruptcy four years ago. Raap purchased the farm earlier this year and is planning to build up to 5 MW of



There are about 12,000 acres of grazed solar in the U.S., but the American Solar Grazing Association's Lexie Hain says there are other forward-thinking opportunities for agrivoltaics. | Secure Futures Solar

ground-mounted solar on marginal, abandoned pastureland and grow berries on the site.

"We're working with a beverage company, called Shrubbly, to grow aronia, currents and elderberries between the solar panels, which we could harvest for their product," he said during the conference.

Hinesburg-based Shrubbly produces a sparkling water drink flavored with organic fruit, herbs and spices.

The project team also plans to study the ecosystem benefits of the site, including, for example, carbon sequestration, water retention and pollination.

If Vermont is to realize the emission-reduction targets set by the 2020 Global Warming Solutions Act, Raap estimates the state needs to build between 150 and 300 MW of new solar every year for the next decade. That capacity would require 1,000 to 2,000 acres of land beyond brownfields and the built environment, Raap said.

One solution, he said, could be to repurpose marginal and abandoned farmland that has low or no economic value, especially if the land is on economically stressed dairies.

If Raap can demonstrate how to build multiple income streams with solar and agriculture at Nordic Farm, the project would be a valuable model for other dairies.

"Farmers [can] de-risk their farming situation with diversification in their agriculture, not only to produce more income from renewable energy but to reduce their energy footprint and make them a more carbon-negative farm," Raap said. ■



Overheard at Conn. Power and Energy Society's 2021 Fall Conference

The Connecticut Power and Energy Society focused its annual fall conference last week on the theme of equity and inclusion as drivers of "the future of energy."

"This is something that we thought was very important for us to do this year," CPES President Alex Judd said.

Here is some of what we heard at the virtual event.

Casten Looks Beyond 'Hot FERC Summer'

When U.S. Rep. Sean Casten (D-III.) went the pop culture reference route to draw attention to FERC on the House floor in July, he did not think "Hot FERC Summer," a play on the Meghan Thee Stallion hit "Hot Girl Summer," would be a defining moment for him.

"I must say it cracks me up to realize that



I've still got a few years left in me, but I now know what they're going to say on my tombstone, and it's going to be 'Hot FERC Summer," Casten said with a laugh during his closing keynote. "Whatever else I've done in my life, that one minute on the House floor seems to be the thing I'll be remembered for."

Zeitgeist and the #HotFERCSummer hashtag aside, Casten now reaches a broader constituency when he talks about energy issues, primarily through an equity and environmental justice lens. According to the UN's Intergovernmental Panel on Climate Change report released in August, Casten said, "we're out of time." (See Too Late to Stop Climate Change, UN Report Says.)

"We don't have time to move slowly, and the single worst thing we can do for equity is to ignore the fires and ignore the floods because this summer is not the new normal," Casten said. "It is the rate of acceleration. That's our new normal."

Economy-wide decarbonization and electrification need to happen quickly, as does the doubling of energy efficiency. And likely without the billions of dollars in funds from the Build Back Better Act that House Democrats fear will look different when the Senate



virtual fall conference. | Connecticut Power and Energy Society

potentially trims back the bill.

"It's a grand parlor game in Washington speculating what might emerge from the Senate," Casten said.

Billions invested in clean energy and the transmission infrastructure to interconnect it, which "without any hyperbole" would be "the single greatest wealth transfer from energy producers to energy consumers that our species has ever seen," Casten said.

"Every technology we deploy is cheaper to operate than the ones that it displaces, and it cuts the cost of energy, to the point that creates real problems for our grid regulators," Casten said.

Part of the reason Casten talked about a "Hot FERC Summer" was the critical role he thought the agency would need to play in building a reliable power system.

He also added that the clean energy transition is an enormous economic growth opportunity, but there is a need to ensure that it does not widen wealth inequality.

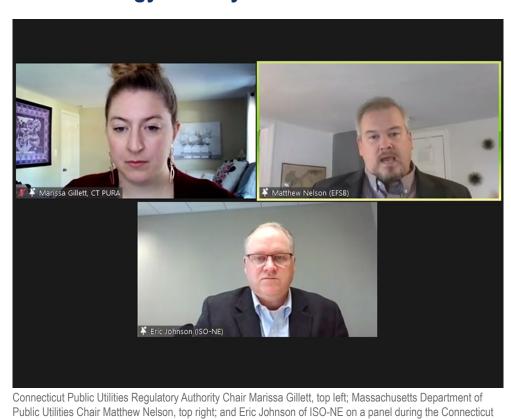
"We need to talk about this more honestly in the energy community," Casten said. "This is

going to lead to a massive increase in labor productivity. That's one way of putting it, but the other way is it doesn't take as many people to run a solar panel."

Helping communities previously built around and dependent upon fossil fuel extraction and production is something that Casten understands because Illinois "used to be a coal state." He has "a certain sympathy" for Sen. Joe Manchin, the West Virginia Democrat who is opposed to some of the more robust climate change measures touted as vital by the Biden Administration and many Democrats in Congress like Casten.

"Geographically, West Virginia is a beautiful state. It's also a really hard state [in which] to build electricity wires and to build highways and infrastructure ... so there's a lot of logic for a West Virginian economy that's based on the natural resources in the ground," Casten said. "But as we've moved away from coal, those jobs have gone away. It's hard to see them coming back."

Casten thinks "it's unfortunate" that people in West Virginia do not have leaders who describe what they have seen "on the other side of the mountaintop" when it comes to



Power and Energy Society's virtual fall conference on Thursday. | Connecticut Power and Energy Society



clean energy.

"Instead, [it's] leadership that's telling them that they agree that this mountain is too high, why don't we just all lie down here in the forest and cry," Casten said.

Congress needs more experts in climate change and energy issues, Casten added. He is a former clean energy company CEO and has undergraduate and graduate degrees in engineering. Climate change is Casten's top priority.

"I would ask you to bring your expertise with an uncomfortable level of ambition because if your message to Washington is, 'I really like the status quo,' that's not particularly helpful,"

Equity in the Regulatory Process

To decarbonize the transportation sector, states like Connecticut and Massachusetts need more electric vehicles on the road.

During their panel, Matthew Nelson, chair of the Massachusetts Department of Public Utilities, and Marissa Gillett, chair of Connecticut's Public Utilities Regulatory Authority, said that people in low- to moderateincome communities need ease and access to charging infrastructure.

"Electric vehicle charging isn't like gas stations. You're not just replacing the gas station. They have different use patterns," Nelson

He added that while getting people into single-passenger EVs is laudable, the real goal is heavy-duty equipment and vehicles.

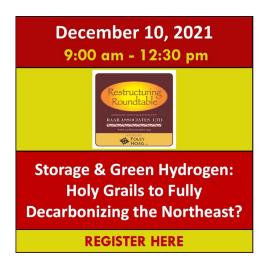
"I recently went to an onsite demonstration of an electric backhoe, and the two things that really jumped out to me is it functioned just as well as the regular gas-powered, and it was incredibly quiet. The societal benefit of having something that is not pumping out emissions that is quiet, other than the actual digging it's absolutely staggering the difference.

There's a lot of non-energy benefits that come from electrifying transportation fleets."

Gillett said she is proud of the work PURA did on its nine-year electric vehicle charging program part of the Equitable Modern Grid initiative - that set targets for the number of charging stations deployed in low- to moderateincome areas or underserved communities. However, she added there needs to be consideration of urban mobility options such as e-scooters and e-bikes. In addition, Uber and Lyft do a lot of "deadheading," often polluting the air in environmental justice communities.

"There's room for creative thinking here that I'm hoping is inspired on this day," Gillett said. "We have a lot of folks that are advancing the electrification conversation. I'm hoping that some of our stakeholders pick up on that thread and start building on top of the work that's already been done."

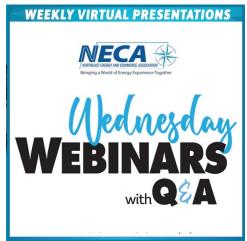
Jason York















Regulators Discuss Conn. Progress on 'Equitable Modern Grid'

By Jason York

Two years ago this month, the Connecticut Public Utilities Regulatory Authority approved a sprawling plan to modernize the state's electric grid.

PURA established four objectives for its Equitable Modern Grid framework centered on Connecticut's green economy, decarbonization, energy affordability in underserved communities and reliability. It also identified 11 near-term tracks to investigate in three phases.

During a recent webinar to recap progress to date, including three final decisions among the 11 tracks, PURA Chair Marissa Gillett said that while Connecticut's electric infrastructure continues to age, there is a concurrent reliance on it "to meet our daily needs."

There is an emphasis on equity that permeates the initiative, including the final decisions on electric storage and zero-emissions vehicles, which contain incentive adders for underserved communities.

"Equity is an important lens that we approach this process with," Gillett said. "And while I think as an industry, we are starting to do a better job thinking about equitable outcomes, what I think we need to do more of is think about how we inject equity into the process of developing and pursuing those initiatives."

Gillett added what she said might seem like a commonsense observation: equitable outcomes are borne from fair access to developing them.

For example, PURA was directed through a bill passed by the General Assembly earlier this year to establish a nine-year electric storage program starting next year, which targets deployment of at least 580 MW and supports the state's goal to reach 1,000 MW by the end of 2030. Storage systems will be compensated through an upfront incentive of \$7,500 administered by the Connecticut Green Bank and performance-based incentives provided by Eversource Energy and United Illuminating. There is also a target to deploy 40% of storage in low-to-moderate income communities.

PURA also set up a nine-year program for zero-emissions vehicles starting in 2022, which includes a study by the Rocky Mountain Institute to identify how to best address and offer electrified transportation mobility options for low-to-moderate-income communities. Stefanie Keohane, supervisor in PURA's clean and affordable energy unit, said there is "recognition and acknowledgment" that many in Connecticut may not have personal vehicles or be able to purchase or lease an electric vehicle. Still, there should be equity work that ensures "that the benefits of transportation electrification are shared among all those in Connecticut."

