RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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

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Dominion Opts out of PJM Capacity Auction

18 GW of Capacity Subtracted as Utility Chooses FRR Option

By Rich Heidorn Jr.

Dominion Energy Virginia has abandoned PJM's capacity market over concerns the minimum offer price rule (MOPR) will undermine its ability to meet Virginia's ambitious renewable energy targets.

The two-unit, 1,672-MW North Anna Power Station is among more than 60 generating units Dominion Energy Virginia is withdrawing from the PJM capacity market. | *Dominion Energy*

The utility confirmed Wednesday it has chosen the fixed resource requirement (FRR) for capacity year 2022/23 for more than 60 generating units totaling more than 18.1 GW. That represents about 11% of the 163.6 GW that cleared in the 2021/22 BRA in May 2018.

All told, 175 generating units have declared they will choose the FRR for the Base Residual Auction on May 19, the second highest on record and more than double the 85 units that chose the FRR option for 2021/22.

Dominion spokesman Rayhan Daudani told *RTO Insider* on Wednesday that the utility

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Dominion Confident in OSW Price Despite Rising Costs (p.31)

Biden's Support for Nuclear 'Too Late' to Save Exelon Plants (p.32)

Revamped Texas PUC Faces 'Heavy Lift'

By Tom Kleckner

Texas' two newest utility regulators conducted their first open meeting last week as they begin to come to grips with the amount of work in front of them.

PUC Chair Peter Lake | *Texas PUC*

Chair Peter Lake and Commissioner Will McAdams — appointed, approved by the state Senate and sworn in to the Public Utility Commission all last month — took some time to get acclimated to their new surroundings.

"I think it is fair to say that I'm still in shock that I am sitting at this table," McAdams told Lake during the meeting Thursday. "Years ago, when I was a [legislative] staffer in the audience, I never thought I would be sitting in this seat nor with a caliber of a partner and colleague in yourself. I'll do everything I can to help you and be a good partner."

Neither McAdams nor Lake have a strong utility background, although Lake chaired the Texas Water Development Board, the state's primary water-planning and financing agency, before he was tapped to lead the PUC. McAdams comes to the commission from the Associated Builders and Contractors of Texas lobbying group, where he was president after 10 years as an aide in the Texas Legislature.

"It's been a big couple of weeks," Lake said.

Before Lake enthusiastically gaveled the meeting to a close, he and McAdams reviewed the PUC's rulemaking calendar, which is filed monthly. In the weeks ahead, they will be considering a proposal for decision on water utili-

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Regulators, ERCOT Stakeholders 'Meet' for First Time (p.9)

MISO Tells Members to Prepare for Summer Emergencies

Transmission tower damaged by Hurricane Laura | *Entergy*

By Amanda Durish Cook

In what has become a familiar refrain, MISO said it could get into hot water this summer if demand spikes and generation trips offline.

The grid operator says it has 146 GW of total capacity to cover a projected summer peak of 122 GW. However, staff told stakeholders during a May 4 summer readiness *workshop* that emergency declarations could be made in all three months.

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MISO: Electrification Leads to Winter Peaks, Soaring Load Growth (p.19)

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***NetZero Insider* is now live!**
See p.28 for this week's coverage.

FERC/Federal News

TVA May Retire All Coal by 2035

By Amanda Durish Cook

TVA CEO Jeff Lyash | *Atlantic Council*

Tennessee Valley Authority CEO Jeff Lyash last month hinted that the federal corporation could cease all coal use by 2035.

The near announcement came during the Atlantic Council's Innovation and the Future of Energy webinar April 28, where Lyash appeared as a panelist.

"We've had to retire about 60% of our coal generation already, and our coal units will continue to retire over the next 15 years because they've reached the end of life for those facilities," Lyash said.

Lyash said TVA will continue to help its coal-dependent workforce "gain new jobs skills and transition to new employment, hopefully with TVA."

"We've been very successful with that," he added.

He also said TVA will continue to repurpose plant sites as it winds down coal use. He pointed to the new gas generation units on the sites of the former Allen and Paradise coal plants in Tennessee and Kentucky, respectively. The shuttered Widows Creek site in Alabama has since attracted a Google data center and solar facilities, he added.

"We see our role as helping to make this energy transition while keeping prices low and reliability high, and helping to transition to this new energy economy for not only our employees but the communities we serve," Lyash said.

TVA has not yet made a formal announcement, and utility representatives would not confirm a retirement timeline with *RTO Insider*.

The Southern Alliance for Clean Energy (SACE) said it expects a formal announcement this month. It said it "applauded" the unofficial decision.

"Which energy resources will replace the coal plants has not yet been clarified, and SACE calls on TVA leadership to immediately initiate and update their integrated resource plans and begin the proper procedures to follow the National Environmental Policy Act in order to accelerate the process of retiring coal and ensure their energy mix is compatible with the Biden administration's call for a carbon-free electricity sector by 2035," SACE wrote in a press release.

SACE said throughout 2019, TVA's five active coal plants emitted over 26 million tons of carbon.

"As a federal agency and the nation's largest public power provider, it's incumbent on TVA to accelerate decarbonization of their power grid," the group wrote. It pointed out that a 15-year span to retire coal plants is probably too late to meet the Biden administration's goals, and "even if the agency fully retires coal, other sources of energy — such as fossil gas — are not carbon-free."

"To be clear … there's a big difference between being coal-free and being carbon-free, which is the ultimate goal," SACE Director Stephen Smith said. "Retiring the coal plants is a major advancement that opens the door for TVA to utilize renewable energy resources such as solar systems, battery storage and energy efficiency programs, all of which mitigate the threats of climate change while creating millions of well paying union jobs, rebuilding our country's infrastructure and fueling our much needed economic recovery."

SACE has pressed TVA to operate an entirely carbon-free grid by 2030. (See *Clean Energy Groups Press for Carbon-free TVA by 2030*.)

Lyash said that by the end of last year, TVA had reduced greenhouse gas emissions 63% from 2005 levels. It has reductions goals of 70% by 2030 and 80% by 2035 with its existing technology and "without raising price," Lyash said.

"We're driving as hard as we can," Lyash said. "But we cannot even attain those numbers unless we preserve and extend the life of our existing nuclear fleet."

Lyash said that for TVA to "close the gap" from an 80% reduction to total carbon elimination, it must use a combination of energy storage, carbon-capture technologies and new small modular nuclear reactors.

"It's the path to attain these objectives we've set out. … We need new low-carbon energy generation resources, and of course that means renewables: solar, wind, as much as the system can integrate; but there are limitations to that," he said. "We need storage to help that integration, yes, but we need new nuclear in order to be able to not only close the gap but generate the energy that's going to be demanded as we electrify the economy, including transportation."

Memphis Light, Gas and Water, the largest of TVA's 153 power company customers, has long pressed the federal utility for cheaper and cleaner energy. (See *Memphis Moves Closer to Breaking from TVA*.)

The municipal utility is currently under contract with Georgia-based GDS Associates, which will collect bids for alternative sources of energy for the city. Following bidding, the Memphis City Council will decide whether to pursue the bids and exit its 80-plus-year partnership with TVA. ■

TVA's Allen plant site in Tennessee | *TVA*

CAISO/West News

CAISO Board Approves EIM Governance Changes

By Hudson Sangree

The CAISO Board of Governors and Western Energy Imbalance Market (EIM) Governing Body on Thursday approved changes to the EIM's governance structure involving the selection of Governing Body members, stakeholder engagement and other matters.

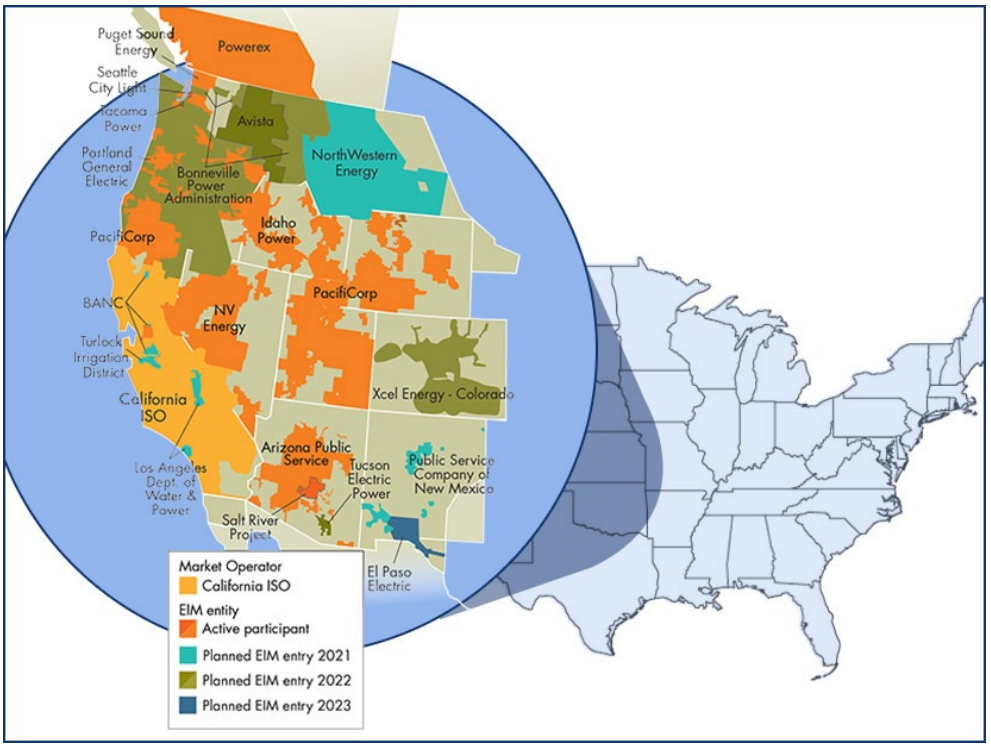
The *changes*, recommended by the EIM's Governance Review Committee (GRC), do not include the GRC's more controversial proposal to give the Governing Body greater joint authority with the board over market rules. That measure will be considered separately. (See *Joint CAISO-EIM Authority Debated in West*.)

"We decided to move forward with finalizing some of the recommendations ... and taking more time to engage with stakeholders on the delegation-of-authority topics before finalizing those recommendations," said GRC member Andrew Campbell, executive director of the Energy Institute at the University of California, Berkeley, Hass School of Business.

Campbell, who presented the GRC's proposal to the joint meeting of the Governing Body and the board, said the committee is aiming to bring its joint authority proposal to the bodies in June for a vote.

The five categories of changes approved Thursday included:

- elevating the representative for the public interest and consumer advocacy groups of the EIM from an advisory role to a voting member of the Governing Body nominating committee;
- allowing the EIM's Regional Issues Forum to offer opinions on matters that are part of an ongoing stakeholder process;
- recommending that the EIM's Body of State Regulators consider adding non-voting positions for federal power market agencies and consumer-owned utilities that participate in the EIM; and
- enhancing the Governing Body's role in market monitoring and market expertise and sharing authority with the board to approve members of CAISO's Market Surveillance Committee (MSC).



As of spring 2021, 14 participants are active in the Western EIM. | *CAISO*

Governor Severin Borenstein said he was concerned that the EIM employing its own experts could prove divisive between CAISO and the EIM. He recommended that the EIM take greater advantage of the ISO's Department of Market Monitoring and MSC for advice.

"I am disturbed that this is fragmenting rather than building a common community," Borenstein said, though he eventually voted for the package of changes.

Thursday's decision was the culmination of a two-year stakeholder process.

The EIM charter, adopted in 2015, required "a review of EIM governance in light of accumulated experience and changed circumstances" within five years. The board and Governing Body adopted a charter for the GRC in June 2019, directing it to develop a proposal for EIM governance refinements. (See *CAISO OKs EIM Governance Review*.)

The governance review *stakeholder process* began with an issue paper in December 2018 and resulted in a revised straw proposal by the GRC in December 2020.

Since its inception in 2014, the EIM — a voluntary interstate trading market — has grown to 14 entities with eight more planning to join in the next two years. The market is expected to eventually encompass 83% of load in the Western Interconnection, and CAISO is trying to expand the EIM's current real-time market to a day-ahead trading platform.

"I applaud the Governance Review Committee's work to advance a package of consensus recommendations that were unanimously approved at yesterday's meeting," CAISO CEO Elliot Mainzer said in a statement Friday. "The Board of Governors and the Western EIM Governing Body recognized the need for governance enhancements to better reflect the growth and evolution of the real-time energy market and the expanding community of utilities committed to greater regional collaboration." ■

EIM Governing Body members Valerie Fong, John Prescott and Carl Linvill participate in a pre-pandemic meeting in December 2019. | *© RTO Insider LLC*

CAISO/West News

CAISO Readies for Storage Scale-up

New Stakeholder Initiative Addresses Compensation Questions

By Hudson Sangree

CAISO has launched a new stakeholder initiative to foster connection of large amounts of storage in the coming years, releasing an issue paper last week and holding the first stakeholder call Wednesday.

The *initiative* focuses on market reforms to bring massive amounts of utility-scale storage into CAISO's system to back up the solar and wind power needed for California's transition to 100% clean energy by 2045, as well as meet local capacity requirements.

"We have the ability to think broadly, at this point, about what kinds of concerns are out there surrounding storage resources," Gabriel Murtaugh, the ISO's lead policy developer for infrastructure and regulatory policy, said at the start of Wednesday's meeting. "We know what sort of framework we have with our current market construct, but we do have the ability to potentially alter and update that market construct to better accommodate storage resources."

The *issue paper* co-authored by Murtaugh and Bridget Sparks, infrastructure and regulatory policy specialist, said that "given the unique characteristics of energy storage resources compared to traditional energy generation or load resources, new market rules and changes to the ISO's existing energy storage optimization models may be needed to fully integrate these resources into the market, to leverage the flexibility of these resources to maintain grid reliability, and to maximize their use and effectiveness to achieve clean energy goals."

The paper addresses issues including state of charge, marginal costs, exceptional dispatch and variable charging rates.

Storage providers expressed concerns about "existing market rules, optimization algorithms and settlement processes as applied to the energy storage resources," it said. "A principal concern raised by the storage community is a lack of compensation during critical periods when the ISO must retain state of charge on limited energy storage devices, which may preclude their active participation in the real-time markets.

"The consideration of the charging and discharging cycle of the energy storage is lacking from existing bid-cost-recovery rules, which is designed based on traditional energy generation resources. Another raised concern is related to the multi-interval market optimization as it applies to energy storage resources."

PG&E and Tesla are building one of the nation's largest storage facilities at the utility's old Moss Landing power plant on Monterey Bay. | *EKM Metering*

CAISO COO Mark Rothleder | *CAISO*

CAISO COO Mark Rothleder told *RTO Insider* in an interview April 30 that the initiative does not address the 1,500 MW of storage expected to come online by this summer to help head off shortfalls like those that caused last summer's rolling blackouts. The Aug. 14-15 blackouts and near misses a few weeks later occurred as solar ramped down steeply in the evenings and there was insufficient storage to meet the high demand from summer heat waves.

The ISO expects to add at least another 1,000 to 2,000 MW of storage in 2022-2024, most of it in lithium-ion batteries with four-hour discharging capacity, he said. CAISO expects summer reliability issues to continue through 2024, when the state's last nuclear plant, Diablo Canyon, begins shutting down. A buildout of solar, wind and batteries will eventually compensate.

"I don't think there's anywhere else in the world where you've got this amount of battery resources being utilized, and so we're excited about demonstrating how you can use these resources effectively for reliability purposes," Rothleder said.

However, "there are some things that we feel we need to address in the longer term in how we manage [storage resources] in real time … and ensure that they're properly compensated for the services they are providing," he said. Requiring operators of storage units to maintain a state of charge for evening readiness means they cannot take advantage of other financial opportunities, he said.

"As prices vary during the day, they may want to go after some of those prices … and that may be in conflict with us managing the charge," Rothleder said. "Fully charged batteries are needed for that 4 p.m. to 5 p.m. hour, so what we're trying to do here is better manage and better optimize storage, recognizing we need it for that evening hour.

"I think the batteries want flexibility to be able to act on middle-day opportunities or mid-hour opportunities, where the prices may go up for short periods," he said. "They'd like to be able to respond to those, and we're trying to balance those opportunities." ■

CAISO/West News

CREPC-WIRAB Takes Stock of Western Resource Adequacy

Regional Coordination Encouraged by Panelists

By Hudson Sangree

Western states and utilities must work more closely to prevent capacity shortfalls and head off the type of energy crisis that roiled the region 20 years ago.

Those were the key takeaways from a webinar Friday that explored resource adequacy issues in the West and the benefits and challenges of a large-scale program that could promote the sharing and coordination of resources across the Western Interconnection.

The webinar was the last in a series of spring *panel discussions* hosted by the Committee on Regional Electric Power Cooperation (CREPC) and the Western Interconnection Regional Advisory Body (WIRAB).

WECC VP of Reliability Planning Branden Sudduth | © *RTO Insider LLC*

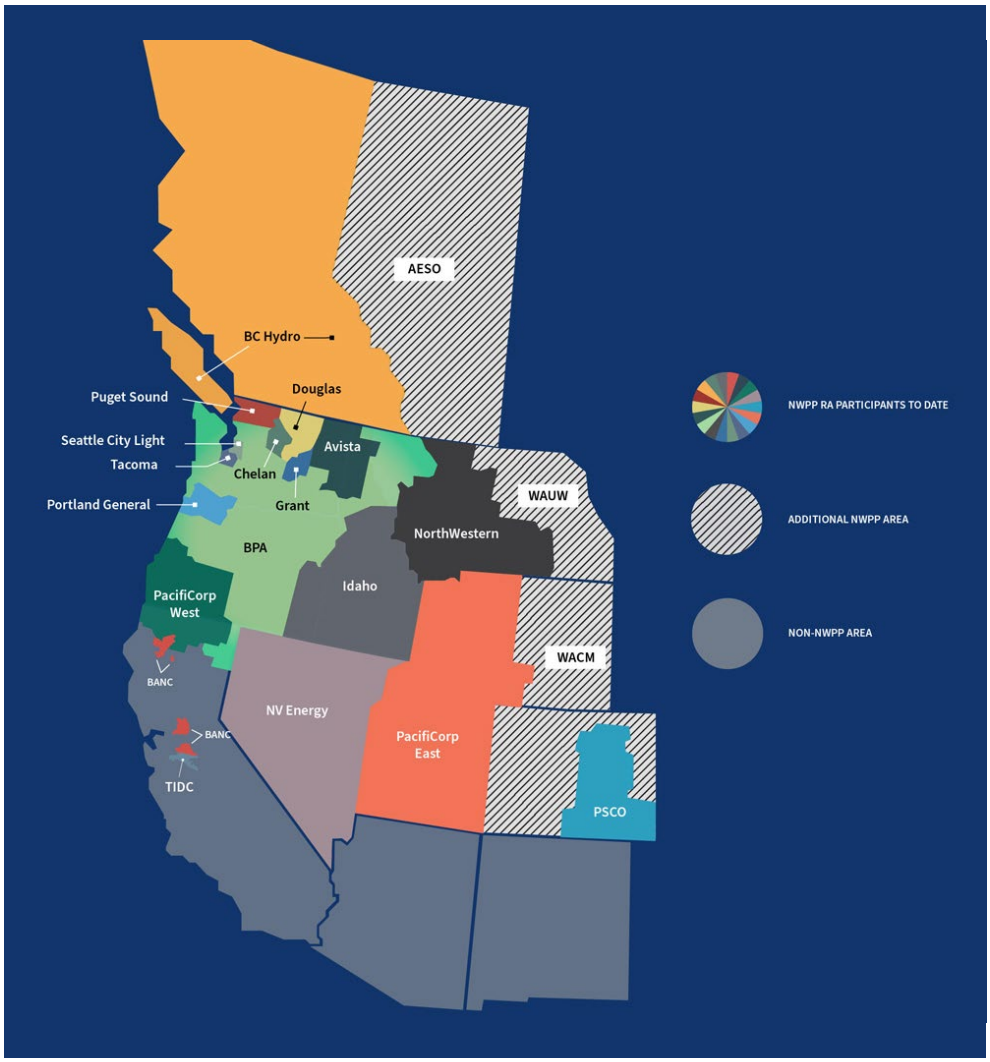
Branden Sudduth, WECC vice president for reliability planning and performance analysis, started the session with a briefing on WECC's findings in its December report and subsequent subregional *reports* on Western resource adequacy. (See *Western RA Planning Must Change, WECC Says*.)

The analyses found potential resource deficiencies, particularly in Southern California but also in the Desert Southwest and in the Northwest Power Pool footprint under strained system conditions. (See *Southern Calif. Could Fail RA Test, WECC Says* and *SW Faces RA Shortfall in 2021 and Beyond, WECC Says*.)

"This demand at-risk issue is not unique to California," Sudduth said. "Under certain scenarios, all of the subregions that we studied show the risk of not being able to serve load at all times."

California's rolling blackouts in August and energy emergencies in September during severe Western heat waves highlighted the supply-and-demand problems facing the West as states transition from fossil fuels to variable renewable resources, such as wind and solar, under hotter, drier conditions.

"At the times of high demand across the entire West, and during times when resource variability is high, each subregion may be struggling to serve its own load and may have limited means to help its neighbors, as we saw during the August 2020 heat-wave event," Sudduth said.



The Northwest Power Pool covers a vast swath of the West. | *NWPP*

A standard 15% planning reserve margin is no longer sufficient, WECC found. Reserve requirements ranged from 9% to 42% in extreme cases, he said.

"The variability observed here is both a function of demand and resource availability, but resource availability is the primary driver," he said.

WECC's *Western Assessment for Resource Adequacy* concluded that "planning entities need to coordinate with their neighbors to assure that they're not counting on imports that may not be available," Sudduth said.

"The challenges that we face with the changing resource mix and future extreme weather events are too big for any state or utility to solve on their own."

In addition, he said, "resource planning efforts, including the tools and metrics that we use, need to be updated to account for resource variability. Simply looking at the peak hour and assuming there's enough capacity to cover load during the hour alone won't help us to resolve some of the resource challenges that we'll be facing in the future."

