ISSN 2377-8016 : Volume 2022/Issue 19 ▪ May 10, 2022

RTO Insider

YOUR EYES AND EARS ON THE ORGANIZED ELECTRIC MARKETS

CAISO ▪ ERCOT ▪ ISO-NE ▪ MISO ▪ NYISO ▪ PJM ▪ SPP

CAISO/West

Calif. Sees OSW Target of 10-15 GW by 2045 (p.13)

CAISO's New Renewables Record Falls Hair Short of 100% (p.14)

CAISO/West

BPA, Tucson Electric Power Enter Western EIM (p.15)

CREPC-WIRAB Weighs Western Transmission, Markets (p.16)

FERC & Federal

Federal-State Task Force on Transmission

FERC-State Task Force Considers Clustering, 'Fast Track' to Clear Queues (p.6)

Task Force Seeks 'Right Balance' in Spreading Tx Upgrade Costs (p.9)

MISO

NiSource Defers Coal Retirement, Blames Probe into Solar Panel Imports (p.23)

ERCOT

'Insane' Heat, Thermal Outages Stress ERCOT Grid (p.19)

COVER: Solar now accounts for the largest share of renewable resources in CAISO. | *California Energy Commission*

RTO Insider
Your Eyes and Ears on the Organized Electric Markets
CAISO ▪ ERCOT ▪ ISO-NE ▪ MISO ▪ NYISO ▪ PJM ▪ SPP

Editorial

Editor-in-Chief / Co-Publisher
Rich Heidorn Jr.

Deputy Editor / Daily
Michael Brooks

Deputy Editor / Enterprise
Robert Mullin

Art Director
Mitchell Parizer

New York/New England Bureau Chief
Jennifer Delony

Mid-Atlantic Bureau Chief
K Kaufmann

Midwest Bureau Chief
John Funk

Associate Editor
Shawn McFarland

Copy Editor/Production Editor
Rebecca Santana

CAISO/West Correspondent
Hudson Sangree

ISO-NE Correspondent
Sam Mintz

MISO Correspondent
Amanda Durish Cook

NYISO Correspondent
Michael Kuser

PJM Correspondent
Michael Yoder

SPP/ERCOT Correspondent
Tom Kleckner

NERC/ERO Correspondent
Holden Mann

Sales & Marketing

Chief Operating Officer / Co-Publisher
Merry Eisner

Account Manager
Kathy Henderson

Account Manager
Dan Ingold

Account Manager
Phaedra Welker

Marketing Manager
Eau Rikhotso

Assistant to the Publisher
Tri Bui

RTO Insider LLC
10837 Deborah Drive
Potomac, MD 20854
(301) 658-6885

2022 Annual Subscription Rates:

Plan	Price
Newsletter PDF Only	$1,520
Newsletter PDF Plus Web	$2,000

See additional details and our Subscriber Agreement at rtoinsider.com.

In this week's issue

Counterflow

By Steve Huntoon

We're Going to Need a Plan B

By Steve Huntoon

Let me give it to you straight:

#1 - climate change is a global threat;

#2 - humanity isn't going to cut carbon emissions enough to contain it.

Most people agree on #1 so let's focus on #2. There are many reasons for #2, first and foremost it's the ultimate "free rider," aka "tragedy of the commons," aka "negative externality" problem. It boils down to this: Each nation incurring costs to reduce its carbon emissions gets some small percentage of the overall benefit to humanity from doing so. So each nation's cost to *its* citizens and to *its* economy is relatively high, and *its* share of benefit is relatively low.

Given we haven't solved this problem *within* nations, like our states where 60% of emissions come from states without climate goals,[1] it's naïve to think we can solve this problem *among* nations. For all the happy talk at international conferences like COP26, nations are going to continue to pursue their national interests.

Global Reality Check

Asia now represents 74% of world coal electric generation, and it's increasing there with no end in sight.[2] Asia is planning 600 new coal plants.[3]

And consider the developing world where people face personal existential crises every day — do we ask them to forgo fossil fuels that have been, and remain, critical to emerging from poverty?[4] Developing nations face many crises, not just climate change, as Daniel Yergin and others point out.[5]

There are strategic resource limitations as well. Current production of strategic minerals for batteries to back up intermittent resources, and to electrify transportation, is a pittance of what is needed, and these minerals tend to be located in problematic nations.[6]

And we haven't untangled the importance of fossil fuels in agriculture (fertilizer), and in plastics, among other essentials of modern life.[7] Did I mention the insane closure of nuclear plants?[8]

And lest we forget, aggressive carbon emission goals by a given nation are a chimera if the consequence is the departure of energy-intensive industries to less-committed nations.[9]

What is the biggest sobering item from the latest Intergovernmental Panel on Climate Change (IPCC) report released April 4? My nomination is: "The report says that to avoid more than 1.5 degrees C of warming, global emissions must peak before 2025 and then fall by 43% before 2030, compared with 2019 levels." [10]

Not happening.

On the Home Front

The American people aren't going to stand for big electricity cost increases, degradation of electric reliability or NIMBY siting issues. We already are seeing pushback on electric rate increases in California.[11] We were reminded by Texas last year that the populace will not tolerate outages. And we have huge NIMBY siting issues, not just for large transmission projects,[12] but also for large wind and solar projects.[13]

Not to mention our "own goals," like the solar panel antidumping investigation.[14] And the new NEPA rules,[15] exacerbating the existing ones,[16] which will sabotage many more renewable projects than fossil fuel projects.[17]

Lord, help us. Because we can't help ourselves.

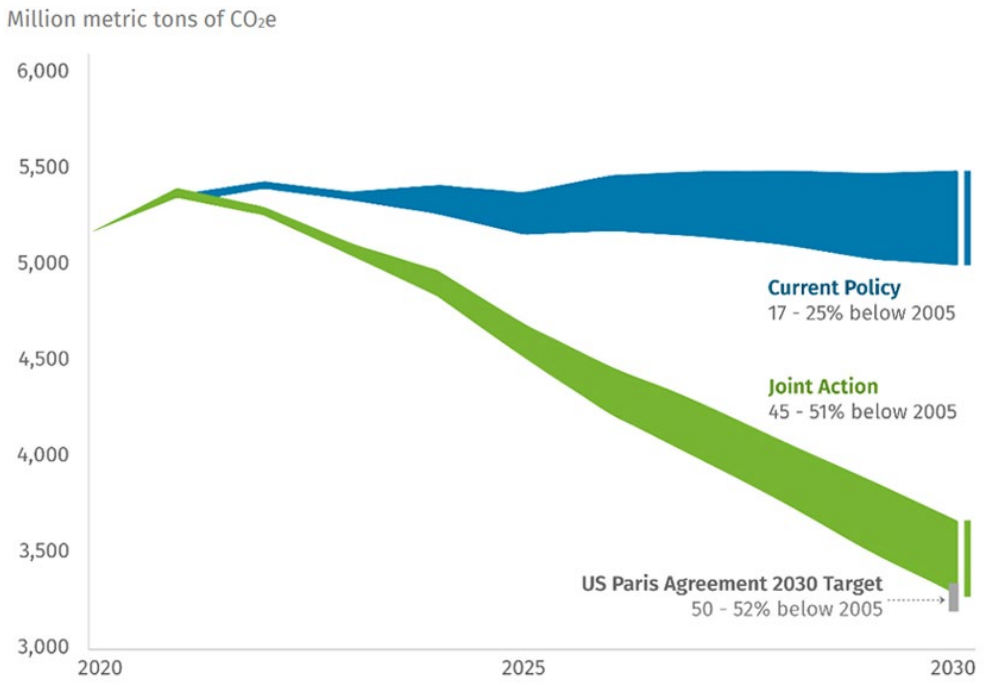
The Coffee

So where are we? We need to wake up and smell the coffee: Plan A ain't happening.

We need a Plan B: Solar geoengineering. This is adding particles, like calcium carbonate (think white sands of Hawaii), to the stratosphere that would reflect more sunlight and thus reduce global warming. It wouldn't take much extra reflection, as the IPCC stated in last month's report: "Simple calculations and climate modelling studies show that about 2% extra solar irradiance reflected away from Earth … would suffice to offset global mean warming from a doubling of the CO_2 concentration." [18] Doubling is much less than the actual increase in CO_2 concentration from the pre-industrial period to now.[19]

Bottom line according to the IPCC? "Modelling studies suggest that it is conceptually possible to achieve multiple climate policy goals by optimally designed SRM [geoengineering] strategies." [20]

Last year a blue-ribbon committee of the National Academies of Sciences, Engineering and Medicine recommended that the U.S. spend about $100 million to $200 million



U.S. net GHG emissions trajectory, 2020-2030 | *Rhodium Group*

Counterflow

By Steve Huntoon

researching this over the next five years.[21] If you look at only one of the footnoted materials for this column, please make it this National Academies report.

The reaction in some quarters has been outrage. The most organized opposition is from those who oppose even research, making three main arguments: (1) the risks are poorly understood and can never be fully known; (2) Plan B would delay/discourage Plan A ("moral hazard"); and (3) the "global governance system" is unfit to develop and implement the necessary agreements for deployment.[22]

Let's take these up. Regarding objection #1, the uncertainty of the risks, that's of course a reason *to do* research. This just in, we humans have been meddling with Earth for about 150,000 years without understanding the risks, much less *fully* understanding the risks. And could the risks of geoengineering be bigger than climate catastrophe?

Regarding objection #2, the moral hazard argument, this is akin to opposing *adaptations* to climate change (*e.g.*, seawalls) because their sheer existence reduces the urgency of cutting carbon emissions. Or opposing seat belts because people drive faster. Or opposing COVID vaccine research because it would discourage mask wearing. And, again, we need to recognize that nations' individual decisions are not going to be determined by whether geoengineering might or might not work.

Regarding objection #3, the alleged unfitness of the "global governance system" to deploy geoengineering, this begs the question doesn't it? If nations can't get it together for geoengineering at a cost of $250 billion to $2.5 trillion through 2100 (depending on the scenario chosen),[23] how on Earth could these same nations get it together to transform virtually everything at a ballpark cost of $275 trillion through 2050?[24]

Those who support research on geoengineering acknowledge that maybe we're just buying needed time for technology, mitigation and adaptation to catch up.[25] Or maybe it's a permanent offset to carbon emissions that can be managed effectively. Nobody knows.

Instead, some environmentalists went into overdrive to stop — not just geoengineering itself — but any research into it.

What About a Plan C?

There is no realistic Plan C. As *The Atlantic* just said: We have two impossible paths to avoid the worst of climate change.[26]

The Atlantic identifies two impossible paths: (1) a collapse in global energy usage, and (2) massive carbon removal from the atmosphere. Regarding energy usage reduction, it gives an example with vehicles where instead of world-wide vehicles increasing from 1.3 billion now to 2.2 billion by 2050, they would actually decline to 0.85 billion by 2050. Not a chance.

As for carbon removal from the atmosphere, the cost is huge, 6X to 20X the social cost of carbon, comparing the technology's cost estimate range of $300 to $600/metric ton,[27] with the Biden Administration's social cost of carbon of $51/metric ton.[28] The IPCC estimates in one scenario that 6 billion tons would need to be removed from the atmosphere every year to 2050 to meet the 1.5 degree goal,[29] so that translates into $67.5 trillion. If the newly announced Frontier initiative were successful in reducing the cost to $100/ton,[30] it would still take $15 trillion. Nations could pass the hat for that $67.5 trillion, or $15 trillion, but the track record for raising even relatively tiny sums is pathetic.[31]

What about new nuclear? Lazard says new nuclear has a capital cost midpoint of $10.3MM/MW and a levelized energy cost of $167/MWh,[32] more than 3X the social cost of carbon. Vogtle in Georgia is a slow-motion train wreck I wrote about five years ago.[33]

But perhaps smaller, "modular" nuclear? To take an example, TerraPower says its first Natrium 345-MW reactor will cost $4 billion — with taxpayers on the hook for half of that.[34] By the way, $100 billion has been spent over six decades on this "advanced" sodium-cooled nuclear technology, to generate roughly 0 MWh (sodium does not play well with water or air).[35] And the project is now in limbo because the only existing source for the specific nuclear fuel is Russia.[36]

Hope Is Not a Plan

Is it better to bury our heads in the sand instead of getting some answers? To condemn humanity to a global threat by ruling out even research on a Plan B?

"We all have to take a chance. Especially if one is all you have." Capt. James T. Kirk, *Tomorrow Is Yesterday*, 1967.

Let's give geoengineering a chance. ■

[1] https://www.economist.com/united-states/california-wants-to-lead-the-world-on-climate-policy/21808833 ("The Rhodium Group, a consultancy, reckons that 60% of emissions stem from states without climate goals.")

[2] https://www.iea.org/data-and-statistics/charts/asias-share-of-global-coal-power-generation-1990-2019; https://www.reuters.com/business/energy/cop26-aims-banish-coal-asia-is-building-hundreds-power-plants-burn-it-2021-10-29/#:~:text=In%20Asia%2C%20coal's%20share%20of,Statistical%20Review%20of%20World%20Energy.

[3] https://www.reuters.com/world/asia-pacific/asias-new-coal-plant-plans-jeopardise-climate-targets-report-says-2021-06-29/#:~:text=China%2C%20India%2C%20Indonesia%2C%20Japan,of%20more%20than%20300%20gigawatts

[4] https://www.wsj.com/articles/climate-change-life-expectancy-carbon-netural-oil-coal-fossil-fuels-ukraine-war-russia-china-fossil-fuels-carbon-emissions-mining-pollution-electric-car-vehicle-11649258860?mod=Searchresults_pos1&page=1.

[5] https://www.theatlantic.com/international/archive/2021/11/energy-shock-transition/620813/

[6] https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf; https://www.wsj.com/articles/green-energy-makes-inflation-worse-minerals-copper-aluminum-graphite-lithium-commodity-markets-11650205511?mod=Searchresults_pos3&page=1.

[7] https://www.theatlantic.com/international/archive/2021/11/energy-shock-transition/620813/; https://www.wsj.com/articles/fossil-fuels-petroleum-refining-products-plastics-fertilizers-africa-food-shortage-grocery-energy-prices-costs-rising-russia-fracking-biden-climate-change-11649100123?mod=Searchresults_pos2&page=1.

[8] I wrote before February 24: "The Germans are shutting down the rest of their nuclear plants so they can be more dependent on Putin's natural gas. An even worse sin than California's and New York's closures of the Diablo Canyon and Indian Point nuclear plants (which I railed against years ago)."

[9] The "good" nations theoretically could tax via tariff their imports from "bad" nations in an effort to rebalance the economic incentives, but will they?

Counterflow

By Steve Huntoon

[10] https://www.economist.com/science-and-technology/2022/04/09/the-latest-ipcc-report-argues-that-stabilising-the-climate-will-require-fast-action

[11] https://www.rtoinsider.com/articles/29617-rate-hikes-prompt-concern-california.

[12] https://www.bloomberg.com/graphics/2022-clean-energy-power-lines-transwest-wind-maps-private-property/

[13] According to Columbia University's Sabin Center, more than 200 wind and solar projects face local opposition. https://www.wsj.com/articles/hamptons-opponents-hound-offshore-wind-power-project-11650058015?mod=Searchresults_pos1&page=1

[14] https://www.rtoinsider.com/articles/29967-solar-sector-braces-tariff-probe-impact

[15] https://www.ceqachronicles.com/2022/04/new-nepa-rule-restores-demanding-environmental-review-practices-for-major-federal-projects/

[16] https://www.wsj.com/articles/for-a-clean-energy-future-we-need-deregulation-11645110044?mod=Searchresults_pos1&page=1.

[17] https://www.washingtonpost.com/business/energy/want-green-energy-cutred-tape/2022/04/21/147bbf38-c173-11ec-b5df-1fba61a66c75_story.html ("An analysis last year found that of the projects undergoing NEPA review at the Department of Energy, 42% concerned clean energy, transmission or environmental protection, while just 15% were related to fossil fuels.")

[18] https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report_smaller.pdf. (pdf page 1036).

[19] https://www.carbonbrief.org/met-office-atmospheric-co2-now-hitting-50-higher-than-pre-industrial-levels

[20] IPCC Report (pdf page 1041).

[21] https://nap.nationalacademies.org/download/25762

[22] https://www.solargeoeng.org/non-use-agreement/open-letter/; more detail here, https://wires.onlinelibrary.wiley.com/doi/10.1002/wcc.754.

[23] https://iopscience.iop.org/article/10.1088/1748-9326/aba7e7/pdf

[24] https://www.mckinsey.com/business-functions/sustainability/our-insights/the-economic-transformation-what-would-change-in-the-net-zero-transition.

[25] It should be noted that there are other consequences of carbon emissions that geoengineering would not necessarily address, such as ocean acidification, https://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-012320-083019.

[26] https://www.theatlantic.com/science/archive/2022/04/ipcc-report-climate-change-2050/629691/?utm_source=newsletter&utm_medium=email&utm_campaign=weekly-planet&utm_content=20220427&utm_term=The%20Weekly%20Planet

[27] https://www.economist.com/science-and-technology/2022/04/09/the-latest-ipcc-report-argues-that-stabilising-the-climate-will-require-fast-action

[28] https://www.kirkland.com/publications/blog-post/2022/03/social-cost-of-carbon-fifth-circuit

[29] https://www.scmp.com/business/article/3174001/google-facebook-owners-among-tech-titans-launch-us925-million-initiative

[30] https://frontierclimate.com/.

[31] https://www.nature.com/articles/d41586-021-02846-3

[32] https://www.lazard.com/media/451905/lazards-levelized-cost-of-energy-version-150-vf.pdf.

[33] https://www.energy-counsel.com/docs/The-Devil-Went-Down-to-Georgia-2018-01-23-RTO-Insider.pdf; https://www.energy-counsel.com/docs/Vogtle-the-Law-of-Holes-and-Two-Modest-Proposals.pdf.