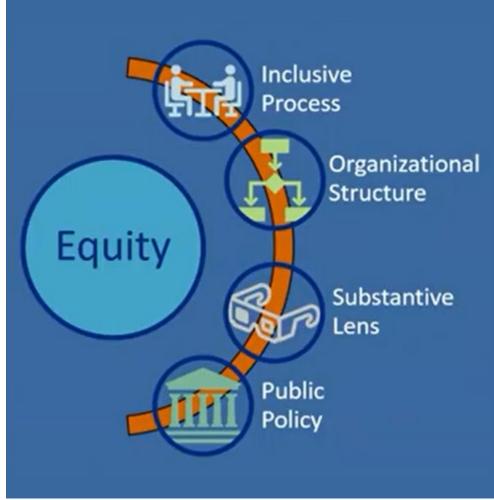
Despite PURA identifying 11 tracks for the Equitable Modern Grid framework, Gillett said it is not "an exhaustive list."

"There could have easily been hundreds, if not thousands, of tracks in [grid modernization], and we recognize that we haven't identified the last of the work," Gillett said.

Ambitions do not restrict PURA although its current staffing levels offer "constraints," according to Gillett. Stakeholder engagement in PURA's public proceedings and constructive feedback through public comments are also critical, though Gillett acknowledged one underreported aspect of that commitment, which is time, especially with non-traditional stakeholders.

"Stakeholder fatigue is a very real challenge that I think is not spoken about enough, and with our desire to emphasize the engagement from non-traditional stakeholders, we want to be cognizant of those limited resources as well." Gillett said. ■

New Approach to "Grid Mod"



PURA's Equitable Modern Grid initiative | Connecticut Public Utilities Regulatory Authority



Mass. Needs 'Holistic' Look at Energy Transition, Consultant Says

By Emily Hayes

After passing an extensive climate law earlier this year, the Massachusetts administration must look closely at the pathways for rapid decarbonization and if it is betting on the right solutions, according to energy consultant Dan Allegretti.

"I think it is important to keep checking in every so many years and ask the question: What do we need to change as we go forward," the former vice president at Exelon said at the Northeast Energy and Commerce Association's Legislative Update event on Wednesday.

Wind and solar power variability, as well as worsening storm events, "all need to be addressed" in the state's next steps implementing the Next-Generation Roadmap law, Allegretti said.

Instead of racing to 100% renewable energy, state policymakers should "think about decarbonization more holistically across sectors," he said, and "determine where it is best to deploy capital to reach incremental goals once we develop a predominantly renewable

power sector."

The state's new climate law sets emission reduction sublimits for certain sectors every five years, including the natural gas and building sectors. Massachusetts is heavily reliant on neighboring states and Canada for its energy resources, which "makes transmission planning tricky," he said. Gov. Charlie Baker's administration will need to focus on building the in-state supply of solar and offshore wind.

Massachusetts is making a "big bet on offshore wind," Allegretti said. "And I wouldn't go much bigger."

Advancements in green hydrogen, longduration energy storage and solar technologies are in the pipeline.

"We don't know what's coming along 10 years from now," he said.

However, a siloed approach could mean state agencies are moving too slowly in acting on their newly prescribed roles in the climate law, said Elizabeth Mahony, assistant attorney general and senior policy adviser for the Massachusetts attorney general's office.

"Who brings [all these efforts] together?" Mahony asked.

The climate law incorporated equity and greenhouse gas emission reductions into the state's Department of Public Utility's (DPU) mission statement and codified that mission statement for the first time. But the DPU and the Executive Office of Energy and Environmental Affairs haven't opened a docket to explore what that means, and Mahony hasn't seen this question come up in a docket under the DPU yet, she said.

The agency could play a role in determining how electric utilities will be involved in covering the costs of the renewable energy transition, such as solar storage.

Utilities in the state need to file energy efficiency plans with the DPU by Nov. 1, which will put new provisions and cost efficiency standards to the test, Mahony said.

But the climate bill is meant to transition the state to renewable energy over 30 years, said state Rep. Joan Meschino (D), one of the main architects behind the legislation. "We are not turning off the switch to natural gas tomorrow."



After passing monumental climate legislation in March, the Massachusetts legislative and executive branches now have the challenge of implementing newly enforceable emission targets. | Shutterstock

ISO-NE News



ISO-NE Planning Advisory Committee Briefs

Regional System Plan Updates

The ISO-NE Planning Advisory Committee on Wednesday received a project list *update* for the Regional System Plan (RSP) from Rudi Vega, the RTO's principal engineer for transmission planning, that included 12 new projects to resolve thermal overloads and voltage violations in New Hampshire and Maine.

Eight of the projects are for Maine and involve rebuilding 21.7 miles of an existing 115-kV line with additional work on MVAR synchronous condensers, capacitors and reactors. The total cost across all projects is \$158.6 million.

The other four projects, in New Hampshire, will cost a total of \$134.9 million. They also involve the installation of MVAR synchronous condensers and capacitors, in addition to 115-kV and 345-kV breakers.

ISO-NE also informed the PAC that it had changed the cost estimates for two projects

since the previous list in June: an increase of \$7.1 million for the Southeast Massachusetts/Rhode Island Reliability Project (SEMA/RI), based on a transmission cost allocation application submitted in August; and a reduction of \$8 million for the Greater Boston Project.

Three projects have been canceled since the June update, as they are no longer needed because of the New Hampshire and Maine solutions:

- a new, \$62.7 million 115-kV line section and upgraded section between Coopers Mills and Highland substations at the Maine Mid-Coast Spur;
- adding a second 115/345-kV autotransformer at the existing 115-kV Kimball Road substation in Maine, along with moving one of the 115-kV/30-MVAR capacitor banks, which would have cost \$3.3 million; and
- installing a transfer trip at Kimball Road to

disconnect the town of Lovell, Maine, from 115 kV for an estimated \$0.5 million.

Eversource Details Phase II of Wood Structure Replacement Program

Eversource Energy will replace 241 laminated wood structures across five 115-kV transmission lines in New Hampshire and one 345-kV line in Connecticut with weathering steel monopoles, installation of lightning arrestors and counterpoise grounding, according to a *presentation* from the utility.

According to Eversource's Dave Burnham, the new monopoles would allow the utility to comply with current clearance and strength code requirements, improve reliability and storm resilience, and support larger conductor sizes if needed in the future.

Burnham also said recent cross-sectional inspections of removed wood structures uncovered significant damage not detected in previous, visual inspections, such as:

- rot present throughout the length;
- open joints at the top, allowing free entry of water;
- damp wood at the center, soft with rot;
- voids between layers of varying size and location, but present on each cross-sectional cut; and
- additional splitting behind surface cracks.

Replacements performed since March have continued to uncover structural damage. (See "Eversource Replacing Wood Structures in NH," ISO-NE Planning Advisory Committee Meeting Briefs: March 17, 2021.) Eversource says it will coordinate replacement schedules with ongoing projects to maximize mobilization, permitting and outreach efforts, and shared right-of-way access.

The current work addresses priority lines at the cost of \$55.6 million, with in-service dates ranging from the first quarter of 2022 to the first quarter of 2023, Eversource said. Additional structures removed during these projects will continue to be assessed for internal damage. The utility will assess the remaining lines with laminated wood structures in the coming months, and additional replacement projects will be presented to the PAC in 2022 for Phase III. ■



| Shutterstock

- Jason York

MISO News



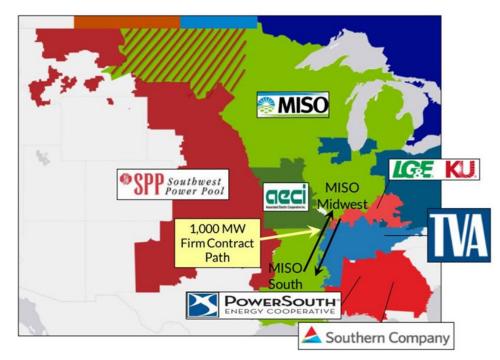
MISO Makes Compromise on North-South Transfer Fees

FERC on Thursday authorized MISO's settlement agreement with parties unhappy over their fees for using the regional transfer limit linking the RTO's Midwest and South regions (ER21-530-001).

The RTO's settlement with MidAmerican Energy, Alliant Energy and the Michigan Public Service Commission replaces the rate structure used to compensate SPP and six other parties for its members' use of the sub-regional transfer limit beyond the 1,000-MW contract path linking MISO Midwest and MISO South. The new rate structure is effective February 2021.

MISO originally planned to extend the use of its current load ratio-based allocation among members until February 2022 while it developed a permanent rate structure. But Alliant Energy and MidAmerican Energy complained that market participants in an lowa local resource zone bore a disproportionate onethird of rate schedule costs in 2020, leading FERC to order a hearing into the matter. (See FERC Orders Hearing on MISO Pact for Midwest-South Tx.)

MISO has proposed adopting a new, marketbased allocation that assigns costs based on the congestion accrued when the transfer limit binds on its 2,500- or 3,000-MW limits, depending on flow direction. The RTO has said its current load-based method, which also employs a diminishing flow-based calcu-



Parties to the settlement agreement for MISO's Midwest-South subregional transmission constraint | MISO

lation, is too complex. (See MISO Proposes New Cost Allocation on Regional Tx Limit.)

While the load-based allocation will technically stay in place this year, MISO has pledged to retroactively use the new allocation to redistribute payments made between Feb. 1,

2021, and Jan. 31, 2022.

The commission said the settlement — which will likely involve MISO issuing refunds or supplemental bills with interest to members is reasonable, fair and in the public interest.

- Amanda Durish Cook







MISO News



La. Regulators Threaten MISO Departure over Tx Costs

Continued from page 1

"These front projects are being referred to by MISO as reliability projects," said Stone Pigman attorney Noel Darce, charged with filing a report on the plan to the commission. "They are primarily designed, however, to allow large quantities of wind resources located in the northwest portions of MISO to be delivered across the MISO footprint."