NWPP RA Effort

Three other panelists built on the theme of

CAISO/West News

regional cooperation to head off capacity shortfalls, citing the Northwest Power Pool's proposed RA program to be developed by SPP. (See *SPP to Develop NWPP Resource Adequacy Program*.)

Susan Ackerman, Eugene Water and Electric Board | *Oregon PUC*

"We all know why this is happening," said Susan Ackerman, a former member of the Oregon Public Utility Commission and now chief energy officer at the Eugene Water and Electric Board. "This is because we are retiring traditional thermal plants, mostly coal plants, and we are adding to our resource mix a great amount of variable renewable resources, and that means that our capacity is running shy."

The Pacific Northwest, with its abundance of hydroelectric generation, has not had to worry about sufficient capacity "because it was always just there, but we do have to worry about it now," Ackerman said.

Without a Western RA program, "we have no common planning standard in the region," she said. With changing conditions, "we no longer have a good feel for what (capacity) is actually in the market and how deep that is."

Regional RA planning and coordination would provide reliability benefits, especially under strained system conditions, she said.

"We're also looking for cost savings," Ackerman said. "How do you use the great diversity that the [Western] footprint has, both in terms of supply and demand, that we can reduce the cost of keeping the system reliable?"

"My third favorite point is to improve the visibility and coordination of the system," she said. "We really want to be in a situation where you have enough data so that you are not underinvesting in resources … [or] over-investing in resources, and that's what improved reliability coordination will get for us."

The NWPP proposal includes a "forward-showing program," requiring members to demonstrate months in advance that they can meet peak summer and winter loads, she said.

"We have two [peak] seasons in the West that we're trying to cover … so we've got two seasons binding our hands," Ackerman said. "The belief is that the forward-program … takes us a long way towards ensuring there are reliability benefits from the program."

California and the Southwest peak in the summer, while the Pacific Northwest peaks in winter and summer. The Pacific Northwest has hydroelectric resources, including in the summer; the Southwest has solar power in abundance, even in winter.

"We can use that diversity in load resources and access to pool resources during the operational timeframe, which we consider to be the day-ahead and the real-time market, to operate in a more cost-effective way for consumers," she said.

The NWPP RA program is holding a *webinar* on May 14 to discuss proposed governance structures.

"We need a program that's resilient and transparent and can effectively adapt through the next few decades … so that it isn't facing constant second guessing in state capitols," Oregon PUC Commissioner Letha Tawney said.

Oregon PUC Commissioner Letha Tawney | *Oregon PUC*

Tawney urged her fellow state utility regulators to "engage and think through what [a regional RA program] means in terms of giving up that local control of the RA target and how resources are counted towards that."

Steve Wright, general manager of the Chelan County (Washington) Public Utility District, gave a detailed history lesson on cooperation and coordination efforts in the Northwest and between the Northwest and California. Those efforts have sometimes succeeded, as in the establishment of the California-Oregon transmission interties, and at other times failed, as in a series of failed efforts to form a Western RTO.

Steve Wright, Chelan County PUD general manager | © *RTO Insider LLC*

Wright, too, encouraged greater cooperation. The resource adequacy situation facing the West could cause a repeat of the Western energy crisis of 2001 if not avoided, he warned. That crisis caused serious harm to utilities and the customers they serve, he said.

"The problems that we're dealing with are very similar to the ones that led to the energy crisis, in that it was a fundamental supply-and-demand problem," Wright said.

"We just can't let that happen again." ■

CAISO/West News

Ariz. Regulators Kill Clean Energy Proposal

By Elaine Goodman

Environmental groups continued to react with dismay this week after regulators in Arizona rejected energy rules that would have required state-regulated electric utilities to reduce carbon emissions by 100% by 2050.

The Arizona Corporation Commission rejected the proposed rules by a 3-2 vote on Wednesday after amending them. The amendment changed the requirements in the proposed rules to voluntary goals for the utilities to try to reach.

In a *news release* sent out Sunday night, Western Resource Advocates said ACC had "failed to help our state reduce the harmful fossil-fuel pollution that causes climate change."

"Arizona's major utilities have all said they want the regulatory certainty of a firm emissions reduction standard, and the commission today has failed to provide that," said Adam Stafford, WRA's senior staff attorney in Phoenix. "Our state needs strong action and solid standards for reducing the emissions that cause climate change and realizing the economic benefits of clean energy."

The proposed rules that the ACC considered last week, before they were amended, would have required electric utilities to achieve a 100% reduction in carbon emissions compared to baseline levels by 2050, with interim reductions of at least 50% by Jan. 1, 2032, and at least 75% by Jan. 1, 2040.

The proposed rule also included requirements for energy efficiency and energy storage.

The adoption of the proposed energy rules, including the expansion of energy efficiency, was projected to save Arizonans more than $2 billion, according to a joint *news release* from the Southwest Energy Efficiency Project, Arizona PIRG Education Fund, and Wildfire: Igniting Community Action to End Poverty in Arizona.

"The commission's failure to extend and expand Arizona's very successful energy efficiency standard means ratepayers will not reap increased financial benefits, and businesses will not have regulatory certainty to invest in our state," said Diane Brown, executive director of the Arizona PIRG Education Fund.

Commissioner Justin Olson (R) proposed the amendment to make provisions of the rules voluntary. Chairwoman Lea Márquez-Peterson (R) and Commissioner Jim O'Connor (R) supported the amendment.

After the amendment was approved, Olson voted against the revised rules.

Commissioners Sandra Kennedy and Anna Tovar, both Democrats, also voted against the revised proposal, saying they could no longer support the energy rules as amended, *Tucson.com* reported. The amended energy rules died on a 3-2 vote.

In a news release following the vote, the Sierra Club Grand Canyon Chapter called the amendment a "poison pill."

"Arizonans have repeatedly and frequently voiced their support for transitioning away from fossil fuels that harm our health and the climate to a clean and sustainable energy system, including in communities most impacted by coal plants and their pollution," said Chapter Director Sandy Bahr. "The commission just did not listen."

The proposed energy rules were first filed in August 2018. In November 2020, the commission voted 4-1 to begin the formal process to adopt the rules, including the requirement to reduce carbon emissions by 100% by 2050. Márquez-Peterson, who now serves as commission chair, voted in favor of the action.

Following Wednesday's vote, Márquez-Peterson issued a *statement* explaining her reasons for supporting the amendment to the proposed energy rules. She said changing the rules from a mandate to a goal for electric utilities was "the best solution to protect ratepayers."

"While a 'mandate' would have essentially given the utilities a blank check to recover any and all costs associated with complying with the rule, a 'goal' allows for accountability and flexibility as commissioners evaluate the costs and allows commissioners to strike a balance between meeting the goals in the long-run and protecting ratepayers in the short-run," she said.

Márquez-Peterson said she was disappointed with the final vote and noted the debate over the energy rules had lasted more than four years, with thousands of hours of public and stakeholder meetings.

"I'm not sure where we go from here," she said. "However, I'm optimistic that this is not the end and that we can continue to stand with Arizona ratepayers to achieve affordable, reliable and sustainable energy for our state." ■

| *Shutterstock*

ERCOT News

Regulators, ERCOT Stakeholders 'Meet' for First Time

Market Participants Gather for Summer Readiness Workshop

By Tom Kleckner

Texas' two newest utility regulators met with ERCOT staff and market participants for the first time May 3, albeit virtually, as they discussed grid preparations for the upcoming summer season.

Peter Lake, recently installed as the Public Utility Commission's chairman, said little in his introductory comments. However, he did appear to recognize the gravity of the moment, saying, "Nothing is more important than summer readiness."

In the wake of the grid's disastrous response during February's winter storm and last month's conservation call that increased the general public's anxiety, the workshop drew a large audience that numbered in the hundreds. Among those listening in were members of the Texas Railroad Commission, which regulates the state's oil and gas industry.

"The entire world will be watching Texas this summer. All eyes will be on us like never before," Lake said, promising that the commission stands ready "to rise to the occasion."

"This is the first opportunity we as an industry and we as regulators can show that the market will perform as intended," Commissioner Will McAdams said in offering his own pep talk. "I have every reason to believe this summer will be one of our finest hours, because every stakeholder in this [meeting] has an incentive to show the world that this market works."

McAdams, who previously served as president of the Associated Builders and Contractors of Texas lobbying group, suggested stakeholders determine whether there is "enough slack" in maintenance schedule to better coordinate dispatchable generation.

He suggested stakeholders and the PUC develop a common vocabulary to better inform the public and media, which have both criticized ERCOT for its initial advisories that confused laymen. McAdams also asked that generating facilities provide greater access to ERCOT and Texas Reliability Entity staff for weatherization spot checks and that they refrain from last-minute filings of their operating plans.

"You were part of the solution for making it through the winter event," McAdams said, addressing the generators. "I think the work you're doing now is important. The data and expertise you can provide ERCOT is critical for our market to adjust to whatever is coming."

Lake and McAdams were sworn in together late last month, shortly after their appointments by Gov. Greg Abbott. One position on the bench remains open after all three previous commissioners, also appointed by Abbott, resigned in the winter storm's aftermath. (See *Lawmakers Wave Through Texas PUC Appointees*.)

Woody Rickerson, ERCOT's vice president of grid planning and operations, said more outages than normal are being processed this spring, primarily because of damage suffered during the storm, but also because the grid continues to grow. ERCOT earlier this year applied *restrictions* on planned transmission outages, restricting them from May 15 to Sept. 15.

ERCOT is expecting a record peak demand of 77 GW this summer. According to a report issued in December, the grid operator has a 15.5% reserve margin, and it projects almost 1 GW of battery storage will be available for the summer heat. (See *Solar Power Boosts ERCOT's Reserve Margins*.)

ERCOT's reserve margin has increased recently, but will it be enough to withstand an expected record peak this summer? | *ERCOT*

> **"This is the first opportunity we as an industry and we as regulators can show that the market will perform as intended."**
>
> —Commissioner Will McAdams

CPS Energy Gains Restraining Order

San Antonio's municipal utility CPS Energy has obtained a temporary restraining order that prevents ERCOT from using its collateral payments to repay the market for short pays by defaulting or bankrupt market participants.

The Bexar County District Court on April 28 granted CPS' *request* for "protection … against massive errors in ERCOT's excessive prices, which will cause price spikes in monthly bills and a blatantly unlawful result" (*2021CI04574*).

The court will hear from both sides this Wednesday. CPS is hoping for an injunction that would remain in effect until the case goes to trial.

At issue is the $47 billion in market transactions during the storm Feb. 15-19. ERCOT says it is *short $2.99 billion* as of April 30.

"ERCOT's latest unilateral and aggressive move is an attempt to unlawfully force our customers to pay for the insolvency of other market participants, caused by ERCOT's own mistakes," CPS CEO Paula Gold-Williams said in a *press release*. "Disappointingly, ERCOT continues to inject uncertainty into the market while failing to address its errors, which is contributing to one of the largest illegal transfers of wealth in the history of Texas." ■

ERCOT News

Revamped Texas PUC Faces 'Heavy Lift'

Continued from page 1

ties' ratemaking, whether to make permanent electronic filing requirements that have been so effective during the COVID-19 pandemic, revising rules around generation and transmission weatherization, and reviewing electric wholesale-priced products.

That doesn't take into account whatever legislation comes out of the Texas Capitol as a result of the February winter storm.

"We are writing a new chapter for the PUC and all our stakeholders," Lake said. "It's a robust list, and we have a lot of heavy lifting in front of us. It's a challenge, but we're eager to write the new chapter."

In their first official action, Lake and McAdams approved publication in the *Texas Register* a list of proposed amendments to state law that would modify the value of the scarcity pricing mechanism's low systemwide offer cap (LCAP). The measure changes the formula that ties the LCAP value to the natural gas price index and replaces it with a provision that allows resource owners to recover their marginal costs during scarcity conditions (*51871*).

The LCAP is currently set as either the greater of $2,000/MWh or $2,000/MW per hour, or 50 times the natural gas price index value as determined by ERCOT.

"We need to be able to provide certainty to the market when we can and approach these signals in a systematic way," McAdams said. "I believe this helps smooth out over the long term some of the [price] distortions that were experienced during the winter event."

Arthur D'Andrea approved the proposal during his short stint as PUC chair. He was the last of the PUC's three commissioners to resign under political pressure after the storm, but he remained seated until Lake and McAdams were sworn in. (See *Lawmakers Wave Through Texas PUC Appointees*.)

"It's fair to say the views of the legislature have been heard loud and clear. Hearing the discussion in the Senate, we are in alignment," McAdams said.

Avangrid-PNM Resources Merger Approved

The commission approved a *settlement agreement* between parties involved in Avangrid's $8.3 billion acquisition of PNM Resources (*51547*).

Avangrid, PNM subsidiary Texas-New Mexico Power (TNMP) and NM Green Holdings — Avangrid's wholly owned subsidiary formed to merge with and into PNM — filed their settlement agreement March 30. Responding to a follow-up memo from staff, the parties clarified they understood "these regulatory commitments" to encompass every regulatory commitment applicable to TNMP and accepted revisions to "disinterested directors'" authority.

Parties to the settlement agreement included PUC staff, the Office of the Public Utility Counsel, the Cities Served by Texas-New Mexico Power Co., Walmart and various consumer groups.

Avangrid said the transaction is on track to close during the second half of the year during last week's quarterly earnings call with financial analysts. FERC lent its approval to the deal last month, leaving only the New Mexico Public Regulation Commission and the Nuclear Regulatory Commission to weigh in. (See related story, *Renewables Boost Avangrid Q1 Earnings*.)

The commission also *approved* Wind Energy Transmission Texas' and Oncor's request to build, own and operate a 345-kV transmission line connecting their respective switching stations in Far West Texas (*50410*) and Southwestern Electric Power Co.'s application for a new 138-kV line and cut-in to Wood County Electric Cooperative in East Texas (*50669*). ■

Texas PUC Commissioner Will McAdams (left) confers with Chair Peter Lake during their first open meeting. | *Texas PUC*

ERCOT News

ERCOT Resource Adequacy Hard Sell After Winter Storm

Texas Grid Operator's Reserve Margin Hits 15.7% and Growing

By Tom Kleckner

ERCOT staff worked to ease anxieties among members of the Texas media Thursday after releasing a pair of resource adequacy *reports* that show the grid operator has healthy reserve margins this summer and into 2026.

The grid operator said it has *sufficient capacity* to meet most extreme scenarios this summer with a reserve margin of 15.7%, nearly double the 8.6% margin in 2019. The margin climbs to 35.1% in 2023, with increased demand chipping that away to 32.3% in 2026.

Still, that was a hard sell for media representatives who were told last November that ERCOT had enough generation to meet demand during the winter. The grid operator's resource adequacy scenarios did not anticipate that the grid would lose half its generating capacity during February's winter storm and its days of extreme temperatures. Stung by the dayslong blackouts and accompanying loss of life, reporters questioned why ERCOT should be trusted this time around.

"We recognize we failed to clearly communicate what the potential risks were going into the winter," Warren Lasher, senior director of system planning, said during a media briefing to explain the reports. "We have developed these reports and tried to communicate, based on recent operational outcomes, what the potential outcomes might be."

Staff added several low-probability, high-impact situations similar to the storm in its seasonal assessments, ERCOT said, "to ensure all market participants and government officials have a comprehensive view into market conditions." Staff said they believe there is a less than 1% chance that the extreme situations will actually occur, pointing out that the February was about a one-in-100 event.

ERCOT said it expects to have 86.9 GW of total resource capacity, enough to meet an expected peak demand of 77.1 GW this summer. That would be a new demand record, breaking the mark of 74.8 GW set in August 2019.

Lasher again assured his audience that the state's generators would be up to the task, noting that the system is built to withstand the Texas summer heat. Temperatures have already hit the 90s in parts of the state, and forecasters are predicting another hot summer.

Generators "get tested on their capability to operate under hot conditions. They get tested every summer," he said.

Staff assume 100% of dispatchable generation summer capacity when compiling its seasonal assessments of resource adequacy (SARAs). However, wind and solar are only included under their historical performance for the recent top 20 peak-demand hours.

ERCOT continues to see new generation resources being added to keep up with the state's growing economy and continued population growth. Utility-scale solar and battery storage projects make up almost 80% of the new resources being studied in ERCOT's interconnection queue.

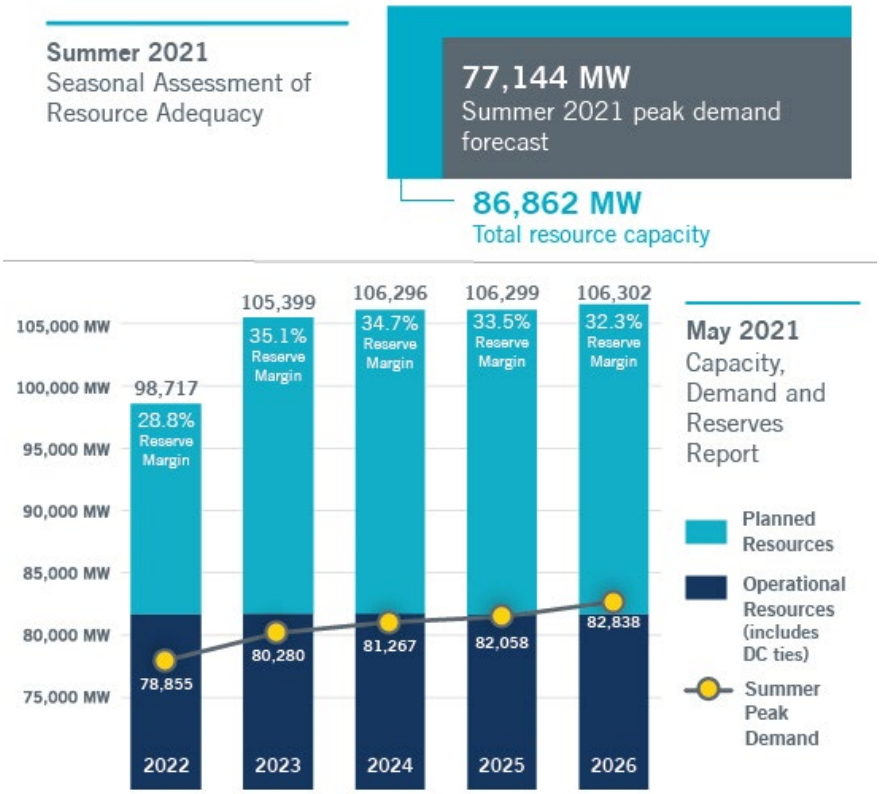
Responding to renewed regulatory and legislative scrutiny following the winter storm, ERCOT said it and Texas Reliability Entity staff will conduct *site visits* at about 30 power plants to evaluate their summer weatherization plans. The first-time summer spot checks will be similar to those assessing winter weatherization.

ERCOT's *preliminary fall SARA* for October and November projects demand to peak at 62.7 GW. The grid operator warned that the grid might still face *tight conditions* if a high-demand day occurs when there is a combination of significant maintenance outages, low renewables production and/or extreme weather.

It also released its capacity, demand and reserves (CDR) *report*, which takes a longer-term view of grid conditions for the next five years.

Both reports take into account the *impending transfer* of nearly 500 GW of load when ERCOT adds the Lubbock Power & Light system over the Memorial Day weekend. The Texas Public Utility Commission last year approved the system's transfer from SPP. (See *Texas PUC Approves LP&L Integration Project*.)

As an indicator of the media's strong interest in ERCOT resource adequacy after February, media briefings such as Thursday's now draw about 100 participants, staff said. A year ago, the briefings had maybe two dozen callers on the line. ■



ERCOT's capacity, demand and reserves report currently shows reserve margins are only going to get fatter. | *ERCOT*

ERCOT News

CenterPoint, OGE Put February Storm, Enable Midstream Behind them

By Tom Kleckner

CenterPoint Energy and OGE Energy delivered positive earnings Thursday, a year after taking financial hits from their Enable Midstream Partners joint venture and several months removed from February's winter storm.

CenterPoint CEO David Lesar | *CenterPoint Energy*

"We are observing a sense of normalcy starting to return here in Texas and in many of our other jurisdictions," CenterPoint CEO David Lesar told financial analysts during the company's first-quarter earnings call.

The Houston-based company said it was not affected by the high prices for natural gas during the storm, as they are a pass-through cost and did not have an effect on earnings. However, it is working to recover those costs through "early adjustments to our normal cost recovery mechanisms."

Lesar said CenterPoint has already reduced customers' exposure to incremental gas costs by $300 million, down to $2.2 billion, by auditing and challenging its suppliers. The company, which sells electricity and gas in eight states, has started recovery in Arkansas and Louisiana and is pursuing recovery of storm-related costs in Minnesota, where it wants to charge its 800,000 customers a *monthly surcharge with 8.75% interest*.

After earlier working with OGE to sell Enable to Energy Transfer Partners for $7.2 billion, CenterPoint last month agreed to sell its Arkansas and Oklahoma gas distribution companies in a $1.725 billion deal. (See *Energy Transfer to Acquire Enable Midstream*.) Both transactions are expected to close in the second half of 2021.

The latter bid attracted more than 40 interested parties, Lesar said, with 17 making bids. He said the transaction is a perfect example of CenterPoint's "efficient capital recycling strategy."

"You sell at 2.5 times the rate base and invest at one times the rate base," Lesar said. "If we see another opportunity to recycle capital in a similarly attractive way, we would explore it as part of our broader strategy."

CenterPoint *reported* first-quarter earnings of $334 million ($0.56/diluted share). A year ago, the company took a $1.23 billion loss (-$2.44/diluted share) after writing off $1.6 billion for its Enable investment.

The company's stock price opened at $24.39 and traded between $23.86 and $24.58 on Thursday. It was trading at $24.36 after hours, a gain of 9 cents on the day.

OGE up on Plant Performance

OGE CEO Sean Trauschke told analysts that the company prepared well for the storm, having winterized its generating facilities when under construction or added weatherization packages to existing units.

"Every single one of our plants was generating megawatts every single day of the storm," he said. "The fleet performed just great. We were prepared because we made those investments."

Still, he said, OGE will take a "hard look" at its natural gas supply chain. The company plans to take advantage of securitization laws recently passed in Oklahoma and Arkansas to recover fuel and purchased power costs of about $930 million.

OGE expects SPP to true up its purchased power settlement amounts in June.