[34] https://www.cnbc.com/2021/11/17/bill-gates-terrapower-builds-its-first-nuclear-reactor-in-a-coal-town.html

[35] https://www.foreignaffairs.com/articles/2021-07-08/nuclear-energy-will-not-be-solution-climate-change; https://fissilematerials.org/library/rr08.pdf

[36] https://www.wired.com/story/the-nuclear-reactors-of-the-future-have-a-russia-problem/

FERC/Federal News

FERC-State Task Force Considers Clustering, 'Fast Track' to Clear Queues

By Rich Heidorn Jr.

FERC and state regulators embraced cluster studies but gave mixed reviews to "fast track" processing as potential solutions to clogged interconnection queues Friday during the third meeting of the Joint Federal-State Task Force on Electric Transmission.

The task force, which includes FERC members and 10 state regulators, was created by FERC Chairman Richard Glick in June to unleash transmission expansion to improve resilience and connect new renewable generation (*AD21-15*).

Unlike the group's first two meetings in Louisville, Ky., in November and D.C. in February, the third daylong session was virtual. (See *FERC-State Tx Task Force Begins Work* and *FERC-State Tx Task Force Debates Allocation, Benefits*.)

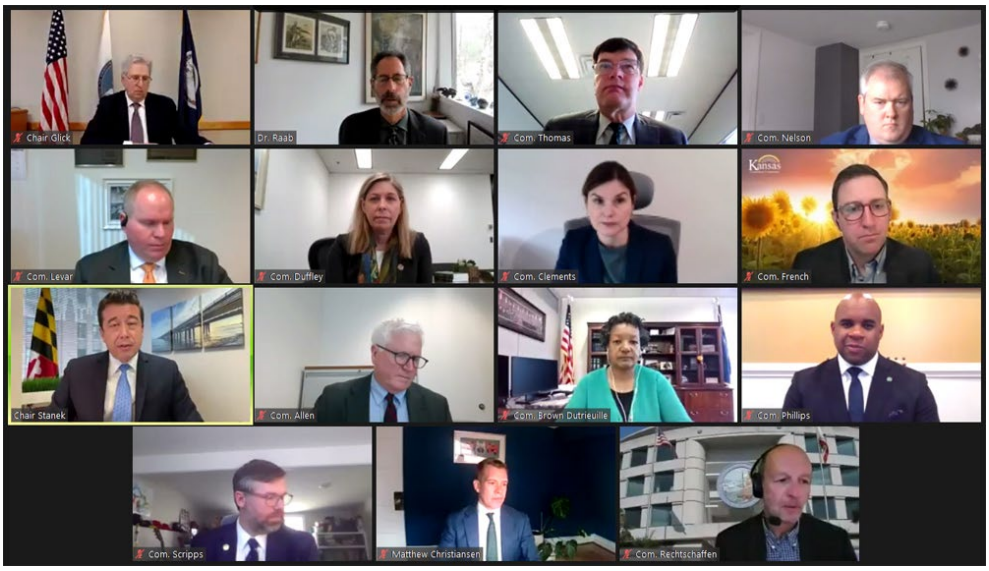
The first half of the session focused on unclogging the queues, while the second half focused on cost allocation. (See related story, *Task Force Seeks 'Right Balance' in Spreading Tx Upgrade Costs*.)

FERC Commissioner Willie Phillips | © *RTO Insider LLC*

FERC Commissioner Willie Philips laid out the first problem at the beginning of the five-hour meeting, noting that interconnection costs, which used to be less than 10% of generators' total project costs, can now exceed 50%.

"The serial, first-come-first-serve study process incentivizes developers to enter into the queue before they are ready. They do this so that they can snag a spot in line. Interconnection customers also submit multiple interconnection requests at different locations even though they know that not all of them will reach commercial operation," he said. "They do this to find where they can get the least amount of network cost upgrades. Then there are often late-stage withdrawals or material modifications to projects, which means that transmission providers must conduct restudies. Ultimately this is harming the ability of transmission providers to timely process the queue."

Jonathan Raab — president of consultancy Raab Associates and facilitator of the meeting — cited *data* from Lawrence Berkeley National Laboratory showing that the typical duration from connection request to commercial operation has nearly doubled, from 2.1 years in 2000-2010 to 3.7 years for 2011-2021. Only 23% of projects that requested interconnection in 2000-2016 have reached commercial operations, with only 20% of wind projects and 16% of solar completed.



The third meeting of the Joint Federal-State Task Force on Electric Transmission was held virtually. | *FERC*

In contrast with the first two meetings, "we're not just asking questions this time," Raab said. Instead the meeting sought feedback on five potential improvements:

- tighter applicant requirements to enter or remain in the queue;
- clustering of applications and areas for studies;
- faster tracks for different generator categories (e.g. state solicitations or smaller resources with limited impacts);
- tighter study deadlines for RTOs and other transmission providers; and
- minimizing restudies.

FERC Warned Against Undermining State Efforts

Several state regulators urged FERC not to issue a sweeping rule that could undermine progress some jurisdictions have made.

Utah Public Service Commission Chair Thad LeVar said that while the interconnection queue process is "easy … to criticize," policymakers should recognize "the significant reform efforts that many transmission providers across the country have been engaging in in recent years."

Chair Thad LeVar, Utah Public Service Commission | *Utah Public Service Commission*

"The specific issues that we'll be talking about over the next couple hours aren't new concepts that nobody's been trying," he added.

Commissioner Kimberly Duffley, North Carolina Utilities Commission | *North Carolina Utilities Commission*

"I've heard from the SEARUC [Southeastern Association of Regulatory Utility Commissioners] states as well as some RTOs like PJM," North Carolina Utilities Commissioner Kimberly Duffley said. "And they request that FERC allow queue reforms to move forward regionally without the disruption of possibly inconsistent requirements."

Duffley said North Carolina officials are optimistic about recent changes to the queue procedures of Duke Energy Carolinas and Duke Energy Progress.

The state has been a leader in utility-scale solar, Duffley said, but beginning about 2014,

FERC/Federal News

the first-come-first-serve interconnection queues began experiencing backlogs and queue-squatting complaints.

The addition of new financial security requirements in 2015 provided some relief, she said, but proved insufficient. Additional changes were approved by FERC last August (*ER21-1579*), following endorsements by the NCUC and South Carolina Public Service Commission, replacing the serial study process with a first-ready-first-served, cluster-based study process.

Duffley said the impact of the new rules, which were based on those of Public Service Company of Colorado, won't be known until the first quarter of 2023.

"I believe that the RTO and the system planners are best positioned to structure interconnection rules for their individual regions, and that prescriptive one-size-fits-all interconnection rules are not necessary," said Gladys Brown Dutrieuille, chair of the Pennsylvania Public Utility Commission. "That being said, I think that FERC is in a position that they can encourage interconnection efficiencies throughout the country by promoting best-in-class processes, such as variations in ways to cluster projects."

Support for Cluster Studies

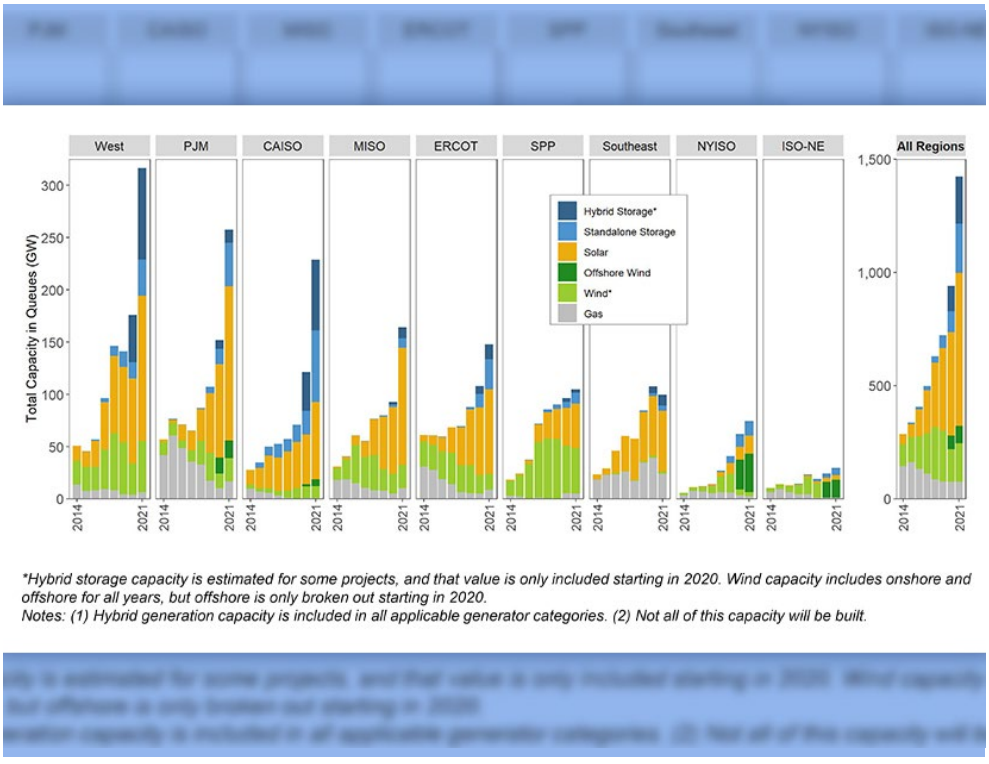
There was wide support for cluster studies, which allow transmission providers to consider many projects in one study. Supporters say restudies are less frequent and disruptive because generators in a cluster can share the cost of network upgrades.

Phillips said cluster studies should be considered a best practice.

"Almost all RTOs and ISOs have used a cluster approach for years, and PJM is currently working on a cluster proposal right now," he said. "Several transmission providers outside of the RTO regions have also started moving to a cluster approach in recent years."

Maryland Public Service Commission Chair Jason Stanek | © *RTO Insider LLC*

PJM will file with FERC later this month a proposed interconnection queue process that moves away from the first-come-first-served model to a first-ready-first-served concept. "That will make the process somewhat quicker, maybe as quick as 450 days ... and that would cut down from an average of somewhere in about 700 days," said Jason Stanek, chair of the Maryland Public Service Commission. (See *PJM Stakeholders Endorse New Interconnection Process*.)



**Hybrid storage capacity is estimated for some projects, and that value is only included starting in 2020. Wind capacity includes onshore and offshore for all years, but offshore is only broken out starting in 2020.*
Notes: (1) Hybrid generation capacity is included in all applicable generator categories. (2) Not all of this capacity will be built.

RTO-ISO interconnection queues 2014-2021 | *Lawrence Berkeley National Laboratory*

Vermont Public Utility Commissioner Riley Allen said clustering can help identify "backbone or ... trunk facilities" that provide efficiencies in the system for ratepayers' benefit.

LeVar said cluster studies also have been helpful in Western states' review of utility integrated resource plans that result in solicitations for new resources. "There's usefulness to best practices. But these best practices are going to operate differently in each RTO and particularly between the RTO and non-RTO areas," he cautioned.

California Public Utilities Commissioner Clifford Rechtschaffen said CAISO's use of cluster processes has been "very helpful" but "is not a panacea."

"Last year in CAISO, in one cluster in two weeks, there was 100 GW of applications filed in a single window, which is 10 times the amount of authorized procurement," he said. "So clustering absolutely helps ... but it has to be accompanied by the other reforms that we're talking about."

Fast Track

There was less unanimity over fast-track proposals.

Stanek called clustering and fast-track processes "Siamese twins. They're very different, but they have some similarities that lead to overall efficiencies."

He suggested fast tracking generation seeking to locate at the sites of retiring plants such as the Oyster Creek nuclear plant in New Jersey and the Indian River coal facility in Delaware, saying it could reduce the need for expensive reliability-must-run agreements.

"Perhaps the standard interconnection process would not be as arduous if we're using existing switchgear and existing substations behind the fence," he said. "Taking advantage of the fact that these points have already been modeled, it shouldn't take 1,000 days or four years for ... some generator to step into the shoes of an existing generator."

Arkansas Public Service Commission Chair Ted Thomas said he agreed "conceptually" with using milestones such as financing and site control to prioritize the queue. "But while we work on those solutions, I also think that we need to be conscious that we not make this a game that only large players can play."

Glick said any fast track would have to be crafted carefully to ensure it does not violate the Federal Power Act's prohibition on "undue discrimination."

FERC/Federal News

"If you start saying small resources have a separate category and make it some expedited approval, that actually might, I think … come across as discriminatory."

Tighter Requirements

Task force members also expressed concerns over tightening queue eligibility requirements.

Michigan Public Service Commission Chair Dan Scripps | *Michigan Public Service Commission*

Dan Scripps, chair of the Michigan Public Service Commission, said increasing applicant requirements "could ultimately delay projects that we're going to need, even if we don't know who the specific off-taker is today."

"If I go back to the old … saying that 'all regulation is incentive regulation,' in some ways we're getting the system that we're encouraging here," he said. "When you talk to developers, they say the length of the time to get through the queue processes encourages the speculative or placeholder nature of a lot of the projects."

Transmission Providers' Accountability

Commissioner Allison Clements said she had concluded that FERC's attempt at "incremental reforms" in Order 845 in 2018 "hasn't worked." The order sought to increase the transparency and timeliness of the interconnection process. (See *FERC Order Seeks to Reduce Time, Uncertainty on Interconnections*.)

She solicited feedback on ways FERC can ensure transmission providers are meeting their obligations, noting that PJM reported to the commission that 99% of its facilities studies failed to meet tariff deadlines in 2021. She said it is unfair that queue participants are held to strict deadlines while transmission providers are only required to make "reasonable efforts" to meet deadlines.

"Interconnection customers facing steady delays have little recourse when a transmission provider misses a deadline, because the reasonable-effort standard is not a particularly high bar," she said. "We need to make some sort of modification to the … reasonable-effort standard."

Among the options are penalties, for which "we'd have to think about the specifics of *force majeure* exemptions; waivers; amount of the penalty," she said. "What would we use the penalty for? When [would] the penalty start?"

She said transmission providers also could be required to devote more staff, software and other resources to interconnection, or subject to additional public reporting requirements — "a scorecard relative to performance."

LeVar said regulators should consider "what barriers might exist to individual generators [and focus on transmission provider] outliers, the ones that aren't trying to engage in reform and are making the good-faith efforts that many are."

Affected-system Studies

Scripps urged FERC to set standards regarding cross-RTO affected-systems studies, which, he said, "have the ability to destroy project economics" and have become "a growing source of delay and cost uncertainty for interconnection customers."

"We expect the affected-system study process to become increasingly critical as more renewable resources come online in renewable-rich areas and transmission capacity becomes ever more scarce," he said.

In 2018, a FERC technical conference resulted in a September 2019 order requiring MISO, PJM and SPP to improve the transparency of their affected-system studies. (See *Affected-system Rules Unclear, FERC Says*.) But Scripps noted the commission declined to open a generic proceeding to address broader affected-system coordination issues.

"We saw in the filings from MISO, SPP and PJM that were done in 2019 and 2020 [that] the delays continue to persist and often due to the underlying issues that were brought to light in that technical conference. Namely each RTO's process and study times are different and tailored to the region.

"It may be time to revisit the commission's 2019 decision not to initiate a proceeding to better coordinate affected-system studies. Specifically, there may be an opportunity to create a general framework that would be consistent across RTO seams," he said. "Fully addressing these cross-RTO issues are inherently beyond any one RTO's or ISO's ability to fully control."

Arkansas' Thomas said he agreed "word for word" with Scripps. "The most effective place that FERC can operate is in the area where you have two RTOs, and the real issue is getting them on the same page. I think that FERC should start gently and move towards less gentle as needed."

Transmission Planning

Maryland's Stanek said reform of the generator interconnection process is interlinked with that of transmission planning. "They're both interdependent elements of developing needed transmission infrastructure and share many of the very same principles and challenges," he said. "A very key difference here is that the generator interconnection needs are much more focused and much more immediate. This is an issue that we can tackle now and not have to wait 20 years to see if the fruits of our labor yield success. How well these new processes are implemented will determine that success."

Andrew French, chair of the Kansas Corporation Commission, said the queue backlog is "a symptom of queue-based planning."

"While we need to, in the interim, try to address the demand for those resources and addressing what's in the queues now, we can't lose sight of the fact that the ultimate long-term solution is better long-range planning," French said.

Vermont's Allen said, "There's a growing body of evidence, especially from PJM and MISO, that we can actually interconnect much more capacity going forward if we do it in a very anticipatory long-term planning framework than on a serial or even a … cluster-by-cluster framework that is the prevailing paradigm."

On April 21, FERC issued a Notice of Proposed Rulemaking that would require transmission providers to use scenarios and probabilistic techniques to identify potential infrastructure needs 20 years into the future based on decarbonization policies and industry trends. (See *FERC Issues 1st Proposal out of Transmission Proceeding*.)

Cure for What Ails us

French said the queue backlogs may not be quite as bad as they seem because so many queue entries are "placeholder projects" used for cost discovery on required transmission upgrades.

"If we were able to create some good large amounts of backbone capacity on the transmission system … and put it in the optimal place, you might actually see quite a bit of generation be able to be interconnected, and the backlogs could clear perhaps more quickly than we would think," he said.

He added, "I know it's never easy to just snap your fingers and [create] backbone transmission." ■

FERC/Federal News

Task Force Seeks 'Right Balance' in Spreading Tx Upgrade Costs

By Robert Mullin

The second half of Friday's meeting of the Joint Federal-State Task Force on Electric Transmission started off with a touch of irony.

"Now we'll move on to the much less controversial issue about funding and cost allocation" of transmission projects, Jonathan Raab — president of consultancy Raab Associates and facilitator of the meeting — said about a topic that has sparked sharp disagreements in organized electricity markets across the country.

The first part of Friday's conference of federal and state regulators focused on clogged generation interconnection queues in RTOs and ISOs. (See related story, *FERC-State Task Force Considers Clustering, 'Fast Track' to Clear Queues*.) The next half delved into the even thornier issue of who should pay for the needed transmission network upgrades spurred by the interconnecting resources piling up in the queues.