Darce said generators in MISO South could be forced to pay for the delivery of other energy sources "to the benefit of states" with lofty renewable energy goals.

MISO has said it could soon recommend up to \$30 billion in construction for new transmission as part of its long-range transmission plan, with as much as an additional \$100 billion of investments to follow. The RTO has long said it needs more transmission to avoid reliability violations as it faces mounting thermal plant retirements, rising renewable energy use, and a growing reliance on electrification.

Facing recalcitrance from its southern members, MISO decided to first study and recommend long-range projects in MISO Midwest. Planners said they'll address MISO South's needs in 2022.

Commissioner Eric Skrmetta said he favors giving MISO a one-year notice to remove Louisiana from membership if the transmission plan contains cost sharing between the RTO's subregions. He also said he would author a motion to begin the exit process in November, if MISO moves forward with its provisional postage stamp allocation plan.

Some members have said separate but equal cost allocations between MISO Midwest and MISO South will keep the subregions electrically isolated and hinder stronger transmission links between the two. The RTO's executives have said they could perform a five-year review of long-range projects in MISO Midwest to see if they delivered quantifiable benefits to the South. (See MISO Hopes Bifurcated MVP Cost Allocation Will be Temporary.)

Skrmetta Vows Supreme Court Battle

"We have arrived at the moment where the cost of transmission is going to outweigh the value benefits provided under the market," Skrmetta said. "We are going to be a member of an organization that is simply going to be burdening our ratepayers with costs."

Skrmetta said he wasn't interested in support-



Louisiana commissioners Craig Greene (left) and Eric Skrmetta Oct. 20 | Louisiana PSC

ing a "tremendous amount" of wind generation in MISO Midwest that was built on production tax credits.

"I remember that an old guy told me, 'God invented water, but he forgot to lay the pipes," he said. "So that's what makes water companies make money. So, it's the same thing with this. They've gotten free windmill assets and now they want the ratepayers to pay for the transmission from these stranded wind assets."

He characterized MISO as a "transmission owners' club" And said state commissions "are looked on as a nuisance."

"We went through a very extensive, I guess, engagement period and we got married and - all of sudden - things changed," Skrmetta said of Louisiana's MISO membership experience.

Louisiana and other MISO South states could join other markets that don't have a transmission component, Skrmetta said. He said he was prepared to pursue a lengthy court battle for the right to leave MISO.

"We've been told by some people in this organization that FERC is never going to let us go. I will let the Supreme Court of the

United States tell us we can't go before I'm going to see ratepayers in this state see a 7%, 8%, 10% immediate increase," Skrmetta said. "We have been either duped, or we're being mistreated, or we have been looked at like we're somewhat less intelligent than our friends up north.

"Either this is going to be a value proposition for ratepayers and for generators and for transmission owners in an equal and balanced situation, or it's not going to be anything for us," Skrmetta said. "Everyone floats on a rising tide ... but when we're going to be holding the anchor, and they're going to be staying on the boat, that is not fair to the ratepayers of this state."

"I want to be very careful about how we move forward," Commissioner Lambert Boissiere said. A MISO split could have huge implications on how Louisiana transmits power, he said, urging the state's utilities and power producers, commission staff and the RTO to work together.

PSC Chairman Craig Greene said an organized wholesale market is a "necessity" for Louisiana.

"Before we divorce one, we need to know which one we'd be going to because it's im-



portant to have the benefits that an organized wholesale market brings," he said.

But Greene also said it's "laughable" that MISO can't single out more specific benefits beyond a postage-stamp allocation.

MISO: Tx Costs Pale Compared to **Generation Costs**

MISO responded by saying its long-range planning is aimed at accommodating members' integrated resource plans and most announced carbon-reduction goals by utilities and states.

Spokesperson Brandon Morris said staff has conservatively estimated \$135 billion in new generation resources will come online over the next 20 years across the footprint. He said MISO's initial \$30 billion price tag represents just 20% of the planned generation investment.

"This is the investment needed to enable the projected generation costs, which will far outweigh the transmission costs," Morris said in an emailed statement to RTO Insider.

But Darce recommended a "deceleration" of

MISO's approval goals for projects.

"MISO was in a rush to approve the transmission in this first tranche of transmission projects in March of '22, and it didn't want to wait any longer to make a cost allocation filing. This process has all moved quickly in MISO and it's been changing in the last few months and in the last few weeks," he told commissioners. "Staff is concerned that the rush to approve these projects by March of 2022 is a self-imposed and artificial deadline and is not leaving enough time for the projects to be vetted [or] the cost allocations to be fully understood."

Darce said MISO's proposed 1:1 benefit-tocost ratio threshold for projects remains too low and that MISO South's recommended 1.25:1 ratio is more appropriate. He said the RTO rejected MISO South's cost-allocation proposal "without any real stakeholder discussion." (See Tensions Boil over MISO South Attitudes on Long-range Transmission Planning.)

"Staff believes that large, expensive projects built based on projections of need decades into the future should not be made with the hope that a dollar spent will return a dollar of benefits." Darce said.

Darce added that the commission isn't opposed to renewable energy or long-term transmission planning decisions made for reliability or economic reasons. But he said the cost of a long-range portfolio is a "major concern." He said costs could exceed the \$130 billion top-end estimate.

"The financial impacts of that construction, even over a footprint as large as MISO's. would be enormous," he said.

Some MISO South stakeholders have argued that the postage stamp cost allocation would effectively bring Entergy's system agreement back from the dead.

The utility's allocation of production costs among its half dozen operating companies under its multistate system agreement has been a source of conflict and complaints for more than a decade. Before 2015. the companies functioned as one system, although each had different operating costs. Under the arrangement, Entergy's low-cost operating companies made payments to the highest-cost company so that no operating company had production costs more than 11% above or below the system average. ■

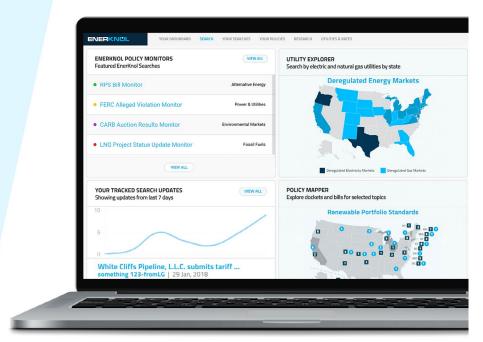
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MISO News



MISO, SPP Eye Small Interregional Tx Projects

By Amanda Durish Cook

MISO and SPP said last week they will likely establish a smaller interregional project type similar to MISO's and PJM's Targeted Market Efficiency Project (TMEP).

If approved, a TMEP — small, \$20 million and under upgrades — could become the grid operators' first interregional transmission project.

MISO's Ben Stearney said the upgrades will be designed to handle persistent congestion on the RTOs' SPP seam.

"I think the MISO-PJM process provides a pretty good framework," he told stakeholders during Friday's Interregional Planning Stakeholder Advisory Committee (IPSAC).

Stearney said the projects will use a "straightforward" benefit analysis that relies on historical market-to-market congestion. He said staffs must line up market data to identify beneficial projects.

He predicted it would take four to six months

for MISO and SPP to draft a TMEP process under their joint operating agreement (JOA) and separately develop regional costallocation methods to divide costs among respective members.

Advanced Power Alliance's Steve Gaw asked whether staffs could accelerate enshrining the TMEPs' process in their JOA. "My read is you've got a lot of support for this," Gaw said.

Stearney said the RTOs want to collect formal stakeholder feedback on the new study type before proceeding. "I really want to kick off this study process in earnest in 2022," he

The RTOs' state regulators have already asked the grid operators to commit to a TMEP-type category. (See MISO, SPP Regulators Call for Pancaking Fix, Smaller Projects.)

MISO executives have said TMEPs could focus on known problem areas, such as the congested Nebraska-Iowa and Kansas-Missouri seams. The chronically congested Neosho-Riverton flowgate on the Kansas-Missouri border has racked up more than

\$46 million in settlement charges due to SPP since 2015.

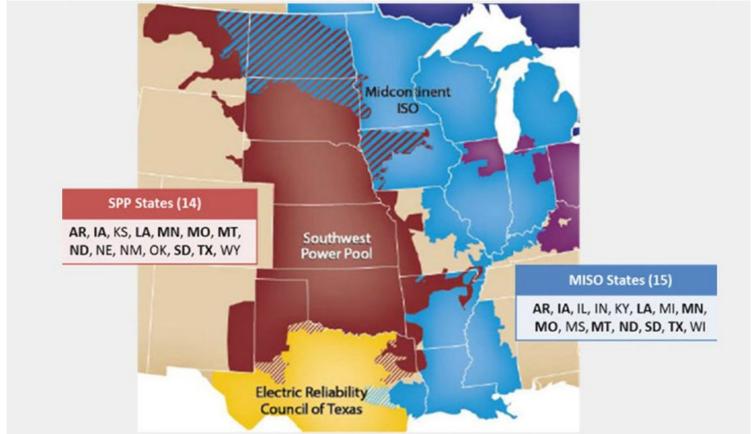
Stearney said TMEPs would "supplement" the grid operators' coordinated system plan (CSP), a longer-term interregional study that typically looks out five years and beyond.

"We're not trying to replace that longer-term study process," he added.

MISO and SPP are still deliberating on whether they will pursue a CSP next year after deciding against conducting a study this year. The RTOs have instead combined on a joint targeted interconnection queue study that is searching for interregional projects to alleviate their jammed generator IC queues. (See No MISO-SPP Joint Study in 2021.)

The grid operators have conducted four CSPs since 2014 but have never found a project candidate beneficial enough to break ground on. (See 4th Time No Charm for MISO-SPP Interregional Study.)