The Oklahoma City-based company *reported* earnings of $52.7 million ($0.26/diluted share). OGE had a loss of $491.8 million (-$2.46/share) in last year's opening quarter as a result of a $590 million impairment charge, net of tax, related to Enable. It expects full-year earnings of $1.76 to 1.86/share.

OGE's stock was going for $34.02 in after-hours trading, a gain of 60 cents. ■

ERO Insider

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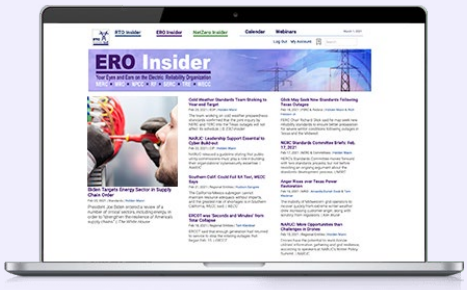

ERO Panel Ponders Mystery of Overgeneration in Eastern Interconnection

NPCC Predicts Lower Peak in Summer 2021

NERC Real Time Operating Subcommittee Briefs: May 5, 2021

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ISO-NE News

Conn. PURA Hits Eversource, UI with Civil Penalties for Isaias Response

By Jason York

The Connecticut Public Utilities Regulatory Authority on Thursday proposed massive civil penalties for Eversource Energy and United Illuminating following their inadequate response in the aftermath of Tropical Storm Isaias last August.

In notices of violation, PURA assessed *$30 million* in penalties against Eversource and *$2.1 million* on UI for issues identified in its *ruling* last week sternly criticizing the utilities' storm response, which left hundreds of thousands of Connecticut residents without power for as many as nine days. (See *Conn. Utilities Found Deficient in Tropical Storm Isaias Response*.)

Isaias damaged power lines, utility poles and transformers, and debris blocked roads, hindering power restoration efforts. During the storm, 50% of Eversource customers and 33% of UI customers lost power.

PURA cited Eversource, the state's largest electric distribution company with approximately 1.3 million customers, and UI, a subsidiary of Avangrid with 340,000 customers, for noncompliance "in emergency preparation or restoration of service in an emergency" and "for violations of accident reporting requirements."

The agency fined Eversource 2.5% of its more than $1.1 billion in rate year distribution revenue in 2020 — the maximum for nonperformance under state law — amounting to about $28 million. Eversource was fined an additional $1.62 million: up to $500 for each of its violations of accident reporting requirements that PURA said began in August and continued for up to 90 days.

Line crews from Eversource work to restore power in Connecticut following Tropical Storm Isaias last August | *Eversource Energy*

| *Eversource Energy*

UI's nonperformance penalty was 0.5% of its distribution revenues of $356.3 million, amounting to about $1.78 million, and $360,000 for its accident reporting violations.

The noncompliance penalties will ultimately be line-item credits on customer bills on a per-kilowatt-hour basis beginning Aug. 1 and lasting through July 31, 2022, with appropriate interest. The money from the accident reporting violations goes to Connecticut's general fund. The civil penalties follow the reduced rates of return on equity stipulated by PURA last week: 0.9% for Eversource and 0.15% for UI. The reduction aligns the performance of the utilities' management during future storm response efforts with their financial performance.

Eversource spokesperson Tricia Taskey Modifica told *RTO Insider* that the company is reviewing the notice and "looks forward to getting through the final stages of the process." Modifica said that while Eversource "worked tirelessly to restore power as quickly as possible, we recognize the hardships our customers and communities experienced, and we acknowledge there are areas for improvement."

"We are working — and will continue to work — in good faith with our communities, customers and regulators to improve our performance," Modifica said.

UI spokesperson Ed Crowder also told *RTO Insider* that the company is reviewing the notice and "considering our next steps."

"We are disappointed PURA did not consider the facts we presented during the investigation," Crowder said. "The facts show that we faithfully followed our emergency response plan. We will continue to work with PURA to improve our preparation for and response to storms and other emergencies."

Both utilities have until May 26 to file written responses to request hearings with PURA that contest the penalties. The subsequent hearings would be held on June 10-11. PURA's final decision is scheduled for July 14.

In a *tweet*, PURA said it "cannot comment on the issuance of proposed [notices of violation] but looks forward to discussing its final decision in July."

In a *statement*, Connecticut Attorney General William Tong said that Eversource "failed its customers and put Connecticut families at risk after Tropical Storm Isaias."

"I fought for swift, severe penalties from the beginning, and this $30 million penalty is appropriate. Eversource must pay for their failures," Tong said. "This penalty is a strong first step to hold Eversource accountable for their disastrous performance, but this matter is far from over. We will continue to fight before PURA to ensure that Eversource cannot put the full cost of their failures back on ratepayers." ■

ISO-NE News

Renewables Boost Avangrid Q1 Earnings

PMN, NECEC, Vineyard Wind and Conn. PURA Additional Topics on Earnings Call

By Jason York

Buoyed by its renewables division, Avangrid *reported* a 40% increase in its first-quarter profits and a doubling of its income amid a "strong operating performance" during the Texas winter storm in February.

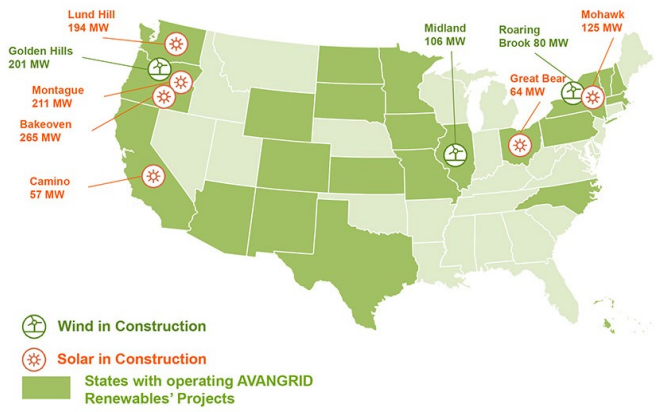
Avangrid CEO Dennis Arriola said during an earnings call May 4 that its Gulf Coast wind farms in Texas met "delivery obligations and produced excess energy contributing to the solution during the crisis."

The Connecticut-based subsidiary of Spanish energy giant Iberdrola reported earnings of $334 million ($1.08/share), up nearly $100 million from the same period in 2020 ($240 million; $0.78/share). Avangrid Renewables earned $108 million during the quarter, up from $52 million in January 2020. Avangrid Networks posted earnings of $225 million during the quarter, compared with $197 million in January 2020.

PMN Merger, NECEC, Vineyard Wind Talk

Arriola said Avangrid's $8.3 billion acquisition of PMN Resources is on track to close in the second half of the year following FERC's approval last month and the Texas Public Utility Commission's approval last week. (See related story, *Revamped Texas PUC Faces 'Heavy Lift'* and *FERC OKs Avangrid PNM Purchase*.)

The remaining regulatory hurdles include approvals from regulators in the New Mexico Public Regulation Commission and the Nuclear Regulatory Commission. Arriola said there has been "positive progress" toward a multiparty stipulation agreement in New Mexico, including public support from Gov. Michelle Lujan Grisham.



Avangrid will have 1.3 GW of renewable energy projects under construction in 2021-2022, including about 390 MW of onshore wind and 915 MW of solar. | *Avangrid*

Construction of the $1 billion New England Clean Energy Connect (*NECEC*) transmission line with Central Maine Power began in January. NECEC spans 145 miles with the capacity to carry 1,200 MW of Canadian hydropower from the Maine-Québec border to Lewiston, Maine, where it will connect to the New England Control Area. The HVDC project includes upgrading 50 miles of existing AC transmission, a new converter station and substation and other upgrades. It has an in-service date of 2023.

Arriola said those opposed to the project are "running out of arguments." Avangrid Deputy CEO Bob Kump added that the need for transmission "to achieve our goals around decarbonization is becoming very well known."

Arriola said that the 800-MW Vineyard Wind, a joint venture between Avangrid and Copenhagen Infrastructure Partners off the coast of Martha's Vineyard in Massachusetts, got a final environmental impact study from the U.S. Bureau of Ocean Energy Management in March and is slated to start construction in the second half of this year and begin commercial operation in 2024.

"The project is progressing well," Arriola said. "We have all major construction contracts with suppliers and contractors secured, and we're finalizing the evaluation of optimal financing structures, including tax equity and project financing."

Parsing with PURA

Avangrid Networks CEO Catherine Stempien said the Connecticut Public Utilities Regulatory Authority has an "ambitious agenda." But she said there is still room for negotiation after PURA last month *rejected* an agreement between the state and Avangrid subsidiary United Illuminating that would have provided a $46.5 million COVID-19 relief bill credit to decrease and stabilize electric rates into 2023. PURA's draft decision also rejects a $5 million voluntary contribution from UI, which can immediately apply for an increase in rates.

PURA's decision sunk an agreement that Gov. Ned Lamont and Attorney General William Tong announced in March that would fully offset a 5-8% increase in bills because of federally mandated transmission charges and costs of the power purchase agreement with the Millstone Nuclear Power Station. The settlement not only included the $5 million from UI but would have accelerated the return of $41.55 million of accumulated savings from federal tax cuts. In addition, UI agreed to not change base distribution rates until at least May 2023, which could have saved ratepayers a projected $20 million above and beyond the $46.5 million COVID credit.

Instead, PURA will spread the cost over 68 months, adding a variable 3.25% prime interest rate. PURA's plan, *according* to Tong, provides marginal immediate relief to ratepayers while ultimately adding millions in future costs.

When pressed by an investor for specifics, Arriola said Avangrid would "rather not negotiate in public" but recognizes "that PURA may look at things slightly differently than we did."

"Part of our job is to make sure that we can advocate for our customers and get them up to speed on why we feel strongly for the original settlement," Arriola said.

On April 28, PURA issued a stinging *assessment* of UI's power restoration efforts during Tropical Storm Isaias in August, with possible fines looming for an inadequate response that left 33% of UI customers in the dark for days. (See *Conn. Utilities Found Deficient in Tropical Storm Isaias Response*.)

PURA criticized UI for not meeting its obligations to clear blocked roads and ensure public safety. The ruling further requires enhancements to emergency response plans and a third-party management audit this summer. Regulators will also mandate a reduced rate of return on equity by 0.15% to link management and financial performance during future storm responses. Additionally, PURA *will consider* civil penalties for noncompliance with issues identified in the ruling and could reject any future requests for storm cost recovery. ■

***Call transcript courtesy of** Seeking Alpha.*

ISO-NE News

Panel Discusses Hybrid Resources for Decarbonization Efforts

By Jason York

FERC in January *directed* RTOs and ISOs to boost the participation of hybrid resources by modifying market rules to accommodate growing renewable energy projects with energy storage. The directive, however, did not mandate any rule changes. FERC did ask that RTOs submit reports that address four hybrid resource issues: terminology, interconnection processes, market participation and capacity valuation.

On Wednesday, the Northeast Energy and Commerce Association hosted a webinar on hybrid resources as part of its series on the role of energy storage in decarbonization. Renewables paired with storage seeking interconnection demonstrate a significant shift in the resources that will decarbonize the grid. Whether for renewables or conventional plants, additional storage brings needed flexibility and reliability to the low-carbon grid of the future, speakers said.

Mark Ahlstrom, vice president of renewable energy policy at NextEra Energy Resources, admitted "that not too many years ago … I thought that it would be really silly to couple storage with any renewable." He said he has had to "eat those words."

Ahlstrom said that when combining two resources like solar PV with battery storage, "throwing away all that clipped energy" is no longer an issue, as it is stored in the battery for future use or to provide ancillary services.

California-based Wellhead Power Solutions began developing a thermal-battery hybrid in 2013 to help maintain reliability in CAISO during large-scale deployment of renewable energy resources. Wellhead eventually patented the technology and partnered with General Electric to sell the hybrid-electric gas turbine (EGT). In the last five years, Wellhead has installed five of these thermal hybrid EGT "systems" in California and Canada.

"We saw some of the advantages that energy storage had, and we thought, 'Let's try to blend the two and make the best of both,'" said Turner Scholl, project manager for Wellhead.

Scholl said a control system automatically communicates with the gas turbine to produce the desired output. The battery allows the resource to remain synchronized to the grid, which is "a big advantage" for a quick response. The EGT keeps the 10-MW battery "tank" full, allowing the combined hybrid resource to always be available with no minimum off or on times.

Scholl said there had been quantifiable environmental benefits. Following the installation of an EGT at Southern California Edison's Center Peaker in Norwalk, there was a 60% reduction in greenhouse gas emissions and a 78% drop in particulate emissions. There were also 50% fewer starts and 60% fewer run hours.

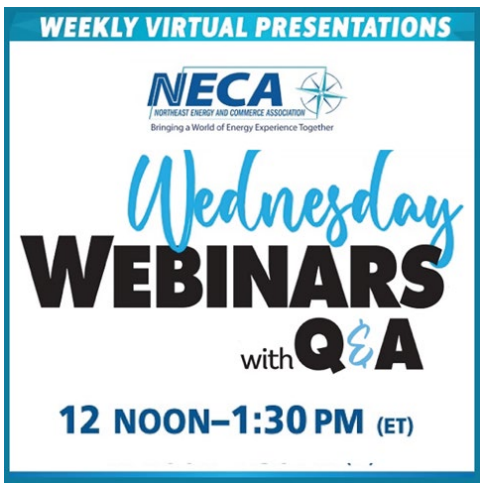
Additionally, Scholl said that as decarbonizing the grid eventually excludes fossil fuels, the technology is adaptable and able to rely more on the battery, which can be expanded in size, especially as prices continue to drop.

"Once you do these hybrids, you will have an existing interconnection, inverters, storage," Scholl said. "And the way we see it is, over time you can expand the storage component and start replacing the capacity of your gas turbine and increase the size of this battery we've installed to eventually take the place of the gas turbine."

Southern California Edison's Grapeland Peaker in Rancho Cucamonga | *Southern California Edison, via Wellhead Power Solutions*

Laurel Meeks, business development manager at Duke Energy, said there would be a "significant increase in renewable generation across the fleet." While some renewables and storage may be standalone, Meeks noted a lot of it would be hybrid as well. That leads to the question of what the optimal renewables-plus-storage configuration is

, "but no matter the configuration, the more flexible hybrid resource can certainly provide a wide variety of grid values at the distribution, transmission and generation level," she said. ■



ISO-NE News

NEPOOL Participants Committee Briefs

Updates to Annual Work Plan

ISO-NE COO Vamsi Chadalavada | *ISO-NE*

ISO-NE COO Vamsi Chadalavada on Thursday *presented* updates on the RTO's 2021 Annual Work Plan to the NEPOOL Participants Committee, including the addition of a project to address the removal of the minimum offer price rule (MOPR) from the capacity market.

The MOPR requires a minimum price for new resources entering the Forward Capacity Market (FCM). Significant concerns have been raised at both the regional and federal levels that its application precludes state-sponsored resources from clearing the FCM.

FERC has identified this matter as a priority; Chair Richard Glick said at the commission's technical conference on capacity markets in March that MOPR is not "sustainable" because it is frustrating state decarbonization efforts. (See *PJM MOPR in the Crosshairs at FERC Tech Conference*.)

Chadalavada said the rule's elimination must be consistent with maintaining reliability, which is the primary goal of the FCM. He added that ISO-NE intends to develop a proposal with input from stakeholders to address the dual objectives of allowing sponsored resources to clear and maintaining competitive capacity pricing.

According to Chadalavada, work on the MOPR is a top initiative and is expected to ramp up in the second half of this year. He anticipates the need to file a proposal with FERC in the first quarter of 2022, which will require targeted efforts by the RTO and all stakeholders.

In a *memo* to the RTO, the New England States Committee on Electricity (NESCOE) said that "it would be helpful to understand any work ISO-NE has done to date" on the MOPR, including "any particular impediments" that could result in an additional capacity auction under the current construct.

"Given the expiration of the renewable technology resource exemption and [Competitive Auctions with Sponsored Policy Resources'] functionality, the next auction is of heightened concern," NESCOE wrote. "We encourage ISO-NE to communicate and work with states and stakeholders early in the development of the range of potential near-term approaches. We look forward to the discussion and working with you and NEPOOL toward a timely resolution on this important issue for the New England states."

Five Advance to Next Interview Round for Board Positions

A *summary* of the Joint Nominating Committee (JNC) meetings held on April 8-9 and 16 said that five candidates emerged from a pool of nine to secure second-round interviews for two upcoming vacancies on the ISO-NE Board of Directors.

Chair Kathleen Abernathy and Director Phil Shapiro will retire on Oct. 1.

The profiles of the candidates selected include:

- part-time adviser for a utility infrastructure consulting company and former interim CEO of an electric utility company;
- adviser to the CEO of a technology services company and former utility innovation strategist;
- independent consultant focusing on policy studies and analysis for a range of institutions;
- managing director of a financial services leadership coaching firm and former banking executive; and
- former transitional utility CEO with a varied energy background.

Second-round interviews will be scheduled for mid-May dates with the five candidates.

Following the second day of first-round interviews, the JNC noted the absence of Vickie VanZandt, who is retiring from the board in 2022. The JNC said VanZandt's input would help better evaluate the technical skills of those candidates with transmission backgrounds. ISO-NE attorney Maria Gulluni said VanZandt, with her extensive transmission background, could join the JNC in a non-voting capacity to interview candidates during the next round.

The JNC comprises seven board members, NEPOOL's six sector leaders, and a New England Conference of Public Utilities Commissioners representative. With input from the board, state representatives and market participants, the committee identifies the types of expertise that ensure ISO-NE has "sufficient knowledge and expertise to act as the RTO for New England," according to the Participants Agreement between ISO-NE and NEPOOL.

6-MW solar farm in Salisbury, Mass. | *LandVest*

Energy Market Value down

ISO-NE's energy market value for April was $229 million (through April 28), down $144 million from the updated March valuation and $69 million higher than the same month in 2020, according to Chadalavada's *monthly report* to the PC.

April natural gas prices were 31% lower than in March. Average real-time hub LMPs were 22% lower than in March, at $26.19/MWh. Average natural gas prices in April and real-time hub LMPs were up 43% and 45%, respectively, from the same period last year.

Average day-ahead cleared physical energy during peak hours as a percentage of the forecasted load was 99.8% in April, up from an adjusted 98.9% during March, with the minimum value for the month of 94.6% posted April 4.

Daily uplift or net commitment period compensation (NCPC) payments totaled $2.6 million over the period, up $400,000 from the adjusted March value and $500,000 more than April 2020. NCPC payments were 1.1% of the energy market value.

Chadalavada said that 17 new projects totaling 5,283 MW applied for an interconnection study — five battery storage projects, seven battery and solar co-location projects, one solar project and four offshore wind projects — with in-service dates in 2021 to 2027. ISO-NE is currently tracking 288 generation projects, which total approximately 31,102 MW. ■

— Jason York

ISO-NE News

Algonquin Gas Appeals FERC Order on Weymouth Compressor

By Emily Hayes

Algonquin Gas Transmission is appealing FERC's decision earlier this year to examine safety concerns with the operation of a compressor station in Weymouth, Mass.

The limited liability company, which is a natural gas pipeline asset of Enbridge, filed a petition last week with the D.C. Circuit Court of Appeals. It is seeking review of FERC's Feb. 18 *order* [CP16-9-012] asking for input on, among other things, what the consequences would be of reversing its September 2020 authorization to place the Weymouth Compressor into service.

The Atlantic Bridge pipeline system, which includes the compressor, was thoroughly reviewed by FERC and other agencies "as part of a transparent and inclusive public permitting process," according to a spokesperson for Enbridge.

The Weymouth Compressor was built to be the cornerstone of the Atlantic Bridge project, which connects two pipelines that allow natural gas from Pennsylvania to travel to New Jersey, up through New England into Canada.

Algonquin filed a request for hearing of FERC's order establishing a briefing, but FERC did not act on the request.

There has been significant opposition to the compressor station in Massachusetts by residents, elected officials and climate activist groups like the Fore River Residents Against the Compressor (FRRACS).

The group hosted a webinar May 4 to show residents of communities close to the station how to submit eFilings or comments online to FERC.

The permitting and public comment process is "transparent for the industry, not for the stakeholders," FRRACS President Alice Arena said.

"If you're not a lawyer, if you don't speak government and you don't have access to people who can help you, it's not transparent," Arena added.

The Maine Public Utilities Commission filed comments with FERC opposing the order to re-examine the compressor project. The agency said that final leg of the Atlantic Bridge project from Weymouth to Baileyville, Maine, which began service in January, is an important part of the state's energy planning. If FERC were to remove the compressor from service, the agency said, "investments already made to facilitate much-needed access to natural gas pipeline capacity ... paid for by Maine's natural gas customers ... will be put at risk."

The Weymouth Compressor, however, has had three unplanned gas releases in the last eight months. It released at least 44,000 standard cubic feet of gas last month after the compressor "experienced an issue" and "safely shut off as designed to prevent equipment damage," which caused a control device to initiate the venting of gas, according to Enbridge.

A *study* from Harvard University's School of Public Health found that deaths associated with natural gas combustion increased in Massachusetts between 2008 and 2017. Natural gas use in buildings led to at least 148 deaths in Massachusetts as of 2017.

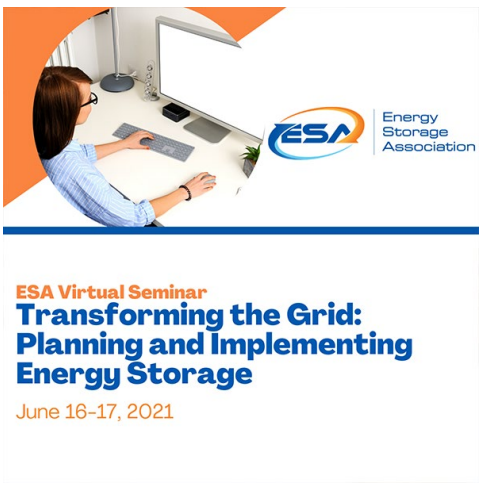
Weymouth Compressor station | *Fore River Residents Against the Compressor Station*

"Even if FERC were to diminish capacity for the compressor or limit its operation, that would be a really big deal," Arena said. The agency would demonstrate it is serious about confronting climate change, she added.