The issue of cost allocation has grown in controversy as the grid integrates increasing volumes of renewable resources. Developers must often site renewables far from load centers, other generating resources and existing high-voltage transmission lines in order to cover enough ground to capture economies of scale and locate in areas that offer higher capacity factors resulting from more consistent winds or sunlight.

"In recent years, I think we're at a point where the changing resource mix has already triggered a number of challenges, and the solutions required are effectively transmission solutions," Michigan Public Service Commission Chair Dan Scripps said in opening remarks.

"It's not that we're building out backbone transmission projects in order to simply accommodate generators, but really to keep the lights on. And whether we continue to allocate a disproportionate share of the cost to interconnecting generators in order to fulfill this reliability imperative, I'm not convinced that the current model strikes the right balance," he said.

Not 'From All to Nothing'

Friday afternoon's discussion aimed to get closer to that balance. Raab framed the session by outlining four cost allocation approaches for the regulators to consider,

| © RTO Insider LLC

including:

- participants (i.e., the generators) paying for 100% of the costs for network upgrades in RTOs/ISOs;
- participants and load sharing the costs for upgrades;
- load picking up 100% of the cost for certain types of upgrades; and
- costs for new or upgraded facilities being covered by generator subscriptions.

State regulators have generally supported the first option, with some flexibility — and some notable deviations.

In its *comments* on FERC's 2021 Advance Notice of Proposed Rulemaking to improve regional transmission planning, cost allocation and interconnection processes (*RM21-17*), the National Association of Regulatory Utility Commissioners urged the commission to "retain the core tenet of participant funding, while exploring the as yet untapped potential economies of scale that could result from increased coordination among participants," such as through clustering of projects. (See *FERC Goes Back to the Drawing Board on Tx Planning, Cost Allocation*.)

On Friday, FERC Commissioner Allison Clements encouraged industry stakeholders to be flexible in their thinking about cost allocation.

"I don't think the solution is going from all to nothing. I don't think that, while interconnection customers currently pay off needed upgrade costs, the solution should be jumping to having them pay nothing. That doesn't jive with [FERC's] cost allocation principles," Clements said.

"I've never had a project sponsor suggest to me that they're unwilling to pay their fair share, and I've also never had a transmission provider suggest to me that in all, or even in most cases, the whole of network upgrade benefits accrue only to the interconnection customer customers paying for them," she added.

"I am a believer that when we make certain high-voltage upgrades as part of the [generator interconnection] process, there are real benefits that flow to load," Kansas Corporation Commission Chair Andrew French said.

Changes to cost-sharing models should not be a "one-way street" directed only at electricity customers, according to French.

"This is not just about getting load to pay more, or to chip in more of the cost to help interconnect generators. It's to try to find the most accurate cost allocation over all of our investments," he said.

French pointed out that SPP's regional planning process can produce a "big backbone" project on which generation developers can "basically free ride for a few years" without dealing with many upgrades.

"They don't have to pay anything for them, and that's the situation we were in for maybe the last 10 years before we ran out of capacity," French said. "I just want to make the point that, ultimately, we need to get to a more holistic, consolidated planning process."

The intertwining relationship between transmission planning and cost allocation was a recurring theme during the discussion.

Michigan's Scripps encouraged fellow regulators to avoid "siloing" the cost allocation issue "because it really does connect with a number of other concerns, and I'd argue that participant funding reform should go hand-in-hand with interconnection key reforms."

Pennsylvania Public Utility Commission Chair Gladys Brown Dutrieuille noted that there isn't a consensus of support for a 100% participant funding model within the Mid-Atlantic Conference of Regulatory Utilities Commissioners, which she was representing during the meeting. But she also emphasized the support for that model in her own state, which deregulated its electricity market to offload generation investment risks from ratepayers.

"The participant-funding model is based on the tried-and-true ratemaking principle of

FERC/Federal News

cost causation. And I just want to highlight what I believe its benefits include: and that would be promoting efficient siting of generation projects, as well as allowing parties that are best positioned to control the interconnection costs to bear the costs."

North Carolina Utilities Commissioner Kimberly Duffley said there's a "strong consensus" within the Southeastern Association of Regulatory Utility Commissioners and the industry at large for maintaining the participant-funding model. Duffley cautioned that straying from that model could saddle ratepayers with costs for transmission projects they neither want nor need.

"Enjoyed listening to Commissioner Dutrieuille. Enjoyed listing to Commissioner Duffley," FERC Commissioner Mark Christie said. "All I can say is, 'What she said — twice.'"

FERC Chair Richard Glick and Commissioner Willie Phillips both reminded their fellow regulators that judicial precedent requires the commission to look beyond participant-driven costs to consider wider system benefits.

"There's a number of cases where the courts have essentially said cost-causation really is benefits, and you have to look at who benefits in terms of who pays," Glick said.

Sharing the Cost

"I believe that cost sharing might actually be more cost-effective for consumers overall, because it could provide some incentive for [transmission owners] to proactively plan and build the optimal transmission lines in the first place," Phillips said when the subject turned to an allocation approach that splits costs between generators and load.

Phillips pointed favorably to CAISO's model in which TOs are required to refund upgrade costs back to generators within five years of a project's operation date, as well as the MISO model where load pays 10% of transmission upgrade costs for lines rated at 345 kV or above.

California Public Utilities Commissioner Cliff Rechtschaffen said that CAISO's practice was designed to ensure that generators have financial "skin in the game" before seeking interconnection.

"The generator still covers the cost between the generation facility and the point of interconnection. The costs that are covered by this policy are the reliability, substation and deliverability backbone upgrades," Rechtschaffen said, adding that CAISO caps the level of reimbursement.

"Only upgrades that are needed to meet resource adequacy requirements are reimbursable. So that ensures that the load that's charged for the upgrades is benefiting and adhering to the beneficiary-pays principle that is so important," he said.

"I think to the extent that we're looking for something with relative simplicity, and something with a framework that FERC is familiar with and has approved in the past, a voltage threshold [as in MISO] would seem to make sense," Maryland Public Service Commission Chair Jason Stanek said.

Dutrieuille called the MISO cost-sharing mechanism "intriguing" and "easy to understand," but she was reluctant to endorse it. "I would make sure that we understood what the benefits were … [and that] you can quantify them, and they're not speculative in nature."

Arkansas Public Service Commission Chair Ted Thomas said as the electricity grid continues to undergo its transition, the "right transmission plan" should function as the shared cost. "Doing that right, there shouldn't be that many remaining shared costs. That's a critical point," he said.

'Relatively Agnostic'

An allocation approach in which load bears 100% of the costs for transmission upgrades found no support among the commissioners, but a model in which generator subscriptions supported the development of new or upgraded infrastructure sparked some interest.

Stanek pointed out that FERC has used the subscription model in the past for natural gas pipelines and some merchant transmission projects.

"I think some of the benefits that could flow from this would be a faster interconnection process, efficiency and, probably most important to this afternoon's conversation, making sure that the costs of this upgrade would be paid for in a fair and equitable manner," Stanek said.

"It's a framework that I think addresses some of the big thorny knots that we're dealing with when we talk about free ridership, lumpy and large payments, cost uncertainties — some of the big things that we can't seem to kind of get around," Vermont Public Utility Commissioner Riley Allen said.

Allen likened the subscription model with ISO-NE's cluster interconnection process, in which the RTO assigns the costs for major transmission upgrades to clusters of interconnecting resources. He envisioned a way of scaling up that process for "superclusters" of resources in allocating costs for upgrading a larger backbone system. Instead of being responsible for incremental upgrades to a network on an individual basis, interconnecting generators could be allocated costs based on a per-megawatt fee.

He also proposed the further step of adopting Vermont's system of using a cost "adjuster" to steer development to areas of the system that already have existing capacity. "So it kind of checks a number of boxes, at least for me, in terms of getting around the problem, working our way past the kind of participant-pays versus load-pays, because this is relatively agnostic," he said.

"I think the proposal that Commissioner Allen just outlined would be very helpful when in terms of offshore wind if you build a collector system. That's probably the fairest way of allocating the cost," Glick said.

Speaking as the lone representative from the "non-RTO West," Utah Public Service Commission Chair Thad LeVar noted that issue of participant funding is not something the region currently wrestles with. But LeVar cautioned FERC about developing cost allocation rules that could "chill" the West's efforts toward increased regionalization and — "hopefully" — an RTO.

"I would hate to see the RTO rules that don't currently apply to us evolve in a way that would scare off stakeholders from the work that's happening across the West," he said.

'A Little Less Consensus'

In wrapping up the meeting, Glick said it was evident there appeared to be "a lot of consensus" on how to address logjams in RTO interconnection queues, and "a little less consensus" on cost allocation for transmission upgrades.

Glick said the lack of agreement was "not surprising" given NARUC's comments on FERC's ANOPR last year and the divergent opinions among states on the need to "reform" cost allocation rules.

"So that's something we need to consider as well, and we're certainly cognizant of all the actions that are going on at the state level," he said. "And whatever actions we take at FERC, I think we certainly will, at least from my perspective, take into account what the states are doing and certainly not try to reverse or impede the progress that the states are making." ■

FERC/Federal News

Humility, State Support Seen as Keys to Transmission Buildout

By Rich Heidorn Jr.

Expansion of the U.S. transmission grid to accommodate decarbonization will require more humility from developers and active support by states, speakers on an Advanced Energy Economy webinar said May 3.

The webinar, titled "Making connections: How to get transmission built," began with a keynote by FERC Chair Richard Glick, who outlined the Notice of Proposed Rulemaking the commission issued April 21 that would require RTOs and ISOs to incorporate scenarios and probabilistic concepts to develop transmission plans looking 20 years into the future. (See *FERC Issues 1st Proposal out of Transmission Proceeding*.)

Glick noted that the NOPR also would require transmission planners to seek state approval for cost allocation of regional grid projects.

"The states are going to be resistant [to transmission expansion if they think] we're being unfair and we're shoving cost on one state versus another state," he said. "Siting [is] a big example. But states have other abilities as well to prevent their utilities from further developing what in many cases most people would believe is much-needed transmission."

Glick also highlighted FERC's Joint Federal-State Task Force on Electric Transmission, which held its *third meeting* Friday. (See related story, *FERC-State Task Force Considers Clustering, 'Fast Track' to Clear Queues* and *Task Force Seeks 'Right Balance' in Spreading Tx Upgrade Costs*.)

Sarah Webster, Pattern Energy | *Pattern Energy*

"It is absolutely critical that the states … meet the feds halfway to understand what transmission can mean — what grid reliability and deployment of renewables and decarbonization — can mean for the ratepayers and for their voters," said Sarah Webster, senior vice president of external affairs and market development for Pattern Energy.

A Win in the Southwest

In December, Pattern completed construction of *Western Spirit Wind*, the largest renewable energy project in the U.S., with four wind farms totaling more than 1,050 MW in central New Mexico.

Pattern built the project to take advantage of New Mexico's winds, which blow strongest in the morning and night, to complement California's surfeit of solar power, Webster said. The project's 377 General Electric wind turbines were accompanied by a 155-mile, 345-kV transmission line that connects with the Public Service Company of New Mexico system near Albuquerque.

"If you want to run a grid on technologies that are reliant on the weather, that's fine; you can do it in a cost-effective and fully reliable way. But you need a grid that's bigger than the weather," she said. "You need the hydro coming in from the Pacific Northwest; you need the wind coming in from the Eastern states; you need the solar that you see in Nevada and California. When you put those all together with some storage and some natural gas for firming and shaping, you've got a really reliable baseload-type product energy product."

But building transmission, she said, "takes patient money" and "a deep engagement with many, many regulatory bodies" and stakeholders.

"The very big reality is, whether we're doing a 100-mile [transmission] line or a 500-mile [transmission] line, pretty much anyone can stop it. You can have local jurisdiction, county jurisdiction, state jurisdiction. And you don't typically have condemnation rights."

Overcoming landowner opposition "takes a lot of engagement. It takes a lot of humility. You've got to talk to people from where they're at. You can't come in political. You can't come in with preconceived ideas. You can't come in even with the implicit idea that this is essential for the greater good. You have to come in, when you're talking with landowners, profoundly respectful, that you may be dealing with heritage ranches that have been in families for over a century. And you need to be willing to sit down, listen, have hard conversations [and] follow up again.

"And then you have to work with their concerns. … They can say, 'You know, I am protective of this particular view. Can you work on the routing around this precious part of the land for me?' And so I think that that's really the key to engagement."

Webster said Pattern takes a broad view of its "host community."

"You're a host community if you're hosting an actual facility with turbines or panels. You're a host community if you're hosting a substation, or a major piece of transmission infrastructure. But to us, you're also a host community if you're supporting the public good by allowing your transmission line to pass through your county or your property. And so we created standardized community benefits packages based on just mileage that [is] consistent across our entire footprint."

'Purple Strategy'

One of the keys to the success of Western Spirit's transmission line, Webster said, was Pattern's "partnership" with the New Mexico Renewable Energy Transmission Authority (RETA), which does have eminent domain rights. Over the 155-mile route, Webster said Pattern used condemnation "on four parcels in a very non-contested way."

Webster said other states have taken note of New Mexico's approach, with Colorado lawmakers recently creating the *Colorado Energy Transmission Authority* and California considering similar legislation.

"This is not a Democrat thing or Republican thing. I mean, most people don't realize that 86% of all wind farms in the United States of America are operating in Republican districts," she said. "This is a purple strategy. Maybe in some states, it's a renewable energy authority; maybe in others, it's an infrastructure authority. But it basically empowers the state and its agencies to make some decisions in support of … decarbonization, economics for citizens and economic development."

Challenges in the Northeast

Macky McCleary, Guidehouse | *Guidehouse*

Another panelist, Macky McCleary, director of energy, sustainability and infrastructure for Guidehouse, discussed the difficulty of siting infrastructure in the Northeast.

"The challenge in highly congested areas like the Northeast is that there's just no space. And these projects require space, even in states like Massachusetts, which have very lofty, renewable goals," he said. "They spent 20 years trying to build Cape Wind, which isn't even on land. They said no to it because they could see it from land in the ocean. To me, that is a great

FERC/Federal News

example of how challenged we are going to be. Really the challenge for this is not money; it's not going to be regulatory. It's not going to be legal. It's not going to be capital. It's going to be political."

McCleary said FERC's NOPR is "a potentially really big deal."

And he said he was cheered that two transmission projects in the Northeast — the *Champlain Hudson Power Express*, which would deliver 1,250 MW of hydropower to New York City, and the *New England Clean Power Link*, which would deliver 1,000 MW of power from the Canadian border to Vermont and ISO-NE — will be built.

McCleary said the failure of the Northern Pass project, which would have brough 1,090 MW of Canadian hydropower into New England, helped the Vermont project because of the state's "culture around renewable energy and the environment."

The New York project benefited from the "sort of emperor governorship [that] allows them to be able to do some things that other states would not be able to do from a stakeholder point of view … [the] ability to sort of move heaven and earth, because the governor says so."

Although siting offshore wind is easier than siting land-based projects, McCleary said he is concerned about how the transmission will be designed to deliver their power.

"If we contract out transmission for each individual parcel, we're going to end up overbuilding transmission for the needs of the entire system. The challenge is that you're running through several different RTOs here, and it's not clear whose job it is to ensure that this is done in an efficient way," he said.

Pattern Energy completed construction in December on Western Spirit Wind, the largest renewable energy project in the U.S., with four wind farms totaling more than 1,050 MW in Guadalupe, Lincoln, and Torrance counties in central New Mexico. | *Pattern Energy*

He said he was encouraged by the New York Public Service Commission's recent order requiring future OSW projects be "mesh ready," with capacity to connect to a future offshore grid. (See *New York Seeks to Protect Tx Options with Mesh-ready OSW*.)

"I think it's necessary for all of the different regulatory bodies to look into this going forward, or we're going to end up overpaying for this resource that is so abundant off the Atlantic Seaboard."

Sensors and Markets

Also appearing on the panel was Mona Tierney-Lloyd, head of U.S. and state public policy for Enel North America, who discussed how drought, wildfires and resource adequacy concerns are leading many to consider a potential RTO in the West. (See *Western Utilities to Support SPP Market Development*.)

An RTO would allow "the coordination of operation across a Western footprint, being able to plan transmission development on a regional basis and the cost allocation of those assets [and to eliminate] pancaked rates, which make it very expensive to move electricity generated in the West from point to point."

Hilary Pearson, senior director of governmental and regulatory affairs for LineVision, which makes sensors for monitoring transmission line conditions.

Pearson noted the growing use of sensors in medicine, personal fitness and cars. "We're really excited at the opportunity to help bring some of that data-driven efficiency and visibility [and] consumer benefits to the electric grid." ■

CAISO/West News

Calif. Sees OSW Target of 10-15 GW by 2045

By Hudson Sangree

The California Energy Commission issued a draft report Friday that, if finalized later this month, would establish goals of building 3 GW of offshore wind by 2030 and 10 to 15 GW by 2045.

"These preliminary megawatt planning goals will inform the development of a strategic plan for floating offshore wind in federal waters off the coast of California," the *report* says.

With technical advances, it might be possible to set a goal of 20 GW by 2050, the Energy Commission (CEC) said.

"CEC staff recognizes that by 2045 there may be sufficient technological developments and related cost reductions driven by innovation in floating offshore wind components such as advanced monitoring systems, mooring systems, flexible cabling and increased turbine size," the report says. "Such technological developments could support a faster rate of offshore wind deployment that could potentially support a larger megawatt planning goal of up to 20 GW between 2045 and 2050."

Assembly Bill 525, which took effect Jan. 1, requires the CEC to set offshore wind targets by June 1 and to coordinate with federal, state and local agencies to develop a strategic plan for offshore wind by June 30, 2023. The effort contributes to the state's goal, under Senate Bill 100, to supply all retail customers with only clean energy by 2045.

The federal Bureau of Ocean Energy Management (BOEM) intends to hold the West Coast's first offshore lease auctions later this year for the Morro Bay Wind Energy Area, off the coast of Central California, and for the Humboldt Bay Wind Energy Area, off the Northern California coast. (See *BOEM to Offer Leases for Calif. Offshore Wind*.)