They will hold another IPSAC in early 2022 to further discuss TMEPs and CSPs. ■



The MISO-SPP seam | Organization of MISO States

NYISO News



FERC Hits NY Hydro Plant for Delayed Repairs

By Michael Kuser and Rich Heidorn Jr.

FERC on Thursday ordered the former operator of a New York hydro project to explain why it should not pay a \$600,000 civil penalty for failing to complete safety repairs over six years before losing its lease rights to the facility (P-9685-034).

Ampersand Cranberry Lake Hydro has 30 days to respond to FERC regarding the 595kW Cranberry Lake project on the Oswegatchie River in St. Lawrence County, N.Y. The project, which is owned by the Oswegatchie River-Cranberry Reservoir Regulating District Corp. (OR-CRRDC), a state municipal corporation, includes a dam that is 195 feet long and 19 feet high and a 57,400-acre-foot reservoir.

The dam has a "high hazard potential" rating. FERC said, "which means that a failure of the project works would result in a probable loss of human life."

FERC awarded Ampersand Cranberry a license for the project in 2015 after the company promised to complete safety work involving the facility's fuse plug spillway in the dam's embankment and to raise the earthen embankment crest. The fuse plug is designed to fail during very high flows to provide a controlled release and avoid a full breach and uncontrolled release.

Although the company promised to complete the work by mid-2017, "it has failed to do so," FERC said. "Instead, Ampersand Cranberry Lake has submitted a lengthy series of extension requests covering nearly the entire time



Oswegatchie River access near Fine, N.Y. | Mwanner, CC BY-SA-3.0, via Wikimedia

that it has held the license for the project."

Ampersand Cranberry notified FERC in July that it had agreed to terminate its lease and give up access rights to the project site to settle litigation with OR-CRRDC, which sued the company in early 2019 over its failure to make rent payments.

The commission said the settlement came despite its repeated warnings that terminating the lease would violate the company's license and would not relieve it of its responsibility to complete the outstanding dam safety work.

The commission criticized the company for "delaying for many years the work ... that it committed to complete when it applied for transfer of the license."

"Based on the reports that it submitted, it appears that Ampersand Cranberry Lake made few efforts to take remedial action regarding its loss of property rights, notwithstanding repeated letters from commission staff directing it to ensure that it did not lose possession of the project," the commission continued. "In fact, seeing the potential loss of possession, Ampersand Cranberry Lake sought to absolve itself of its dam safety obligations (and the economic cost of complying with such obligations), claiming that OR-CRRDC would be responsible for completing the work on the fuse plug and embankment that it had committed to do."

As a carrot, the commission said it would consider offsetting the repairs against the civil penalty if Ampersand Cranberry is able to negotiate access to the project and complete the fuse plug and embankment work.

But it also included a stick, warning that it "will consider naming Ampersand Cranberry Lake's corporate parent(s) as alter-ego defendant(s) in any federal court enforcement action if Ampersand Cranberry Lake fails to make timely payment of any civil penalty that is assessed."







NYISO News



NYISO Details Comprehensive Mitigation Review Proposal

By Michael Kuser

Stakeholders last week discussed NYISO's Comprehensive Mitigation Review proposal to change the ISO's buyer-side mitigation (BSM) rules and the impacts of implementing those

Michael DeSocio. NYISO director of market design, told the Installed Capacity (ICAP) Market Issues Working Group that the ISO is developing the proposal to help ensure that the capacity market still functions with an influx of thousands of megawatts of state-supported resources while avoiding any unnecessary litigation.

"We're very focused on making sure that the package of changes supports the goal here," DeSocio said.

New York's Climate Leadership and Community Protection Act (CLCPA) requires the state to procure large amounts of renewable energy to get to zero-emission electricity by 2040, and similar efforts around the country are challenging regulators and grid and electricity market planners.

NYISO also presented the methodology used to measure market impacts, and the Market Monitoring Unit, Potomac Economics, presented on capacity accreditation and related consumer impacts.

"The intent here is to assess the marginal accreditation of all resources ... and we have about a six-week window to do that from when the [installed reserve margin] studies are finalized and when we need to have these accreditation values determined." DeSocio said.

"We are proposing to value the capacity accreditation of all resources based upon their



New York is investing hundreds of millions of dollars upgrading transmission lines like these to modernize the electric power grid. | NYPA

marginal reliability contribution," said Zachary Smith, manager of capacity market design.

NYISO wants to complete these changes in time for the Class Year 2021 BSM evaluations and intends to address capacity accreditation in different phases, with the Phase 1 tariff changes to be discussed through year-end and discussion of procedures and details for Phase 2 expected to start around January and run throughout 2022. (See NYISO Reviews Mitigation Efforts, Updates Timeline.)

Market Outcomes Analysis

The Analysis Group last week also presented a draft of its study modeling 10-year capacity supply and demand curves and the resulting market outcomes under the proposed BSM changes. The results show that, despite "a

rapidly changing system," the capacity market would remain competitive and the ISO would continue to meet resource adequacy requirements.

Paul Hibbard, Analysis Group principal, said the study assumes an increase in total installed capacity (ICAP) of about 5,000 MW between 2022 and 2026: a 2.834-MW decrease in fossil fuel capacity, but increases in onshore wind (244 MW), offshore wind (1,200 MW), solar (5,000 MW) and batter storage (1,571 MW).

"However, since most of the added capacity is from solar, wind and storage resources, while most of the decrease is associated with thermal generating resources, total UCAP [unforced capacity] decreases by 951 MW," the study says. "Despite the significant addition of zero-offer CLCPA resources by 2026, the market retains 31,485 ICAP MW (29,309 UCAP MW) of thermal, hydro and nuclear capacity, and 5,772 ICAP MW (5,650 UCAP MW) of other resources (e.g., biogen, pumped storage, imports, special-case resources)."

NYISO will address any stakeholder feedback at the Oct. 29 ICAP meeting, including updates to tariff language if necessary. At the Nov. 2 meeting, Potomac Economics and NYISO will present the consumer impact analysis of the capacity accreditation proposal. The ISO plans to bring tariff updates before the Business Issues Committee and Management Committee in November.

All in \$/MWh terms	Resource X	Resource Y	
Levelized Cost	(a)	50	60
Energy Revenue	(b)	25	25
Capacity + REC Revenue Needed	(c) = (a) - (b)	25	35
Capacity Revenue (Marginal Approach)	(d)	2	5
Capacity Revenue (Average Approach)	(e)	3	15
REC Offer (Marginal Approach)	(f) = (c) - (d)	23	30
REC Offer (Average Approach)	(g) = (c) - (e)	22	20

Method	Winner	REC	Capacity Payment	Incremental Capacity Value	Energy Revenue	Resource Cost	Total Payment less Energy and Capacity Value
Marginal Approach	Resource X	23	2	2	25	50	23
Average Approach	Resource Y	20	15	5	25	60	30

The NYISO MMU says that marginal accreditation allows the more efficient resource to be selected. | Potomac **Economics**



'Good Riddance' to Old PJM MOPR, Glick Says

By Michael Yoder

FERC Chairman Richard Glick had strong words at Thursday's open meeting regarding the end of PJM's expanded minimum offer price rule (MOPR), saying "good riddance" to the controversial rule that had been in effect since 2019 (ER21-2582).

PJM's narrowed MOPR proposal, filed by the Board of Managers on July 30, took effect Sept. 29 by operation of law after FERC deadlocked 2-2. The new rule applies only to resources connected to the exercise of buyer-side market power or those receiving state subsidies conditioned on clearing the capacity auction. (See FERC Deadlock Allows Revised PJM MOPR.)

"The expanded PJM MOPR was an absolute disaster, creating enormous uncertainty, threatening to impose billions of dollars in additional costs onto consumers and imperiling the future of the PJM capacity market itself," Glick said.

Glick said PJM's original MOPR in 2006 was a "narrowly constructed instrument" that was designed to address concerns about the exercise of buyer-side market power in the RTO's capacity market. As wind and solar generation became more competitive and energy prices

decreased, Glick said "new rationales" were offered to expand the rule's reach.

The expanded MOPR order was a "thinly veiled attempt to frustrate state efforts to promote cleaner energy," he said. The narrowed rule "returns the focus of the MOPR to where it belongs."

Glick said he may have written some of the proposal's aspects "slightly differently," but it "plainly meets [the] standard" of Federal Power Act Section 205.

The commissioners on Oct. 19 issued formal statements explaining their views on the change, with Glick and Commissioner Allison Clements filing a joint statement.

Commissioner Mark Christie said in his statement that he agreed that the expanded MOPR needed "to be replaced or significantly modified" because it was "simply unsustainable" because of the disparate energy policies among PJM's 13 states and D.C. But he called the RTO's proposal the "flawed and rushed result of an 'expedited' stakeholder process."

"Finding a replacement MOPR that properly accommodates state policies while ensuring a credible capacity market to benefit consumers — one in which competition is real, not a sham — has always been the challenge,"

Christie wrote. "PJM's present proposal simply fails to meet the challenge and, as the pleadings filed by intervenors to this docket demonstrate, the proposal fails to meet the FPA Section 205 standard of being just and reasonable and not unduly discriminatory or preferential."

Christie said PJM's Independent Market Monitor was "explicit" in its concerns that the PJM proposal was going to "open the door wide open" to exercises of market power, providing a "devastating critique" that the RTO's markets "would be better off, more competitive and more efficient with no MOPR than with PJM's proposed approach."

"We must do better, and we can," Christie wrote. "We should not rush into place a grossly inadequate proposal just to meet the artificial deadline of the December Base Residual Auction — an auction PJM itself has already asked to postpone — and do so just because we do not like the current MOPR structure."

Commissioner James Danly had yet to issue his own statement of the MOPR as of Thursday's commission meeting, saying he couldn't meet the "internally agreed upon deadline." He said it would be published "in the next day or so."



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Global Fuel Supply Issues Prompt PJM Manual Changes

By Michael Yoder

PJM stakeholders at Wednesday's Markets and Reliability Committee meeting endorsed a series of temporary manual changes regarding minimum fuel requirements during emergency operations.