However, if FERC were to allow the Weymouth Compressor to continue operating as is, FRRACS and other groups are concerned it will be a positive signal for new natural gas pipeline development in Massachusetts to transport fuel to Canada.

Under new climate policy in the state, according to Arena, there is no longer a need for natural gas infrastructure. She added that the location of the compressor in Weymouth could serve as a combined solar and battery storage facility.

"The alternatives are there, just not the political willingness," she said. ■



ISO-NE News

Eversource Q1 Results Reflect $30 Million Conn. Penalty

By Jason York

Eversource Energy said Monday that shareholders would shoulder the cost of $30 million in penalties the Connecticut Public Utilities Regulatory Authority (PURA) laid down last week for the utility's inadequate response to Tropical Storm Isaias in August 2020.

That statement accompanied Eversource's first-quarter *report*, in which the company announced earnings of $366.1 million ($1.06/share), 9% higher than the same period last year.

The results reflect the $0.07/share charge tied to a PURA penalty for Eversource's performance during Isaias, which about 50% of the company's 1.3 million Connecticut customer lost power for as many as nine days.

There were damaged power lines, utility poles and transformers, and debris that blocked roads that hindered power restoration. PURA fined Eversource about $28 million, the maximum for nonperformance under state law. It also hit the utility with an additional $1.62 million for violations of accident reporting requirements. (See *Conn. PURA Hits Eversource, UI with Civil Penalties for Isaias Response*.)

Eversource Energy CEO Joe Nolan | *Eversource Energy*

Recently appointed CEO Joe Nolan said it was "painful" to read some aspects of PURA's April report that harshly criticized the utility over Isaias. (See *Conn. Utilities Found Deficient in Tropical Storm Isaias Response*.)

Nolan said it "did not reflect the hard work of our dedicated employees," such as line workers who worked up to 16 hours a day on power restoration efforts amid the COVID-19 pandemic. He said he recognized "clearly identified areas for improvement" from the PURA audit and penalties, including the utility's storm response plan and its relations with the regulator.

"I can assure you that we hear this loud and clear and are already doing all we can to improve on both counts," Nolan said.

Eversource has until May 26 to file a written response for a hearing with PURA to contest the penalties. The subsequent hearings would be held on June 10-11 with a final decision scheduled for July 14.

Eversource's electric distribution segment absorbed the PURA penalties, dropping first-quarter profits to $93.2 million, compared with $130.1 million a year earlier. Nolan added there were approximately $20 million of storm-related expenses January through March this year, with 31 separate storm events across the company's footprint that further drove down electric distribution earnings.

The electric transmission and natural gas segments reported significant gains compared with the first quarter in 2020. Electric transmission earned $135.4 million, up nearly $9 million, primarily because of additional investments in the system. Natural gas distribution earned $147.6 million, a 71% increase, mainly because of the acquisition of Columbia Gas and its distribution assets in Massachusetts.

Winds of Change

Nolan said the climate legislation signed by Massachusetts Gov. Charlie Baker earlier this spring allows each of the state's utilities to build up to 280 MW of additional solar generation. About $500 million is budgeted for this action between 2022 and 2025.

Additionally, the expansion of Massachusetts' offshore wind authorization from 3,200 MW to 5,600 MW will help keep the state at the forefront of OSW development in the United States, Nolan said OSW is "near and dear to his heart," having overseen Eversource's partnership with Ørsted before being named CEO.

Nolan said the Biden administration's goal of 30 GW of OSW by 2030 has also provided a boost.

"We expect to be a significant contributor to that output through our partnership with Ørsted," Nolan said. "Already, more than 1,750 MW are under contract to serve load in Connecticut, New York and Rhode Island."

Nolan said it is a "breath of fresh air" working with the administration on OSW development. He cited a recent meeting that included four cabinet secretaries and climate czars Gina McCarthy and John Kerry.

"The focus down there is what can we do to help move this agenda," Nolan said. "We're already seeing decisions that are coming out of there at a much faster pace than we'd seen in previous administrations, and it's really been a sea change for this business." ■

***Call transcript courtesy of** Seeking Alpha.*

MISO News

MISO: Electrification Leads to Winter Peaks, Soaring Load Growth

By Amanda Durish Cook

Within two decades, increasing load from electrification will have MISO operating on a winter peaking model, staff said last week.

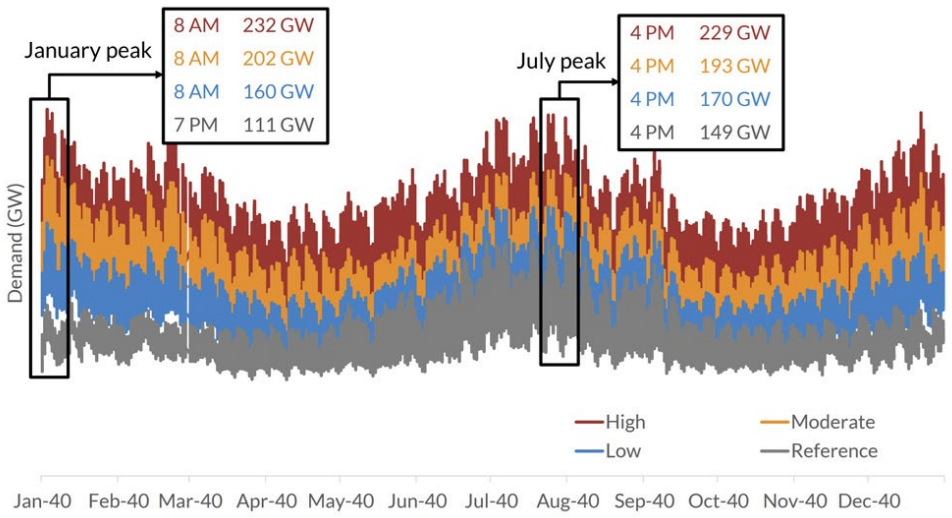
According to the RTO's *electrification report* published last month, MISO could see demand peak at more than 200 GW during a January day by 2040. Electrification's additional load could have members building hundreds of gigawatts of new generation and facing winter systemwide peak demand that eclipses the summer peak. (See *MISO Report Focuses on Electrification's Impacts*.)

Speaking during an electrification stakeholder workshop May 5, MISO engineer Hilary Brown said staff drew up the report to figure out "what risks MISO has to be prepared for to meet its reliability imperative."

She said electrified home heating and vehicles will create demand that nudges the RTO into a winter peak paradigm as load increases year-round.

"The summer peak does not go away. It remains fairly consistent with the winter peak," Brown said.

Staff also found deeper ramping needs and two daily power demand peaks in every month except July, largely because of uncontrolled EV charging. The analysis did not consider flexible or responsive load.



Potential 2040 load scenarios under increasing electrification | *MISO*

Even with low electrification-adoption assumptions, Brown said the load growth is considerable. Compared with a scenario without electrification, even low levels of electrification could add about 50 GW to a January peak by 2040 and about 20 GW to a July peak.

"It's still a fairly large amount in the low scenario," she said.

Brown said in addition to electrification of homes and commercial buildings, lawnmowers, snowblowers, forklifts and mining equipment will transition to electric.

There are emerging applications for electrification too, Brown said. They included the aviation and maritime industries and the ultraviolet light air filters that gained popularity in commercial spaces during the pandemic.

Mississippi Public Service Commission consultant Nick Puga, who also consults for the Nova Scotia Utility and Review Board, said Canada will require some commercial customers to keep their original fossil fuel heating systems functional in some instances. That will allow load to be converted back when necessary during winter peaks.

Electrification also stands to impact transmission usage across MISO, Brown said.

"Shifting patterns of load growth could fundamentally shift flow patterns within MISO," she said, adding that the RTO will probably experience new areas of transmission congestion.

Brown said much remains unknown about electrification's effect in MISO. She said the grid operator doesn't know how much electrification will come to pass, to what extent flows will be reworked, and which locations will adopt electrification more readily than others.

She said in the future, it could be load that also receives dispatch instructions.

"There are still a lot of unknowns with respect to electrification," Brown said. "There are unknown unknowns. There are probably things in this study that we don't know that we missed." ■

| *Evergy*

MISO News

MISO Tells Members to Prepare for Summer Emergencies

Continued from page 1

Eric Rodriguez, a resource adequacy engineer, said that if the summer peak is realized in July under expected load and generation availability conditions, MISO may be forced to call an emergency to access its fleet of load-modifying resources. If faced with worst-case generation outages and demand hits 129 GW, the RTO runs the risk of exhausting all its emergency reserves. MISO set its all-time summer peak of 127 GW in July 2011.

Rodriguez said generation outages could become a concern. Last summer, outages during the monthly peak hours were high compared to MISO's five-year average of outages during peak summer months. During last June's peak hours, planned and forced outages exceeded 25 GW.

This year's forecasted peak is lower than MISO's 2020 projection of 125 GW. The grid operator had 152 GW of available capacity, but despite two weather-related emergency declarations, the summer peak *came in* at just 117 GW in late August. (See *MISO Preps for Balmy Summer with Pandemic Effects*.)

Renuka Chatterjee, executive director of system operations, said in a *release* that staff's projections were made "based on information we received from our members and stakeholders." She said MISO will work with members "to ensure operational readiness regardless of the conditions, season or time of day."

The National Oceanic and Atmospheric Administration anticipates warmer-than-average temperatures throughout the RTO's footprint this year.

Staff reflected on last summer's slew of challenges.

"Not only did we manage operations in a pandemic … MISO also went through its first experience with a major hurricane," MISO Director of Operations Planning J.T. Smith said.

Trevor Hines, manager of South reliability, said last summer featured a July transmission outage in Michigan, a powerful derecho in Iowa and the Midwest in August and Hurricane Laura's devastation in the Gulf in August.

He said intensifying storms call for "more robust preparation" and "more sophisticated tactical annual hurricane drills."

Hurricane Hazards

MISO is expecting an above-normal hurricane season this year, said Anita Hurst, of MISO's training division.

Using predictions from Colorado State University, she said the 2021 Atlantic hurricane season could result in 17 storms, eight of which would develop into hurricanes. Of those eight, four would likely develop into major hurricanes. CSU also predicted a 44% chance that a hurricane would brew in the Gulf of Mexico before striking the U.S.

Hurst said last year, the COVID-19 pandemic forced MISO to scale back its annual hurricane drills with members. "This year, we are back in full force, leveraging our simulator," she said.

Cooperative Energy Director of System Operations Joe Riels stressed the importance of emergency preparation to his fellow stakeholders.

"Everybody has a plan until they get punched in the mouth," Riels said, quoting former boxer Mike Tyson. He said Cooperative Energy had such a moment when MISO ordered the co-op to shed load during February's ice storm.

"Admittedly, it took a few seconds until we got our plan together," Riels said.

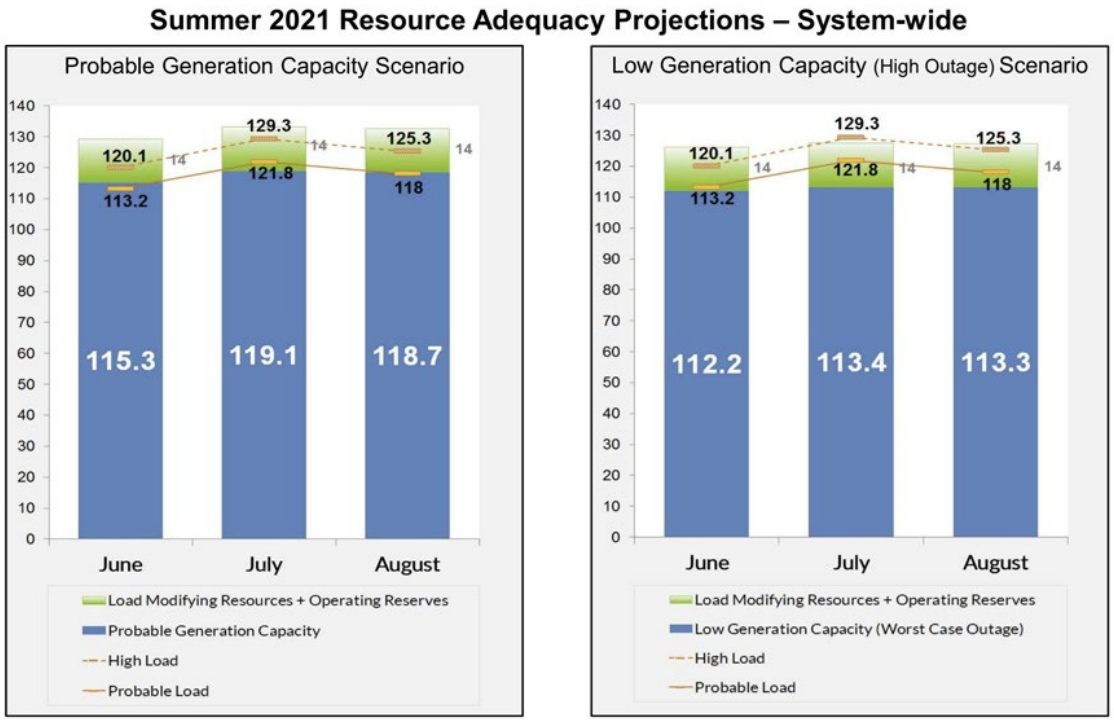
SERC Vice President of Operations Tim Ponseti said that the 11 hurricanes that made landfall in the U.S. during the 2020 season smashed the all-time record set 1916.

"It becomes a patriotic event in this country, all the people pooling together to restore power," he said.

During the Gulf Coast Power Association's spring conference last week, CenterPoint Energy Executive Vice President Kenny Mercado remarked on the more frequent, stronger storms.

"We don't see [Category] 1s and 2s anymore. We see 4s and 5s," Mercado said during an April 29 panel.

Entergy Texas CEO Sallie Rainer said Entergy has been building more wind-resistant transmission towers in the Lake Charles, La., area, which found itself in the path of two major hurricanes in 2020. ■



MISO summer peak predictions | *MISO*

MISO News

MISO Debuts Members' App for Demand Response

MISO hopes to have a new demand-side management tool fully operational by July for its members to manage their load-modifying resource fleets.

The Demand Side Resource Interface *application* will replace the LMR availability reporting and scheduling instructions that are currently handled through the long-maligned MISO Communication System (MCS). Members have called the nonpublic interface outdated and difficult to navigate. Some have said that the system's unclear instructions deserved partial blame when LMRs didn't perform up to the RTO's standards during maximum generation emergencies. (See *MISO to Fix Communications System Shortcomings*.)

The new application will allow MISO to cancel requests for LMRs and for LMR owners to acknowledge the grid operator's canceled requests. It will also be able to conduct LMR deployment drills.

"Not only is it able to host the same functionality, it's able to hold some enhancements as well," MISO's Jeffrey Minks told stakeholders during a Reliability Subcommittee on May 6.

MISO's Carmel headquarters | © *RTO Insider LLC*

Minks said while the application will initially handle only the LMRs' management, it will eventually be used to supervise MISO's emergency demand response and future demand-response services as demand-side management becomes more ubiquitous. In the meantime, the MCS will continue to report and deploy emergency demand response.

"The long-term vision is really to have a one-stop shop," Minks said.

He said user testing and training will begin this month and he urged LMR owners to access the application and "kick the tires."

MISO is also revamping its generation outage-tscheduling interface for the first time in five years.

The updated Control Room Operations Window (CROW) will have more "stakeholder-focused features" that will allow members to more easily cancel or change outage requests, staff said. ■

— Amanda Durish Cook

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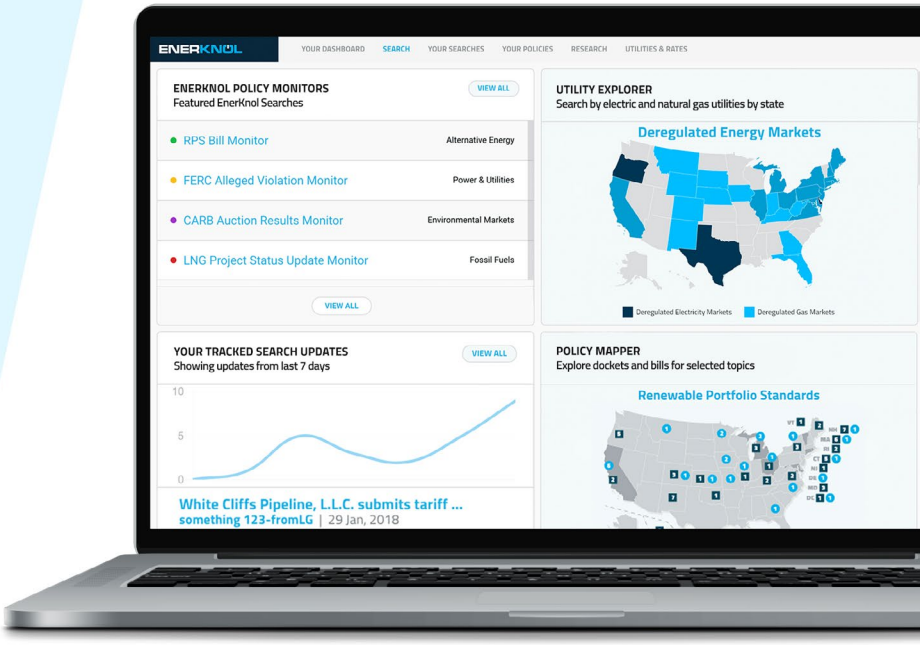

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MISO News

Despite FERC NOPR, Fortis Optimistic About Transmission

By Michael Kuser

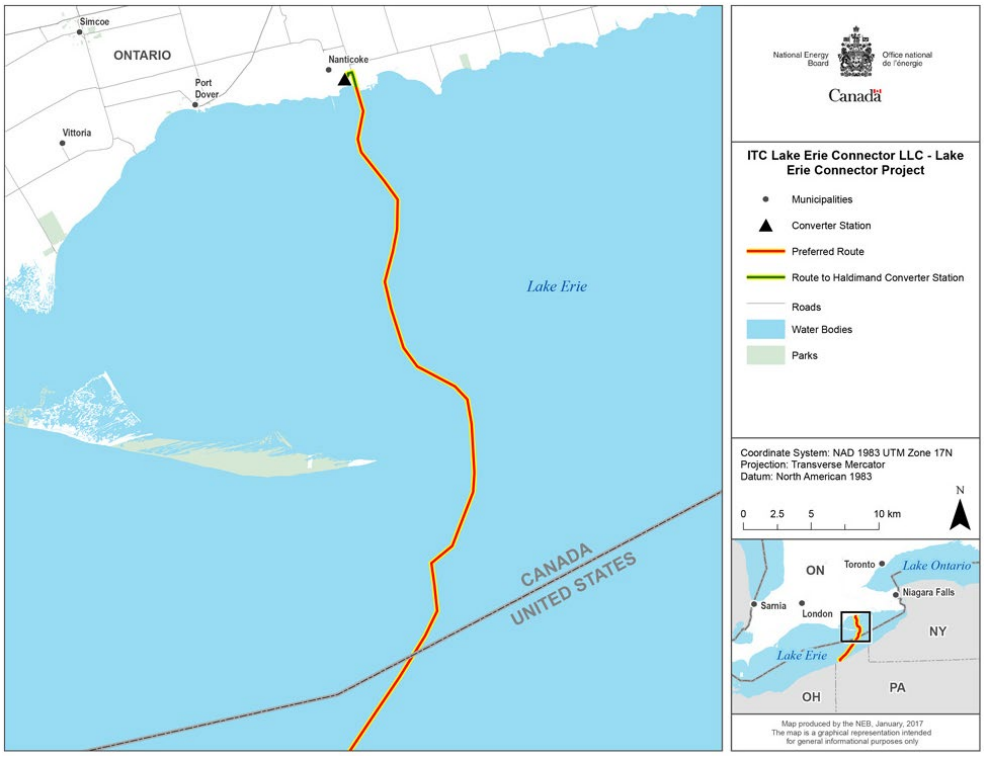
Fortis on Wednesday *reported* first-quarter net income of $355 million (Canadian) ($0.76/share), up 12% from the same period in 2020, driven by rate base growth at the firm's regulated utilities, including new customer rates at Tucson Electric Power (TEP).

In a call with analysists, the Newfoundland and Labrador, Canada-based company's CEO, David Hutchens, highlighted the work of its subsidiary ITC Transmission, the largest independent electricity transmission company in the U.S.

He discussed FERC's Notice of Proposed Rulemaking to eliminate the 50 basis-point return on equity adder for utilities that have been RTO members for more than three years. "Not only were we surprised in the reversal of FERC's direction on the RTO adder, but we are extremely disappointed given the important role RTOs play in facilitating the reliable cost-effective and resilient grid, while enabling clean energy goals," he said. (See *FERC Proposes Increased Tx Incentives*.)

"So, we don't know where that will end up, and we will obviously make comments accordingly on the importance of the RTO adder ... for getting people inside those RTOs," Hutchens said. "It is extremely important to recognize that the bigger the markets are, the lower the costs are [and] the higher the reliability and the more renewable energy that we can integrate into the system. So, we really think that that was the wrong direction."

Tucson Electric Power's 250-MW Oso Grande Wind Project is situated on 24,000 acres in southwest New Mexico. | *Siemens*



The Lake Erie Connector Project, if approved, would consist of three distinct components: HVDC converter stations and facilities, terrestrial cable systems, and underwater cable systems running from Haldimand County, Ontario, to Erie County, Pa. | *ITC*

Hutchens noted that MISO has estimated it needs $30 billion to $100 billion of 345-kV, 500-kV and 765-kV transmission lines, and a massive footprint-wide network of DC transmission. (See *MISO Execs Defend Need for Long-range Tx*.) ITC's assets are strategically located to interconnect the Midwest to cleaner energy resources, he said.

ITC CEO Linda Apsey said the company expects MISO to announce their portfolio of first-mover projects later this year; they would be included in MISO's annual Transmission Expansion Plan for next year.

"There is a group of MISO transmission owners that is also advancing principles around cost allocation that would be coincident with the projects that are put forth," Apsey said. "So, we are very optimistic given a lot of the activity, the conversation, the collaboration [and] the engagements across MISO."

