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

ISSN 2377-8016 : Volume 2020/Issue 09 March 3, 2020

PJM Stakeholders Get First Look at MOPR Floor Costs

By Rich Heidorn Jr.

PJM stakeholders on Friday got their first look at the price floors that could be applied for capacity resources under the expanded minimum offer price rule (MOPR).

PJM shared what it called "informational" net cost of new entry (CONE) values, while The Brattle Group, which was hired by the RTO, gave a presentation on its work to develop avoidable-cost rate (ACR) values, the default minimum price for existing units.

The MOPR previously covered only new natural gas-fired generators. Under FERC's Dec. 19 order, the RTO must extend it to all new state-subsidized units, including renewables and new and existing nuclear plants receiving subsidies.

PJM's *informational* net CONE numbers range from a low of $235/MW-day for a combined cycle plant to a high of $3,261/MW-day for offshore wind.

PJM's Gary Helm said the RTO was terming the net CONE values "informational" because they include "placeholder" energy and ancillary services (E&AS) offsets from a 2018 FERC filing. "We feel pretty good" about the gross CONE values, he said.

Brattle's *preliminary* gross ACRs for "representative" plants ranged from a low of $40/MW-day for solar PV to $892/MW-day for a single-unit nuclear plant (using 2022 dollars).

Resources seeking to offer below the net ACR or net CONE values would have to seek a unit-specific exemption.

Both PJM and Brattle representatives emphasized during the special meeting of the Market Implementation Committee that their numbers were preliminary and would be refined before the RTO makes its compliance filing, due March 18.

Continued on page 29

Ex-CPUC Head Counsels Fresh Look at Energy Future

San Francisco's historic Palace Hotel was the setting for this year's annual meetting of the Energy Bar Association's Western Chapter (p.6) | © *RTO Insider*

Western RTO 'Imperative,' Says Retiring CAISO CEO

Berberich Plans Move to Texas while Search Begins for His Successor

By Hudson Sangree

Steve Berberich | © *RTO Insider*

FOLSOM, Calif. — As he prepares to leave CAISO this summer, CEO Steve Berberich said a regional transmission organization is essential for maximizing renewable energy use across the West, but that it won't coalesce under the ISO unless California lawmakers admit other states to its Board of Governors.

California's governor appoints the five members of CAISO's board, and the State Senate confirms the appointments. The idea that heavily Democratic California could dictate energy policy to the more conservative states of the Interior West has proven the major obstacle to forming an RTO under CAISO. Similarly, California politicians don't like the idea of sharing authority over the ISO with coal-burning states such as Arizona and Wyoming.

Asked if he could foresee one or more Western RTOs forming in the future, Berberich replied, "I think it's an imperative."

In an interview with *RTO Insider* at CAISO's suburban Sacramento headquarters last week, Berberich addressed the question of Western regionalization and talked about his impending

Continued on page 7

Also in this issue:

RTO Insider

CAISO ERCOT ISO-NE MISO NYISO PJM SPP

Editorial

Editor-in-Chief / Co-Publisher
Rich Heidorn Jr. 202-577-9221

Deputy Editor / Senior Correspondent
Robert Mullin 503-715-6901

Art Director
Mitchell Parizer 718-613-9388

Associate Editor / D.C. Correspondent
Michael Brooks 301-922-7687

Associate Editor
Shawn McFarland 570-856-6738

CAISO/West Correspondent
Hudson Sangree 916-747-3595

ISO-NE/NYISO Correspondent
Michael Kuser 802-681-5581

MISO Correspondent
Amanda Durish Cook 810-288-1847

PJM Correspondent
Christen Smith 717-439-1939

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

NERC/ERO Correspondent
Holden Mann 205-370-7844

Subscriptions

Chief Operating Officer / Co-Publisher
Merry Eisner 240-401-7399

Sales Director
Marge Gold 240-750-9423

Account Manager
Margo Thomas 480-694-9341

RTO Insider LLC
10837 Deborah Drive
Potomac, MD 20854
(301) 299-0375

Plan	Price
Newsletter PDF Only	$1,450
Newsletter PDF Plus Web	$2,000

2019 Annual Subscription Rates:
See additional details and our Subscriber Agreement at rtoinsider.com.

In this week's issue

Correction

A story published in the Feb. 18 *RTO Insider* on PPL's capital spending plans and fourth-quarter 2019 earnings mistakenly attributed to CEO Bill Spence a comment made by COO Vince Sorgi. The story has been updated online to correct the quote and to clarify the company's spending plans. (See *PPL Spells out $14B International Tx Upgrade Plan*.)