The RTO said the revisions to Manual 13 were based on fuel availability issues hitting companies and countries around the world and are aimed at maintaining reliability in the face of possible extreme weather conditions.

The changes, which were endorsed in a rare same-day first read and vote at the MRC, state that PJM may request a generation owner to move steam units, which are mostly coal-fired, into the maximum emergency category if their remaining run time falls below 240 hours, or 10 days. The units could be restricted from operating during that time unless required to meet reliability needs for the grid.

Units could remain in maximum emergency status until their fuel inventory rose above 21 days, or 504 hours. The designation would only be implemented to address concerns with local or regional reliability resulting from fuel supply shortages.

The previous run-hour threshold for maximum emergency was 32 hours.

Mike Bryson, PJM's senior vice president of operations, said the RTO recognized it was "unusual" to ask for a first read and endorsement of a manual item on the same day at

the MRC, but it was important to act now instead of during next month's MRC meeting because waiting would "make the inventory issue worse."

The RTO started hearing about fuel supply issues in August, Bryson said, with rising natural gas prices and limited coal inventories. He said it has conducted data requests with units to "get a handle" on current fuel supplies.

"PJM is concerned, both on the industry-wide issues and general inventories, particularly of coal, going into the winter," Bryson said.

The changes are only temporary, Bryson said, focusing on the 2021-2022 winter season. PJM is looking to have stakeholder discussions to examine "longer-term tools" to implement for fuel security issues.

Bryson said PJM realizes that it's the generator's responsibility of "managing this risk" of fuel security and have "heard that clearly" from the generators the RTO has talked to about supplies.

"We do recognize this may not be the ideal tool, but it is something we can implement prior to winter operations without a waiver or FERC filing," Bryson said. "We think it's important that we have an additional tool going into the winter."

Chris Pilong, director of PJM's operations planning department, said the manual revisions are a "reliability backstop" and the "last tool we potentially have" in case of a fuel shortage emergency. The changes wouldn't be used

as the primary tool for PJM to manage fuel inventories, he said, but the RTO wanted to take every possible action to ensure reliability this winter. "Given the escalation of the concerns we've been hearing have ramped up significantly over the last few weeks, we feel it very prudent to take action immediately to make sure we're prepared."

The manual changes were partially a result of lessons learned from the February winter storm's impacts in Texas.

Stakeholder Opinions

Though they ultimately approved them, stakeholders raised several concerns about the changes, saying they could impact current market incentives or exempt affected generators from performance requirements and penalties.

Susan Bruce, counsel to the PJM Industrial Customer Coalition (ICC), said she appreciated the "reliability imperative" in the changes, but the ICC viewed them as "pretty significant" without much time to debate the ramifications.

Bruce said they presented potential "concerns" for portfolio owners on transparency issues. She asked if the changes involve a "discretionary action" if a resource "can be placed" into max emergency or if it "will be placed" at PJM's direction.

"In my mind, they're two very different scenarios," Bruce said.

Pilong said the language was developed to be on the "flexible side," as in depending on the situation. He said the 10-day provision allows PJM to have discussions with the resource owner to determine if there are concerns about reliability or the ability to replenish fuel.

"It's very evident that not every situation falls nice and neatly into the perfect, same box," Pilong said.

Jeff Whitehead of Eastern Generation said stakeholders have spent a lot of time discussing fuel security issues over the last few years in PJM. He said he had the sense similar fuel shortage scenarios had been examined.

Whitehead said it may be necessary for PJM to come back with more education on emergency scenarios and seasonal fuel security

"I'm a little surprised we're here, frankly," Whitehead said.



PSEG's Sewaren combined cycle plant in New Jersey. | PSEG



Stakeholders Endorse PJM ARR/FTR Market Changes

By Michael Yoder

A joint PJM-stakeholder proposal to address the RTO's auction revenue rights (ARRs) and financial transmission rights won endorsement after failing an initial vote at last week's Markets and Reliability Committee meeting.

The changes, whose proponents included Calpine, Exelon, NextEra Energy, Vitol and Public Service Enterprise Group, was endorsed in a sector-weighted vote of 3.74 (74.8%), surpassing the necessary 3.33 (66.6%) threshold. In a first round of voting, the proposal failed the sector-weighted vote with 3.16 (63.2%) support.

Members first endorsed the proposal at the Market Implementation Committee meeting earlier this month with 84% support, and now it heads to the Members Committee for a final vote in November. (See "ARR/FTR Market Task Force Proposal," PJM MIC Briefs: Oct. 6, 2021.) Two other proposals presented as alternatives failed in sector-weighted votes.

Brian Chmielewski, manager of PJM's market simulation department, said the changes "represent the culmination of a two-year stakeholder process" that were initiated after the GreenHat Energy default in 2018, including a six-month review by an independent consul-

tant and work done at the ARR/FTR Market Task Force.

GreenHat acquired the largest FTR portfolio in PJM between 2015 and 2018 but defaulted on the portfolio in June 2018, leaving PJM stakeholders to



Brian Chmielewski. PJM | © RTO Insider LLC

cover more than \$179 million in the market to the present. When the company defaulted, GreenHat had only \$559,447 in collateral on deposit with PJM. (See Doubling Down - with Other People's Money.)

Chmielewski said the resulting work was a "balanced package" that received overwhelming stakeholder support at the MIC.

"We believe the changes in the proposal strike an appropriate balance in advancing the benefits for load while advancing the efficiencies of our current FTR auction structure." Chmielewski said.

PJM Proposal

Chmielewski reviewed the proposal, which included revisions to the tariff and the Operating Agreement, saying they were guided by the findings of a report developed by London

2011-2020 \$2,000 average: 83% ■ Total congestion charges collected by PJM ■ Total congestion charges returned to load Nominal \$ millions \$1,600 Record winter Bomb cyclone peak \$1,200 Polar vortex \$800 \$400 \$0 19/20 12/13 13/14 15/16 17/18 18/19 11/12 14/15 16/17 Payout to 99% 92% 45% 64% 86% 98% 46% 88% 125% LSEs ratio

Total congestion payments collected by PJM versus congestion charges returned to load | London Economics

Economics International (LEI), a consultant enlisted by the RTO to conduct a "holistic review" of the ARR/FTR market.

LEI was hired on the recommendation of the "Report of the Independent Consultants on the GreenHat Default," which called for an outside expert to review PJM's FTR market and its other markets to evaluate risks and benefits of rule changes. (See "PJM Seeking Consultant on ARR/FTR Task Force," PJM MIC Briefs: May 13, 2020.)

Chmielewski said the proposal aimed to recognize recommendations made in the LEI report and address concerns raised by the Independent Market Monitor and stakeholders regarding the ARR/FTR market. He said the proposal also sought to maintain the consultant's conclusion that the existing FTR product is "reasonable and generally achieving the intended purposes" of serving as a financial equivalent to firm transmission service and to ensure "open access to firm transmission service by providing a congestion-hedging function."

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

Chmielewski said the ARR section was the main part and intended to answer a primary concern that the ability for some load to "efficiently hedge congestion costs can be deteriorated at times" when a "misalignment" occurs between the allocation of ARRs and congestion charges paid by load.

The other main features included a guarantee of 60% of network service peak load for each load-serving entity, which was meant to "protect zonal native load hedging ability with additional upfront capability." The proposal also expanded the source/sink availability for ARR allocation so that they "align with any source/sink that is available for bid in the annual FTR auction."

The FTR section contained features intended to "advance the efficiencies" of the FTR auction structure. Efficiencies cited included market liquidity and future price discovery, Chmielewski said, both of which are designed to add value and contribute to a competitive market.

The changes also add hedging product to account for on-peak weekend and holiday hours



to increase hedging flexibility; increase the bid limits in all FTR auctions from \$10,000 to \$15,000; and add a \$1/MW-period class clearing price floor for all FTR option products.

The transparency section includes recommendations to "help bolster confidence in the FTR action results," Chmielewski said, including the creation of a network model user guide to standardize market procedures and the posting of market limits utilized in approved cases for binding constraints.

Chmielewski said the ARR changes are anticipated to take effect by February 2023, and the other changes in the proposal could happen even sooner.

Alternative Proposals



Erik Heinle, D.C. OPC | © RTO Insider LLC

Erik Heinle of the D.C. Office of the People's Counsel reviewed the group's alternative proposal, which was identical to the joint proposal except that 100% of the surplus allocation would have been given to ARR holders. Heinle said the

LEI report was "pivotal" for the group's evaluation of the allocation issue and that it "really Equity



- Develop an objective definition of equity; establish a more detailed understanding of zonal patterns of congestion
- Expand biddable points and time of use periods for
- Add flexibility to selfscheduling rules
- Explore alternatives to historical path assignment of ARRs
- Explore alternative allocation approaches for distributing surplus congestion

Efficiency



- · Maintain PJM's annual, monthly and long-term FTR auctions
- · Continue to allow non-load participation and current set of biddable points
- Monitor competition and profitability trends over
- · Determine a minimum premium for options
- Evaluate changes to the current FTR forfeiture rule

Transparency and simplicity

- · Issue a network model manual
- · Provide detailed documentation of changes over time
- · Periodically retain transmission expert to independently review the network model

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

focused on what was best for the market."

Heinle said the LEI report recognized the dual purpose of the market through returning congestion charges to load and supporting hedging activities, both of which benefit consumers. And while the PJM proposal addressed several important issues, Heinle said, the issue of auction and congestion surplus

was left unchanged.

"This places D.C. OPC in the unfortunate and uncomfortable position of offering an alternate that does address these equity concerns," Heinle said.

The OPC alternative proposal nearly won stakeholder endorsement in the first round of voting, receiving a sector-weighted vote of 3.28 (65.6%).