The proposed 1,000-MW Lake Erie Connector transmission project between Ontario and Pennsylvania also continues to progress, Hutchens noted. In April, the Canada Infrastructure Bank announced that it will fund up to 40% of the $1.7 billion project cost.

"The project is expected to bring an estimated $100 million in annual savings to Ontario customers by connecting their grid to the PJM Interconnection," Hutchens said.

Finally, Hutchens noted that the Biden administration recently released its proposed infrastructure plan calling for carbon-free power from the electricity sector by 2035, which could accelerate capital investments at the firm's U.S. utilities through transmission interconnections at ITC, clean generation and energy storage in Arizona, and electric vehicle infrastructure in all the states Fortis serves, Hutchens said.

Fortis posted 2020 revenue of $8.9 billion and had total assets of $56 billion as of March 31. The company serves utility customers in five Canadian provinces, nine U.S. states and three Caribbean countries. ■

***Transcript courtesy of** Seeking Alpha*.

NYISO News

NYISO 2021 Power Trends Report: Resource Mix Changing Fast

By Michael Kuser

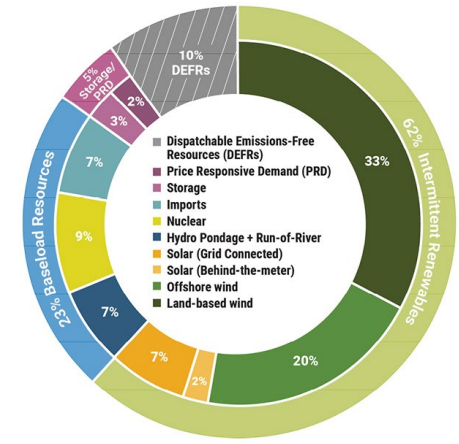
NYISO's annual report on the grid and wholesale electricity markets this year focuses on how public policy, climate change and new technologies are driving unprecedented and rapid change in the state's energy resource mix.

In a press briefing Wednesday, CEO Rich Dewey said the ISO's 2021 Power Trends *report* examines "the core of our mission of maintaining reliability and markets, [while] recognizing that significant change is underway, both in terms of technology of the grid as well as the policies that are driving some of the change, specifically within New York."

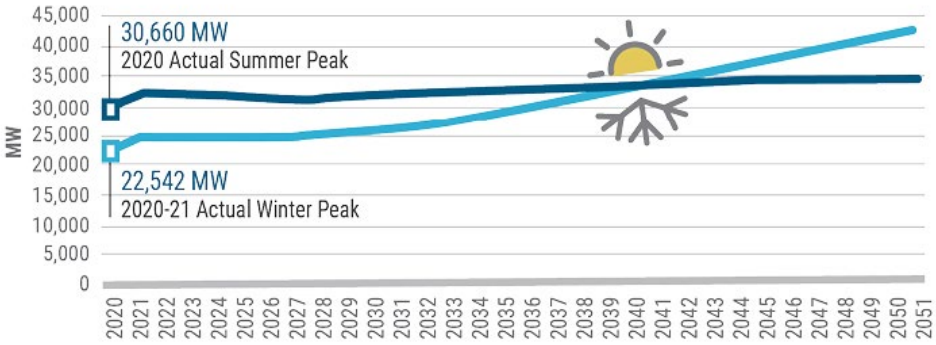
"In addition to that, we're seeing across the country the effects of more frequent extreme weather events and the need to think about what sort of systems and procedures we need to have in place to make sure we're prepared and ready for those types of events," he said.

Data in this year's report were skewed by the economic slowdown stemming from the COVID-19 pandemic, which cut 2020 energy usage by more than 4,100 GWh — or about 2.6% below forecasted levels. Statewide peak demand at times fell 10% below forecasts and as much as 16% below forecast in New York City, the most heavily affected area.

NYISO also observed an increase in residential usage, especially during midday, which reflects lower economic activity and a shift in usage from New York City to the suburban areas of Long Island and the lower Hudson Valley during the pandemic, the report said.



Electric summer and winterpeak pemand, actual and forecast: 2020-2051 | *NYISO*



Projected CLCPA winter energy production by resource type in 2040 | *NYISO*

Peak Transition

As New York moves toward becoming a winter peaking area by about 2040, solar will not contribute output when the peak load occurs after sunset, Dewey said. "So when we start thinking about planning the system, and increasingly as we get to be a winter-peaking system, we've got to have good forecasting capabilities and good understanding of how solar resources need to be managed."

New York's Climate Leadership and Community Protection Act (CLCPA) requires that 70% of the state's electric load be served by renewable resources by 2030; it also requires procurement of 6 GW of solar by 2025, 3 GW of storage by 2030 and 9 GW of offshore wind by 2035. New nitrogen oxide emission limits in the state are affecting about 3,300 MW of peaker generation, mostly located in the lower Hudson Valley, New York City and Long Island.

Newly instituted market participation rules for storage "we think will lead to consistent and steady increases in the amount of storage on the system," Dewey said. "That's very beneficial to be able to backstop the wind, firm up the wind and solar, so when those intermittent resources go off the grid or have their output reduced by weather impacts, storage is going to be an increasingly valuable asset and to reduce the need for fossil fuel-based resources to come online."

Policy Signals

Dewey said the new FERC commission seems more receptive "to trying to resolve the conflict between states' energy policies and what was the federal energy policy. It seems like we've got some daylight that we can come up with an acceptable solution that I believe the renewable projects and the existing generators will all be pretty happy as long as they're getting a fair signal."

FERC in March accepted NYISO rules allowing energy storage to participate in the wholesale markets with wind or solar as a co-located storage resource (CSR). In a separate statement concurring with that ruling, Chair Richard Glick urged the ISO "to replace those rules with a model that moves beyond minimum offer price rules as a means for mediating the interaction between state policies and wholesale markets." (See *FERC Approves NYISO Co-located Storage Model*.)

NYISO last month laid out a plan to revise its capacity market rules by this fall — especially those regarding buyer-side mitigation (BSM) — to address regulators' views that they hinder the deployment of state-subsidized resources such as solar and wind, which have environmental attributes not normally accounted for in market valuations. (See *NYISO Outlines Goals for Capacity Market*.)

"Acceptable resolution of these buyer-side mitigation rules ... would naturally influence New York state's decision on what the right resource adequacy mechanism is," Dewey said.

Regarding the increased frequency of extreme weather events, Dewey said the rolling blackouts in California highlighted the importance of having an accurate reserve margin in place. (See *CAISO Says Constrained Tx Contributed to Blackouts*.) He said the February outages in Texas, although still under investigation, showed the importance of winterization, a problem not applicable to New York. (See *ERCOT: Grid was 'Seconds and Minutes' from Total Collapse*.)

Regarding fuel availability, Dewey said, "We deal with gas shortages in New York, but many of our critical facilities are dual fuel units and have back-up oil supplies. ■

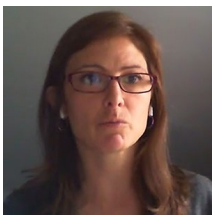
NYISO News

NY Power Panel to Recommend Gas Infrastructure Moratorium

By Michael Kuser

The New York Climate Action Council's Power Generation Advisory Panel will recommend that the full council adopt a moratorium on building new gas-fired power plants and related infrastructure — with the caveat that it did not achieve consensus on the idea. (See "Public Input," *NY Power Panel Debates Gas Moratorium*.)

The panel met May 3 to review public comments and changes to its final scoping plan recommendations. The CAC is charged with making recommendations to state regulators to meet emission's targets but does not have the power to issue binding measures.



Sarah Osgood, NYDPS | *NYDPS*

"We received a lot of feedback through both our email address for public comment, our voicemail, and through the five public information sessions that we held," said Sarah Osgood, director of policy implementation at the state's Department of Public Service. She chaired the meeting and was last month *appointed* executive director of the CAC. "The vast majority of the comments were from individuals, but we also did get some from environmental justice and environmental groups, as well as utilities and a variety of different organizations."

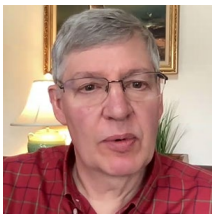
Public comments at a panel session in March supported stopping construction of new gas-fired power plants, closing old peakers, and increasing the use of energy storage and other new technologies to cut emissions and help achieve a net-zero grid. (See *Cut Peakers, Boost Storage, NY Climate Council Hears*.)

The state's Climate Leadership and Community Protection Act (CLCPA) requires 40% decreases of methane and other greenhouse gases by 2030 and 85% cuts by mid-century. It also requires the grid to run on 70% renewables by 2030 and be net-zero by 2040.

The panel agreed to a few changes to its draft recommendations, including to technology and market solutions, and increasing resources to ensure the buildout of distributed energy resources. The recommendations will now incorporate advanced fuels, distinguish green hydrogen from combustion of hydrogen, and urge a study on untapped renewable energy and storage potential.

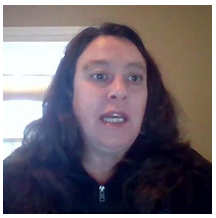
The market solutions will include a strengthened statement that *NYISO* buyer-side mitigation rules should not be applied to CLCPA resources. The panel will urge state advocacy at NYISO and *FERC* to align markets and planning processes with CLCPA goals, as well as earnings adjustment mechanisms for utilities to speed decarbonization efforts, Osgood said.

Panel Concurrence



William Acker, NY-BEST | *NYDPS*

"We particularly put an emphasis on developing dispatchable technology solutions as they emerge," William Acker, executive director of the New York Battery and Energy Storage Consortium (NY-BEST), said, referring to efforts by the utilities to procure long-duration storage. "I do believe we have a very good set of recommendations, and I'm fully supportive."



Lisa Dix, Sierra Club | *NYDPS*

Lisa Dix, New York representative for the Sierra Club Beyond Coal Campaign, referred to the panel members' differing views on a moratorium on building new gas-powered generators and encouraged the utility group to look at the recommendations being put forth to the CAC in terms of a refinement of ideas on dispatchable resources.

"If the utilities really want to play a role in decarbonizing the electric sector fully... really leaning in and figuring out how they can work with the state to replace fossil fuel plants and units over time with creative financing mechanisms that would be able to bundle non-emitting resources would be a great collaborative effort," Dix said.

NYISO Executive Vice President Emilie Nelson said the diversity of the panel strengthened the effort, and that a strong aspect of the recommendations is the iterative nature of some of the planning processes implemented for consideration by the CAC.

"Given the length of this implementation, we're considering how to transform not only the electric sector, but the balance of the economy over the next two decades and beyond," Nelson said. "Remaining engaged is going to be necessary as we make adjustments as we go ahead and make sure that all interests are balanced."

John Reese, Eastern Generation | *NYDPS*

John Reese, senior vice president of Eastern Generation, said the panel had arrived at "the core solution" of building upon the peaker regulations and the approach taken there of reviewing proposals and coordinating reliability to ensure that the state gets to zero carbon while maintaining reliability and the New York economy.

Kit Kennedy, NRDC | *NYDPS*

Kit Kennedy, director of energy and transportation for the Natural Resources Defense Council, lauded the collective "smart planning" of the panel to meet the CLCPA goals and said that "the addition of energy efficiency and demand response recommendations was perhaps the final piece in the puzzle," and that "flexible resources will be really important" to achieving the state's climate targets.

Betta Broad, outreach director at New Yorkers for Clean Power, said that the interdisciplinary nature of the group resulted in strong recommendations. "I'm delighted that we were able to expand the scope of the methane leakage section, in particular, and address the need to decommission the entire gas system." ■

NYISO News

Con Edison Q1 Earnings up Nearly 12% YOY

By Michael Kuser

Consolidated Edison on Thursday *reported* first-quarter net income of $419 million ($1.23/share), up nearly 12% from $375 million ($1.13/share) a year ago.

The company said its total allowances for uncollectible customer accounts, mostly related to the COVID-19 pandemic, increased from $146.7 million at year-end to nearly $181 million as of March 31. In April the company filed a petition with the New York Public Service Commission to establish a surcharge recovery mechanism for $52 million of late payment charges and fees last year, offset for related savings, as well as a similar mechanism for any fee deferrals for 2021 and 2022.

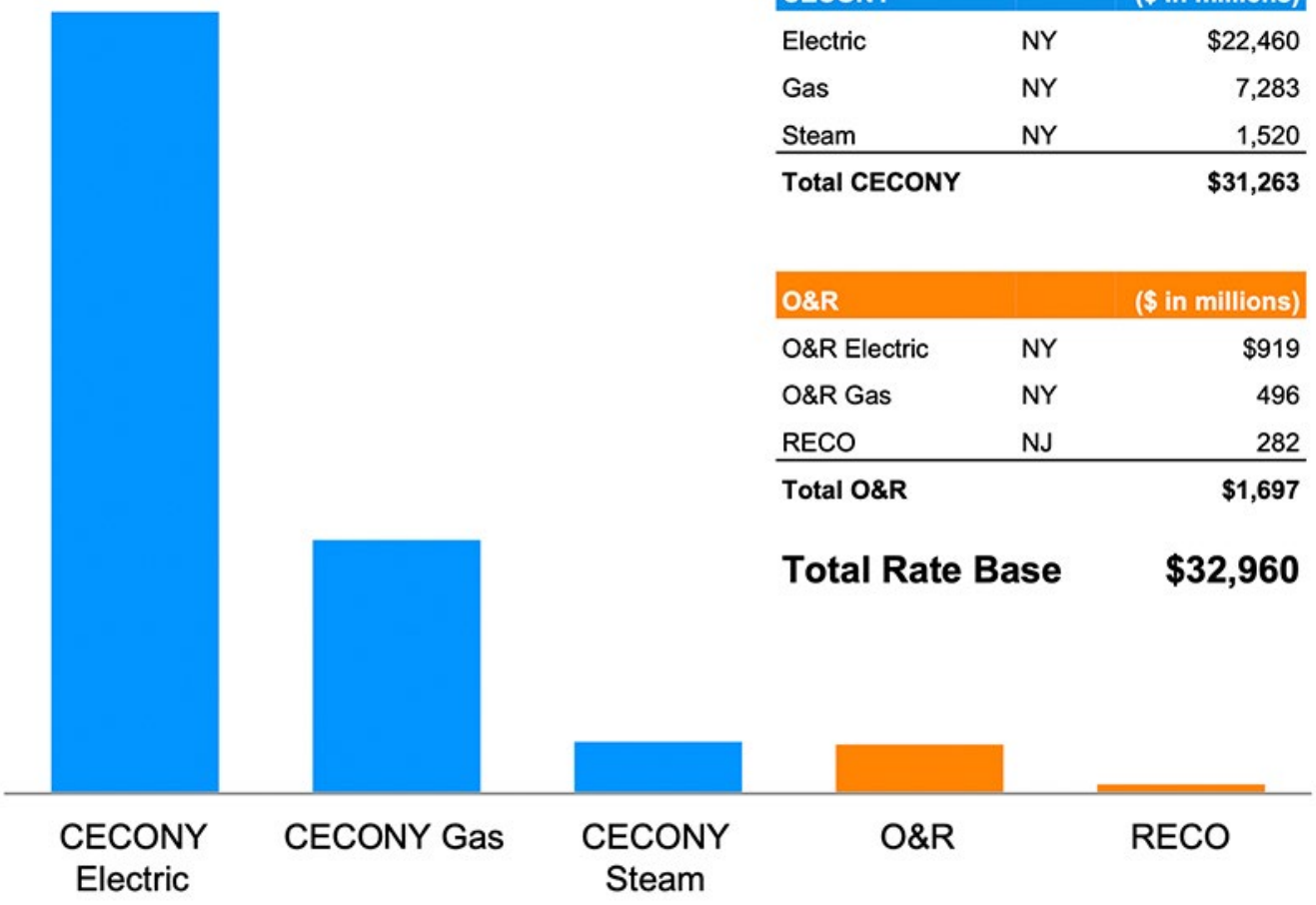
Meanwhile, state limits on nitrous oxide emissions during the summer ozone season will require 1,400 MW of fossil-fueled generating units in Consolidated Edison Company of New York's (CECONY) service territory to cease operation during the summer, install emission controls, repower or retire by 2025. Last month the PSC approved Con Ed's petition to recover nearly $800 million of costs to construct three transmission projects to solve the local reliability needs. (See *NYPSC OKs $800 Million Tx Cost Recovery for Con Ed*.)

Con Ed reported its Clean Energy Businesses units have 3,240 MW of utility-scale renewable energy production projects in service (2,809 MW) or in construction (431 MW) and 66 MW of behind-the-meter renewable energy production projects in service or in construction.

"Con Edison is leading the way to a clean energy future with its investments in renewable energy, electric vehicle infrastructure, and energy efficiency," CEO Timothy Cawley said in a statement. "Delivering energy safely and reliably is always a top priority, and our workforce continues to provide value for shareholders and all New Yorkers during this challenging time."

Con Ed owns, through subsidiaries, a 50% interest in Stagecoach Gas Services, a joint venture that owns and operates an existing gas pipeline and storage business located in northeastern Pennsylvania and the southern tier of New York.

In the process of reducing its stake in Stagecoach, a goodwill impairment test resulted in the joint venture recording a charge of $343 million as of March 31, leading Con Ed to record a pre-tax loss of $172 million. ■



CECONY		($ in millions)
Electric	NY	$22,460
Gas	NY	7,283
Steam	NY	1,520
Total CECONY		**$31,263**

O&R		($ in millions)
O&R Electric	NY	$919
O&R Gas	NY	496
RECO	NJ	282
Total O&R		**$1,697**

Total Rate Base $32,960

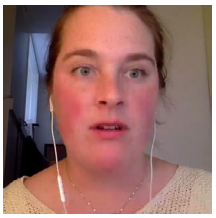
Composition of Con Edison's regulatory rate base as of March 31 | *Con Ed*

NYISO News

NY Officials Told to Stay the Course on CDG Solar

By Michael Kuser

Clean energy advocates and solar developers told New York officials to tweak the value of distributed energy resources (VDER) tariff on environmental value rather than make complicated new processes to sustain PV growth.



Kaitlin Kelly O'Neill, CCSA | *NYDPS*

"We have a successful program and paradigm in place, and VDER is looked to by other states as a model policy and held up as an innovative way for compensating DERs based on actual value," Kaitlin Kelly O'Neill, Northeast regional director of the Coalition for Community Solar Access, said Friday.

O'Neill spoke at the second of two technical conferences on VDER, especially community distributed generation (CDG) solar, hosted by New York State Energy Research and Development Authority (NYSERDA) and Department of Public Service (*15-E-0751*).

The state's investor-owned utilities said in a joint presentation that no single technology will tackle the state's climate challenge and recommended that regulators be open to all types of renewable energy.

New York's Climate Leadership and Community Protection Act (CLCPA) requires the state to consume 70% renewable electricity by 2030, switch to 100% zero-emission power by 2040 and reduce greenhouse gas emissions to 85% below 1990 levels by midcentury. The CLCPA also calls for the procurement of 6 GW of solar by 2025, 3 GW of storage by 2030, and 9 GW of offshore wind by 2035.

Beyond Targets

"We're really asking, 'What are we doing post-6 GW?'" David Sandbank, NYSERDA vice president for DER, said in chairing the meeting and highlighting the *presentations* given during the conference.

The first conference on April 21 addressed potential ways to continue advancing commercial, industrial and community solar development.

The May 7 session looked at commercial, industrial and CDG policy options for pricing externalities, i.e., via monetary cost of damages or the marginal abatement cost. DPS staff will issue a white paper that incorporates comments submitted by stakeholders. (See *NY Works to Sustain Community Solar Growth*.)

Sam Jasinski, Borrego Solar | *NYDPS*

With the state needing to add 2.5 to 3 GW of renewable energy capacity every year from now to 2050 to achieve its climate goals, it's no surprise that New York is going to need more than 6 GW of solar to meet 2040 zero emissions electricity sector goals, said Sam Jasinski, director of Northeast policy and business development at Borrego Solar.

Borrego received its first NYSERDA large-scale renewable contract in February for the 110-MW Rutland Center Solar 1 project, "but there's a lot left for us and everyone else to learn about how to bring these promising utility-scale solar projects to market, and how much it's ultimately going to cost to do that," Jasinski said.

Borrego agreed with a DPS recommendation to update the environmental value in the existing value stack. DPS on April 21 *issued* an updated value at $31.03 per MWh, up from the previous $27.41 per MWh due to a higher social cost of carbon (SCC) over time and based on the 20-year period from 2022 to 2041.

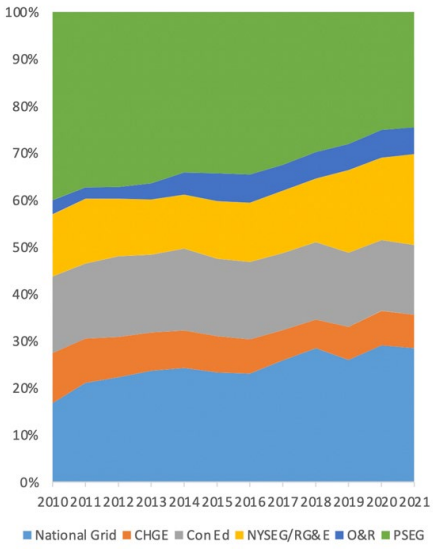
In addition, Jasinski urged regulators to preserve market continuity by making eligible those projects that missed out on the community adder or base MW block incentives.

Utility Perspective

The presentations at the conference had a lot in common despite perceived differences, said Stephen Wemple, Con Edison vice president of regulatory affairs.

Stephen Wemple, Con Edison | *NYDPS*

"I think everybody agrees that distributed solar is an important tool and part of the CLCPA that has helped us get to the 6 GW target," Wemple said. "It can and should continue to play a big role as we go forward."



Cumulative share of interconnected, distribution-connected PV, extrapolated from New York interconnection queue data in March 2021. | *Joint Utilities*

However, it is important to recognize that CDG may have some limitations, he said, advocating a holistic approach to a "distributed renewables market, not just distributed solar."

"There are other emerging renewable technologies, whether it's tidal turbines in the East River, or upstate agriculture applications to capture methane on dairy farms, and even rooftop wind turbines in New York City as well as ground-mounted wind turbines in peoples' back yards upstate," Wemple said. "From our perspective, we need all-of-the-above to get to some of those CLCPA goals."