California has capacity for up to 15 GW of floating offshore wind platforms by 2045, according to a draft report by the state Energy Commission. | *Principle Power*

BOEM expects Morro Bay to generate 3 GW and Humboldt to generate 1.6 GW. The areas are very different with respect to transmission, however, the CEC noted in its report.

"The North Coast wind resource is one of the best in the world with high renewable energy potential and wind speeds consistent and favorable for commercial development," it says. "But the electric system in California's North Coast region is relatively isolated from the California grid and serves primarily local community need. Additional transmission infrastructure will be needed to deliver offshore wind energy from this region to the grid."

In contrast, "existing transmission on the Central Coast is robust and near large load centers," the report says. "Near-term electric generator retirements, such as 2,225 megawatts from the Diablo Canyon Nuclear Power Plant, provide an opportunity to repurpose existing infrastructure to integrate wind energy developed offshore."

Ports and infrastructure capable of handling massive floating wind turbines must still be developed, it said. (See *West Coast Wind Faces Big Challenges*.)

Potential effects of offshore wind on marine ecosystems, fisheries, Native Americans and national defense are being studied. BOEM said Thursday it had completed its environmental *review* of impacts to the Humboldt offshore wind area and found no significant impacts.

Early reaction to the CEC's draft report was mostly positive.

Industry group Offshore Wind California said in a statement that the "ambitious multi-gigawatt goals set by the California Energy Commission in its draft AB 525 report are very encouraging news and an important milestone for the Golden State's offshore wind industry.

"They show that California is serious about 'going big' on floating offshore wind … [and] send an important signal to the industry and other state and federal agencies that California is committed to moving forward expeditiously to make offshore wind power a reality," the group said.

The CEC plans to host a *public workshop* on May 18 to discuss the draft report before it is finalized. ■

CAISO/West News

CAISO's New Renewables Record Falls Hair Short of 100%

For a moment on April 30, CAISO was able to serve nearly 100% of its native load with renewable energy, beating a record set just a month earlier.

The peak occurred at 2:50 p.m., when the California grid operator served 99.87% of its momentary demand with renewables, breaking the previous record of 97.6% set on April 3, the ISO confirmed last week after reviewing generation data. (See *CAISO Sets 98% Renewables Record*.)

In a tweet May 3, CAISO called the event "a significant milestone along the path to a carbon-free power grid."

Preliminary data from the ISO indicated that output from renewables reached 18,629 MW during the peak, nearly matching demand. At the same time, gas-fired plants were generating 2,434 MW, nuclear 2,239 MW and large hydro 590 MW. Exports from the CAISO system hit about 4,400 MW during the interval.

The exports did not match total generation from those resources because a portion of the ISO's natural gas generation consists of reliability-must-run units operating behind transmission constraints and combined heat and power units that cannot be curtailed.

Spring is typically a period of low demand in California, accompanied by relatively high output from solar, wind and hydro, often leading to energy surpluses.

CAISO's installed renewable energy mix consists of about 57% solar, 30% wind, and smaller amounts of geothermal energy, small-hydro resources and biofuels. While emissions-free and technically renewable, large hydro resources are not included in the mix.

Solar now accounts for the largest share of renewable resources in CAISO. | *California Energy Commission*

About 32% of California's energy mix came from renewable power in 2020, the most recent year for which figures are available, according to the state Energy Commission.

— Robert Mullin

CAISO/West News

BPA, Tucson Electric Power Enter Western EIM

Northwest Assets Spell Huge Expansion for the Market

By Robert Mullin

The Western Energy Imbalance Market (WEIM) took on the Bonneville Power Administration and Tucson Electric Power (TEP) as new participants on May 3, marking the market's largest single expansion since it began operating in November 2014 with PacifiCorp as its first member.

BPA's journey into the WEIM has been an especially complicated one. The federal power marketing administration first announced its interest in joining the market in 2018. What followed was three years of stakeholder meetings to make a final determination on membership, at times held in parallel with workshops to help prepare the agency's customers for implementation.

The agency was originally scheduled to begin trading in the WEIM in early April, along with Pacific Northwest utilities Avista and Tacoma Power. But in January, BPA officials postponed entry to address technology and customer training issues, giving the final go-ahead for the May 3 entry only two weeks earlier, after determining those problems had been sufficiently addressed. (See *BPA Set to Go Live in Western EIM in May*.)

"Joining the Western EIM is a monumental and meaningful step in the modernization of our operations that unlocks a range of benefits for Bonneville and our customers," BPA Administrator John Hairston said in a statement. "As we explore additional market-based opportunities to maximize the value of our surplus power and the Northwest's federal transmission system, we will ensure that they are consistent with our statutory authority and further our ability to deliver affordable, reliable energy to our customers."

BPA brings a massive amount of transmission into the WEIM. The agency's 15,000 miles of lines comprise about 75% of the network in the Northwest, and its partial ownership of the California-Oregon Intertie and the Pacific DC Intertie will greatly increase the WEIM's transfer capability between the Pacific Northwest and California.

BPA also controls 31 hydroelectric projects in the Federal Columbia River Power System (FCRPS), rated at a combined 22.5 GW. Its balancing authority area additionally interconnects generation from other numerous other producers, including over 2.9 GW of nameplate wind capacity.

Hydro accounts for about 80% of the generation capacity in BPA's BAA, followed by wind (10.2%), nuclear (4.3%), gas (3.9%) and geothermal (1.4%). In the WEIM, the Northwest's hydro output is expected to serve as a fast-ramping, firming complement to California's rapidly growing — and variable — solar capacity. On the flip side, load-serving entities in the north should be better positioned to absorb CAISO's mid-day solar surpluses.

'Vital Source'

The entry of TEP further extends the WEIM's reach into Arizona, with Arizona Public Service and Salt River Project already participating.

TEP owns or controls about 2,500 MW of generating capacity, including 298 MW of utility-scale solar and 429 MW of wind. Its service area contains about 301 MW of commercial and residential rooftop solar.

"We're working toward a dramatic expansion of renewable resources, and participating in the WEIM provides another way to increase our use of wind and solar energy," TEP CEO Susan Gray said.

The utility also operates 2,175 miles of high-voltage transmission, with key links into wind-rich New Mexico and the neighboring BAA of Public Service Company of New Mexico, which joined the market last year.

CAISO CEO Elliot Mainzer lauded BPA and TEP staff for their efforts in preparing to join the WEIM.

"I am very appreciative of the hard work and focus required to meet this important milestone and look forward to delivering real economic and environmental value to BPA and TEP customers, Mainzer said in a statement posted on LinkedIn.

In a separate statement, Mainzer, who formerly headed BPA, noted that the FCRPS "is a vital source of clean energy that will bring significant resource diversity and transmission capability to the WEIM." He also called TEP "another highly valued partner in the Desert Southwest."

With the entry of the BPA and TEP, the WEIM now includes 19 members accounting for 77% of the load in the Western Interconnection.

In the first quarter of this year, the market topped $2 billion in total benefits for its participants, reaching that mark 20 months after hitting $1 billion in benefits. (See *Western EIM Tops $2B in Benefits*.) The accumulation of benefits is expected to accelerate with the admission of BPA into the market. ■

Transmission line in Umatilla County, Ore. | © *RTO Insider LLC*

CAISO/West News

CREPC-WIRAB Weighs Western Transmission, Markets

Regional Coordination Seen as Key to Reliability and Renewables

By Hudson Sangree

SAN DIEGO — The West's potential to regionalize transmission planning and participate in organized markets occupied much of the discussion at the three-day *meeting* of the Committee on Regional Electric Power Cooperation and the Western Interconnection Regional Advisory Body (CREPC-WIRAB) in San Diego last week.

A prime topic was FERC's recent Notice of Proposed Rulemaking (NOPR) on transmission, which, if adopted, would require long-term regional transmission planning and increased state involvement in transmission cost allocation, among many other changes.

Western utility commissioners also discussed the work of the Joint Federal-State Task Force on Electric Transmission, convened by FERC and the National Association of Regulatory Utility Commissioners (NARUC) to spur transmission development as a means to deliver renewable power, reduce congestion and improve reliability. (The task force met virtually on Friday to discuss challenges related to clogged generator interconnection queues and cost allocation for transmission network upgrades. See related story, *FERC-State Task Force Considers Clustering, 'Fast Track' to Clear Queues* and *Task Force Seeks 'Right Balance' in Spreading Tx Upgrade Costs*.)

Utah Public Service Commission Chair Thad LeVar told the audience of state regulators and others that two questions guide his work on the task force.

"The first question is, 'Will any specific proposal or rulemaking either encourage or chill development of regional transmission coordination in the West?'" LeVar said. The second question is whether any proposal will fail to "respect and recognize the diverse carbon policies" of Western states, he said.

"To me, those are the two most important things because everybody agrees we need to move toward more regional transmission coordination … but we need to do that in a way that respects and recognizes" state policies, he said.

Those policies range from California's drive to supply retail customers with 100% clean energy by 2045 to the plans of states of the interior West to continue relying on a mix of renewable energy and fossil fuels for the foreseeable future.

The uneasy relationship between more progressive and more conservative states in the West is likely to remain a sticking point to greater grid integration, stakeholders at the meeting said.

Even so, "there's a lot of momentum toward regional coordination," LeVar said.

Stakeholders at the spring CREPC-WIRAB meeting listen to Utah Public Service Commission Chair Thad Levar and California Public Utilities Commissioner Clifford Rechtschaffen discuss their work on a joint federal-state task force on transmission. | *© RTO Insider LLC*

CAISO/West News

Moves Toward Western Markets

The push toward Western coordination now extends to a major resource planning program and the possibility of participation in organized markets.

The Western Power Pool's Western Resource Adequacy Program (WRAP), which WPP President Sarah Edmonds described in a presentation, is poised to be a West-wide effort to ensure reliable energy supply as coal plants retire and weather-dependent wind and solar resources proliferate during a time of climate change and extreme weather events. (See *Western Power Pool Names New CEO*.)

"This planning framework establishes a common planning reserve margin for the entire footprint … and it arrives at common counting rules across the entire footprint for the resources that we use," Edmonds said on the meeting's first day, May 2.

"The region has never had a West-wide view of what it needs to meet the needs of the future and how to count resources consistently across the footprint," she said. "There's a real value proposition in what we can do when we work together and … [leverage] our community as a whole."

The WRAP, scheduled to enter a nonbinding phase later this year, has attracted participants in an area that stretches from British Columbia to Arizona and east to South Dakota. Stage 1 of the WRAP will include 26 participants that together represent a summer peak load of about 67,000 MW and a winter peak of more than 65,000 MW.

CAISO's Western Energy Imbalance Market (WEIM), an interstate real-time trading platform, recently surpassed $2 billion in cumulative benefits for its participants since its founding in 2014. The WEIM has 17 members and is expected to grow to 22 participants by 2023, its benefits keeping pace with participation. (See *Western EIM Tops $2B in Benefits*.)

The ISO issued a straw proposal April 28 to add an extended day-ahead market (EDAM) to WEIM's real-time market, potentially attracting even more of the Western market to its regional offerings. (See *CAISO Issues EDAM Straw Proposal for the West*.)

In addition, several Western entities have joined SPP's Western Energy Imbalance Service and could eventually become members of SPP's planned RTO West or its Markets+ program, which offers an array of RTO-like services but stops short of a full RTO.

A panel of stakeholders discussed the challenges of day-ahead market design on day two of the CREPC-WIRAB meeting.

Scott Kinney, Avista Corp. | © *RTO Insider LLC*

"When you think about how unique a day-ahead market will be, especially in the West — where we have different [open access transmission tariffs] that we have to deal with, with regards to transmission utilization in the market, as well as potentially different resource adequacy programs — we have to think about how we create equity with those different constructs, and so that'll be important as these designs continue to evolve," Scott Kinney, director of power supply with Avista Corp., said.

Avista, based in Spokane, Wash., is a new participant in the WEIM and recently signed a letter with 14 other Western utilities saying it plans to support *SPP*'s efforts to develop a regional day-ahead energy market to evaluate against *CAISO*'s proposed day-ahead market. (See *Western Utilities to Support SPP Market Development*.)

A day-ahead market is "something that I think we should pursue as a region, but there's no crisis behind it," Kinney said. "So, let's take the time to make sure that we fully flesh out all the options that are in front of us from a day-ahead market construct so that we can compare them equitably and make sure that they're providing benefits to our customers."

In the past year, FERC commissioners have urged the formation of one or more RTOs in the West, which remains balkanized with 38 separate balancing authority areas, while much of the rest of the nation is organized into RTOs or ISOs. (See *Glick Says West Should 'Finish the Job' on RTO*.)

In all the regionalization efforts, "the one area that hasn't been tackled is transmission operation, transmission planning and transmission cost allocation," LeVar said. The joint task force is intended to further regional transmission cooperation, he said.

FERC Transmission NOPR

FERC's transmission NOPR (*RM21-17*) is separate from the work of the task force but shares its aims.

In one of its more controversial provisions, however, the NOPR would retreat from Order 1000's effort to open transmission development to competition by giving incumbent transmission owners a federal right of first

CAISO/West News

refusal (ROFR) on regional projects, provided they partner with an unaffiliated company with a "meaningful level of participation and investment" in the project.

The commission found in Order 1000 that federal ROFRs create "a barrier to entry," discouraging nonincumbent transmission developers from proposing alternative solutions that could be more efficient or cost-effective. But the commission said it was changing course in its April 21 NOPR because it feared that Order 1000's removal of the federal ROFR may be "inadvertently discouraging investment" in regional transmission.

Incumbent transmission providers "may be presented with perverse investment incentives" to instead engineer local transmission projects for which they retain development control, FERC said.

The NOPR troubles independent transmission developers.

Sharon Segner, LS Power | © *RTO Insider LLC*

Sharon Segner, senior vice president for transmission policy at developer LS Power, said the NOPR raised concerns about transmission competition in the Western Interconnection. She spoke as part of a panel on barriers to transmission development in the West, which largely focused on the NOPR's pros and cons.

"As we look at the NOPR from a Western perspective, the first question that has to be asked is, 'Does the rule usher in a cost-effective, clean energy transition?'" she said. "And while there are certainly areas of progress from a Western standpoint, in my company's view we certainly see some yellow lights and red lights in terms of the proposals."

Among the problems is that the NOPR "took meaningful steps backward on the notion of transmission competition across the country," Segner said. "It's a proposal that my company will rigorously object to."

The proposal runs counter to President Biden's July 2021 *executive order* aimed at promoting competition in the American economy," she said. The order names FERC as a federal entity responsible for administering statutes protecting fair competition.

If an incumbent transmission provider has a partner, "then the competitive process could go away," Segner said. "Having a partner in a transmission line does not necessarily mean that the consumers will have lower rates, and that doesn't provide the benefits of a competitive process."

"We don't believe that FERC can substitute competition for cartels, and that's essentially what we believe the end result of FERC's proposal is — that if the transmission owner finds one partner then they have the ability to shut out competitive pressures and have the ability to stop competition," she said.

Some panelists and audience members supported FERC's goal of enhancing regional transmission planning to incorporate renewable resources.

Rob Gramlich, Grid Strategies | © *RTO Insider LLC*

"I was very pleased to see it," Rob Gramlich, president of consulting firm Grid Strategies said.

An "open, transparent regional planning process," will be more likely to get transmission built, Gramlich said. The NOPR could require planners to proactively examine the future resource mix and take a more holistic approach to balancing costs and benefits, he said.

Fred Heutte, senior policy associate with the Northwest Energy Coalition, said the co-optimization of new generation and transmission, rare in the West, is "implicit in where the NOPR is going."

Gramlich agreed "that co-optimization is extremely important for consumers to save on generation costs and [to see an] overall delivered cost of generation plus transmission."

A big question, he said, is who will coordinate those activities.

"I think the NOPR, first of all, requires a mindset shift" in the West toward regional generation and transmission planning, more like processes followed by Eastern RTOs and ISOs, Gramlich said.

"You can clearly envision a role for WECC and for [regional planners] WestConnect and Northern Tier [Transmission Group] and CAISO," Gramlich said.

In January, CAISO published a first-of-its-kind 20-year transmission outlook intended to promote regional efforts to move renewable energy across the West. (See *CAISO Sees $30B Need for Tx Development*.)

"I don't know exactly where the boundaries should fall, but I think that somebody needs to proactively [coordinate transmission planning], and I agree with Sharon [Segner] that, to some extent, this shouldn't just be utility driven," he said.

"I think there's a lot of deference to just sort of taking what the individual utilities put together in this region … rather than an actual 'let's take the data and come up with an optimal configuration and then work with policymakers on an acceptable regional plan,' Gramlich said. "I'd love to see a shift toward that latter framework." ■

National/Federal news from our other channels

NM Adopts Calif. Advanced Clean Cars Rules

CARB Top Exec Corey to Retire

PG&E-led Demo Project to Explore Viability of Hydrogen

RTO Insider subscribers have access to two stories each monthly from *NetZero* and *ERO Insider*.

ERCOT News

'Insane' Heat, Thermal Outages Stress ERCOT Grid

Texas Grid Operator Sets New Peak Demand Marks for May, June

By Tom Kleckner

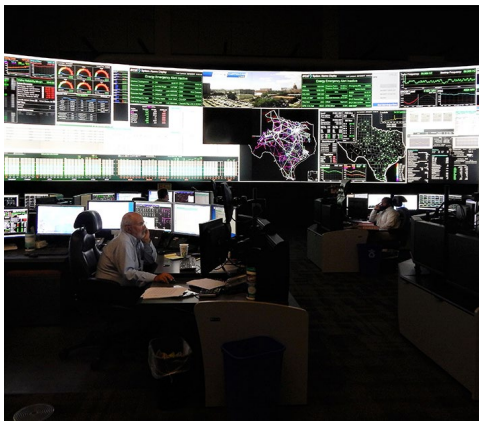
August-like weather that one weatherman called "categorically insane" has settled over Texas, leading to ERCOT calling on generators to postpone planned outages or return to service in advance of the heat.