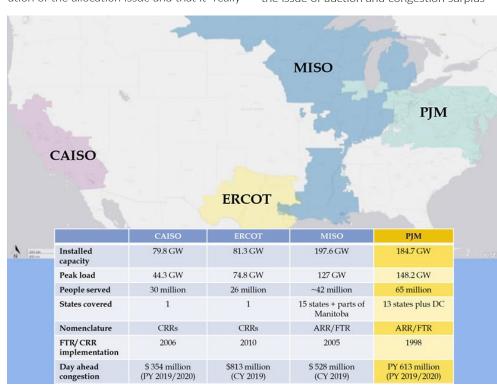
In reviewing the IMM's proposal, Monitor Joe Bowring said he disagreed with a recommendation in the LEI report that load should be satisfied with receiving 50 to 75%, instead of 100%, of overpayments. He also said the other proposals didn't go far enough on the congestion payment issue.

"PJM's proposal takes some tiny, tiny steps towards increasing the congestion revenues that belong to load," Bowring said.

The Monitor's proposal also failed to receive endorsement in the first round of voting, garnering a sector-weighted vote of 1.33 (26.6%).

Susan Bruce, counsel to the PJM Industrial Customer Coalition, said she appreciated all the work taken on by PJM and stakeholders on the issue. The LEI report gave members a clear path to come up with solutions, she

"In the wake of GreenHat, this was very important form the customer's perspective to understand what's going on in this market," Bruce said.



Key market components of RTOs/ISOs across the country. | London Economics



PJM MRC/MC Briefs

Markets and Reliability Committee

Regulation Mileage Ratio Fails

PJM stakeholders rejected two different proposals at last week's Markets and Reliability Committee meeting to change the undefined regulation mileage ratio calculation in Manual 28 and the tariff, sending the issue back to the Market Implementation Committee for further discussions.

One proposal from PJM failed in a sectorweighted vote of 2.12 (42.4%), short of the 3.33 (66.6%) threshold for endorsement. A separate proposal from the Independent Market Monitor did better but also failed, receiving a sector-weighted vote of 3.07 (61.4%).

Both proposals were the source of several months of stakeholder debates, but the PJM proposal received endorsement at the September MIC meeting. (See "Regulation Mileage Ratio Calculation Endorsed," PJM MIC Briefs: Sept. 9, 2021.)

Michael Olaleye, senior engineer with PJM's real-time market operations, reviewed the RTO's proposal. Olaleye said PJM had not received any additional feedback from stakeholders since the issue was discussed at the September MRC meeting, so no changes had been made to the proposal.

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

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

PJM proposed setting the RegA mileage floor

Local Hour	RMCCP	RMPCP	Hourly Mileage A	Hourly Mileage D	Hourly Mileage Ratio (settled)	Hourly Mileage Ratio (Proposed)	Difference in Mileage Ratio
3/4/2013 18:00	\$37.67	\$0.03	0.074304	0.257536	3.47	2.58	0.89
11/9/2013 18:00	\$12.40	\$0.97	0.072887	15.649591	214.71	156.5	58.21
5/31/2015 15:00	\$187.06	\$0.78	0.070406	14.128501	200.67	141.29	59.38
12/11/2015 16:00	\$12.49	\$0.01	0.078511	13.35094	170.05	133.51	36.54
12/31/2015 18:00	\$0.27	\$0.00	0.056789	12.54787	220.96	125.48	95.48
1/1/2016 2:00	\$8.45	\$0.00	0.013579	10.582214	779.31	105.82	673.49
6/28/2016 16:00	\$3.08	\$0.00	0.018116	11.818568	652.38	118.19	534.19
2/27/2018 9:00	\$0.00	\$0.00	0.040318	20.448624	507.18	204.49	302.69
1/21/2019 11:00	\$313.49	\$0.00	0.006478	27.402607	4230.10	274.03	3956.07
1/30/2019 14:00	\$17.49	\$0.01	0.046133	5.225629	113.27	52.26	61.01
6/22/2020 15:00	\$0.01	\$0.00	0.048004	19.204105	400.05	192.04	208.01
6/26/2020 0:00	\$11.37	\$0.00	0.096609	23.562192	243.89	235.62	8.27
8/12/2020 14:00	\$15.09	\$0.01	0.03332	22.412721	672.65	224.13	448.52
2/17/2021 9:00	\$0.00	\$0.00	0	19.159495	#N/A	191.59	191.59
4/2/2021 4:00	\$8.59	\$0.00	0.099567	6.182331	62.09	61.82	0.27
4/15/2021 9:00	\$6.91	\$0.00	0.052218	33.582262	643.12	335.82	307.30
5/8/2021 13:00	\$13.77	\$0.00	0.011427	31.296327	2738.81	312.96	2425.85

Instances of RegA hourly mileage rates less than 0.1 in PJM since 2013 | PJM

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

Adrien Ford of Old Dominion Electric Cooperative offered the Monitor's proposal, which failed an endorsement vote at the September MIC meeting. It called for a cap of 5.5 on the realized mileage ratio in all hours instead of 0.1, indicating the cap would eliminate the current undefined mileage ratio result that PJM is attempting to address. The Monitor said that based on data it collected over a 15-month span, the 5.5 cap would reduce but not eliminate the market distortion resulting from the use of mileage ratios when they incorrectly represent regulation output and that the change would affect less than 50% of impacted hours.



Steve Lieberman, AMP © RTO Insider LLC

Steve Lieberman, assistant vice president of transmission and PJM affairs for American Municipal Power, suggested sending the issue back to the MIC to possibly come up with a different proposal and to "rehash" why stakeholders either

supported or opposed the existing proposals.

"It certainly seems like an issue we need to fix," Lieberman said. "We need a solution we can rally around."

Stu Bresler, PJM's senior vice president of market services, said the regulation mileage ratio issue could be taken back up at the Nov. 3 MIC meeting. But "the sooner we resolve this, the better," he said.

Carl Johnson of the PJM Public Power Coalition said there's "no right answer" to the regulation mileage ratio. Johnson said the choice was between a "very simple mathematical fix" from PJM and the Monitor attempting to tackle some larger structural market issues.



Carl Johnson, PJM Public Power Coalition I © RTO Insider LLC

Johnson suggested a possible solution to "resolve some of these longstanding issues with a colossally broken regulation market."

"This is just one tiny symptom of an overall broken structure," Johnson said.

Paul Sotkiewicz of E-Cubed Policy Associates said the undefined regulation mileage ratio issue started off as a "math problem" to solve and morphed into an examination of larger problems in the regulation market. Sotkiewicz said the Monitor's proposal had a "huge" impact on mileage ratios and was "like taking a sledge hammer when all you need is a scalpel."

Sotkiewicz suggested revisiting the scope of the original the issue charge and possibly come up with a new issue charge and problem statement to examine the market problems in a long-term fix while accepting a short-term compromise on the calculation.

"If we're going to open the hood up on the



regulation market, I think we need to do this the right way," Sotkiewicz said.

Resource Adequacy Charter Approved

A new senior task force aimed at addressing resource adequacy topics and recommending possible changes to the capacity market won stakeholder approval.

The Resource Adequacy Senior Task Force (RASTF) was approved by acclamation vote, with three members voting against it and one abstaining. The task force was presented for a first read at the September MRC meeting. (See "Resource Adequacy Charter," PJM MRC Briefs: Sept. 29, 2021.)



David Anders, PJM I © RTO Insider LLC

David Anders, director of stakeholder affairs for PJM. reviewed the charter for the RASTF, calling it the "central clearinghouse" for work related to resource adequacy that follows discussions on the minimum offer price rule (MOPR) conduct-

ed under the Critical Issue Fast Path (CIFP) stakeholder process. The RASTF will report directly to the MRC.

The task force was partially the result of a letter issued by the Board of Managers on April 6 that urged stakeholders to address a series of topics related to the capacity market, including the evaluation of characteristics of the appropriate level of capacity procurement and the examination of the need to strengthen the qualification and performance requirements on capacity resources.

Anders said the charter includes a reporting protocol for work on the capacity market performed at other PJM groups like the Quadrennial Review currently being discussed at special sessions at the MIC, load forecasting at the Load Analysis Subcommittee, and reliability products and services at the Operating Committee to be brought to the RASTF for coordination of efforts. A dashboard on the task force website will be established to list all the capacity work being discussed.

"The idea is to provide a useful tool for folks to see where everything is and to be able to access documentation." Anders said.

PJM received stakeholder feedback to include a discussion on opportunities to address the social cost of carbon along with procurement of clean resource attributes in the RTO's capacity, energy and ancillary services markets.

A draft of the specific scope of the work to be addressed by the task force is being developed in an issue charge that will be presented for approval at a future MRC meeting.

Transparency Forum Debated

Greg Poulos, executive director of the Consumer Advocates of the PJM States (CAPS), reviewed the proposed charter on behalf of the New Jersey Division of the Rate Counsel for the creation of a new Transparency Process Forum. Poulos



Greg Poulos, CAPS I © RTO Insider LLC

first presented the charter at the September Members Committee meeting but moved the proposal after some stakeholders said the discussion would be more appropriate for the MRC. (See "Transparency Forum," PJM MRC/MC Briefs: Sept. 29, 2021.)

Poulos said the current Stakeholder Process Forum has done a "great job" providing members with an outlet to have discussions and express concerns about the existing stakeholder process. He said there are some items that "don't fit within that stakeholder process discussion," and the proposed forum could provide a place to openly discuss matters that "currently take place in the back of the room."

One of the items presented by the advocates as a possible topic for the forum was establishing a formal process to request information and data from PJM and to keep track of responses. He said having access to data was the "most pressing" issue.

"The advocates and folks from other sectors see it as an important aspect for us having the ability to get answers to certain things they're struggling to get answers to and doing it in a public forum," Poulos said.

Jason Barker of Exelon said his company "still [has] some concerns" after the concept for the forum was first discussed at the MC. Baker said it appears to be "a solution in search of a problem" with no clear transparency concerns.