Toby Hyde, National Grid | *NYDPS*

One of the strong points of the value stack is its application to new technologies, such as potential injections from electric vehicle charging stations, said Toby Hyde, principal strategy and policy analyst at National Grid.

While NYSERDA support for new renewable energy projects would better allocate costs statewide and avoid over-burdening customers of one company, the joint utilities said they "do not have a fully-baked solution to offer," but will collaborate with all other stakeholders. ■

PJM News

PJM Annual Meeting Focuses on Balancing Decarbonization, Reliability

By Michael Yoder

The intersection of decarbonization and reliability on the grid will be a defining issue for the energy industry to grapple with in the upcoming months and years, according to industry officials and experts.

PJM stakeholders heard some of the conflicts fleshed out at the RTO's annual Meeting of Members on May 4, as speakers talked about the pressing issues of state policies on green energy going up against the RTO's mandate to maintain the reliability of the grid for all customers.

Manu Asthana, PJM president and CEO, said the convergence of decarbonization policies and grid security needs to be answered in the near future by stakeholders. Asthana said the issue is not as easy as simply dismissing the challenges of addressing reliability or discounting public policies addressing decarbonization. Finding solutions is going to require selecting a path "based on the best collective thinking" of PJM and its members.

"This topic is squarely in our strategic fairway, and it's a topic without pat, easy answers," Asthana said.

3D Transformation

Jim Robb, NERC CEO and keynote speaker at last week's event, said the "evolving nature of the grid" remains at the top of mind for his agency. Robb said NERC has learned hard lessons over the last year of how the grid operates, indicating that it's "not our grandfather's electric system" as it exists today. He described the evolving grid as a "3D transformation" involving decarbonization, distributed and digitization.

NERC CEO Jim Robb | *PJM*

The increase in renewable generation is being driven by the "improving economics" of the technology and the environmental priorities of states regarding power generation, Robb said, while the expansion of variable resources is "really straining the way" regulators, politicians and stakeholders have to think about resource adequacy.

In the past, Robb said, capacity on the grid was one of the main issues the industry focused on, but decarbonization goals and intermittent resources have significantly changed the way system operators like PJM need to approach their business. Robb said the past generation model featured a fixed set of assets that were fairly predictable, but now the changing technology and green energy mix has created a "topsy-turvy" set of issues.

"It's become painfully clear that capacity is now necessary but no longer sufficient," Robb said. "We really have to have our eyes on energy and the ability to serve load."

Much of the generation being built is also going on the distribution system, driven by the improvements in solar generation economics and creating an industry where the "bright line" between bulk power and distribution is darkening.

Finally, Robb cited the "explosion" of the internet of things in devices in people's homes. The digitization revolution also includes the sophisticated energy management systems large industrial customers are installing to manage their own energy loads, Robb said, along with devices such as dynamic line ratings and smart meters.

These devices are "vastly improving our visibility" into the system and uncovering new ways to operate the system more efficiently, Robb said, but those improvements come with a price: A digital world in the electrical system poses a "great risk" for cyberattacks by adversaries and other bad actors.

Robb pointed to several digital supply-chain compromises in the last six months, including the SolarWinds hacking event revealed in December that compromised government systems. (See *FERC Pushes Cybersecurity Incentives*.)

"One of the things we've learned in the last year is how capable our adversaries are," Robb said.

PJM CEO Manu Asthana | *PJM*

The three D's are "really starting to strain" against the environment in which it operates, Robb said, as severe weather events have pushed the system to or past the breaking point. He said the operating environment is becoming more challenging and is "aggravated by the resource mix" that is being built.

Robb said last summer's load shed event in California involving CAISO's inability to import power to balance the resource showed a weakness in the system. (See *CAISO: Blackouts May Continue, Calls Emergency Meetings*.)

The severe cold snap in Texas and the Midwest in February proved to be a similar problem "on a much more dramatic scale," Robb said, as the severe weather took out an exceptional amount of generation at a time when the load was growing "exponentially."

Robb said it was "stunning" to learn that ERCOT's load during the emergency would have exceeded their August peak if all the generation had been able to operate. He said NERC is investigating the Texas event, but he said the headline will probably end up being gas-electric coordination issues.

"Who would have ever thought of Texas having a winter peak?" Robb said. "It was an extraordinary failure of the system that also exposed the extraordinary interdependence of the system with the fuel supply."

NERC is taking actions to make sure a similar event like Texas doesn't happen again, Robb said, making development of the cold weather standard and weatherization standard "a priority." After Texas, staff started working on a standard to send to the NERC Board of Trustees in June for approval. (See *NERC Cold Weather*

PJM News

Standards Headed to Final Ballot.)

Robb also pointed to the need for more transmission and other infrastructure to be built, saying the near future could be the "golden age of transmission" by getting more stakeholders talking and excited about the possibilities.

"As we see the industry move towards the more variable resource mix, we think investment in transmission, as well as natural gas infrastructure, is going to be required to provide the resilience that the system needs," Robb said.

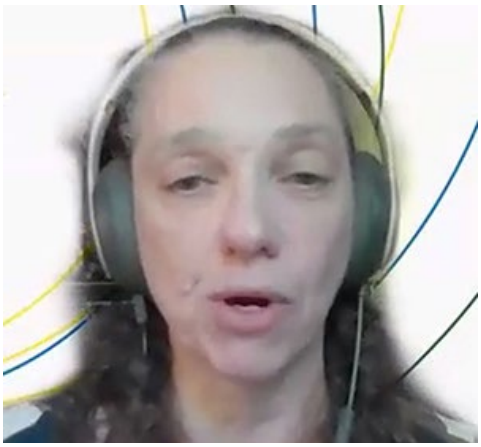
Near- and Long-term Issues

Patricia Hoffman, principal deputy assistant secretary of the U.S. Department of Energy's Office of Electricity, said the country is at a "critical junction." Challenges facing the energy industry include the fragility of the grid and where best to place energy investments in the future.

The significant increase in renewable energy added to the system in the next decade and beyond is forcing stakeholders to contemplate how best to adapt the system to the new energy mix, Hoffman said, and at the same time it's becoming clearer that a significant amount of transmission will be needed to handle the new energy mix.

Hoffman said near-term issues that need to be addressed include increasing transmission capacity on the existing system, whether through reconductoring lines or DLRs. As interconnection issues become more in focus with the amount of renewable projects in the queue, Hoffman said, stakeholders may need to take another look at cost allocation for clean energy operators looking to interconnect.

Hoffman said the energy industry also needs to continue to build capacity and capability while figuring out where the stresses are on the system.



Patricia Hoffman, DOE | *PJM*

"At the end of the day, we need a significant amount of transmission," Hoffman said. "So we should think about how we want to characterize transmission buildout and allocation of costs moving forward." ■

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NATIONAL/FEDERAL

Granholm Lays Out DOE's $46.2 Billion Budget

Solar Jobs Fall in 2020 as Capacity Sees Record Rise

MIDATLANTIC

Doubts Dog NJ Solar Proposal

Pa. Releases Rulemaking to Join RGGI

MIDWEST

Canadian EV Co. Lion Electric to Build Truck, Bus Factory in Illinois

Mich. Utilities Say They Support Raising Solar Cap

NORTHEAST

LED Streetlights Cut One Mass. City's Power Bill in Half

New York Expands Net-zero Apartment Retrofit Project

Massachusetts Opens Bidding for 1.6 GW of OSW

Boston Readies for Enforceable Building Emissions Standard

Try This Martini with a Clean Twist

Maine Bill Aims to Block Regulatory 'Back Door' to Carbon Tax

NY Legislators Send 100% ZEV Bill to Governor

SOUTHEAST

Activists Urge Duke Shareholders to Reject Chair Lynn Good

Duke Shareholders Reject Proposal to Require Independent Board Chair

WEST

Oahu Transportation Plan Calls for $27B in Spending

Calif. Bills Seek to Decarbonize Concrete

Challenges Loom for Decarbonizing Concrete

Ariz. Regulators Kill Clean Energy Proposal

Sponsor Plans to Revive Stalled Wash. Land Use Bill

PJM News

Dominion Opts out of PJM Capacity Auction

18 GW of Capacity Subtracted as Utility Chooses FRR Option

Continued from page 1

elected the FRR alternative "recently."

"Given the minimum offer price rule and the Virginia Clean Economy Act [VCEA] requirements, FRR is a cost-effective choice on behalf of our customers, who will continue to receive the reliable, affordable service they are accustomed to," he said. "I can also confirm we've had discussions with the [Virginia State Corporation Commission] on this topic."

"This is a company decision that does not require any action by the SCC," commission spokesman Ken Schrad said. He added that the prudency of Dominion's decision could be raised by intervenors during the current financial review of the utility (*PUR-2021-00058*).

All of Dominion's PJM-approved regulated capacity resources, including its Surry and North Anna nuclear plants, are in its FRR plan, Daudani said.

Under the FRR option, load-serving entities such as Dominion can meet PJM's resource adequacy requirements by committing to acquire adequate capacity to meet the RTO's forecast of its loads plus a reserve margin for at least five years.

Although PJM's Reliability Assurance Agreement (RAA) requires utilities to make an election four months before the auction, there is no requirement that such elections be made public, and Dominion had not discussed it publicly until being contacted by *RTO Insider*. PJM posted the *list* of FRR units on April 23.

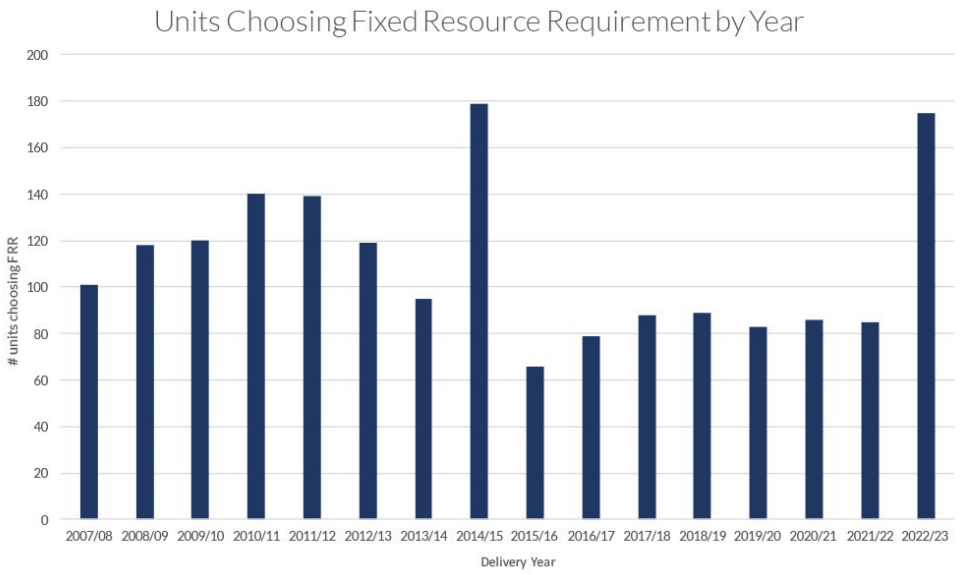
The decision was also not mentioned in Dominion's first-quarter earnings call May 4. (See related story, *Dominion Confident in OSW Price Despite Rising Costs*.)

LS Power Challenges FRR Plan

On Friday, however, LS Power filed a complaint asking FERC to reject Dominion's FRR plan, saying PJM violated its rules by accepting it (EL21-72).

PJM's RAA requires that load-serving entities choosing the FRR must demonstrate the "commitment of capacity resources for the term of such election sufficient to meet such party's daily unforced capacity obligation."

But LS Power said PJM informed it that it has been approving FRR alternative elections based on capacity plans covering just the first delivery year of the elections.



Some 175 generating units in PJM have declared they will choose the fixed resource requirement for capacity year 2022/23, the second-highest on record and more than double the 85 units that chose the FRR option for 2021/22. | © *RTO Insider LLC*

"The reference to '2022/2023 FRR Capacity Plans' in the caption of the FRR Resources List implies that, notwithstanding the requirements of the RAA, these FRR capacity plans covered just the 2022/2023 delivery year," LS Power said in its complaint. "Complainants have confirmed that this is the case through communications with PJM."

LS Power's complaint, filed on behalf of the company and its 1,165-MW Doswell natural gas-fired generator, asks the commission to rule by May 17 and invalidate any FRR elections that did not demonstrate sufficient capacity for the entire five-year term.

LS Power said Dominion's withdrawal from the BRA will suppress prices, harming Doswell's revenues. "With the deadline for submitting FRR capacity plans having passed and the 2022/2023 BRA approaching rapidly, the only acceptable remedy here is to invalidate FRR alternative elections that were not supported by compliant FRR capacity plans," it said.

"PJM's willingness to bend the rules regarding FRR Capacity Plans is irreconcilable with its strict application of the filed rate in other circumstances," LS Power continued. "PJM's preferential treatment of Dominion and other LSEs implicates not only the filed rate doctrine; its actions also implicate the statutory prohibition against undue discrimination, because, as the commission has long held, even when an RTO/ISO 'has discretion, it must exercise that discretion in a not unduly discriminatory manner.'"

PJM spokeswoman Susan Buehler said the RTO is preparing its response to the complaint, which is due Friday. "We believe our tariff and manual provide a solid legal foundation for approval of FRR capacity plans on a delivery year basis," she said.

Dominion's Daudani said the company is aware of the filing but had no comment.

Monitor: Transparency Needed

"We think the process should be a lot more transparent," Independent Market Monitor Joe Bowring told *RTO Insider*. "That election, in our view, should be public so that the market can absorb the information."

The Monitor, which has previously issued reports on the potential impact of the FRR option in Illinois, New Jersey and Ohio, is completing work on a report on the impact on Virginia, Bowring said.

Although the prior reports predicted the FRR option would be more expensive to ratepayers in the three states, Bowring said Dominion is "unique" because it is a vertically integrated

PJM News

utility. "They'll buy their own capacity and pay cost-of-service" rates, he said.

Dominion told Virginia regulators in its proposed integrated resource plan last May that it was still evaluating the FRR alternative in response to FERC's December 2019 order expanding the MOPR to new state-subsidized resources.

FERC had previously exempted from MOPR self-supply resources owned by public power entities and vertically integrated utilities subject to traditional bundled rate regulation like Dominion. But in the 2019 order, FERC said new self-supply resources would no longer be exempt, ruling that they suppress capacity prices.

Dominion asked FERC to expand eligibility for the self-supply MOPR exemption to any resource that is planned under a self-supply entity's IRP. (See *Dominion: FERC MOPR Rulings Inconsistent on Self-supply*.) FERC rejected Dominion's request in April 2020.

But new FERC Chair Richard Glick (D) has called for eliminating the MOPR, which he said Republican commissioners were using to undermine state efforts to decarbonize their generation. Last week, PJM proposed making FERC determine which resources are subject to the rule. (See *PJM Proposes Shifting MOPR Determinations to FERC*.)

Critics say the MOPR increases the costs of meeting state clean energy goals and requires utilities to retain unnecessary legacy fossil fuel generation.

Dominion is planning to build 2.6 GW of offshore wind and is more than halfway through a plan to add 3,000 MW of solar generation. Its proposed IRP for 2021-2045 would quadruple the amount of solar and wind generation in its previous 15-year plan, a response to Gov. Ralph Northam's executive order on climate change and the VCEA. (See *Va. 1st Southern State with 100% Clean Energy Target*.)

Integrated Resource Plan

In its discussion of the FRR option in its IRP, Dominion noted that American Electric Power, parent of Appalachian Power in Virginia and West Virginia, is "the only significant utility in PJM" to have adopted FRR.

"Because of its five-year minimum commitment requirement, risks to FRR election should be carefully weighed against the benefits," Dominion told the SCC. "Risks include future environmental changes, regulatory changes, zonal constraints, and capacity and energy market changes. The potential benefits of FRR election include [a] lower required reserve margin and the absence of MOPR risk to new generation used to meet the load obligation."

In testimony on behalf of the Sierra Club in the IRP docket, Synapse Energy Economics associate Jason Frost told the SCC it should require Dominion to conduct a full cost-benefit analysis of the FRR alternative versus remaining in the capacity market. He said the commission should open a docket to allow stakeholders an opportunity to file comments and present testimony on the company's analysis.

The primary benefit of the FRR, Frost said, is protecting consumers from paying excess costs for renewable power. "If the capacity from new renewable resources receiving state incentives is not counted toward PJM's capacity requirement, then consumers may end up paying twice for capacity: once for unnecessary fossil generation through the [capacity market], and once in the form of higher incentive costs for renewable resources needed to meet state clean energy goals," he said.

Dominion's Surry Power Station has a capacity of 1,676 MW. | *Dominion Energy*

The FRR's portfolio-level physical compliance option can also reduce risks.

"Under this framework, individual resources are not penalized based on performance during severe grid conditions. Instead, the LSE is required to procure additional resources in the next year if its portfolio of resources does not perform as required," Frost said. "This can reduce the risk for individual renewable resources participating in the capacity market."

Until 2023, the impact of the MOPR on Dominion's resource mix would depend primarily on the ability of solar to clear the auction, he said. Dominion's plans for offshore wind and battery storage resources coming online in 2026 would be impacted by the MOPR in 2023, given the three-year lead time between BRAs and delivery years.

In February, the SCC said Dominion's *IRP* was incomplete, saying the company must provide more information on how it will comply with the VCEA (PUR-2020-00035). The commission said the utility's 2021 and 2022 updates to the plan must improve the modeling of alternative plans for complying with the law. (See *Virginia Grades Dominion IRP Incomplete*.) ■

PJM News

Dominion Confident in OSW Price Despite Rising Costs

Test Turbines Show Higher-than-expected Capacity Factor

By Rich Heidorn Jr.

Dominion Energy officials are bullish on the utility's "decarbonization opportunity" and confident that its 2.6-GW offshore wind project will meet cost projections despite rising raw material costs.

During the company's first-quarter earnings call May 4, CEO Robert Blue said the company's evaluation of turbine designs and data from its two test turbines indicates its assumed capacity factor of 41% is too low, although he offered no specifics.

Blue said there has been "robust" response to the company's procurement solicitations for the project but that it has seen a recent increase in raw material costs. "In the case of steel, for example, the return of pandemic-idled steelmaking capacity hasn't yet caught up to global demand," he said.

Nevertheless, he said, "taken as a whole, there's no change to our confidence around the project's expected [levelized cost of energy] range of $80 to $90/MWh."

'Decarbonization Opportunity'

Blue said the company expects to spend $72 billion on decarbonization through 2035, calling it "the largest, the broadest in scope, the longest in duration and the most visible regulated decarbonization opportunity among U.S. utilities."

In addition to the estimated $1.7 billion OSW project, the company sees up to $20 billion in spending on solar generation, up to $7 billion on energy storage, up to $15 billion on electric grid transformation and up to $9 billion on gas distribution modernization and renewable natural gas.

It also expects to spend as much as $4 billion extending the lives of its nuclear fleet. Shortly before the earnings call, Blue said the Nuclear Regulatory Commission informed the company it had *approved* the extension of the operating licenses for the two-unit, 1.7-GW Surry Power Station for an additional 20 years, through 2053.

Over the next five years, the company plans $32 billion in capital spending, more than 80% of which it says is "decarbonization focused" and more than 70% of which is eligible for recovery via bill riders. (See related story, *Virginia SCC Gives IOUs a Pass on RPS Plans — for Now*.)

Dominion Energy is building the first Jones Act-compliant offshore wind installation vehicle, pictured in an artist's conception above. The Jones Act requires that goods shipped between U.S. ports be transported on ships that are built, owned and operated by U.S. citizens or permanent residents. | *Dominion Energy*

In response to a question from J.P. Morgan analyst Jeremy Tonet, Blue said it was too soon to determine any impact on the company from the Biden administration's infrastructure proposal, which includes numerous decarbonization initiatives. "To decarbonize as quickly as we can, reliably and affordably makes all the sense in the world," he said. "We're very well positioned to do that. This is not something that's new to us."

Remembering Tom Farrell

The company reported it earned $1 billion ($1.23/share) in the first quarter, a rebound from the $270 million loss ($0.34/share) for the same period in 2020.

Operating earnings were $893 million ($1.09/share) versus $788 million ($0.92/share) a year ago. The company said the difference between GAAP and operating earnings for the quarter reflected a net benefit from its nuclear decommissioning trusts, economic hedging activities and other charges.

Blue opened the call with a tribute to his predecessor, Thomas Farrell, who died of cancer last month, a day after retiring as the company's executive chairman. Farrell was CEO from 2007 though 2020.

"Tom's passing on April 2 was heartbreaking to those of us who loved, admired and respected him. It's quite clear that while Tom's list of accomplishments was long, the list of people whose lives he touched was much, much longer," Blue said. "He could be gruff occasionally. Many of us participating on this call may have experienced that from time to time. But much more often we experienced his generosity, his loyalty, his dry sense of humor and his focus on improving our company, our community and our industry." ■

PJM News

Biden's Support for Nuclear 'Too Late' to Save Exelon Plants

CEO Says Illinois' Proposed Subsidies Too Low

By K Kaufmann

Exelon CEO Christopher Crane | © *RTO Insider LLC*

The fate of Exelon's Byron and Dresden nuclear plants depends on whether the Illinois legislature can pass a comprehensive energy package with substantial support for the two plants, CEO Christopher Crane said during the company's first-quarter earnings call Wednesday.

And lawmakers only have until the end of their official session on May 31 to do it, he said.

"Legislative leaders are meeting to craft a package; however, the details really matter," Crane said. "Current market prices do not allow us to continue to meet our payroll, pay our property taxes, and cover other significant costs and risks of operating these assets without adequate policy. We will begin retiring uneconomic plants this fall."

Nuclear policy, both state and federal, and the $880 million first-quarter loss Exelon took in the Texas winter power outages in February were top of mind for Crane during the earnings call. The outages at the utility's three natural gas plants in Texas were the main factor in the company's first-quarter GAAP net loss of 30 cents/share, down from 60 cents in the first quarter 2020. Exelon's adjusted operating loss of 6 cents/share was also down from 87 cents last year, he said.

"The event was unprecedented," Crane said. "We continue to investigate the multiple, complex factors that led to our plant outages, and we're working with regulators and other stakeholders to ensure this does not happen again."