Peak demand hit 70.6 GW late Monday afternoon, breaking Sunday's short-lived record of 67.5 GW, as well as the previous peak demand mark for June. The previous high for May was set in 2018.

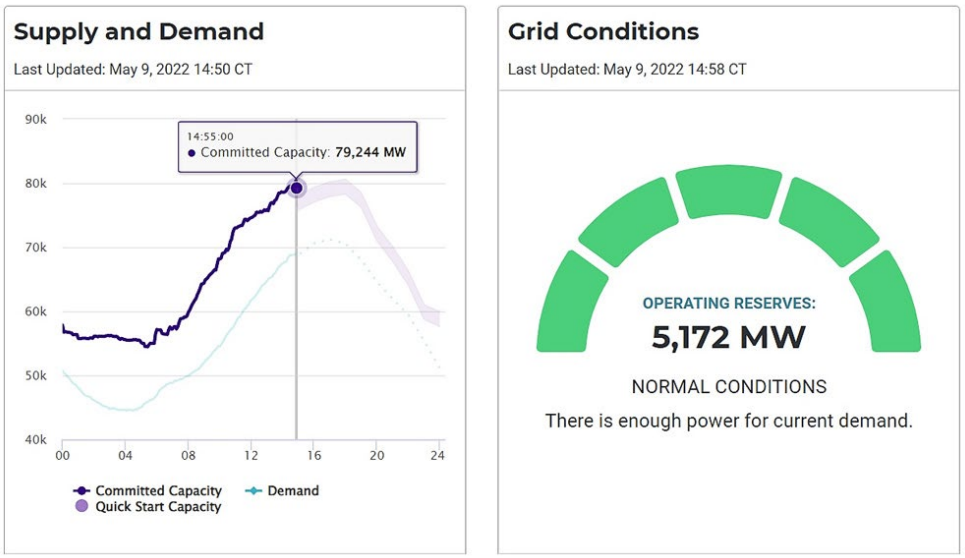
ERCOT's all-time record for peak demand is 74.8 GW, set in August 2019. The Texas grid operator said last week that it expected to have sufficient generation to meet the above-normal demand from "unseasonably" hot weather.

The problem is that about 15 to 20 GW of thermal generation, approximately a third of the fleet, has been offline in recent days during what is normally maintenance outage season. Generators have until May 15 to complete their outages. Renewables have helped pick up the slack, providing nearly 30 GW of energy, or close to 45% of total generation.

ERCOT said in an emailed statement that it is "coordinating closely" with the Public Utility Commission, generation owners and transmission utilities to ensure "they are prepared for the extreme heat."



ERCOT's operations center | © *RTO Insider LLC*



As demand approached another record peak for May on Monday, ERCOT had plenty of capacity in reserve. | *ERCOT*

ERCOT said in an emailed statement that it is "coordinating closely" with the Public Utility Commission, generation owners and transmission utilities to ensure "they are prepared for the extreme heat."

"ERCOT will deploy all the tools available to us to manage the grid reliably," a spokesperson said. "At this time, ERCOT projects there will be sufficient generation to meet this high demand for electricity."

The grid operator on May 3 issued an operating condition notice (OCN), its lowest-level communication in anticipation of a possible emergency condition. On Friday, ERCOT extended the OCN until Thursday because of forecasted temperatures above 94 degrees Fahrenheit in its North Central and South Central zones.

The National Weather Service said heat and humidity will result in heat indexes in the low 100s in the Houston area. Highs in the state are expected to stay in the 90s through the rest of the week.

Prices briefly hit $2,183 in the Houston area early Monday afternoon. At the same time, prices were as low as -$849 in nearby Calhoun County, where renewable generation was trapped behind transmission constraints.

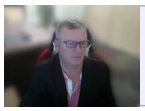
ERCOT and the PUC have yet to issue press releases or use social media to urge conservation or warn about the unseasonable heat; nor has Texas Gov. Greg Abbott, who continues to focus his Twitter account on Operation Lone Star, his *costly* effort that he says is securing the southern border with Mexico.

However, the Texas Division of Energy Management *tweeted* about the excessive heat, urging Texans to "spend time in air conditioning."

Stoic Energy President Doug Lewin attributed the high demand to a combination of extreme heat, poor energy efficiency and population growth: Texas' 15.9% population growth rate between 2010 and 2020 was more than double the U.S.' and will help the state hit 30 million residents this year, according to the U.S. Census Bureau.

"Texas gets 80% less energy reduction from efficiency than the 'average' state," Lewin said. "This particularly hurts us in extreme temperatures." ■

South news from our other channels



Texas RE Provides Facility Ratings Guidance

ERO Insider

RTO Insider subscribers have access to two stories each monthly from *NetZero* and *ERO Insider*.

ERCOT News

CenterPoint Energy Now a 'Pure Play Utility'

Management Details Benefits to Analysts of Exit from Gas Industry

By Tom Kleckner

CenterPoint Energy's Houston headquarters | *WhisperToMe, Public domain, via Wikimedia Commons*

CenterPoint Energy executives celebrated their company's status as a "pure play regulated utility" during their first-quarter earnings call May 3 with financial analysts.

"We heard loud and clear that many of you wanted CenterPoint to exit the [gas] midstream industry," CEO David Lesar said. "We did it in a way we believe was better and quicker than many of you ever expected."

Late last year, CenterPoint and OGE Energy completed the $7.2 billion sale of their partnership in Enable Midstream Partners to Energy Transfer Partners. (See *OGE, CenterPoint Complete Enable's Disposal*.)

CenterPoint sold all its common units within four months of the transaction at a 20% premium to Energy Transfer's unit price when the deal was announced, Lesar said.

"Not a bad outcome for those shareholders who thought we would never get out of this investment, let alone receive approximately $1.3 billion of net after-tax proceeds from it," he said. "We listen to our investors."

The Houston-based utility in February also sold gas distribution businesses in Arkansas and Oklahoma for more than $1.6 billion. It has used $1.8 billion of the combined proceeds to reduce debt, with a goal of slicing parent-level debt to about 20% of the total by the end of the year.

Management expects full recovery of $1.1 billion in gas costs incurred during the 2021 winter storm through Texas securitization efforts. CenterPoint will also soon file in Indiana for the cost of retiring two coal plants. It expects a decision by the end of the year and, with approval, securitization bonds to be issued early next year.

The utility *reported* earnings of $518 million ($0.82/diluted share) for 2022's first quarter, up from $334 million ($0.56/diluted share) for the same period a year ago. The non-GAAP earnings of 47 cents/share just missed the Zacks Consensus Estimate of 48 cents.

The company's share price closed at $30.54 on May 3, a gain of 33 cents. ■

ISO-NE News

Conn. Lawmakers Send Energy Storage Pilot Bill to Governor

Bill to Study Hydrogen Power also Passes

By Jennifer Delony

The Connecticut Senate on May 3 passed a bill, 30-5, that would direct two state utilities to develop energy storage pilot programs in support of a 1-GW storage goal for 2030.

The bill (*HB 5327*) now goes to Gov. Ned Lamont for his signature, having passed the House of Representatives unanimously in mid-April.

As passed with amendments, HB 5327 would require Avangrid and Eversource Energy to submit three proposals each by the end of the year to the Public Utilities Regulatory Authority for pilot programs to build, own and operate energy storage systems. The bill would also limit the utilities' current authority to own energy storage by requiring that any new facilities enhance distribution reliability or resilience and maximize facility participation in wholesale markets.

"We need to keep an eye on our power grid and energy generation; we need to make sure we remain competitive in the markets in years to come," Sen. Norm Needleman (D), chair of the legislature's joint Energy and Technology Committee, said in a statement upon passage of the bill.

The nonprofit RENEW Northeast expressed disappointment in passage of the bill at the expense of another storage bill (*SB 90*), saying in a statement Thursday that HB 5327 would give utilities a "monopoly" for building six energy storage projects.

"The electric distribution companies now have reserved for themselves a large portion of the energy storage market," said Francis Pullaro, executive director of RENEW. "Insulating the utilities from competition is contrary to Connecticut's strong, pro-consumer law and unnecessary for any technical reason."

RENEW urged Lamont to veto the bill.

Connecticut's energy storage law, which went into effect last year, allows the Department of Energy and Environmental Protection (DEEP) to issue requests for proposals for utility-scale storage projects to reach 300 MW by 2024, 650 MW by 2027 and 1 GW by 2030.

SB 90 would have provided a technical fix so DEEP could move forward with a proceeding launched in October for a competitive storage solicitation under that law. The bill's language gave DEEP the necessary authority to direct Avangrid and Eversource to enter power purchase agreements for up to 20 years for projects the department selects under the solicitation.

Avangrid and Eversource objected to SB 90 in hearing testimony in February.

"The PPA model only works when the parties can identify a knowable production quantity over which to pay the storage project developer, but there is no such knowable quantity with storage for energy," Eversource said.

SB 90 was on the Senate calendar at the end of the session, as recommended for passage by the Energy and Technology Committee. No vote was taken on the bill.

Hydrogen Study

The Senate on May 3 unanimously passed another bill, *HB 5200*, which would authorize the creation of a task force to study hydrogen-fueled energy opportunities for the state.

Among the task force study parameters are reviews of:

- regulations and legislation to achieve economies of scale for hydrogen;
- hydrogen-related incentives and programs in the federal Infrastructure Investment and Jobs Act;
- workforce development opportunities;
- sources of clean hydrogen, including wind, solar, biogas and nuclear; and
- funding sources for hydrogen energy programs and infrastructure.

The task force would have to submit a report to the General Assembly by Jan. 15, 2023. The bill now goes to the governor for his signature, having passed the House 142-2 in April. ■

ISO-NE News

NEPOOL Participants Committee Briefs

Competitive Power Ventures' proposal to revamp ISO-NE's financial assurance rules failed to win approval from NEPOOL's Participants Committee on Thursday, spelling the end of an effort that struggled to get off the ground in the stakeholder process.

CPV's plan to change the financial assurance (FA) rules for the region's Forward Capacity Market was designed to penalize projects that fall well behind their construction schedules. (See *NE Stakeholders Propose Retirement, Financial Assurance Changes*.) It would add increments of FA at certain milestones in the construction process as well as create new FA categories.

After several rounds of stakeholder meetings in recent months, including a failed vote at the Markets Committee in April, the proposal picked up support from the renewables group RENEW after adopting several of the group's recommendations. RENEW said the latest iteration "strikes a good balance between creating incentives to encourage market entry only when projects are sufficiently confident of success while not creating a barrier to entry for any size or type of new resource."

But at the last hurdle, Thursday's PC meeting, the proposal again fell short with 64.74% voting in favor when the motion needed 66.67% to pass.

The issue is not likely to go away after the Killingly Energy Center's disruption of Forward Capacity Auction 16 spotlighted the question of financial assurance and project timelines.

Board Vote

In an executive session, the committee also voted on two nominees for the ISO-NE board.

One candidate was current board Chair Cheryl LaFleur, who is up for re-election, and the other is a new board member whose identity is being kept confidential until it is announced by ISO-NE. (See *NEPOOL Participants Committee Briefs: April 7, 2022*.)

The grid operator's board will vote next to approve the candidates.

Load Records

ISO-NE COO Vamsi Chadalavada informed the committee of several recent landmarks related to low minimum load caused by high solar penetration.

The grid operator set a new record low of 7,580 MW of minimum load on May 1, a low-demand Sunday featuring sunny skies and mild temperatures.

ISO-NE has this year already experienced 28 "duck curve" days in which daytime minimum load fell below overnight levels. (See *New England's Duck Curve Days Chart Solar Growth*).

"New England's power system is changing right in front of our eyes," Chadalavada said in a press release Thursday. "While these changes haven't happened overnight, a day like May 1 is a good reminder of the progress New England has made in its transition to the future grid."

OP and PP Changes

The PC also voted to approve changes to two operating procedures and one planning procedure that had previously been approved by the Reliability Committee, including:

- revisions to OP-14 (addition of a reference to NX-12 and an exemption for DNE Dispatchable Generators and Continuous Storage Facilities);
- revisions to OP-18 (edits resulting from biennial review — formatting and grammatical changes, updated references and terminology, and documentation of existing metering requirements for Alternative Technology Regulating Resources); and
- revisions to PP5-6 (revisions clarifying treatment of facility re-dispatch under certain specific circumstances within the interconnection study and voltage response when interconnecting Distributed Energy Resources).

The proposed Killingly Energy Center has been at the center of discussions about changes to ISO-NE's financial assurance policy. | *NTE Energy*

— Sam Mintz

MISO News

NiSource Defers Coal Retirement, Blames Probe into Solar Panel Imports

By Amanda Durish Cook

The U.S. Commerce Department's probe into tariff evasion by Chinese importers of solar panel components has prolonged the life of one northern Indiana coal plant by two years.

NiSource said during its May 4 first-quarter earnings *call* that it will postpone retirement of the R.M. Schahfer plant's remaining two units from 2023 to 2025 because the investigation is stalling its development of solar facilities meant to replace the 877-MW facility.

The retirement raincheck is one of the first ripple effects since the federal government began its investigation in April. (See *Solar Sector Braces for Tariff Probe Impact*.)

In a press release, NiSource explained that the probe has "brought uncertainty and delays to the solar panel market." It said it was working with its renewable energy developers to "better understand the potential project impacts."

Shawn Anderson, NiSource chief strategy and risk officer, said the utility's 10 solar and energy storage projects slated to come online over this year and next now face delays of six to 18 months.

"Our focus has been to accelerate savings for our customers to benefit from the renewable transition, and delays resulting from this investigation may ultimately delay the timing of when our customers could begin receiving these benefits, especially in the current energy cost inflationary environment," Anderson said during the call.

The utility plans to idle all its coal plants by 2028 and cut its carbon emissions 90% from 2005 levels by 2030. Despite the deferral, NiSource said its clean-energy goals remain unchanged. The company said it expects to retire its Michigan City Generating Station sometime between 2026 and 2028.

NiSource also said despite solar development delays, it remains on track to spend $10 billion in capital investments, including $2 billion

R.M. Schahfer coal plant | *NiSource*

on renewable projects, between 2021 and 2024. The utility said it has planned "flexibility in the timing of other gas and electric infrastructure capital investments that can allow adjustments to compensate for delays in renewable generation projects." ■

MISO News

MISO and Members to Discuss Great Resignation

By Amanda Durish Cook

MISO's June listening session with its Board of Directors will concentrate on how the RTO and its members are tackling the nationwide Great Resignation, a recent phenomenon in which employees are quitting their jobs at a record rate.

Speaking at the Advisory Committee's meeting Wednesday, Allegra Nottage, MISO's human resources and chief diversity officer, said the RTO is faced with "inflation and salary pressures" to attract and retain talent. She said the entire electric industry is experiencing similar strain, and MISO leadership would like to hear how its members are navigating the new employment landscape.

Nottage laid out five *questions* for MISO members and organizations to consider ahead of next month's committee meeting during the RTO's quarterly Board Week, to be held in Indianapolis:

- How are organizations within MISO sectors experiencing the Great Resignation?
- How can MISO and members use more diverse hiring practices to fill talent needs of the industry now and into the future?
- Where do MISO sectors see the largest demands for positions, and what is the risk of not being able to fill them?
- Are sectors experiencing salary pressure to retain employees, and if so, what is being done to address the issue?
- How are MISO members thinking about the tensions "between changing expectations and preferences and employer preferences in terms of culture; the way work gets done; where work gets done?"

MISO Carmel, Ind., headquarters | © *RTO Insider LLC*

"The future of work appears to be more hybrid in nature, more flexible in nature, and MISO is interested in how sectors are handling that," Nottage told the Advisory Committee.

At the spring MISO-SPP conference hosted by the Gulf Coast Power Association, MISO CEO John Bear said to retain and attract employees, the RTO plans to review compensation two to three times per year. He said MISO is up against inflation and competing employers that lure employees with double-digit percentage pay raises.

Additionally, stakeholders are asking that they be able to make direct comments to committee members and the board during Advisory Committee meetings. Currently, stakeholders who are not Advisory Committee members are limited to an open mic period at the end of committee meetings to make public comments, usually hours after discussions have wrapped. ■

MISO News

PSC OKs Sale of AEP's Kentucky Operations to Liberty Utilities

By Amanda Durish Cook

Kentucky regulators on Wednesday approved Liberty Utilities' $2.8 billion acquisition of American Electric Power's Kentucky operations while including multiple customer protections.

As part of the deal, Liberty will assume $1.221 billion in debt for AEP subsidiaries Kentucky Power Co. and Kentucky Transmission Co. (*2021-00481*). Liberty is a subsidiary of Algonquin Power and Utilities.

AEP will net $1.4 billion in cash after taxes and transaction fees, which it said it will use to invest in renewable energy in other company subsidiaries outside of Kentucky. Liberty's purchase price includes a $585 million acquisition premium above Kentucky Power's net book value.

AEP in early 2021 announced it was mulling a potential sale of its Kentucky operations.

Liberty said it will retain all 360 Kentucky Power and Kentucky-based AEP employees and will not seek to recover the transaction premium or one-time transition costs in customer rates.

The Kentucky Public Service Commission included several stipulations to make the deal support the public interest.

Among them, the PSC ordered that Kentucky Power's ratepayers receive an initial $30 million to offset the "continued subsidization of transmission investments of other AEP affiliates." After the deal closes, Kentucky Power will continue to be a member of the AEP East Transmission Zone in PJM as a non-affiliated participant. As such, Kentucky Power will continue to pay zonal transmission rates based on a collective transmission investment of AEP operating companies, instead of individual company costs. The PSC estimates that if Kentucky Power doesn't withdraw from the AEP PJM transmission zone, its ratepayers will pay "at least" an additional $15 million annually over the next five years.

The PSC said the customer subsidy fund will continue post-transaction and warned the utilities that it would add another $45 million if Kentucky Power, AEP and Liberty don't fix the pricing issue.

"AEP, Kentucky Power and Liberty are incentivized to fix this subsidization issue with active and immediate advocacy at the federal level," the state commission said.