"A new venue doesn't seem necessary," Barker

Alex Stern, director of RTO strategy for PSEG Services, asked if the sponsors would be supportive of incorporating a provision in the charter to allow stakeholders to provide input to the Monitor and PJM prior to them both filing items at FERC or in state commissions.

Poulos said he wouldn't have a concern adding that language with the understanding that both PJM and the Monitor will do what they want to do in FERC and state commission filings.

The PJM Public Power Coalition's Johnson said he had concerns about whether the charter was specific enough regarding how the forum will work and if enough guidance is provided for facilitators and stakeholders as to what issues should be brought to it.

"I'm really unclear as to how topics are going to be raised there and how PJM will be asked to respond to them," Johnson said.

Carbon Pricing Senior Task Force Sunset

Members are being asked to sunset the Carbon Pricing Senior Task Force (CPSTF) after a majority of stakeholders indicated they were not ready to move forward with developing rules on leakage mitigation in carbon pricing.

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

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

A survey conducted in summer 2020 indicated that 65% of the respondents suggested not moving forward to rule development in a second stage of the CPSTF. Hsia said some suggested that there needs to be more state interest or federal legislation to move forward with carbon pricing in the RTO.

"We want to be responsive to stakeholder feedback," Hsia said. "And from the survey results, we did not see a strong interest from stakeholders to move forward with a market rule design."

The committee will be asked to endorse sunsetting the CPSTF at its next meeting.

HVDCSTF Sunset

Stakeholders requested sunsetting a senior task force created last year to examine inte-



grating HVDC converters as a new type of capacity resource in PJM.

Johnson, speaking on behalf of American Municipal Power, moved to sunset the High Voltage Direct Current Senior Task Force (HVDCSTF). An issue charge by Direct Connect Development was endorsed by the MRC in May 2020, seeking to establish HVDC converter stations' eligibility to participate in the capacity market. (See HVDC Initiative Endorsed by PJM Stakeholders.)

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

Johnson said a few education sessions were held in 2020, but "numerous" stakeholders expressed concerns about whether any solution could be found that wasn't precluded from current FERC-approved approaches to providing capacity to PJM's market from outside the RTO.

The task force stopped meeting last October. Several stakeholders requested that it be sunset earlier this year. (See "HVDC Senior Task Force Update," PJM MRC/MC Briefs: March 29, 2021.) Johnson said that because the

task force stopped meeting, SOO Green has brought an official complaint to FERC seeking approval of the proposal. (See SOO Green Seeks Relief from PJM Rule on External Capacity.)

"That's probably the best way to figure out a resolution to their issue, as I don't think the rest of the stakeholder body felt there was one available to us," Johnson said.

The committee will be asked to endorse the motion to sunset the HVDCSTF at its next meeting.

Consent Agenda

The committee unanimously endorsed several revisions as part of the consent agenda. They included:

- endorsement of the 2021 reserve requirement study results for the installed reserve margin and the forecast pool requirement. The study was unanimously endorsed at the Oct. 5 Planning Committee meeting. (See "Reserve Requirement Study Endorsed," PJM PC/TEAC Briefs: Oct. 5, 2021.)
- endorsement of proposed updates addressing behind-the-meter generation business rules on status changes and corresponding revisions to Manual 14D, Manual 14G and the tariff. The updates were developed in spe-

- cial sessions of the Market Implementation Committee. (See "Manual 14G Updates Endorsed," PJM PC/TEAC Briefs: Aug. 31, 2021 and "Manual 14D Endorsed," PJM Operating Committee Briefs: Sept. 10, 2021.)
- endorsement of proposed revisions to Manual 15: Cost Development Guidelines, the Operating Agreement and the tariff to address incremental and no-load energy offers. The Cost Development Subcommittee proposed revising the no-load cost and incremental energy offer definitions to clearly define what costs can be included, including operating costs, tax credits and emissions allowances. (See "Manual 15 Revisions Endorsed." PJM MIC Briefs: Sept. 9, 2021.)
- endorsement of the proposed solution and manual revisions to address the calculation of the energy efficiency add-back in Reliability Pricing Model auctions. The proposal, which called for modified language to section 2.4.5 of Manual 18 to reflect revisions to the EE add-back method, was endorsed at the Oct. 6 MIC meeting. (See "Energy Efficiency Add-back Endorsed," PJM MIC Briefs: Oct. 6, 2021.)

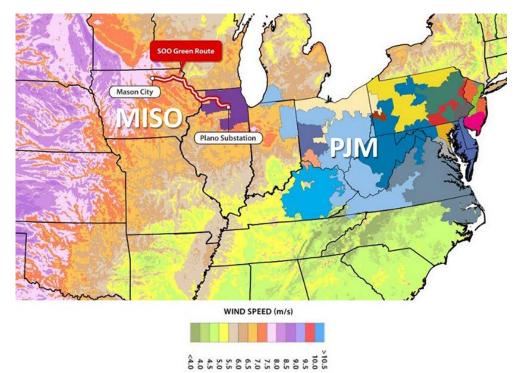
Members Committee

Manual 34 Revisions Approved

Stakeholders unanimously approved proposed revisions to Manual 34: PJM Stakeholder Process, addressing the inclusion of forums as stakeholder bodies. The revisions were originally discussed at the Stakeholder Process Forum and presented for a first read at the September MC meeting. (See "Manual 34" Revisions," PJM MRC/MC Briefs: Sept. 29, 2021.)

Michele Greening, senior lead stakeholder affairs consultant for PJM, said several new forums have been created, but PJM found that Manual 34 didn't define a forum as an official type of stakeholder group. The manual revisions define a forum as a stakeholder body to provide consistency with other defined stakeholder groups and to provide clarity to the purpose and role of a forum in the stakeholder process. The charters for all new forums must be approved by the MRC.

A forum is now defined as a "stakeholder body formed to address specific topics and scope as outlined in its Markets and Reliability Committee-approved charter. Forums are non-decisional stakeholder groups."



Direct Connect's SOO Green HVDC Link project | SOO Green

- Michael Yoder

Company Briefs

Evergy Issues Requests for New Wind Projects



week issued a request for

proposals to purchase up to 1,000 MW of wind energy projects.

The company's goal is to have the new projects online by 2026, but preference will be given to projects that can be in operation by mid-2024 through the end of 2025.

Project proposals, which are due by Nov. 23, must generate at least 50 MW and connect to SPP.

More: KSHB

FERC Extends MBRA for Phillips 66, Others

FERC last week removed prohibitions on Phillips 66's authority to sell power at market-based rates in the PacifiCorp-East, PacifiCorp-West, Idaho Power Co., North-Western Corp., Nevada Power and Sierra Pacific balancing authority areas, as well as CAISO's Energy Imbalance Market (EIM). The commission also approved a tariff amendment permitting the company to sell ancillary services in SPP (ER21-2283).

The commission eliminated the prohibition based on Phillips 66's statement that Berkshire Hathaway Energy Co. no longer has a 10% or greater interest in Phillips 66, eliminating their status as affiliates. Phillips 66 occasionally sells power produced in excess of operating needs at its oil refineries and other facilities.

FERC also issued six other orders approving or extending market-based rate authority. Approved for the first time was CPRE 1 Lessee, LLC (ER21-2426), a Duke Energy subsidiary and lessee of solar power projects in the Duke Energy Carolinas balancing authority area. The commission also accepted updated triennial market power analyses and extended the MBRA for Battery Utility of Ohio, LLC (ER13-1667-005) and affiliates of Calpine (ER10-2042, et al.); Tenaska (ER10-1632-018, et al.); Wheelabrator Portsmouth (ER10-3230, et al.) and Morgan Stanley (ER10-2906-014, et al.).

FERC Approves Panda Stonewall Transaction

FERC last week approved the purchase of the Panda Stonewall generating facility in Virginia by ARCC Green Energy Partners



Blocker LLC from Panda Stonewall Super Holdings LLC and Siemens Financial Services. The commission said the acquisition of the 812-MW natural gas-fired facility will not have an adverse effect on competition, electricity rates or state and federal regulations.

Blocker, a subsidiary of Ares Management, a publicly traded fund manager, will acquire 100% of the voting ownership interests in Panda Stonewall. Ares Management is affiliated with 3,866 MW of generation in the PJM market, including generation in the AP South submarket.

More: EC21-99

Georgia Power Revises Vogtle In-service Dates



Georgia Power last week shifted back the schedule for its Vogtle 3 and 4 expansion projects by three months, citing the need for extra time to address

construction challenges and to allow for comprehensive testing.

An in-service date in the third guarter of 2022 is now projected for Vogtle 3, with Vogtle 4's in-service date set for the second quarter of 2023.

Direct construction of unit 3 is 99% complete, with the overall expansion about 95% complete. Fuel loading could begin at unit 3 as early as the first quarter of 2022, but a fuel load date as late as May 2022 "should support" a third-quarter 2022 in-service date.

More: World Nuclear News

NIPSCO 'Refines' Timeline for Coal **Plant Retirement**



NIPSCO last week said it has "refined" its plan to retire

two coal fired plants, as it now expects to shut down the Michigan City Generating Station between 2026 and 2028. An earlier version of the company's 2021 Integrated Resource Plan said the retirement would occur in 2028.

The utility also said it still expects to retire the remaining coal-burning units at the R.M. Schahfer Generating Station by 2023. However, it will continue to operate a natural gas system.

More: Inside Indiana Business

Pfizer Signs Solar PPA with Vesper Energy



United States pharmaceutical company Pfizer last week an-

nounced it has signed a 15-year power purchase agreement with renewables developer Vesper Energy to receive electricity from the 500-MW Hornet Solar project in Texas.

The contract is for at least 310 MW and will cover 100% of the projected power demand of Pfizer's North American operations.

The project is scheduled to become operational by the end of 2023.

More: Renewables Now

TPI Composites to Close Iowa Factory



TPI Composites, a maker of wind turbines which has supplied blades to General

Electric, announced last week that it will close its Newton, Iowa, factory by the end of the year. As many as 710 workers will lose their jobs.