He also gave a quick update on the company's planned separation of its regulated utilities and merchant generation business, announced during its February earnings call. At that time, Exelon said the restructuring would create the nation's "largest fully regulated transmission and distribution utility," with six utilities in five states and D.C., and the largest producer of carbon-free power — thanks mostly to its 18.7-GW nuclear fleet. The utility also owns 12 GW of hydropower, solar, wind, gas and oil generation. (See *Exelon to Split Tx, Generation Businesses*.)

Applications for regulatory approval of the split have been filed with FERC, the Nuclear Regulatory Commission and the New York Public Service Commission, Crane said. Decisions from all three are expected by the end of the year, with the separation finalized in the first quarter of 2022.

Highly Uncertain and Too Late

Illinois is one of *five states* — along with Connecticut, New Jersey, New York and Ohio — that provides some form of support to keep nuclear plants open. Zero-emission credits (ZECs) are the primary form of support, ranging in value from $10 to $17.50/MWh, according to the U.S. Energy Information Administration.

Passed in 2016, Illinois' Future Energy Jobs Act provided ZECs totaling $235 million per year for two Exelon plants, Clinton and Quad Cities. Suits to overturn ZEC programs in New York and Illinois were defeated in federal court in 2018. (See *Appeals Court Upholds NY Nuclear Subsidies* and *7th Circuit Upholds Ill. ZEC Program*.)

During the earnings call, Crane cited growing recognition at the state and federal levels that the country's nuclear fleet will be critical for meeting ambitious clean energy goals, such as President Biden's 2035 target for decarbonizing the U.S. power system. Biden's American Jobs Plan includes a clean energy standard, which would leverage existing nuclear plants as carbon-free power.

However, getting the plan through "is highly uncertain, and in any case, it will be too late to reverse the retirement decisions for Byron and Dresden," the CEO said.

According to Exelon's *August 2020 announcement* of the closures, the two plants together provide 30% of Illinois' carbon-free power, employ 1,500 full-time workers and pay $63 million per year in taxes.

Seeking a transition to 100% clean power by 2050, Gov. J.B. Pritzker's recently introduced the *Consumers and Climate First Act* would provide $19 million per year ($1/MWh) in subsidies for Byron and $52 million per year ($3.50/MWh) for Dresden through 2025. Those figures are based on recommendations from an *independent financial analysis* performed by Synapse Energy Economics.

"Byron and Dresden do face real risk of becoming uneconomic in the near term," the study said. "This has implications for Illinois' policy goals because the plants generate carbon-free electricity that is currently undervalued or even ignored within current wholesale electricity markets."

But Crane said the modest and limited subsidies in the governor's bill would not be enough to keep the plants open and pointed to the recent decision by the New Jersey Board of Public Utilities to provide ZECs of $10/MWh to keep PSEG's Salem and Hope Creek nuclear plants open.

"The commission in New Jersey emphasized that maintaining the existing nuclear plants was critical to achieving the state's emission goals and significantly less costly than replacing nuclear with other zero-carbon generation," he said. "This is true in Illinois.

"We'll continue to be optimistic that we can work with stakeholders and a legislative body and the administration," Crane said. "But short of getting something done, we'll have to start to proceed."

Offsetting Texas Losses

Exelon is now estimating its "full-year loss from the [Texas] weather event to be approximately $900 million to $1.1 billion pre-tax, or $670 million to $820 million after tax," according to CFO Joseph Nigro.

However, Nigro said, the company expects to offset a major portion of the losses through a "combination of enhanced revenue opportunities, deferral of selected nonessential maintenance and one-time cost savings," and it still expects to hit its adjusted operating earnings of $2.60 to $3/share.

The company also announced $6.6 billion in capital expense spending for 2021. Building out electric vehicle infrastructure is a particular focus for the company's utilities, Nigro said, with many offering rebates for installing residential charging stations and special time-of-use rates for off-peak charging. The company has also committed to electrifying 30% of its light- and heavy-duty vehicles by 2025 and 50% by 2030, he said. ■

PJM News

PSEG Finds Buyer for Solar Assets

Agreement Reached with Affiliate of LS Power

By Hugh R. Morley

Public Service Enterprise Group on Wednesday announced it has entered into an agreement to sell its 467-MW Solar Source portfolio of 25 solar plants in 14 states as the utility seeks to sharpen its focus on being a regulated electric and gas facility.

In a first-quarter earnings call, PSEG CEO Ralph Izzo said the $500 million to $600 million sale is expected to close in the second or third quarter of this year. *A press release* announcing the agreement said that the net carrying value of the assets sold was about $500 million on March 31.

The buyer is Quattro Solar, an affiliate of LS Power. The solar business would add to existing LS Power assets that include a fast-charging network for electric vehicles, a battery energy storage platform, more than 600 miles of high-voltage transmission lines and more than 140 MW of wind power.

Along with the solar business, PSEG is looking to sell its non-nuclear generating business, including 6,750 MW of fossil generation in New Jersey, Connecticut, New York and Maryland.

Izzo said PSEG recognizes the "shift in investor preference toward owning regulated utility businesses without commodity exposure to merchant generation and related earnings volatility."

If completed, the plan to sell the solar and fossil generating fleet would fashion the company into a "primarily regulated electric and gas utility, with a complimentary carbon free nuclear fleet and offshore wind investments that will be highly contracted," Izzo said on the earnings call. The plan to sell the solar and fossil fuel plants was first announced in July. (See *PSEG Seeking to Sell Fossil, Solar Generation*.)

Nuclear Options Sought

The Solar Source announcement comes a week after the New Jersey Board of Public Utilities (BPU) awarded subsidies totaling $300 million to the three nuclear plants operated by PSEG in South Jersey. Board members said they had little choice except to award the subsidies under the state's Zero-Emission Certificate (ZEC) program because PSEG said it would close the plants if the ZECs were not awarded or their $10/MWh value were reduced. (See *NJ Nukes Awarded $300 Million in ZECs*.)

Hope Creek Nuclear Generating Station in New Jersey | *Public Service Enterprise Group*

Izzo celebrated the latest ZEC award but said that in the long term, the company is looking for an alternative way to help fund operation of the plants.

"It is pretty clear that a three-year process is untenable in such a capital-intensive asset," he said. "And as we said, throughout this proceeding, the $10/MWh was not commensurate with the cost of capital associated on a risk-adjusted basis for operating those plants."

Nuclear power accounts for 90% of the state's carbon-free power, and so the plants are key to Gov. Phil Murphy's plan to boost the state's share of energy generated by carbon-free resources to 50% by the end of the decade and reduce greenhouse gas emissions to 80% below 2006 levels by 2050.

Running from June 2022 to May 2025, the ZECs were awarded to the Hope Creek nuclear power plant, which is owned and operated by PSEG, and the Salem 1 and 2 units, which PSEG operates and co-owns with Exelon. The award to PSEG is its second, following a 2019 award of the same amount.

The company accepted the $10/MWh because it is hopeful that one of three alternative methods of securing support for the plants will come through at some point in the future, Izzo said. One alternative is the possibility of a federal clean energy tax credit, which PSEG has been pushing in Washington, he said.

PSEG wrote to President Biden in support of his plan for the U.S. to get 80% of its power from emissions-free sources by 2030, and it is urging the administration to include nuclear in any proposal to offer tax credits for carbon free energy generation, Izzo said. He added that there is a "growing interest at the federal level in preserving existing nuclear as an essential part of a clean energy mix."

The second plan is to "be an honest broker and adviser" to New Jersey in its pursuit of a fixed resource requirement (FRR) option in PJM, Izzo said. Such an arrangement allows utilities to opt out of the RTO's capacity market.

"In the unlikely event that all of that doesn't achieve the long-term economic viability of the nuclear plants, then we would talk to state policymakers about modifying the ZEC program," Izzo said of the third alternative.

Earnings Increase

PSEG reported net income of $648 million ($1.28/share) in the first quarter, an increase from $448 million ($0.88/share) in the same quarter of 2020. Non-GAAP operating earnings were $650 million ($1.28/share), compared to $520 million ($1.03/share) in 2020. ■

PJM News

Takahashi Selected as PJM Board Chair

The PJM Board of Managers on Wednesday selected international finance executive Mark Takahashi as its new chair, replacing outgoing Chair Ake Almgren.

"Mark Takahashi brings a wealth of markets experience and has a keen grasp of the changing energy landscape," PJM CEO Manu Asthana said. "I look forward to working closely with him as PJM moves into the future."

Takahashi previously served as CFO of Ascendant Group Ltd., the parent company of Bermuda Electric Light Co. He was also the group director and CFO of CLP Holdings, a vertically integrated electric utility company in Hong Kong, from 2008 to 2014, having worked at the company since 2003.

Takahashi earned a bachelor's in civil engineering from the University of Colorado Boulder and an MBA from the Wharton School of the University of Pennsylvania.

In his tenure on the PJM board, Takahashi served as the chair of the Competitive Markets Committee and a member of the Risk and Audit Committee and the Finance Committee.

Takahashi addressed members of PJM's Public Interest and Environmental Organizations User Group during their meeting on Wednesday, hinting that he was in line to take over as chair of the board.

"The world is in a massive energy transition, and I'm looking forward to working with the board, PJM staff, and members and stakeholders as we seek to meet the challenges of that transition," Takahashi said in a statement.

At the RTO's annual Meeting of Members on May 3, PJM stakeholders elected Paula Conboy and Jeanine Johnson to the board and re-elected Sarah Rogers to serve an additional term. Johnson will take Almgren's seat, while Conboy replaces retiring board member John McNeely Foster. (See *PJM Stakeholders Elect New Board Members*.) ■

— Michael Yoder

New PJM Chair Mark Takahashi addresses the Public Interest and Environmental Organizations User Group on May 6. | *PJM*

PJM News

PPL Highlights UK Sale, Narragansett Acquisition in Earnings Call

By Michael Yoder

PPL is inching closer to the finalization of the sale of its U.K. utility while moving ahead in the administrative process with the acquisition of its first New England-based utility.

During Thursday's first-quarter *earnings call*, PPL CEO Vincent Sorgi said the company is making "good progress" on the regulatory approval processes related to the sale of Western Power Distribution (WPD), the distribution utility for parts of England and Wales, to London-based National Grid, while acquiring National Grid's Narragansett Electric. The multibillion-dollar deal was first announced in March. (See *PPL to Sell UK Business, Acquire Narragansett Electric*.)

National Grid shareholders in April voted to approve the nearly $11 billion WPD transaction, Sorgi said, and PPL is awaiting one final regulatory approval in the U.K. before the deal officially goes through. Sorgi said PPL could close on the sale of WPD as early as this month.

Sorgi said PPL officials "remain confident" the company can complete the $3.8 billion acquisition of Narragansett by March 2022.

"The transition teams for both PPL and National Grid have been formed and have actively been planning to ensure a seamless transition for both employees and Rhode Island customers upon approval and closing of the transaction," Sorgi said.

PPL headquarters | *PPL*

Gregory Dudkin and Stephanie Raymond | *PPL*

The companies on May 4 filed a petition seeking approval from the Rhode Island Division of Public Utilities to acquire Narragansett. Sorgi said the petition highlights PPL's operations in different regions of the country and the opportunities to help Rhode Island achieve green energy mandates, including net-zero carbon emissions by 2050 and 100% renewable energy by 2030. (See *RI Seeks to Lead with 100% Renewable Goal*.)

Sorgi said PPL has had "very constructive discussions" with public officials in Rhode Island since the announcement of the acquisition about why the company is "uniquely positioned" to own the Narragansett assets.

"These interactions have only strengthened my belief that PPL is well positioned to drive real value for Rhode Island customers and their communities and to play a key role in helping the state achieve its ambitious decarbonization goals," Sorgi said.

PPL intends to take its experience in deploying smart grid technology, such as dynamic line ratings, in Pennsylvania and bring it to Rhode Island, Sorgi said. PPL is also committed to have a Rhode Island-based president of Narragansett.

Leadership Changes

Sorgi also highlighted some of the recent leadership changes at PPL, saying they were made to "help further position the company for long-term success" as it integrates Narragansett.

The company announced last month that Gregory Dudkin, PPL Electric Utilities president since 2012, was elected executive vice president and chief operating officer of PPL. Stephanie Raymond, vice president of distribution operations, succeeded Dudkin as president of PPL Electric Utilities.

In his new position, Dudkin reports to Sorgi and oversees PPL's regulated utility operations in the U.S. Dudkin has also been tasked with overseeing the regulatory process in the acquisition of Narragansett.

"I'm very excited about the strong leadership team we've assembled at PPL," Sorgi said. "I believe it's the right team at the right time as we strategically reposition PPL for long-term growth and success."

Earnings

PPL's first-quarter earnings fell substantially as it continues to finalize the two utility deals. The company posted a net loss of $1.84 billion (-$2.39/share), compared to a profit in the same period last year of $554 million ($0.72/share). Adjusting for the loss from discontinued operations in the U.K. business, however, and the company earned $219 million ($0.28/share), compared to $206 million ($0.27/share) last year.

"These results were in line with our expectations for the quarter," Sorgi said.

Revenue for the quarter was $1.5 billion, slightly above last year's first quarter.

The price of PPL's shares was down slightly at the close of the market on Thursday, falling 8 cents to $28.84. ■

PJM News

Virginia SCC Gives IOUs a Pass on RPS Plans — for Now

Utility Request to Combine RPS and IRP Plans Rejected

By K Kaufmann

The Virginia State Corporation Commission on April 30 gave Dominion Energy the go-ahead to spend $10.4 million to build three solar projects totaling 82 MW, saying the company had submitted a "reasonable and prudent" plan for complying with the renewable portfolio standards of Virginia's landmark Clean Economy Act (VCEA) (*PUR-2020-00134*).

The commission also approved Appalachian Power's RPS plan, which did not request any immediate spending (*PUR-2020-00135*).

But, acknowledging criticisms of the plans from clean energy advocates, the commission set more rigorous requirements for the utilities going forward while leaving some issues open for further debate, for example, a VCEA carve-out for distributed generation in low-income communities.

Under the VCEA, Dominion is required to produce 100% of its electricity from clean sources by 2045, and Appalachian Power, by 2050. Both utilities will have to submit yearly RPS plans to the SCC.

The SCC also approved Dominion's proposal to procure 498 MW of new solar through six power purchase agreements with developers.

Critics complained the plan did not provide a "least-cost" option for reaching the VCEA's 100% mandate, saying Dominion was using a too narrow reading of the VCEA, that focused only on one section of the law, requiring the SCC to approve new projects, advocates said. The company said the proceeding was limited to meeting the development targets in the VCEA, "not cost-effective compliance with the RPS program." The commission disagreed, ordering a least-cost plan in future filings.

"The central issue in the case, from where we stand, was whether the Clean Economy Act that was passed in 2020 mandates that Dominion, and APCo build a bunch of solar, wind and energy storage projects, regardless of need or costs," said Will Cleveland, senior attorney for the nonprofit Southern Environmental Law Center. "And we argued that the Clean Economy Act does not mandate that; it mandates a transition to zero-carbon energy."

The utilities "were cherry-picking out the provisions that they liked, that fit with their business model … but it does not result in the optimal mix of resources, and it doesn't result in the least-cost implementation," said Harrison Godfrey, executive director of Virginia Advanced Energy Economy, a clean energy business association. "We care about a diversity of resources, and we care about that diversity in no small part because it [affects] reliability and affordability, fundamental things that are at the core of everything."

Dominion Energy will be adding 82 MW of new solar to the Virginia grid. | *Shutterstock*

Still, both Cleveland and Godfrey were encouraged by the requirements the SCC laid out for Dominion and Appalachian Power's future RPS plans. The detailed list includes providing least-cost options for complying with the VCEA, updating the data used for fundamental load and business forecasting and commodity pricing, and detailed charts on how each utility has complied with the law's RPS mandate.

Renewable power procured by "accelerated renewable energy buyers" — that is, large corporations, such as Walmart and Amazon — will not be counted toward the utilities' RPS compliance, the rulings say.

The SCC also turned down Dominion's request to combine its integrated resource plan and RPS plan filings. Advocates had argued that the two plans cover different aspects and time frames for utility planning and should be kept separate. IRPs are filed every three years, versus the yearly filing the VCEA requires for RPS plans.

APCo will also have to keep its IRP and RPS filings separate, but the rulings do anticipate that the modeling, projections and figures each utility uses for its IRP and RPS plans should be consistent.

The commission also left the door open for Dominion to file a "consolidated bill analysis that pertains to both the IRP and RPS proceedings, a subset of which would be RPS-related costs."

The $10.4 million for the three utility-owned solar projects will be recovered through a bill rider adding 19 cents/month to the average residential electricity bill.

Appalachian Power said its RPS procurements for the VCEA will add 3.5% to customers' bills over a five-year period.

'The Letter of the Law'

Both Dominion and APCo responded to the rulings by focusing on the renewable projects they have in the pipeline.

The commission's approval of Dominion's

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solar projects "is another major step forward in building a clean energy economy in Virginia," Ed Baine, the utility's president, said in a statement May 3. "Our customers deserve reliable and affordable energy, and they also deserve a clean environment. These projects will help us deliver on that promise."

APCo spokesperson Teresa Hamilton Hall said, "We were pleased that our annual plan and what we intend to do meets the letter of law and is in the best interest of our customers, and we will abide by the letter of the law."

While the APCo plan had no requests for project approvals, APCo said it expects to add 210 MW of solar by 2023, including 105 MW of utility-owned capacity from a solicitation issued last year.

Hall pointed to APCo's February announcement of a request for proposals for wind or solar projects of 50 MW or more for a procurement that will total up to 300 MW, the largest RFP the utility has issued in a single year, according to the release. Bids are being reviewed, she said.

At Dominion's first-quarter earnings call May 4, CEO Robert Blue said the company's next RPS filing will be larger in scale and more heavily weighted toward utility-owned solar. (See related story, *Dominion Confident in OSW Price Despite Rising Costs*.)

"The Clean Energy Act is quite specific on this point that for the new solar build, 65% is to be utility owned and 35% is to be third-party PPAs," he said. "The total amount of that is on the order of 1,000 MW a year for the next 15 [years]."

Blue said although Dominion may build some renewables for corporate customers, "our focus on growing our solar portfolio is on the regulated side."

Despite the increasing amounts of solar they will be putting on the grid, both utilities are planning a gradual ramp-up of energy storage. While the VCEA requires Dominion to have 2,700 MW of storage online by 2035, the utility only expects to install 16 MW in 2021 and 14 MW in 2022, with no procurements of 100 MW or more before 2025.

APCo will need 400 MW of storage by 2035, but does not anticipate adding any resources until 2025. One chart in the utility's RPS shows the cost of energy storage remaining more than $1,100/kW through 2046.

However, storage prices are usually measured per kilowatt-hour and continue to fall. BloombergNEF recently pegged battery energy storage prices at $137/kWh and predicted prices as low as $100/kWh by 2023.

Hall said APCo will be updating its pricing projections for storage in its next RPS plan.

David Murray, executive director of the Chesapeake Solar and Storage Association (formerly MDV-SEIA) said pushing the utilities on storage will be one of the organization's priorities going forward. Storage will help get more "solar on the grid a lot faster," he said.

Another key issue not mentioned in the SCC ruling on Dominion's plan is the VCEA's distributed generation carve-out, which requires the utility to meet at least 1% of its RPS mandate with distributed projects of 1 MW or less. The Behind the Meter Solar Alliance (BTM-SA), a small group of Virginia installers, argued that the carve-out is intended to promote behind-the-meter solar but that the utility's plan could circumvent the requirement with utility-owned, front-of-meter projects.

"The 1% [carve-out] was attached to job growth and economic development," said Karla Loeb, chief policy and development officer at Sigora Solar, one of the companies behind the BTM-SA. Residential, behind-the-meter solar accounts for more than half of the jobs in the industry, according to the Solar Foundation's *2019 Solar Jobs Census*.

"It becomes very clear that the way you get the real economic wins in the industry and the state is by making sure there is a reserved segment for behind-the-meter resources because those jobs are not six-month projects; they are day-in, day-out," Loeb said.

Another flashpoint is the VCEA's requirement for 25% of the DG carve-out to be low-income projects. SCC staff and the BTM-SA raised concerns about how Dominion would define these projects, and the commission ordered the utility to "utilize a reasonable stakeholder process" to address the issue.

Both Loeb and Cleveland see the SCC rulings as the opening round in an ongoing process to ensure that their concerns around low-income solar and least-cost compliance with the VCEA remain priorities for the commission and the utilities.

"Next year will be a fight about what constitutes a least-cost model," Cleveland said. "It's an iterative process, continually refining how these utilities look at the legal obligations they have and how they go about proposing to comply with those legal obligations. There's going to be a lot of work to do to make sure that these laws are implemented in an equitable, fair way." ■

Rich Heidorn Jr. contributed to this article.

PJM News

Duke Sees Coming Rebound from COVID Sales Slump

But IRPs Face Ongoing Opposition over Slow Pace of Coal Retirements

By K Kaufmann

The growing momentum of the post-COVID-19 economic recovery and Duke Energy's progress toward a net-zero system by 2050 were key themes in the company's first-quarter earnings call on Monday.

The COVID-19 migration of remote workers from major coastal cities to smaller cities and rural areas has been a boon for Duke, as the utility continues to see growing residential demand and an encouraging rebound in commercial and industrial markets, said Steven Young, executive vice president and chief financial officer.

"Nearly all of our large commercial and industrial customers have resumed operations, and the sector is showing signs of optimism," Young said. "We continue to expect 1 to 2% load growth in 2021. We operate in four of the top eight states for population migration, a testament to the attractive business environments of our service territories and electricity rates."

Young was referring to Duke utilities in Florida, North Carolina, South Carolina and Tennessee. He also pointed to Apple's recent decision to build its first East Coast campus in North Carolina, bringing $1 billion in investment and an estimated 3,000 jobs to the state.

CEO Lynn Good reeled off a list of clean energy actions and initiatives, including the closure of a 270-MW coal plant in North Carolina in March and the "accelerated closure of our Gallagher station in Indiana, bringing the retirement forward a year and a half to June of 2021."