FERC/Federal News

Murkowski, Manchin Offer Bipartisan Energy Bill

Focus on Innovation

By Rich Heidorn Jr.

Sen. Lisa Murkowski (R-Alaska), chair of the Senate Energy and Natural Resources Committee, and ranking member Joe Manchin (D-W.Va.) unveiled their long-awaited energy legislation Thursday, incorporating some 50 bills previously approved by the panel.

Murkowski said the 550-page *American Energy Innovation Act* "is our best chance to modernize our nation's energy policies in more than 12 years," an apparent reference to the 2007 *Energy Independence and Security Act*.

The bill "will modernize domestic energy laws to ensure the United States remains a global energy leader while also strengthening national security, increasing our international competitiveness and investing in clean energy technologies," she said in a statement. "By working together to pass it into law, we can promote a range of emerging technologies that will help keep energy affordable even as it becomes cleaner and cleaner. Our bill also addresses national needs by taking overdue steps to enhance our cybersecurity, grid security and mineral security. I'm proud of the bipartisan work we have done and encourage all members of the Senate to work with us to advance it through the legislative process."

Murkowski's previous efforts to update energy efficiency laws with former ranking member Maria Cantwell repeatedly fell short. But Murkowski indicated she had support from Senate Majority Leader Mitch McConnell (R-Ky.), who filed cloture on the motion to proceed to S.2657, a geothermal research and development bill by Murkowski and Manchin that she said will serve as the legislative vehicle for the bill. *The Hill* reported that the bill could reach the floor as soon as this week.

In addition to reauthorizing the Advanced Research Projects Agency – Energy (ARPA-E) through fiscal year 2025, the bill could mean higher salaries for some FERC employees and provide new markets for coal and natural gas. It includes initiatives for carbon capture, ocean energy, next generation nuclear power and advanced vehicles and would create incentives for utility investments in cybersecurity.

The bill won immediate support from the National Mining Association; ClearPath Action, a conservative clean energy group; the Nature Conservancy; and the Business Council for Sustainable Energy.

Sens. Lisa Murkowski (R-Alaska) and Joe Manchin (D-W.Va.) | © *RTO Insider*

The American Council on Renewable Energy (ACORE) said it backed the bill's support for energy storage. "However, all should understand that federal investment in future innovation, while constructive, is not nearly a sufficient response to the climate crisis. In 2020, any energy bill should include provisions to accelerate near-term renewable energy deployment. More specifically, ACORE calls on Congress to include critical clean energy tax incentives in this package."

Below is a summary of some of the most significant provisions of the bill:

Energy Efficiency

- Creates a pilot program to award grants to provide nonprofit buildings with energy efficiency materials;
- Competitive grants for schools to make energy improvements;
- Establishes a program to implement smart building technology and demonstrate the costs and benefits of smart buildings;
- Extends existing federal building energy efficiency improvement targets through 2028, and adds water use reduction targets through 2030;
- Requires development of a metric for data center energy efficiency;
- Reauthorizes the Weatherization Assistance Program through FY 2025; and
- Establishes rebate programs for the replacement of energy-inefficient electric motors and transformers.

Capacity Building and Workforce Development

- Provides grants to colleges for building training and assessment centers and grants to partially cover the cost of training programs in energy-efficient building technologies;
- Establishes a pilot program to provide competitively awarded cost-shared grants to support training and apprenticeship programs in renewable energy, energy efficiency, grid modernization or the reduction of greenhouse gas emissions;
- Establishes a joint industry-government partnership to research, develop and demonstrate new sustainable manufacturing and industrial technologies and processes; and
- Authorizes FERC to pay employees with scientific technological, engineering and mathematical skills at a higher level than that allowed under civil service.