Implosion of a Big Sandy cooling tower in 2016 | *Independence Demolition*

The parties to the deal also struck a bridge power coordination agreement that will allow AEP to "monitor, operate, and dispatch Kentucky Power's transmission system for up to 24 months" if necessary to navigate the transition. Kentucky Power must remain a PJM transmission owner and load serving entity in AEP's zone through 2024, when it satisfies AEP's preexisting fixed resource requirement plan.

After that, Liberty said it will evaluate the benefits and costs of Kentucky Power's participation in PJM. Liberty must get the commission's permission should it choose to exit PJM.

The PSC also ordered creation of a $43.5 million fund to make up for AEP's overdue restoration of its Kentucky distribution system from past storm damage. The regulators offered strong words regarding the past upkeep of AEP's distribution lines.

"While these expenses are a result of storm damage, they are a direct result of Kentucky Power's underinvestment in its system, including the failure to address appropriate loading levels required for the utility's distribution system," the commissioners wrote. "The commission noted the purpose of the fund is to ensure ratepayers are not harmed post-transaction by AEP's under-investment over the years, and the company's repeated failure to comply with the commission's directives and suggestions to improve the distribution system."

The fund can be used to reduce rates in Kentucky Power's next rate case, the PSC said.

The commission's order also greenlighted Liberty's proposed $40 million fuel adjustment clause (FAC) credit for customers and a three-year deferral of the existing decommissioning rider for the 295 MW Big Sandy plant, a gas-fired facility on the Big Sandy River that was converted from coal in 2016.

The FAC credit will return the $40 million over 18 months between July 1 and Dec. 31, 2023, split 75% to residential customers and 25% to non-residential customers. The PSC said the FAC credit will provide "more transparency and predictability for customers." If Liberty uses the PSC's suggested allocation, a typical residential customer can expect bill credits of almost $33 during the winter months and $1.40 in all other months.

The PSC said that, while the three-year deferral of Big Sandy's coal decommissioning rider will cause a longer recovery period and more costs to customers in the long run, it's necessary for Kentucky Power to take the delay in order to securitize the rider. ■

MISO News

MISO-SPP Joint Study to Focus on M2M Congestion

By Tom Kleckner

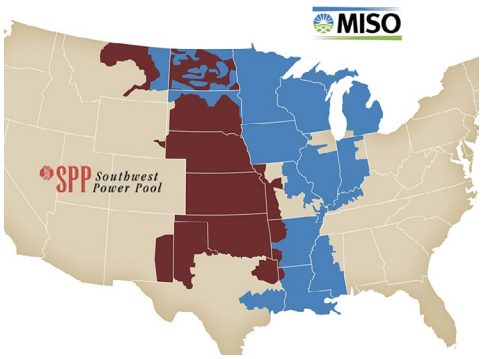
MISO and SPP staff on Friday told stakeholders that this year's coordinated system plan (CSP) study will focus on "potential solutions to historical, persistent congestion issues" on the RTOs' seam.

The study, which is not dependent on other regional or interregional planning processes, will analyze historical market-to-market (M2M) congestion problems and look for transmission solutions that benefit both grid operators.

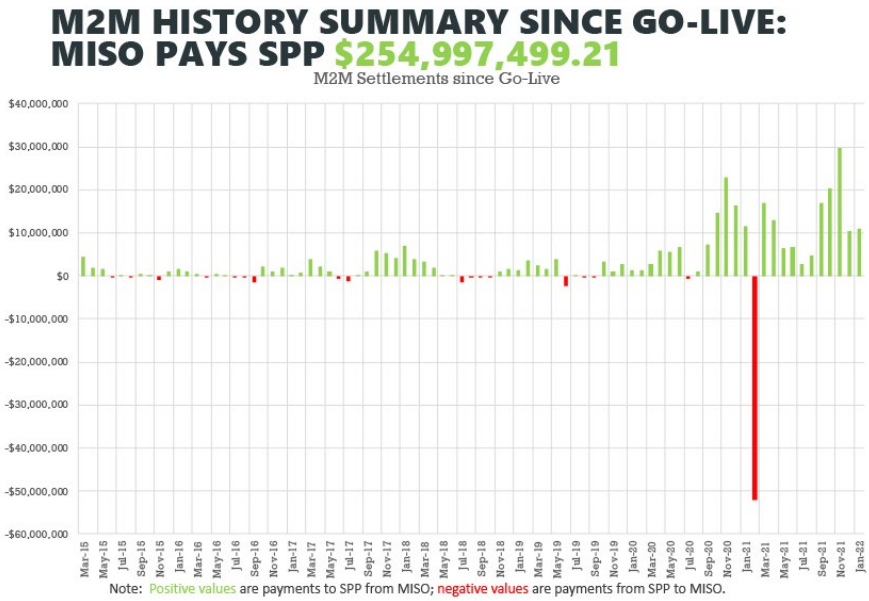
The M2M process has resulted in SPP accruing almost $255 million in settlements from MISO since the RTOs began it in March 2015. Under the process, the grid operators exchange settlements for redispatch based on the non-monitoring RTO's market flow in relation to firm-flow entitlements.

"We're looking at sort of near-term planning horizon," MISO's Ben Stearney told the Interregional Planning Stakeholder Advisory Committee (IPSAC). "We want to target solutions that can be implemented quickly. So really, we're not looking for large expensive, greenfield projects. We're targeting kind of a low-hanging-fruit, quick-hit type of projects."

In their scope *document*, staff said they have been jointly exploring ways to address M2M congestion where a long-term planning horizon study "may not effectively capture certain existing day-ahead or real-time market conditions." They raised the concept of a targeted market efficiency project, similar to that conducted by MISO and PJM, before formally agreeing to use the process in the CSP. (See *MISO, SPP Take on 2nd Interregional Planning Effort*.)



MISO and SPP seams | *MISO and SPP*



MISO has piled up $255 million in market-to-market settlements since 2015 due to SPP. | *SPP*

The RTOs' staffs hope to develop a repeatable process to effectively study persistent congestion on the seam, including a set of appropriate project criteria for inclusion in their joint operating agreement's (JOA) language. They also plan to recommend transmission upgrades using a yet-to-be-determined cost allocation methodology.

The grid operators' JOA requires a CSP be conducted every couple of years to find interregional projects. However, previous, more comprehensive studies have come up empty over cost allocation issues. The MISO-SPP Joint Planning Committee, comprising representatives from each RTO, agreed in March to pursue the new study process.

Asked whether the CSP analysis might find projects that have already been identified by the RTOs' long-term transmission planning efforts already underway, Stearney said those latter studies have longer lead times.

"I don't see that as an issue," he said. WEC Energy Group's Chris Plante offered his company's support for the CSP study.

"I think when we look back at the process that MISO and PJM followed when evaluating targeted market efficiency projects, I think we found that to be a very successful process in terms of identifying extremely near-term, low-dollar cost upgrades that can address some of this congestion," he said.

The RTOs are working to compile two years of historical M2M data and establish a list of candidate flowgates for consideration. They intend to develop the study process and complete the initial assessment this year. However, they pointed out, because the study will require JOA updates to formally recommend any resulting projects, the final tariff language and FERC filings are not expected to be completed until midway through 2023.

Staff will wait until next year to begin the always sticky development of regional cost allocation.

Future IPSAC meetings are scheduled for July 22 and Sept. 23. Additional meetings will be held as needed while the study progresses. ■

Midwest news from our other channels

Purdue and Duke Energy Exploring Small Modular Reactor to Power Campus

NetZero Insider

RTO Insider subscribers have access to two stories each monthly from *NetZero* and *ERO Insider*.

PJM News

PSEG Sees Potential $3 Billion OSW Transmission Spending

Utility Focuses on Clean Energy as Izzo Prepares to Retire

By Hugh R. Morley

Public Service Enterprise Group said last week that it could secure projects costing $1 billion to $3 billion under New Jersey's solicitation seeking proposals for transmission upgrades.

PSEG CEO Ralph Izzo | *National Clean Energy Week*

Speaking during the company's first-quarter earnings call May 3, CEO Ralph Izzo said the utility is hopeful that one or more of the proposals it submitted will be picked by the New Jersey Board of Public Utilities (BPU) to help the agency develop a robust transmission system that will tie New Jersey's offshore wind projects to the grid on land.

The initiative is part of PSEG's sweeping clean energy program now pending as Izzo prepares to step down on Sept. 1, after 30 years at the company and 15 in the top spot. Announcing the retirement in April, *PSEG called Izzo* a "pioneer" who championed clean energy and the "sustainable business strategy" that helped reduce carbon emissions from the company's power generation by 98% since 2006.

As part of a planned leadership change, Izzo will continue as executive chair of the board until his retirement on Dec. 31. Current COO Ralph LaRossa, another 30-year company veteran, will succeed Izzo as president and CEO.

Izzo acknowledged that although the investment in the offshore transmission system "could range" up to $3 billion, it also could be zero. He said the company, which submitted its proposals with Danish offshore wind developer Ørsted, took part in all four public hearings organized by the BPU in the last two months to explore different aspects of the proposed transmission system. The BPU has said it could pick some, all or none of the proposals. (See *NJ Seeks Efficiency, Savings in OSW Transmission Process*.)

PSEG's Hope Creek and Salem nuclear plants | *Public Service Enterprise Group*

"The solutions we submitted range from single collectors at various landing points to a linked transmission network out in the ocean," Izzo said.

"We're not guaranteed anything in that solicitation," he said, but added that "we happen to think we're the best bidder in the lot."

Public Support for Nuclear

Izzo also told investors that the utility plans a $15 billion to $17 billion capital spending program through 2025, the majority of which will support the company's commitment to cut its carbon emissions in line with the Paris Agreement to limit the global average temperature rise to 1.5 degrees Celsius. The investments are aimed at meeting that goal "either through direct carbon emissions reductions, energy efficiency or climate adaptation," Izzo said.

"Based on our initial carbon inventory, our Scope 1 and Scope 2 emissions comprised roughly 15% of our total carbon emissions," Izzo said. "Our challenge, one that we embrace, is to address our largest emissions category, which falls under Scope 3, the largely downstream customer use of our energy products that also includes the emissions profiles of our upstream suppliers.

"We are fully engaged in developing our plans, staffed with technical advisers and internal teams" who are preparing a plan that will go to the U.N. at the end of the year as part of the organization's *"Race to Zero"* initiative, Izzo said. "We are confident that we are creating shareholder value by growing our rate base in alignment with New Jersey's clean energy goals."

Scope 1 emissions are those generated by a company's operations directly under its control, while Scope 2 emissions are those

Mid-Atlantic news from our other channels

Ørsted Inks Labor Agreement for US OSW Construction

NetZero Insider

PJM News

generated by the electricity, steam, heating or cooling a company purchases.

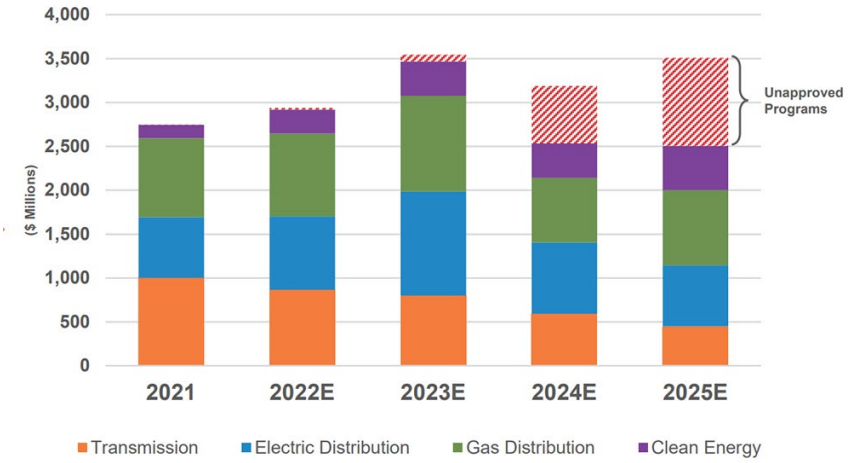
PSEG invested $656 million in the first quarter, part of the expected $2.9 billion in infrastructure spending in 2022 that will be "aligned with New Jersey's clean energy goals," the company said in its presentation.

PSEG in February completed the sale of its fossil plants in New York and Connecticut, and the company last year moved up its pledge to reach net-zero emissions by 2030, rather than the previous goal of 2050.

Nuclear power is expected to play a key role in that strategy. Izzo said he is "hopeful" that a tax incentive to support nuclear plants can be passed by Congress to "preserve the economic viability" of nuclear plants, including those owned by PSEG.

"We have seen a positive shift in public sentiment in support of nuclear power, and its carbon free energy security attributes, since the Russian invasion of Ukraine," he said. "We do think that current markets might make it easier, candidly, in Washington, to score a production tax credit in terms of the impact on the federal budget. And certainly, that would be helpful in New Jersey to reduce the pressure on New Jersey customers."

Such credits also would give stability to nuclear plant owners, by providing financial support for years to come, Izzo said. At present, PSEG must apply every three years to the BPU for financial subsidies to support the utility's three nuclear plants, Hope Creek nuclear power plant and Salem 1 and Salem 2. The BPU, in each of the last two three-year periods, has awarded the plants $300 million under the zero-emission certificate program. (See *NJ Nukes Awarded $300 Million in ZECs*.)



PSEG capital spending 2021-2025E | *PSEG*

He said that the U.S. Department of Energy recently opened a "funding window to help struggling nuclear plants." The department on April 19 said it was *accepting submissions* for the $6 billion Civil Nuclear Credit Program. (See *DOE Launches $6B Nuke Credit Program*.)

But none of PSEG's nuclear plants meet the criteria for funding, Izzo said. The first cycle of awards from the program will "prioritize reactors that have already announced their intention to cease operations," according to *DOE*.

"We will endeavor to obtain the maximum benefit for our nuclear units from the DOE program, should we qualify in future rounds," he said. "However, we do not believe that the DOE grant program provides sufficient revenue stability or visibility needed to make longer-dated fuel and license extension decisions."

Earnings

PSEG reported a net loss of $2 million (-$0.01/share) for the first quarter compared to net income of $648 million ($1.28/share) in the first quarter of 2021, according to *its earnings release*. Non-GAAP operating earnings for the first quarter were $672 million ($1.33/share), compared to non-GAAP operating earnings of $650 million ($1.28/share) in the first quarter of 2021.

The net loss in GAAP reported earnings reflected $674 million of reconciling items, mainly mark-to-market adjustments "related to higher energy prices versus our existing forward-sale contracts," Izzo said.

The results show "solid utility and nuclear operations and rate base growth from regulated investments, as well as lower cost resulting from the completed sale of PSEG Fossil that will benefit first-half 2022 comparisons," he said. ■

PJM News

PPL Earnings up as Rates Set to Rise

By Michael Yoder

PPL reported a positive first quarter during its earnings call on Thursday after announcing earlier in the week that it will raise its default electricity rates by 38% for residential Pennsylvania customers on June 1.

The company reported first-quarter earnings of $273 million ($0.37/share), compared with a first-quarter 2021 net loss of $1.84 billion ($2.39/share). Adjusting for special items, PPL's earnings were $305 million ($0.41/share), compared with $219 million ($0.28/share) a year ago. Some of those items included integration expenses from the planned acquisition of Narragansett Electric from National Grid and last year's non-cash net loss from its discontinued operations associated with PPL's former U.K. utility business, Western Power Distribution.

PPL's rebound comes after the company cut its dividend in half and missed earnings and revenue targets in the fourth quarter of 2021. (See *PPL Announces Losses, Dividend Cut in Q4 Call*.)

This year's rate increase will add about $34/month to the average bill. The residential rate will rise to 12.366 cents/kWh, while small businesses will pay 11.695 cents/kWh.

CEO Vincent Sorgi said PPL is "very focused" on making sure customers are familiar with programs to help lower their rates and to also "provide flexible payment plans" like those instituted at the height of the COVID-19 pandemic.

"Commodity prices are way up this year versus last year," Sorgi said. "That's a pass-through cost for us, but it's upwards this year versus last. It could be as much as 50 to 60%, so it is very significant. We are actively reaching out to our customers to help them."

Narragansett Deal

PPL continues the acquisition process of Narragansett, Sorgi said, with the company receiving approval in late February from the Rhode Island Division of Public Utilities and Carriers. (See *RI Agency Approves PPL Acquisition of Narragansett Electric*.)

The Rhode Island attorney general's office appealed the division's decision to the state Superior Court, receiving a stay of the approval. PPL and other stakeholders provided oral arguments on April 26, with the AG's office contending that the division misapplied the statutory standard for approval and failed to adequately consider Rhode Island's Act on Climate in its analysis.

"We disagree and believe the extensive record and evidence in this case demonstrate that the division properly applied the statutory standard and correctly approved the transaction," Sorgi said. "We continue to believe Narragansett Electric is an excellent fit for PPL and that PPL is an excellent fit for the state of Rhode Island. We remain confident that we will reach a positive outcome in the proceeding."

Kentucky Operations

Sorgi also highlighted PPL's Kentucky segment, which earned 25 cents/share for the first quarter, a 7-cent increase over a year ago and attributable to higher base retail rates that took effect July 21.

Ford Motor Co.'s announcement that it will build a $6 billion battery manufacturing complex within PPL's service territories in Glendale, Ky., "will help put the state at the forefront of the auto industry's transformation to electric vehicles," Sorgi said. To support the project, PPL subsidiary Kentucky Utilities has requested regulatory approval to build two 345-kV and two 138-kV transmission lines and two new substations at an estimated cost of up to $200 million.

Sorgi said Kentucky Utilities is continuing to look for opportunities to advance clean energy technologies, including joining the state's new hydrogen hub initiative in February. "We're excited to join this new hydrogen hub initiative, and we will continue to engage with the Kentucky administration and other stakeholders as the state's clean energy strategy evolves."

He also said that based on PPL's current coal plant retirement schedule, the company expects its coal capacity to be reduced from just over 4,700 MW to about 550 MW in 2050. The remaining capacity is the Trimble County 2 plant in Kentucky, which was completed in 2011.