Duke's commercial renewable business, Duke Energy Renewables, powered up the 350-MW Frontier 2 wind farm in Oklahoma, also in March, while the company's regulated utilities added 220 MW of solar in Florida and the Carolinas, Good said. Overall, the utility intends to triple the amount of renewables on its system by 2030, with investments that will add 15 to 20 GW of clean power, backed up with coal retirements totaling 7 GW, she said.

Capital expenses will total $59 billion through 2025, and then increase to $65 billion to $75 billion for 2025-2029, she said.

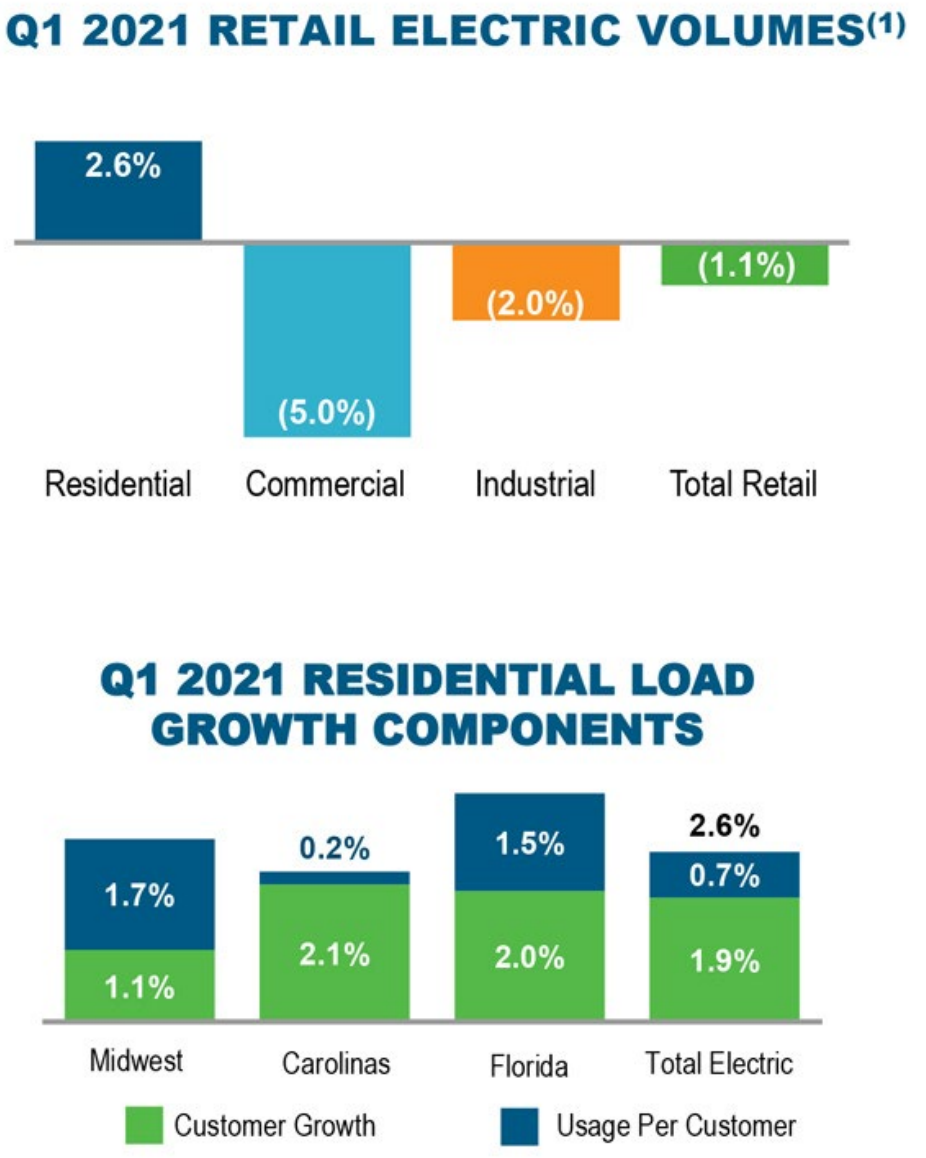
The numbers underneath Good's positive picture of recent accomplishments and future growth were equally upbeat. Young reported first-quarter earnings per share of $1.25, up just 1 cent from $1.24 in the same period last year, and adjusted earnings per share of $1.26, up from $1.14 last year.

Projected earnings per share for 2021 remain unchanged, at $5 to $5.30/share, with a midpoint of $5.15, he said, while the company is predicting 5 to 7% EPS growth over the next five years.

Growth Indicators

The ongoing evolution in Duke's customer and load figures is perhaps one of the more significant signs of a post-pandemic economic recovery. While overall demand was down 1% from Q1 2020, Duke sees the 2.6% growth in the utility's residential business, especially in the Southeast, as a marker for future expansion, Young said.

"Keep in mind that we are comparing [first quarter 2021] sales to a quarter last year that had little impact from COVID-19," Young said.



Duke's energy sales were down about 1% from Q1 2020, but its residential customers and sales continue to grow. | *Duke Energy*

PJM News

"Residential volumes were up 2.6% over last year, driven by continued strong customer growth in our service territories and ongoing remote learning and work-from-home policies."

Duke anticipates customer numbers will grow 2.1% in the Carolinas and 2% in Florida this year.

Transportation electrification is another driver for load growth and infrastructure investment, and Duke is positioning itself as a "key enabler of mass electric vehicle adoption," Good said. The utility has won regulatory approvals in Florida and the Carolinas to invest a total of $100 million in pilot programs to support decarbonization of the transportation sector across the Southeast, she said.

Duke has pledged to convert 100% of its light-duty vehicles to electric and 50% of its medium-duty, heavy-duty and off-road vehicles to EVs, plug-in hybrids or other zero-carbon alternatives by 2030. The utility is also partnering with the city of Charlotte, N.C., on a pilot program to add 18 electric buses to the city's public transit fleet.

Energy Policy Updates

Good also provided an update on federal and state legislation that Duke is following. In North Carolina, Duke is working with stakeholders on a comprehensive energy bill aimed advancing the state's clean energy goals while also ensuring "regulatory reforms that provide timely recovery of these investments," she said.

Analysts tried to tease out further details on potential North Carolina legislation, but Good's answers remained general.

"Our optimism is really centered on the broad support for comprehensive energy legislation that exists within the state," she said. "The administration, the environmental community, solar developers, industrial customers, Duke Energy and others have been at the table, and there is broad support to move forward in 2021."

An unnamed source close to the stakeholder process confirmed that a cross-industry group is working on issues related to the energy transition in the state and, echoing Good, was "guardedly optimistic" that a bill might be drafted in the coming weeks.

The *North Carolina Clean Energy Plan* includes a reduction in electricity sector carbon emissions of 70% over 2005 levels by 2030 and a net-zero system by 2050.

Without referring directly to President Biden's $2 trillion infrastructure package, Good said, Duke sees "great alignment between our vision of a net-zero clean energy future and the policies that are being discussed," such as support for research and development and tax policies.

"We see permitting reform as a solution to help streamline the process to build infrastructure, without compromising community involvement and environmental protection," she said.

It's All About the IRPs

But much of Duke's progress toward its stated goal of a net-zero system by 2050 will depend on if and when regulators in different states take action on the company's integrated resource plans, which have faced strong public opposition in both North and South Carolina. According to the *IRP posted on Duke's website*, the coal plant retirements announced and planned could still leave more than 3,000 MW of combined coal and gas generation on the system through 2035, as well as add up to 9,600 MW of new natural gas generation.

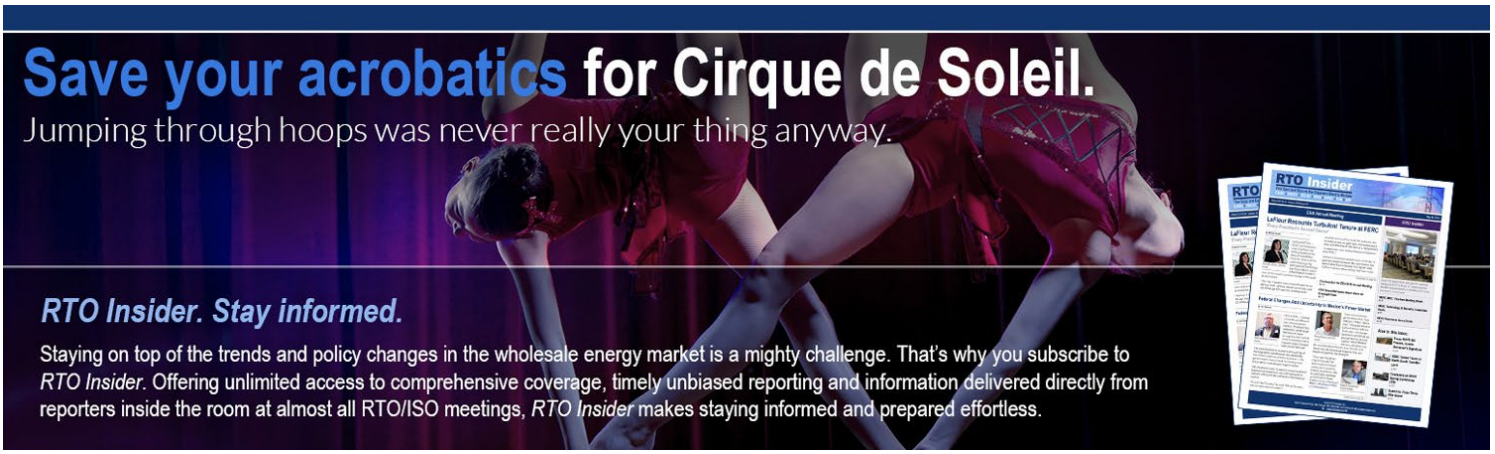
Speaking at a recent virtual hearing before the North Carolina Utilities Commission, environmental advocate Eliza Stokes said, "The next decade is the absolutely most important one in the fight against climate change. We simply cannot continue business as usual by bringing on any more gas plants in North Carolina."

Duke Energy CEO Lynn Good | *Duke Energy*

Stokes participated in one of six virtual hearings the NCUC scheduled when 211 individuals and organizations signed up to speak at a hearing in March. The next *virtual hearing* on the IRP is scheduled for tomorrow. (See *Outspoken Public Pushes for Duke to Lead on Climate*.) The NCUC does not approve the IRP, rather it provides comments to the utility.

Good herself faced a proxy proposal at Duke's Annual Meeting on May 6, aimed at replacing her seat as chair of the utility's board of directors with an independent chair. The proposal, from the New York City Office of the Comptroller representing four city pension funds holding about 1 million Duke shares, was voted down 65% to 35%.

The board argued that a separate chair was unnecessary because it had created a strong "independent lead director in order to independently oversee management." (See *Duke Shareholders Reject Proposal to Require Independent Board Chair*.) ■



Company Briefs

Another Mountain Valley Delay Increases Project Cost

Mountain Valley Pipeline last week said it will take longer (until summer 2022) and cost more ($6.2 billion) to complete a natural gas pipeline that will run through Southwest Virginia.

In a conference call with financial analysts to discuss first quarter results, lead partner Equitrans Midstream attributed the latest setback to a change in the permitting process for about 420 stream and wetland crossings that remain for the 303-mile pipeline. Legal challenges by environmental groups forced Mountain Valley to abandon a blanket permit issued by the U.S. Army Corps of Engineers. It now plans to seek individual permits for some of the water bodies in Virginia and West Virginia, while asking FERC to allow drilling tunnels under others.

When construction began four years ago, the project was expected to be finished in 2018 and cost $3.7 billion.

More: *The Roanoke Times*

Enel Announces 3 Major Texas Renewable Projects

Enel Green Power last week said it plans to build three renewable energy projects in Texas, including its largest solar farm in North America. The company estimated the projects will have a combined capacity of 1,200 MW and would boost Enel's generating capacity in Texas to about 2,000 MW.

The largest of the new projects, a Roseland solar farm, is projected to produce about 639 MW once it's operational in the fall of 2022, while an adjacent utility-scale storage facility will be able to store 59 MW. The other two projects are a 270-MW solar farm with 59 MW of storage, and a 263-MW wind project with 87 MW of storage.

The amount of money being invested by the company was not disclosed.

More: *Houston Chronicle*

NRG Energy Consolidates Headquarters in Houston

During an earnings call last week, NRG Energy announced it is consolidating its corporate headquarters, currently in Houston and Princeton, N.J., to Houston only.

CEO Mauricio Gutierrez said the office consolidation is a result of more employees working remotely from home, during and after the pandemic, and an effort to simplify the company's operations.

NRG reported an $82 million loss in the first quarter, compared to a $121 million profit during the same period last year.

More: *Houston Chronicle*

TC Energy Posts $1.8B Quarterly Loss

TC Energy last week reported a loss in the first quarter, hit by $1.81 billion in impairment charges related to the suspension of its Keystone XL project.

The KXL pipeline was planned to carry 830,000 barrels per day of heavy crude across the border from Alberta to Nebraska, but President Joe Biden revoked a key permit for the project on his first day in office.

The company posted a $2.07 billion loss from its oil pipelines, of which Keystone is the biggest contributor, compared with a $339 million during in the same period last year.

More: *Reuters*

Federal Briefs

Enviros Sue Corps Over Wisconsin-to-Iowa Power Line

The National Wildlife Refuge Association and other environmental groups sued the Army Corps of Engineers in federal court last week over its permitting of a proposed 102-mile Wisconsin-to-Iowa power line, alleging the agency unlawfully authorized the project after botching its environmental review.

The groups argue that the Corps' approval of the $500 million Cardinal-Hickory Creek Project with nationwide and regional permits violates the National Environmental Policy Act because the agency failed to take a "hard look" at how alternatives to the transmission line could have lessened environmental harm such as bird strikes. They also claim the Corps failed to consult with the Fish and Wildlife Service in violation of the Endangered Species Act to assess if the project would imperil listed species.

More: *Reuters*

FERC to Add Timeline Certainty to Gas Pipeline Construction Order

In an order issued last week with a 3-1 vote, FERC sought to set a clearer limit around the timing of natural gas pipeline construction by adjusting its recent rule that barred developers from starting work while rehearing of commission orders was pending.

The order says the prohibition on construction starts would last until the earlier of the date when a rehearing request is no longer pending, or 90 days after a request for rehearing may be denied by operation of law.

The order also narrows the bar on construction starts to cases in which rehearing reflects opposition to project construction, operation, or need, therefore preventing delays when companies or customers may seek refinements to orders, or rehearing involves rate or tariff issues.

More: *S&P Global*

Report Says Power Failures Up More Than 60% Since 2015

New research published in the journal Environmental Science & Technology last week says national power failures have increased

by more than 60% since 2015. The report says that as much as winter storms and extreme cold remain a threat, the greater risk to human health is from extreme heat.

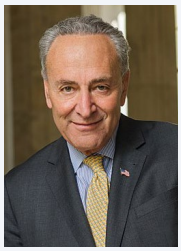
Using computer models to study Atlanta, Detroit and Phoenix, the authors estimated that a combined blackout and heat wave would expose at least two-thirds of the residents to heat exhaustion or heat stroke. And while each of the cities in the study have dedicated public cooling centers, those centers could accommodate no more than 2% of a given city's population. Also, none of the cities require those cooling centers to have backup power generators in case of power failures.

Heat is the most dangerous type of severe-weather event, by one estimate killing some 12,000 Americans each year.

More: *The New York Times*

Senate Dems Announce $73B Clean Bus Plan

Senate Majority Leader **Charles Schumer** (D, N.Y.) and Sen. Sherrod Brown (D, Ohio) last week announced a new $73 billion plan aimed at replacing the country's mass



transit buses with clean vehicles.

The proposal seeks to replace the country's 70,000 buses and 85,000 cutaway vehicles and transit vans, prioritizing funding for areas with the worst air quality. Nearly all the funds would be used for grants to help with procurement and infrastructure costs.

The transportation sector is the country's largest producer of greenhouse emissions and was responsible for 29% of emissions in 2019.

More: *The Hill*

US Approves Massive Solar Project in California Desert

The Biden administration last week approved the $550 million Crimson Solar Project that will be sited on 2,000 acres of federal land in the California desert.

The project, which is being developed by Recurrent Energy and will deliver power to Southern California Edison, will include a battery storage system and is expected to have a 30-year lifespan.

More: *Reuters*

US Eyes Nuclear Reactor Tax Credit to Meet Climate Goals

According to sources familiar with the discussions, the White House has signaled privately that it supports taxpayer subsidies to keep nuclear facilities from closing and making it harder to meet national climate goals.

New subsidies, in the form of "production tax credits," would likely be swept into President Joe Biden's effort to invest in infrastructure and jobs, the sources said. Wind and solar power producers get these tax rebates based on the levels of energy they generate.

While Biden pledged to boost spending for research on a new generation of advanced nuclear plants, his administration has struggled to devise a blueprint to save the existing reactors.

More: *Reuters*

State Briefs

CALIFORNIA

Plug-in Vehicles Nearing 1-in-10 Sales

Plug-in vehicles — including battery-electric cars, plug-in hybrids and hydrogen fuel-cell cars — are nearing 1-in-10 new-car sales in the state, according to an update from industry group Veloz.

The update says Californians purchased 59,000 plug-in cars in the first quarter of 2021, accounting for more than a 9% market share. Meanwhile, the state accounted for 45% of national plug-in car sales in the first quarter, with sales numbers up nearly 50% from the fourth quarter of 2020.

More: *Green Car Reports*

MONTANA

Gov. Gianforte Signs New Laws to Extend Coal Power, Companies Sue

Gov. **Greg Gianforte** last week signed two laws nullifying portions of the Colstrip Ownership and Operation Agreement. A day later, four owners of the plant respond-

ed with a lawsuit over the laws, calling them unconstitutional.

One bill empowers Attorney General Austin Knudsen to prescribe maintenance at the plant and issue fines of $100,000 a day to each Colstrip owner who doesn't comply, while another forces all contract disputes to be settled in Montana, instead of Spokane, Washington, where arbitration has taken place since the creation of Colstrip Units 3 and 4.

Owners Puget Sound Energy, Avista, PacifiCorp and Portland General Electric filed the lawsuit. NorthWestern Energy and Talen Energy are defendants.

With no Washington use for coal power beyond five years, and a similar Oregon ban beginning in 2030, Colstrip's owners began questioning spending money on repairs that aren't necessary to keep the plant running beyond 2025.

More: *Billings Gazette*; *Billings Gazette*

NEBRASKA

Saunders County Planners Vote Against Solar Farm

The Saunders County Planning Commission last week voted 5-1 against a conditional-use permit for a proposed Omaha Public Power District 81-MW solar farm.

Several commissioners said they felt the process was being rushed, while other residents objected because the site is adjacent to a cemetery.

The county's board is scheduled to take up the issue May 11.

More: *Omaha World-Herald*

NEW YORK

Valatie Hydroelectric Plant Back Online

Following a nearly three-year hiatus, the Valatie Falls Hydro power plant once again began generating electricity last week.

John Doran, who purchased the dormant plant in April 2020, is selling the steady 160-kW stream of hydroelectric power through

National Grid. He hopes to feed the power eventually into the village of Valatie, as well as local electric vehicle charging stations.

More: *Times Union*

TEXAS

El Paso Electric Bills Increasing Because of Natural Gas Prices

El Paso Electric bills will be going up because of the increased cost of natural gas used to fuel the utility's power plants, company officials said last week. The increase is not related to the February cold wave that caused massive power outages in most of the state.

The average residential customer will see an increase of $5.80 per month (5%) beginning in May under preliminary approval from the Public Utility Commission. The increase could have been around $9 per month, but utility officials asked for a lower increase to help customers.

It is the company's first fuel cost increase since 2017.

More: *El Paso Times*

OREGON

State Reverses 2 Jordan Cove Energy Permits

The Land Use Board of Appeals last week reversed a pair of key permits for the Jordan Cove Energy LNG Project that would have cleared the way for expanded dredging and other site preparation in the Coos Bay estuary.

The permits were challenged by conservation groups and tribes, who claimed the permits were illegally issued. The appeals board agreed and reversed both permits outright, rather than sending them back for reconsideration. The decision also comes less than three weeks after Pembina said it was "pausing" the project and the associated 229-mile-long pipeline.

More: *The Oregonian*

VIRGINIA

Culpeper County Board Denies Solar Project Request

The Culpeper County Board of Supervisors last week unanimously denied Strata Solar's proposal for a 149-MW solar facility.

The Maroon Solar facility would have been built on 1,700 acres of agricultural land in 500-acre increments over three years.

The planning commission had twice recommended denial of a conditional use permit for the project on the grounds that it is too large, per the county's solar policy.

More: *Culpeper Star-Exponent*

Forecaster: Data Centers, EVs Will Drive up Electricity Demand

A forecast from the University of Virginia's Energy Transition Initiative released last week said the demand for electricity in the state is likely to balloon over the next 30 years as data centers open and electric vehicles replace traditional automobiles.

The forecast predicts Virginia's electricity sales will increase 30% to 38% by 2035 and by more than 78% by 2050, compared with current sales. However, some experts caution that many variables will affect future demand. In the UVA's analysis, nearly all of those increases will be due to two factors: data centers and transportation electrification.

In 2016, Northern Virginia became the world's largest data center market in the world. By 2019, the area's market had swelled to such an extent that it was nearly as large as the next four largest U.S. markets of Dallas-Fort Worth, Silicon Valley, Chicago and Phoenix combined.

More: *The Daily Progress*

WEST VIRGINIA

Gov. Justice Signs Fossil Fuel-friendly Bills into Law

Gov. **Jim Justice** last week signed three bills into law designed to help the coal, oil and gas industries while letting a solar-friendly bill become law without his signature.

The bills Justice signed require coal-fired plants owned by public utilities to keep at least 30 days of coal supply under contract for the lifespan of those plants. The bills also make changes to the state's coal severance tax rebate program and to the methodology for valuing producing oil and natural gas wells.

The bill that became law without the governor's signature encourages retail-customer investment in solar energy by exempting power purchase agreements from the Public Service Commission's jurisdiction.

Justice also signed a bill to create a cost savings program to reduce energy usage by 25% below 2018 levels by 2030 in state government buildings.

More: *Charleston Gazette-Mail*