Renewable Energy

- Extends incentives for hydroelectric production and efficiency authorized in the Energy Policy Act of 2005 through FY 2036;
- Modernizes the Department of Energy's R&D work on marine and hydrokinetic renewable energy; establishes the National Marine Renewable Energy Research, Development and Demonstration Centers at institutions of higher education;
- Requires the U.S. Geological Survey to update its geothermal resource assessment;

FERC/Federal News

establishes a program to adapt oil and gas technologies for geothermal development; creates a prize competition for the production of critical minerals from geothermal brines; expands research into enhanced geothermal systems; establishes a research program for heat pumps and direct use; defines the thermal component of geothermal energy as renewable; and

- Establishes solar and wind energy technology programs.

Energy Storage

- Incorporates the Better Energy Storage Technology Act, establishing a research, development and deployment (RD&D) program to advance energy storage technologies; requires at least five demonstration projects; establishes a joint long-term demonstration initiative with the secretary of defense; facilitates a technical and planning assistance program for rural electric cooperatives and municipal utilities; directs FERC to issue a regulation on energy storage cost recovery;
- Provides the secretary of the interior with sole authority for the development of pumped storage hydropower projects on Bureau of Reclamation reservoirs, eliminating the need for a separate permit from FERC; and
- Creates a program on grid-scale energy storage to address challenges identified in the 2013 DOE Strategic Plan for Grid Energy Storage, including systems research, power conversion technologies research, grid-scale testing and analysis, and storage device safety and reliability.

Carbon Capture, Utilization and Storage

- Establishes a technology program to improve the efficiency, effectiveness, costs and environmental performance of coal and natural gas use, including an R&D program, large-scale pilot projects, demonstration projects, and a front-end engineering and design program;
- Establishes an RD&D carbon storage program, a large-scale carbon sequestration demonstration program and an integrated storage program;
- Establishes an RD&D program to identify and assess novel uses for carbon, carbon oxide, carbon capture technologies for industrial systems and alternative uses for coal; and
- Establishes a program to develop technologies for removing CO_2 from the atmosphere on a large scale.

Nuclear

- Replaces DOE's existing Nuclear Energy Systems Support Program with a Light Water Reactor Sustainability Program to maximize the benefits of existing nuclear generation; enable continued operation of existing nuclear power plants through technology development; improve performance; and reduce plant operating and maintenance costs;
- Creates a research program on next-generation light water reactor and advanced reactor fuels through FY 2025; and
- Requires DOE's Office of Nuclear Energy to develop a 10-year strategic plan that supports advanced nuclear R&D to help such reactors reach the market.

Vehicles

- Creates a program of basic and applied research, development, engineering, demonstration and commercial application activities to increase the efficiency of, and reduce petroleum use in, passenger and commercial vehicles;
- Creates a program of research, development, engineering, demonstration and commercial application for advanced vehicle manufacturing technologies and practices; and
- Creates a program of cooperative research, development, demonstration and commercial application activities on advanced technologies for medium- to heavy-duty commercial, vocational, recreational and transit vehicles.

Natural Gas

- Amends the Natural Gas Act to expedite approval of exports of small volumes of natural gas by deeming applications to export up to 51.75 billion cubic feet per year to any country to be consistent with the public interest;
- Authorizes a study involving DOE and the secretaries of defense and treasury on the potential national and economic security benefits of building ethane and other natural gas liquids-related petrochemical infrastructure in the vicinity of the Marcellus, Utica and Rogersville shale plays.

Supply Chain Security

- Updates the congressional declaration of policy on mineral security; and
- Creates a program to develop advanced separation technologies for the extraction and recovery of rare earth elements and minerals from coal and coal byproducts.