"There are any number of technology developments, regulatory mandates or circumstances that could impact the timing of the end of this plant's economic life," Sorgi said. "We believe that research and development is key to our clean energy future and fully expect that innovation, technological advances and the relative economics of other cleaner energy sources will support the company's commitment to not burn unabated coal at this facility by 2050." ■

PPL's Trimble County Generating Station in Kentucky may be one of the company's final coal-fired units to remain in operation as it moves from more than 4,700 MW of coal production today to 550 MW in 2050. | *LG&E*

PJM News

Dominion Files to Suspend RGGI Participation

Offshore Wind Project also Discussed During Q1 Earnings Call

By Michael Yoder

Dominion Energy announced Thursday during its first-quarter earnings call that it had filed with the Virginia State Corporation Commission to suspend its rider through the Regional Greenhouse Gas Initiative (RGGI) as the state moves to withdraw from the environmental program.

CEO Robert Blue said Thursday's filing also included a request that RGGI compliance costs incurred through July 31 and not yet recovered, which total about $178 million, be recovered through Dominion Energy Virginia's current base rates.

The SCC in August approved Dominion's request to recover RGGI costs from ratepayers, which the utility estimated would cost the typical residential customer $2.39/month. According to figures supplied by Dominion to the SCC, cited in a *report* released by Gov. Glenn Youngkin (R) in March, the utility expected RGGI participation will cost customers a total of $3 billion through 2045. (See *Youngkin Report: RGGI a 'Direct Carbon Tax' on Va. Ratepayers*.) Youngkin signed an executive order just hours after taking office Jan. 15 to remove Virginia from RGGI, fulfilling a campaign promise.

Blue said Dominion's new proposal filed with the SCC will "provide a meaningful reduction to customer bills" that still allows the company to achieve Virginia's ambitious decarbonization goals.

"While we are committed to the ongoing transition to cleaner and lower carbon-emitting resources, we're concerned that Virginia's linkage to the RGGI program through the Virginia carbon proposal would result in a financial burden on customers with no real mitigation of greenhouse gas emissions regionally," Blue said.

Offshore Wind

Blue addressed upcoming SCC hearings scheduled to begin May 16 on the costs of the company's 2.6-GW Coastal Virginia Offshore Wind (CVOW) project. Dominion announced in November that the projected cost had increased by more than 20% to $9.8 billion, citing "commodity and general cost pressures." (See *Dominion's OSW Project to Cost $9.8B, up from $8B* and *Va. AG, SCC Staff Question Costs on Dominion's OSW Project*.)

| *Dominion Energy*

Blue said contracts for the primary offshore equipment suppliers were completed and signed in late 2021, including for the foundations, transition pieces, substations, transportation of components, installation, and subsea cabling and turbine supply.

"Offshore wind, zero fuel costs, and transformational economic development and jobs benefits are needed now more than ever," Blue said. "The project will also propel Virginia closer to achieving its goal to become a major hub for the burgeoning offshore wind value chain up and down the country's East Coast."

Blue was asked about the status of the SCC approval process and the "back-and-forth" between the company and regulators in the proceeding.

Dominion is "pleased" with the project's progress, Blue said, and expects to have a final order from the SCC in early August. The company's rebuttal testimony showed under different scenarios that the project is beneficial to customers, he said, pointing to PJM's load forecast showing increased energy sales in Virginia.

"I feel even stronger, as now that all the testimony is in, we have a very strong case on offshore wind," Blue said. "The legislation, the Virginia Clean Economy Act, lays out the parameters for spending that is presumed prudent, and we've clearly met all of those."

Blue was also asked if there was an opportunity to settle any disputes with the concerned parties before the SCC's decision in August. He said Dominion is always open to finding a "constructive settlement" on regulatory issues.

"If there were an opportunity to settle in a constructive way, we'd obviously do that," Blue said. "I expect you to hear that from every party to every litigated matter. But we've got a schedule, and that's what we're following."

Earnings

Dominion reported first-quarter net income of $711 million ($0.83/share), compared with net income of $1 billion ($1.23/share) for the same period in 2021. Operating earnings for the first quarter were $1 billion ($1.18/share), compared to $893 million ($1.09/share) last year.

The company affirmed its full-year 2022 operating earnings guidance range of $3.95 to $4.25/share and its long-term earnings and dividend growth guidance. Dominion expects second-quarter operating earnings in the range of 70 to 80 cents/share.

Dominion's stock was up 53 cents (0.64%), finishing at $83.04 on the same day the Dow Jones Industrial Average lost more than 1,000 points for its worst day since 2020. ■

SPP News

OGE Q1 Earnings up from 2021

OGE Energy on Thursday announced first-quarter earnings that were more than quintuple those of last year's first quarter, which was marred by the severe winter storm.

The Oklahoma City-based company *reported* earnings of $279.5 million ($1.39/diluted share), compared to $52.7 million ($0.26/diluted share) for the same quarter a year ago. The increase was driven by higher operating revenues at OGE's Oklahoma Gas & Electric subsidiary, partially offset by increased depreciation on a growing asset base and higher operations and maintenance expenses.

"Solid execution and load growth in the first quarter have us on plan for the year," CEO Sean Trauschke said in a statement.

OGE's load growth came in at 1.3% in the quarter, helped by a 2.7% unemployment rate in Oklahoma.

The company is continuing its exit from its joint partnership with CenterPoint Energy in Enable Midstream Partners, which they sold to Energy Transfer Partners late last year. (See *OGE, CenterPoint Complete Enable's Disposal*.)

OG&E lineman at work late in the day | *OGE Energy*

OGE has sold 21.75 million units of Enable through April and received $246 million in net pre-tax proceeds this year, which it plans to use in retiring short-term debt. Trauschke said the company expects to exit the majority of its position in Enable by the end of the year.

The company's share price lost 34 cents during the day's sell-off on Wall Street, closing at $39.34. ■

— Tom Kleckner

SPP News

SPP Briefs

SPP Takes AECI Dispute over Winter Storm Charges to FERC

SPP has filed a request with FERC that the commission take immediate action in a dispute between the grid operator and Associated Electric Cooperative Inc. (AECI).

The RTO filed its *Section 207 request* on April 20, asking FERC to assert its exclusive or primary jurisdiction and determine that it properly compensated AECI for emergency power provided during the February 2021 winter storm as it scrounged for power from its neighbors to meet demand.

It also asked the commission to find that:

- the transactions in question are governed by SPP's tariff;
- AECI is entitled only to the compensation provided for under the tariff under federal law; and
- the RTO correctly calculated payments and paid the cooperative all the compensation owed as an SPP market participant.

SPP requested the commission act expeditiously to preserve its exclusive jurisdiction over the issues in dispute. AECI has taken its complaint to the U.S. District Court for Western Missouri, where it filed in February (6:22cv3030).

AECI is seeking to recover $37.64 million from SPP for the emergency power it provided during the storm. That includes $29.4 million for the costs to provide the power and $8.24 million in day-ahead residual unit commitment (DARUC) make whole payments SPP has charged the cooperative.

AECI said it was obligated to reimburse the market for other resources that were committed during the emergency events, but did not itself receive any such payments for its resources. It said SPP has not reimbursed the cooperative for any of the make whole payments.

The organization's representatives discussed the dispute several times last year and this year, SPP said. It said AECI did not follow all of the JOA's dispute-resolution's formal steps and that no mutual resolution was reached through the informal discussions.

SPP has filed a motion to dismiss the lawsuit. An RTO spokesperson said the grid operator is waiting on orders from FERC and the court and is unable to provide further comment.

MMU Releases Winter Market Report

Wind energy grabbed a 42% share of SPP's generation mix during the winter, a 35.5% increase from the previous winter, according to the Market Monitoring Unit's (MMU) *quarterly State of the Market report*.

The MMU said wind generation was the primary fuel type during the most recent winter, an increase from 31% the prior winter. Coal and natural gas thermal generation decreased between the two winters, from 38% to 33% and from 21% to 16%, respectively.

Other highlights from the report, which covered December 2021 to February 2022:

- Day-ahead prices increased from an average of $18.18/MWh during the 2020 winter to $27.95/MWh in the most recent winter, a 54% increase. Real-time prices increased from an average of $16.93/MWh two years ago to $24.32/MWh in 2022, a 44% increase.
- Average winter monthly outages and derates returned to normal after the 2021 winter storm, totaling 29,100 GWh.
- Overall, real-time market congestion for intervals with breached flowgates increased to 82% of all intervals, a substantial increase from 2021 (59%) and 2020 (34%). Analysis indicates that over the last three winters, the percentage of intervals with breached market-to-market (M2M) flowgates has increased from 33% of all intervals to 82%, indicating M2M flowgates are a large factor in increased flowgate breaches.
- Transmission congestion rights (TCR) funding during the winter came in at 84%, down from 98% the winter before. The MMU partially attributed the low funding levels to significant outages not found in the TCR model as underfunding worsened to $101 million, up $93 million from the previous year.
- The 2021 frequently constrained area (FCA) study had similar congestion patterns as previous years, but with more frequent and higher congestion costs. The study identified the southwest Missouri and southeast Oklahoma areas to be added as FCAs.

The MMU will host a webinar to discuss the report on a to be determined date.

Competitive Tx Process Improvements

The Transmission Owner Selection Process Task Force is soliciting stakeholder feedback as it works to improve the RTO's competitive transmission project selection process. The feedback is due this Wednesday.

SPP has conducted a similar process after each of the four competitive projects it has awarded. The most recent came last month when the grid operator's board approved NextEra Energy Transmission Southwest's selection to build a 48-mile, 345-kV transmission line in Oklahoma. (See *SPP Board of Directors/Markets Committee Briefs: April 26, 2022*.)

The task force is conducting its work even as FERC has backed off some of its Order 1000 requirements. The commission last month issued a transmission planning rules proposal that would offer incumbent TOs a federal right of first refusal on certain regional projects. (See *ANALYSIS: FERC Giving up on Transmission Competition?*) ■

— Tom Kleckner

Wind energy provided by EDF Renewables' Rock Falls wind facility in Oklahoma and other facilities accounted for more energy production than any thermal resource in SPP this last winter. | *EDF Renewables*

Company News

Vistra: Hedged for Tight Gas Market Conditions

By Tom Kleckner

Vistra executives expressed confidence in their hedging strategy Friday, telling financial analysts during their first-quarter earnings call that the company is "very well positioned" to take advantage of a tight natural gas market.

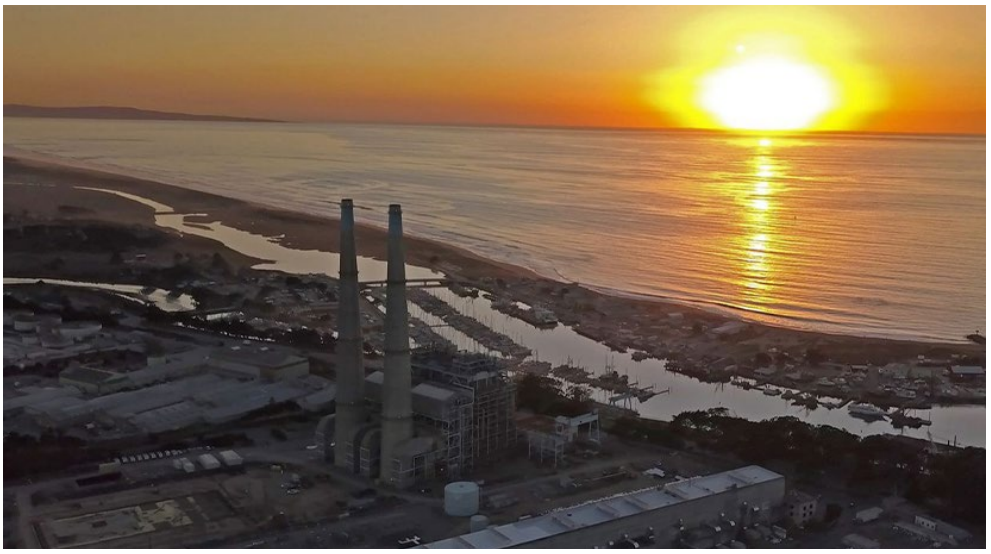
"In a nutshell, the U.S. natural gas complex is already tight and likely to be increasingly tied to world gas economics," CEO Curt Morgan said in his prepared comments. "As an expanding pivotal supplier on the world stage, we expect U.S. supply and demand to tighten even further. Higher natural gas prices in turn lead to higher power prices, and Vistra is long power and natural gas equivalents."

Vistra's retiring CEO said the company "is in the right position to capitalize on the strong forward curves" and that its "prudent" hedging strategy has locked in value through 2025.

"The forwards have also risen materially out to 2030. The market clearly believes there has been a fundamental shift in the energy commodity complex," Morgan said. "This shift ... offers continued opportunities to hedge more while remaining mindful of the potential liquidity requirements against further commodity price moves."

The Irving, Texas-based company *released* first-quarter adjusted EBITDA from ongoing operations of $547 million. That is a more than three-fold improvement over the same period the year before, when Vistra reported a loss of $1.2 billion following the February winter storm disaster. (See *Vistra's Winter Storm Loss Deepens to $1.6B*.)

Vistra uses adjusted EBITDA as a performance measure, saying it believes that outside analysis of its business is improved by visibility into both net income prepared in accordance with GAAP and adjusted EBITDA.



Vistra expects its Moss Landing storage facility in California to resume operations before the summer heat. | *Vistra*

The company reaffirmed its previously announced guidance of adjusted EBITDA from ongoing operations of $2.81 billion to $3.31 billion. Morgan noted that Vistra, the largest generator in the ERCOT market, still has the summer months ahead of it and "carries a little more open position than in the past for risk management purposes."

"We reaffirm this guidance with increased confidence given the favorable energy commodities markets we continue to experience," he said.

Wall Street reacted favorably Friday, driving the company's share price to its 52-week high of $27.10. Vistra's stock closed at $26.62, a $1.21 (4.8%) gain on the day. The share price has gained 65.9% over the last year, when it stood at $16.05.

Vistra continues "sensibly progressing" its zero-carbon generation fleet, having completed construction of two solar facilities totaling 158 MW of capacity and a 260-MW energy storage facility, all in Texas. In California, it is installing replacement connectors in the water-based heat suppression safety systems at its Moss 300 and Moss Landing 100 storage facilities.

The earnings call was Morgan's last at CEO. He announced his retirement in March and is transitioning his leadership role to CFO Jim Burke. (See *Burke to Succeed Morgan as Vistra's CEO*.)

"I'm proud of all that we've accomplished, and [I] believe Vistra is well positioned to drive continued industry leadership," Morgan said. ■

National/Federal news from our other channels

Report: Electric Heavy-duty Trucks Can Now Replace Some Diesels — NetZero Insider

Cancel: Info Sharing Critical in Response to Russo-Ukraine Conflict — ERO Insider

NERC Hits SPP, SRP for $406K in Penalties — ERO Insider

RTO Insider subscribers have access to two stories each monthly from *NetZero* and *ERO Insider*.

Company News

Exelon Reports Increased Q1 Earnings off Utility Rates

Company Highlights State EV Targets

By Michael Yoder

Exelon reported a positive first quarter to investors and analysts Monday, its first earnings report since it completed the separation of its former power generation and competitive energy business, Constellation Energy, in February.

Net income from continuing operations for the first quarter of 2022 decreased to $481 million ($0.49/share), compared to $525 million ($0.53/share) for the same period in 2021. Adjusted to exclude the costs of the Constellation separation, however, earnings increased to $634 million ($0.64/share) from $542 million ($0.55/share).

Company officials said the results reflected higher earnings from Commonwealth Edison, resulting from an increased rate base, and increased returns on equity for PECO Energy, Baltimore Gas and Electric and Pepco Holdings Inc.

Exelon CFO Joe Nigro said the earnings were "driven in part by the recovery of costs associated with ongoing infrastructure investments to improve reliability and resiliency, enhance service for our customers and prepare the grid for a clean energy future." Exelon reaffirmed its full-year adjusted operating earnings guidance range of $2.18 to $2.32/share and a long-term operating earnings growth target of 6 to 8% through 2025.

"Our grid modernization investments, enabled by constructive regulatory relationships, continue to drive solid operational results and stable earnings across our utilities," Nigro said.

CEO Chris Crane said the separation of Constellation "really unlocked significant value" for shareholders, with a total return of 76% through the time of the announced deal more than a year ago through mid-April of this year.

"The first quarter was a milestone for Exelon as we successfully completed our separation of the generation business and embarked on our path as the nation's premier transmission and distribution utility company," Crane said.

Electric Vehicle Initiative

Nigro spoke about the adoption of electric vehicles and Exelon's strategy in helping in the transition to EVs, saying they are "unquestionably a key enabler for reducing emissions."

Jurisdictions in which Exelon operates are targeting 4.2 million EVs on the road over the next 25 years, a twentyfold increase from the end of 2021, he said.

"As our states make this transition over the coming decades, Exelon is poised to support our customers through investments such as upgraded distribution circuitry, substations and ultimately transmission," Nigro said. "Transforming the grid over this period to meet the increased standards required by EVs, along with other expanded and innovative uses of the grid, will require significant investment."

COO Calvin Butler said Maryland wants 300,000 EVs on the road by 2025, while New Jersey wants 330,000 by 2025 and 2 million by 2035. Current Illinois law requires 1 million EVs by 2030, and Delaware is looking for 20% of its registered vehicles to be electric by 2025.

"That just goes to show you the opportunity," Butler said. "And when you look at the infrastructure that is going to be required to meet that and all of our capital plan, we see the opportunity across the Exelon utilities. It's all different but significant opportunity for us to be partners in building out that infrastructure and preparing the grid." ■

Exelon continues to advance programs supporting EVs throughout its service region. | *Exelon*

Company News

Winter Storms Reduce Duke Energy's Q1 Earnings

But Revenues Increased Compared to a Year Ago

By John Funk

Higher operating costs tied to an increase in winter storms drove down Duke Energy's first-quarter earnings despite an uptick in revenues from increased demand for both power and natural gas.