Company executives gave warning about the layoffs as contract negotiations with GE continued last month. TPI had a contact for GE to continue buying blades through the end of the year, however not having any business lined up for next year combined with various economic factors led to the facility's suspension at the end of 2021.

More: Des Moines Register

Federal Briefs

Biden, Schumer, Manchin Huddle on **Budget Deal**

President Joe Biden reportedly met with West Virginia Sen. Joe Manchin and Senate Majority Leader Chuck Schumer at his Delaware home last weekend to work toward resolving disagreements regarding spending and tax provisions that have stalled the Democrats' budget bill.

The three met after Democrats missed the deadline to resolve disputes. What had been a \$3.5 trillion plan is now being eyed as \$1.75 trillion package but is within a range that could still climb considerably higher, according to a person who requested anonymity about the private talks. Biden has said he'd like to see a \$2 trillion package and will try again this week to reach agreement.

The talks appeared to last for hours, but no decisions were announced.

More: The Associated Press, The New York Times

EIA: US Coal-fired Electricity Generation to Rise in 2021



The EIA last week said it expects a 22% increase in coal-fired generation for the U.S. in 2021 compared

to last year, marking the first year-on-year increase since 2014.

The increase is attributed to soaring natural gas prices and relatively stable coal prices,

the administration said.

More: Reuters

EVs Having a Banner Year in 2021

U.S. consumers bought 305,324 all-electric vehicles from January to September, an increase of 83% from the same period in 2020, according to Kelley Blue Book.

Electric vehicles now account for 2.6% of all new light-duty cars and trucks sold in the country, which is also up from 1.6% at this time last year.

Teslas accounted for about 70% of new EV sales this year, while California had about 40% of the country's EV registrations.

More: InsideClimate News

State Briefs

CALIFORNIA

5 Counties Sue PG&E Over Dixie Fire

Five Northern California counties last week sued Pacific Gas & Electric over the massive Dixie Fire.

According to a statement, Butte, Lassen, Plumas, Shasta and Tehama counties filed the suit in San Francisco Superior Court. The lawsuit alleges the utility's equipment caused the fire, which burned 963,000 acres in the five counties and was the largest non-complex fire in state history.

The lawsuit seeks damages for injuries to public resources and natural resources, lost revenues, increased expenses, lost assets, infrastructure damages and other damages.

PUC Ratifies PG&E Fire Prevention Plan

The Public Utilities Commission last week unanimously ratified Pacific Gas and Electric's latest plan to prevent wildfires. The plan had been approved last month by the Office of Energy Infrastructure Safety.

PG&E's plan includes a new risk model intended to guide investments aimed at avoiding catastrophic wildfires caused by power lines. It also includes installing

more weather stations, conducting more tree trimming and upgrading more electric equipment, among other measures.

More: San Francisco Chronicle

Redondo Power Plant Operations Extended Through 2023

The Water Resources Control Board last week voted unanimously to give the final approval needed to keep the gas-fired Redondo Beach power plant operating through 2023 as the state struggles to meet electricity demands.

Except for Los Angeles Power and Water operations, all of the state's ocean-cooled, gas-fired power generators were scheduled to close at the end of 2020. But after rolling blackouts in August of 2020, energy analysts predicted future supply shortfalls. Because of that, regulators last year approved extending the life of old generators in Huntington Beach, Long Beach and Oxnard through 2023, and those in Redondo Beach through 2021.

More: Los Angeles Daily News

NEW MEXICO

Community Solar Project Permit Denied

The Roswell-Chaves County Extraterritorial Zoning Commission last week voted 4-3 to deny a special use permit to Pivot Energy

and its proposed community solar garden.

Opponents said they did not want a solar project in the rural-suburban district, while others said they had concerns about electromagnetic radiation and the release of toxic materials, as well as some other concerns.

The company has yet to decide on whether to appeal to the ETZ Authority.

More: Roswell Daily Record

NORTH CAROLINA

Buncombe County to Expand Solar Cluster, Zero-emission Vehicles

The Buncombe County Board of Commissioners last week voted to expand the state's largest public solar boom and transition to zero-emission vehicles.

The county and city of Asheville are engaged in a large-scale solar installation at 39 local government buildings. The county is paying for its projects with a \$12.4 million, 15-year bond, with a potential \$2.2 million rebate from Duke Energy. The projects are forecast to save the county between \$14 million and \$17 million in energy costs over the next 30 years and make up the largest public solar project in the state.

County Manager Avril Pinder is moving the local government's fleet toward more

efficient cars and trucks, but the resolution reinforces that policy.

More: Asheville Citizen Times

NORTH DAKOTA

Industrial Commission Approves First Carbon Storage Project

The Industrial Commission last week granted approvals for a project at Red Trail Energy that aims to capture the facility's carbon emissions and store them underground. It will be the first carbon dioxide storage project in the state.

The gas from the ethanol plant will be compressed and injected down a 6,400foot well. Researchers say the state's rocks could store as much as 250 billion tons of carbon dioxide.

More: The Bismarck Tribune

OKLAHOMA

OG&E Customers Could Bear High Costs from February Storms



Oklahoma Gas and Electric last week asked the Corpo-

ration Commission to approve its request to recoup \$760 million from customers for expenses related to February's winter storm.

The plan, proposed as a jointly stipulated settlement agreement, would authorize Oklahoma to issue bonds on behalf of the utility to secure the costs over 28 years. However, one feature of the proposal would pass about \$23 million in cost recovery from OG&E's largest customers to its smallest commercial and residential customers. It would result in a 10-cent raise on the average bill over the 28 years.

Final case filings were due before the administrative law judge at the commission on Monday. The judge will recommend a proposed order for members of the Corporation Commission to consider.

More: The Oklahoman

TENNESSEE

Legislature Approves Ford's Blue Oval City

State lawmakers last week gave their approval for a nearly \$900 million spending package aimed at clearing the way for Ford's \$5.6 billion investment in an electric vehicle and battery factory.

The bills would establish an authority to oversee the development of the Blue Oval City at the Memphis Regional Megasite, dole out \$500 million in incentives to Ford, and spend \$384 million on infrastructure projects, workforce development, authority expenses and other services.

The deal will be subject to clawback provisions, as the Department of Economic and Community Development has the authority to reclaim funds if Ford does not deliver its promise.

More: Nashville Tennessean

TEXAS

Brazos' \$2B Bill Lawsuit Survives **Effort to Dismiss**



The Brazos Electric Power Cooperative last week defeated an effort by

opponents to dodge a lawsuit over a \$2 billion energy bill stemming from the state's historic February storm. U.S. Bankruptcy Judge David Jones rejected arguments from ERCOT and the Public Utilities Commission of Texas that said the dispute should not be handled in bankruptcy court and that allowing it to continue would infringe upon the state's sovereignty.

Brazos filed for Chapter 11 protection in March after it was hit with the massive bill. The bill is nearly three times the co-op's total power cost from 2020, which was \$774 million, according to court papers. For several days during the storm, ERCOT set electricity prices at \$9,000 per MWh.

More: Reuters

Gold-Williams to Depart CPS Energy in **Early 2022**



CPS Energy President and CEO Paula Gold-Williams last week

announced she will leave the municipally owned utility early next year.

Gold-Williams, who has been with the company since 2004 and was named president and CEO in 2015, said she "will work cooperatively with the Board of Trustees through this transition."

CPS Energy said it will form an executive search committee to find a new president and CEO.

More: San Antonio Report

VIRGINIA

Dominion Reaches Deal with AG, SCC in Rate Case

Dominion Energy announced last week that it has reached a settlement with Virginia's Office of the Attorney General and State Corporation Commission (SCC) staff to resolve disputes in its ongoing rate

Under the settlement, which must still be approved by the SCC, customers would receive \$330 million in refunds and a \$50 million reduction in rates going forward. The rate reduction is the maximum amount allowed by law under the 2018 Grid Transformation and Security Act. Dominion estimated it would translate to a refund of approximately \$67 and a monthly bill decrease of about 90 cents for the average customer.

Meanwhile, the utility would receive a 9.35 percent return on equity compared to the current 9.2 percent rate.

The commission staff and the attorney general alleged the utility raked in almost \$1 billion in excess profits between 2017 and 2020.

More: Virginia Mercury

Frederick Planners Support Solar **Facility's Second Phase**

The Frederick County Planning Commission last week voted 8-2 to recommend the approval of a conditional-use permit to allow construction of a 430-acre solar power generating facility.

Torch Clean Energy wants to build a 60-MW facility, which represents the second phase of the greater Bartonsville Energy Facility. Torch only recently received its state permitting approval for the first phase and anticipates starting construction in the spring. If supervisors approve a permit for the second phase, the Bartonsville facility's total acreage would expand from 1,160 to 1,797 acres.

The matter will go before the Board of Supervisors on Nov. 10.

More: The Winchester Star

WISCONSIN

Judge Pauses Construction of Cardinal-Hickory Creek Power Line

Dane County Circuit Judge Jacob Frost last week temporarily halted construction of

the \$492 million Cardinal-Hickory Creek transmission line provided that opponents of the project can come up with millions of dollars to cover potential costs of a delay. Utilities had planned to begin building the line on Oct. 25.

Frost granted a request for an injunction to put the project on hold while the courts consider challenges to its permit and agreed that clearing land would result in damage that could not be easily repaired if

the line is ultimately stopped.

The American Transmission Co. said it was disappointed with the order and that, if implemented, it could add \$30 million to the cost.

More: Wisconsin State Journal

PSC Says No EIS Required for Solar Farm

The Public Service Commission last week

said the proposed 6,300-acre Koshkonong Solar Energy Center will not significantly harm people or the environment and thus will not need an environmental impact statement.

The commission is reviewing the application for the construction of the 300-MW solar electric generation facility, battery energy storage system, and associated facilities.

More: HNGNews.com