Cybersecurity and Grid Security and Modernization

- Amends the Federal Power Act to require FERC, working with DOE, NERC, the Electricity Subsector Coordinating Council and the National Association of Regulatory Utility Commissioners, to establish incentive-based rate treatments to encourage utility investments in advanced cybersecurity technology and participation in cybersecurity threat information sharing programs;
- Establishes a competitive grant program for rural and municipal utilities to deploy advanced cybersecurity technology and participate in cybersecurity threat information sharing;
- Authorizes financial assistance to help states develop energy security plans that assess states' existing circumstances and proposes ways to improve its ability to secure infrastructure and minimize supply disruptions; reauthorizes the State Energy Program through FY 2025;
- Requires DOE, working with state regulatory authorities, industry, the Electric Reliability Organization and other relevant federal agencies, to advance the physical security and cybersecurity of electric utilities, with priority provided to utilities with fewer resources; requires a report to Congress on improving the cybersecurity of electricity distribution systems;
- Creates a program to develop advanced energy sector cybersecurity technologies and applications, and to leverage electric grid architecture to assess risks to the energy sector; requires DOE conduct "cybertesting" and mitigation to identify vulnerabilities of energy sector supply chain products;
- Establishes a grant program for projects modernizing the electric grid, including distribution system technologies;
- Establishes a program to promote hybrid microgrid systems for isolated communities and microgrid systems to increase the resilience of critical infrastructure; and
- Creates a process to develop model grid architecture and a set of future scenarios to examine the impacts of different combinations of resources on the electric grid; the energy secretary would use the findings to determine whether any new standards are necessary for the grid, and if so, make recommendations. ■

FERC/Federal News

CERAWeek Canceled as COVID-19 Virus Spreads

EPA Administrator Andrew Wheeler speaks at CERAWeek 2019. | © *RTO Insider*

The COVID-19 coronavirus has led to the cancellation of one of the world's largest energy conferences, CERAWeek, held annually in Houston.

IHS Markit, the London-based global information firm that organizes CERAWeek, said it had made its decision "reluctantly and after deep consideration." The event was scheduled March 9-13.

In an email to participants and a *message* posted on CERAWeek 2020's website Sunday, IHS Markit said that concern about the virus has "mounted rapidly" in recent days. It pointed to increasing number of companies instituting travel bans and restrictions, more restrictive border health checks and "growing concern about large conferences with people coming from different parts of the world."

Event organizers were expecting delegates from more than 80 countries to participate in CERAWeek 2020. Last year's event drew more than 5,500 executives, government officials and thought leaders from the energy, policy, technology and financial industries.

"Our No. 1 concern is the health and safety of delegates and speakers, our partners, our colleagues and vendors," event organizers said, noting they had established a medical partnership with a local hospital and were in touch with infectious disease experts. "But the spread of COVID-19 is moving quickly around the world."

IHS Markit said it would continue with CERAWeek 2021 in Houston on March 1-5, 2021.

COVID-19 has infected more than 92,100 people worldwide, killing more than 3,000, including six in the U.S. ■

— Tom Kleckner

CAISO/West News

Ex-CPUC Head Counsels Fresh Look at Energy Future

By Hudson Sangree

SAN FRANCISCO — The former president of the California Public Utilities Commission told a gathering of energy lawyers Friday that common assumptions about the future of renewable energy and electrification need to be re-examined.

Former CPUC President Michael Picker | *© RTO Insider*

Michael Picker, who left the commission in summer 2019, was replaced by Marybel Batjer. Since then, Picker said he's been working for Gov. Gavin Newsom, putting together an energy roadmap for the state as it tries to reach its ambitious renewable energy and greenhouse gas reduction goals by midcentury. (See *Retiring CPUC President Still Has Lots to Say*.)

His research has led him to new thinking about reliability and resilience, he told the Western Chapter of the Energy Bar Association at its annual meeting. Picker was the keynote speaker, and his thought-provoking presentation was discussed throughout the day's proceedings.

For instance, Picker said the idea that the state's biggest utilities are opposed to clean energy, while community choice aggregators are more progressive, doesn't pan out in the math.

The state's investor-owned utilities — the "much maligned" Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric — had achieved renewable portfolio compliance of 40%, 36% and 41%, respectively, by the end of 2018, he said.

"So that's not bad progress since the goal was 30% by 2020," Picker said. "And if you look at the forward compliance, each of them expects to be at 52% or above by 2024."