Duke on Monday reported first-quarter earnings of $1.08/share compared with first-quarter 2021 earnings of $1.25/share. Total revenues for the quarter were $7.1 billion, a 16% increase from $6.1 billion in the first three months of 2021.

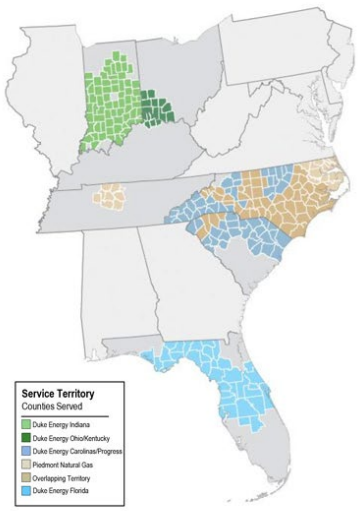
The cost of coal ash cleanup in Indiana cost the company about $250 million. Severe winter storms in the Carolinas were the primary expense drivers. The storms alone reduced earnings per share by 7 cents, the company said.

Duke fielded crews of nearly 19,000 employees to restore power to more than 1 million customers after a series of winter storms, the highest number in eight years, swept through the region.

Duke Energy CEO Lynn Good | *Duke Energy*

CEO Lynn Good said despite the increase in expenses for storm restoration operations in the first quarter, the company is reaffirming its full-year earnings guidance range of $5.30 to $5.60/share, with a midpoint of $5.45.

"We're also reaffirming our long-term EPS growth rate of 5 to 7% through 2026, at the midpoint of our original 2021 guidance range," Good told analysts at the start of the company's earnings call. "We're monitoring economic trends and will take action if necessary as we continue to execute the important strategic work we have underway in the Carolinas, Indiana and Florida."



South Carolina	▪ Potential legislation for storm cost securitization
Florida	▪ Filed updated 10-year storm protection plan (2023-2032) in April; includes $7 billion of capital investment focused on grid hardening ▪ Completed Park & Plug pilot program, installing 627 EV charging stations in public spaces and on thoroughfares
Indiana	▪ Issued RFPs for up to 2,400 MW of new generation in February, in advance of CPCN filing by year end ▪ Completed TDSIC 2.0 hearing in March
Ohio / Kentucky	▪ Anticipate DE Ohio-Electric rate case hearing in the summer
Natural Gas LDCs	▪ Piedmont South Carolina rate case hearing in August ▪ In April, Tennessee passed legislation enabling investment in low-to-zero emission capital projects for innovative natural gas resources

Duke Energy provided investors with a summation of upcoming regulatory issues, including a long-term $7 billion "grid hardening" investment in Florida and up to 2,400 MW of new generation in Indiana. | *Duke Energy*

The plan, in accordance with legislation (H.B. 951) passed a year ago, will lay out how Duke will lower carbon emissions by 70% by 2030 compared to 2005 levels and achieve net-zero emissions by 2050. Once approved, the plan must be updated every two years.

"The plan will outline multiple portfolios to achieve the 70% carbon-reduction target, including proposals around timing of coal plant retirements and resource additions," Good said.

"We expect substantial solar and battery additions, demand-side management and energy efficiency opportunities in every pathway. Onshore and offshore wind will be presented for consideration, as well as small modular nuclear reactors. Each portfolio has been rigorously tested for reliability and affordability for our customers."

The company is planning to file a rate case in North Carolina, as permitted by H.B. 951.

In Florida, Duke is committed to spending $7 billion over the next 10 years, including measures to harden the grid to resist storm damage.

And in Indiana, the company has proposed building 2,400 MW of new generation, including 1,100 MW of renewables and 1,300 MW of "dispatchable generation," including new gas turbine power plants and batteries, before it can close its remaining coal plants. ■

Duke Energy's first quarter revenues were higher than a year ago, but increased storm damage expenses reduced net earnings. | *Duke Energy*

Company Briefs

ACORE Announces New Executive VP of Policy and Programs

The American Council on Renewable Energy (ACORE) last week announced that José Zayas will join the organization as the executive vice president of policy and programs, effective May 16.

Prior to joining ACORE, Zayas was a senior vice president of Eagle Creek Renewable Energy, overseeing their innovation, project management and partnership portfolio. He also previously served as executive director of the Wind and Water Power Technologies Office at the Department of Energy.

More: *ACORE*

Mountain Valley Pipeline to Seek New Permits

Mountain Valley Pipeline last week said it will again seek new permits that have twice been denied by the courts, delaying its completion to late 2023 and increasing the project's cost to $6.6 billion.

"After engaging with the federal agencies and evaluating all options, we believe the best path forward for MVP's completion is to pursue new permits," Chairman and CEO Thomas Karam said.

In late January, the 4th U.S. Circuit Court of Appeals struck down a U.S. Forest Service permit allowing the pipeline to pass through 3.5 miles of the Jefferson National Forest in Virginia. The following month, the same panel invalidated a biological opinion from the U.S. Fish and Wildlife Service, which concluded the pipeline would not jeopardize local endangered species. A few weeks later, the U.S. Army Corps of Engineers announced it would put on hold the company's latest permit application.

Assuming that permits are reissued, Mountain Valley said it plans to restart construction next spring or summer and finish the job in four to five months.

More: *The Roanoke Times*

Nuclear Reactor Company NuScale Begins Trading on Wall Street

Shares in Oregon nuclear energy company NuScale Power began trading on May 3 on the New York Stock Exchange.

NuScale went public by merging with an investment fund known as a special purpose acquisition company. The company said it has an enterprise value of $1.9 billion, including the value of its debt. Shares climbed 55 cents on its first day to close at $10.55

The company, which was founded in 2007 with technology developed at Oregon State University, says its reactor design is safer to operate and less expensive than conventional nuclear reactors. Still, NuScale needs key approvals from federal regulators, and it must demonstrate its technology works as intended.

More: *The Oregonian*

SEIA Launches Nonprofit to Alleviate Clean Energy Roadblocks

The Solar Energy Industries Association (SEIA) last week announced it is launching a 501(c)3 nonprofit to accelerate the transition to carbon-free electricity through clean energy research and analysis.

The Solar and Storage Industries Institute (SI2) will serve as SEIA's charitable and educational arm, using research, public education initiatives and policymaker engagement to remove barriers to clean energy deployment. It will propose and incubate new solutions that encourage the growth of the solar and storage industry, as well as tackle some of the biggest challenges facing the industry.

David Gahl, SEIA's current senior director of state policy, will lead SI2 and serve as the institute's first executive director.

More: *SEIA*

Shell Posts Record Quarterly Profit

Shell last week reported a record first-quarter profit of $9.13 billion, boosted by higher oil and gas prices, stellar refining profits, and the strong performance of its trading division, the company said.

Shell beat its previous highest-quarterly-profit mark recorded in 2008 even after writing down $3.9 billion post-tax as a result of its decision to exit operations in Russia.

More: *Reuters*

Texas Companies Partner to Move CO_2 Along the Mississippi River Corridor

Texas Companies EnLink Midstream and Oxy Low Carbon Ventures last week announced they have signed an agreement to transport carbon dioxide along the Mississippi River corridor to a planned sequestration facility in the Baton Rouge metro area.

EnLink Midstream will use existing pipelines and build new lines to transport carbon dioxide to Oxy Low Carbon Ventures' planned sequestration facility in Livingston Parish, which is leasing 30,000 acres of land from Weyerhaeuser for the facility.

The construction timeline for the Livingston facility is uncertain.

More: *The New Orleans Advocate*

Federal Briefs

April Sets Record for Highest CO_2 Levels in History

Levels of carbon dioxide reached the highest levels on record for any calendar month during April, averaging 420 parts per million (ppm) for the first time since observations began in 1958, according to new data from the Scripps Institution of Oceanography.

April's concentration of 420.02 ppm was up from 316 ppm at the start of the Mauna Loa Observatory record.

The 400 ppm mark was eclipsed in 2013; CO_2 amounts have increased by more than 2 ppm each year.

More: *Axios*

BOEM Approves Environmental Assessment for Humboldt Wind Area

The Bureau of Ocean Energy Management last week announced it has finished its environmental review for future offshore wind farm development in the Humboldt

Wind Energy Area — a 130,000-acre parcel located 20 miles off the northern California coast.

The review issued a finding of no significant impact, allowing the process toward a lease sale to move forward.

If developed, the area could generate up to 1.6 GW of renewable energy for California's grid. It would be among the first full-size commercial offshore wind lease areas on the West Coast and would contribute about 5% of the Biden administration's target of 30 GW of U.S. offshore wind capacity by 2030.

The next step would be to move to a lease auction, followed by filing of a construction and operations plan by the successful bidder.

More: *The Maritime Executive*

DOE Announces Funding for Agrivoltaic Research

The Department of Energy's Solar Energy Technologies Office last week announced the Foundational Agrivoltaic Research for Megawatt Scale (FARMS) funding opportunity, which will award $8 million in funding for projects that examine how agrivoltaics can scale up to provide new economic opportunities to farmers, rural communities and the solar industry.

Agrivoltaics is defined as agricultural production — such as crop production, livestock grazing and pollinator habitat — that exist underneath solar panels and/or between rows of solar panels.

The DOE expects to make up to six awards under FARMS, each ranging from $1-$2 million.

More: *Energy.gov*

Electric Bills to Continue to Rise

The national average residential electricity rate was up 8% and 4% this January and February, respectively, from the previous year, according to the EIA.

The national average rate in the first two months of the year was nearly 14 cents per kWh. The EIA forecasts that rates a year from now will average about 15 cents per kWh, or $150 a month for the typical household that uses 1,000 kWh.

The immediate reason for the jump in rates is that the war in Ukraine has driven up the cost of natural gas, which is burned to produce about 40% of America's electricity. Rates may also continue to rise at a rapid clip for years due to utilities and regulators realizing they need to harden grids against natural disasters linked to climate change.

More: *The New York Times*

Government to Delay Water Releases from Lake Powell

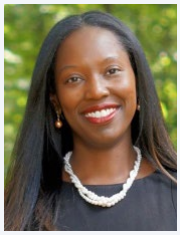
The Interior Department last week announced that it will retain some water in one of the Colorado River's major reservoirs, describing it as an extraordinary action to temporarily stave off increased uncertainty in water and electricity supplies in the West.

The decision to keep more water in Lake Powell, rather than releasing it downstream to the other major reservoir at Lake Mead, comes as both are at record-low levels after 20 years of drought. The department said the decision will keep the lake at a level at which it can continue generating hydropower for the next 12 months.

All told, the actions will result in about a million acre-feet of additional water in Lake Powell (about 15% of its current volume). Lake Mead is currently at 31% capacity, and because it gets almost all its water from releases from Powell, the decision will cause it to fall even lower.

More: *The New York Times*

White-Newsome Named Sr. Director of Environmental Justice for CEQ



The White House last week announced it has appointed **Jalonne White-Newsome** as the Council on Environmental Quality's (CEQ) senior director for environmental justice. White-Newsome will succeed Cecilia Martinez.

White-Newsome founded the equity-focused consulting firm Empowering a Green Environment and Economy and led the Washington office of WE ACT for Environmental Justice.

The CEQ coordinates the federal government's environmental efforts and advises the president on the environment, climate change, environmental justice and conservation efforts.

More: *Inside Climate News*

State Briefs

CALIFORNIA

State Preparing for Summer Shortfall

Officials from the Public Utilities Commission, Energy Commission and CAISO last week said the state will likely have an energy shortfall this summer as threats from drought, extreme heat and wildfires, and current solar industry problems create challenges for the grid's reliability.

Models assume the state will have 1,700 fewer megawatts of power than it needs during the times of highest demand — typically early evening as the sun sets — in the hottest months when air conditioners are in full use. Under extreme circumstances, the shortfall could be as much as 5,000 MW.

More: *Los Angeles Times*

FLORIDA

TECO Pleads Guilty, Faces Fine in 2017 Explosion

Tampa Electric (TECO) last week plead guilty to violating Occupational Safety and Health Administration standards when an explosion led to the deaths of five workers at its Apollo Beach power plant in 2017.

The plea agreement requires Tampa Electric to pay up to a $500,000 fine. The government will ask for a sentence of three years' probation, including payments to the victims' families and requiring the company to implement a safety compliance plan. A TECO spokesperson said the families have already been paid.

The explosion happened in June 2017 when a group of workers were trying to dislodge a blockage of slag, a molten coal byproduct, from a cooling tank. The slag gushed from the tank, killing four and

seriously injuring two others, one of whom later died.

More: *Tampa Bay Times*

INDIANA

CenterPoint to Acquire More Solar Power

CenterPoint Energy Indiana South last week received approval from the Utility Regulatory Commission to purchase an additional 335 MW of solar energy.

The agreements include 185 MW of solar power under a 15-year power purchase agreement (PPA) from Oriden, which is developing a project in Vermillion County, as well as 150 MW under a 20-year PPA from Origis Energy, which is developing a project in Knox County.

More: *Inside Indiana Business*

LOUISIANA

Lawmakers Propose Study for Wind Energy Pilot Project in Gulf

The House of Representatives last week formally requested that the Public Service Commission study the benefits, costs and best ways of achieving an offshore wind pilot project in the Gulf of Mexico by 2026.

The request became official with the adoption of Resolution 25, which was sponsored by Rep. Joseph Orgeron (R).

Studies show Gulf wind power is one of the largest untapped energy resources in the nation, as the Department of Energy's National Renewable Energy Laboratory found winds can provide double the energy currently being used in all five Gulf states.

More: *Louisiana Illuminator*

MARYLAND

PSC Commissioner Herman Retires

Commissioner **Mindy Herman**, who has been a member of the Public Service Commission for nearly five years, announced that she will retire, effective May 4.

Herman was first appointed to the PSC by Gov. Larry Hogan in 2017.

Patty Bubar has been appointed to replace Herman, and her first day will be May 18. Bubar's appointment will require confirmation by the Senate, but she will have full voting rights in the interim.

More: *Maryland PSC*

NEW HAMPSHIRE

PUC Approves Energy Efficiency Plan

The Public Utilities Commission last week approved a state energy efficiency plan that authorizes spending $223.7 million across seven energy efficiency programs through 2023.

The plan includes residential, commercial and industrial programs, with rebates and incentives covering things such as home and building weatherization, heating and hot water equipment upgrades, lighting improvements, and energy-efficient appliances. It also includes $3.9 million to help cities improve the efficiency of municipal and school buildings.

More: *New Hampshire Bulletin*

OHIO

Crawford County to Restrict Industrial Wind Development

Crawford County commissioners last week voted 2-1 to restrict industrial wind farm development in all unincorporated areas of the county.

The resolution effectively bars construction of Apex Clean Energy's 300-MW Honey Creek industrial wind farm for now.

Senate Bill 52, which became law in July, significantly changed state laws governing siting requirements for industrial solar and wind projects and gave county commissioners the ability to prevent Power Siting Board certification of certain facilities. It also gives supporters the ability to file petitions forcing a November referendum vote on the issue, which could overturn the commissioners' action.

More: *Bucyrus Telegraph-Forum*

Democratic Party Sues DeWine over FirstEnergy, Nuclear Bailout Records

The Democratic Party last week filed a lawsuit against Gov. **Mike DeWine's** administration, saying they are breaking the state's public records law by turning over documents with information blacked out and are demanding the documents related to the House Bill 6 corruption scandal be turned over without redactions.

Democrats are searching for connections between DeWine and two FirstEnergy executives who admitted bribing former House Speaker Larry Householder and former Public Utilities Commission Chair Sam Randazzo. Meanwhile, DeWine's office said the lawsuit does not identify specific redactions the ODP takes issue with and it is positive none of the redacted events were related to HB 6 or HB6 legislative strategy.

More: *WKSU*

Union County Court Rejects Pipeline Eminent Domain

Judge Mark S. O'Connor last week rejected Columbia Gas of Ohio's request to approve eminent domain to install a pipeline through preserved farmland.

Columbia Gas filed petitions asking the court to allow the company to use eminent domain to obtain easements for its pipeline; however, O'Connor dismissed the petitions and encouraged further mediation. The decision was not based on ag easements already in place on the land, but an inconsistency between the easement language approved by the Power Siting Board and what was presented to the court. He disagreed with the argument that the existing ag easement should protect the land from eminent domain.

The Power Siting Board approved the project in August 2020, with construction scheduled to start in February 2021. Columbia Gas won't be able to start construction until it holds easements for the entire route.

More: *Farm and Dairy*

SOUTH CAROLINA

Judge Approves More Refunds for Nuclear Debacle

A judge last week approved $61 million in a second round of refunds for Dominion Energy customers after the utility poured billions of dollars into the V.C. Summer Nuclear Station that was never completed.

The agreement will split the $61 million based on power use by residential, business and industrial customers during a decade of planning and construction for

the nuclear station, according to reports.

Four executives of the utility or company that was building the reactors have been indicted or have pleaded guilty to criminal charges in the failure.

More: *The Associated Press*

VIRGINIA

DEQ Awards $14M for Clean School Buses

The Department of Environmental Quality last week announced more than $14 million in funding for public schools to replace old diesel school buses with all-electric buses.

These funds, made through the Clean School Bus Program, complement more than $10 million awarded last year to replace 72 diesel school buses in 17 districts with electric and propane buses.

The funds will come from Virginia's $93.6 million allocated in the Volkswagen Environmental Mitigation Trust.

More: *Virginia Department of Environmental Quality*

WYOMING

PacifiCorp Avoids Regulatory Closure at Jim Bridger

The EPA last week said the coal-fired Jim Bridger plant will remain in operation pending a second revision of the state's regional haze compliance plan.

The federal agency confirmed it has no plans to order PacifiCorp to shut down Unit 2 — among four coal-burning units at the plant — despite blowing past a Jan. 1 deadline to install haze pollution controls. The EPA cited a sue-and-settle consent decree between PacifiCorp and the Department of Environmental Quality. Among other actions, the decree sought to avoid potential corrective actions from the EPA by proposing a new revision of Regional Haze State Implementation Plan.

More: *WyoFile*