Under Senate Bill 100, passed in 2018, the IOUs are expected to achieve primary reliance on clean energy sources by 2045.

Community choice aggregators (CCAs), most of which promise clean energy to retail customers and will become the majority of load-serving entities in coming decades, are falling behind, he said. They've proven more reliant on short-term contracts with out-of-state generators, with transmission constraints between source and sink, he said.

The IOUs, with more capital available, have been more successful in signing long-term contracts with in-state generators, whereas the "smaller entities [such as CCAs] with thinner capitalization have had a harder time being able to make those investments in long-term contracts," he said. (See *Calif. Lawmakers Reveal Growing Divisions over CCAs*.)

Another issue, Pickers said, is that time-of-day demand from residential and commercial customers is merging.

California's aerospace and automobile manufacturing economy died away, he said. Those industries used electricity around the clock, working three shifts every 24 hours. Now the state has a lot of "computational-based industries" that mirror household demand, with peaks about 200 hours out of the year, mainly after 5 p.m. on weekdays, he said.

"Who wants to build a power plant that's only going to be selling electricity for 200 hours per year?" Picker said. "And how do you do that with solar if some of that demand is in the evenings after the effective capacity of solar starts to decline as the sun's going down to the horizon?"

Rethinking EVs

Picker also noted that there's a common misconception that generators are responsible for the bulk of greenhouse gas emissions. Electricity generation is responsible for 15% of carbon emissions, whereas transportation is responsible for 40%, he said.

State law requires a reduction in greenhouse gases by 40% below 1990 levels by 2030.

"As the electricity supply gets cleaner, it's harder to reach that 2030 goal simply on the backs of the electric industry," Picker said. "We have to address transportation."

Statutes set a goal of having 2.5 million electric vehicles on California's roads by 2025, he said. But planners tend to focus on individual ownership of EVs.

"There's an implicit assumption amongst many of the planners that transportation is going to look the same 20 years from now as 20 years before," he said. "Most of the policy … is focused on single ownership cars."

In some urban areas, including Sacramento, more EVs are being charged and parked under car-sharing programs. The cars are taken to central locations where they're charged at night, when demand is lowest, and distributed throughout the cities during the day.

Why, then, are government planners focused on owners charging cars in their garages? Picker asked.

"Why wouldn't [car sharing] be the public policy priority rather than people installing [charging stations] in their homes?" he said.

Another point: As more Western states adopt renewable energy goals, the hydroelectric power generated in the Pacific Northwest will become a more coveted commodity, Picker said. And limited transmission will result in greater congestion, he said.

Electricity is becoming devalued as a commodity, while poles and power lines are generating greater revenues, he said.

The focus of policies has been on reducing greenhouse gases, but climate change will require greater resilience, which Picker said is another term for adaptation to changing circumstances.

"What I'm arguing," Picker said, "is that we're going to see more and more focus on adaptation." ■

San Francisco's historic Palace Hotel was the setting for this year's annual meeting of the Energy Bar Association's Western Chapter. | *© RTO Insider*

CAISO/West News

Western RTO ‘Imperative,’ Says Retiring CAISO CEO

Berberich Plans Move to Texas while Search Begins for His Successor

Continued from page 1

retirement from the ISO.

CAISO’s Western Energy Imbalance Market allows real-time trading across state lines, and a proposal to expand it to a day-ahead market could enhance its value, Berberich said. But whether the regionalization effort can move beyond the EIM is problematic, he said.

“There is some desire of those in the West to have an RTO, and I fully respect the fact that some of the out-of-state people are certainly not interested in joining the California ISO’s RTO because of our governance,” he said. “I believe that it’s in California’s best interest to have a regional RTO, and that it be this RTO that is extended. However, I believe that the possibility does exist that other RTOs will form in the West eventually.”

Rocky Mountain states, for instance, could band together, leaving out the West’s coastal states, he said.

“It’s absolutely essential for high levels of renewables to have a regional grid,” Berberich said. “And I take note [that] … Iowa sometimes can meet 100% of its load with its wind fleet. Why? Because they’re part of MISO, and because MISO is such a giant footprint, they can absorb that kind of movement. In Europe, they run the day-ahead market across the entire continent, and they leverage each other’s assets. That’s how you have to do it.”

Although California could go it alone, it could achieve lower energy costs and higher carbon reductions in an RTO with other states, he said. (See *Can Calif. Go All Green Without a Western RTO?*)

That will only happen if other states are represented on the CAISO board, Berberich said. Even states with similar carbon-reduction and renewable-energy goals, such as Oregon and Washington, won’t join a CAISO RTO without a say in its governance, he said.

“If this ISO is to become the Western RTO, the governance has to change,” Berberich said.

That will be a tough sell in the State Capitol. Lawmakers have already rejected efforts to alter CAISO’s governance structure, most recently with a bill that languished in 2018. (See *Western RTO Proponents Vow to Keep Trying*.)

“Ultimately, I respect that the policymakers downtown in Sacramento are going to have to make this decision,” Berberich said. “It won’t be ours to make.”

‘The Right Time’

Berberich, 56, a Missouri native, earned business degrees from the University of Tulsa and worked in finance, technology and utilities, including a stint at the former TXU Corp. when it entered the newly deregulated Texas energy market in the early 2000s.

He came to CAISO 15 years ago, serving as vice president of technology, chief financial officer and chief operating officer before taking the helm as president and CEO nine years ago. Berberich earned nearly $1.5 million in 2017 according to CAISO’s *Form 990* filing as a nonprofit organization with the Internal Revenue Service.

The ISO announced his plans to retire early this summer on Feb. 19. (See *CAISO CEO Steve Berberich Retiring*.)

The announcement came soon after the retirements of two other CAISO leaders in January. Keith Casey, vice president of market and infrastructure development, and Nancy Traweek, executive director of system operations, both retired after more than two decades at the ISO. (See *CAISO Announces Leadership Changes*.)

The series of high-level retirements are coincidental, each driven by personal circumstances, Berberich said.

“I think it’s the right time for me,” he said, explaining that CEOs and the organizations they lead both need a change every decade or so.

Berberich said he and his wife are planning to move to Dallas to be near their grandchildren. He said he’s not done working but hasn’t decided his next move yet.

The ISO has begun a nationwide search for his successor.

Restoring Trust

Recounting his accomplishments as CEO, Berberich said, “First and foremost, it’s showing the world how you can operate a grid with large amounts of renewables on it and do it in such a way that it’s reliable and efficient and effective — and I think we’ve done that.”

Peaks of wind and solar on CAISO’s system have reached more than 70% and total renewables serving demand topped out at more than

CAISO’s headquarters in Folsom, Calif. | © *RTO Insider*

80% on May 15, 2019.

“I can remember when people were concerned about 20% renewables on the grid,” Berberich said. He looked at the board in CAISO’s control room last Tuesday around noon and said, “Right now we’re at 54% on the grid.”

Challenges lie ahead, he said, including serving peak and residual-peak load as the sun sets and solar goes offline, he said. CAISO planners predict potential shortfalls starting in 2021. (See *CAISO, CPUC Warn of ‘Reliability Emergency.’*)

And whether electric vehicles will absorb excess solar energy during the day or exacerbate California’s peak evening demand remains in doubt. (See *EVs Could Soak up Solar or Exacerbate ‘Duck Curve.’*)

“EVs are either a marriage made in heaven or a marriage made in hell,” he said.

Another major accomplishment, Berberich said, is the restoration of trust following California’s energy crisis of 2000-2001 and the creation of the EIM, which is on track to have significant participation from entities in every Western state by 2023.

“The EIM has shown that we have established credibility and trust in the region, which was sorely damaged during the energy crisis, and I think being able to turn that around completely to the fact that they would trust us to participate in our market is a big change,” Berberich said.

He said he’s melancholy about leaving CAISO and hopes to be remembered by its staff as a good leader.

“The proudest thing I have here is the people and the culture that we’ve been able to develop at the ISO to embrace the changes facing us,” he said. “We have an amazing group of people here, and I’m just simply humbled to have been able to be part of that.” ■

ERCOT News

ERCOT TAC OKs Glossary Change in Email Vote

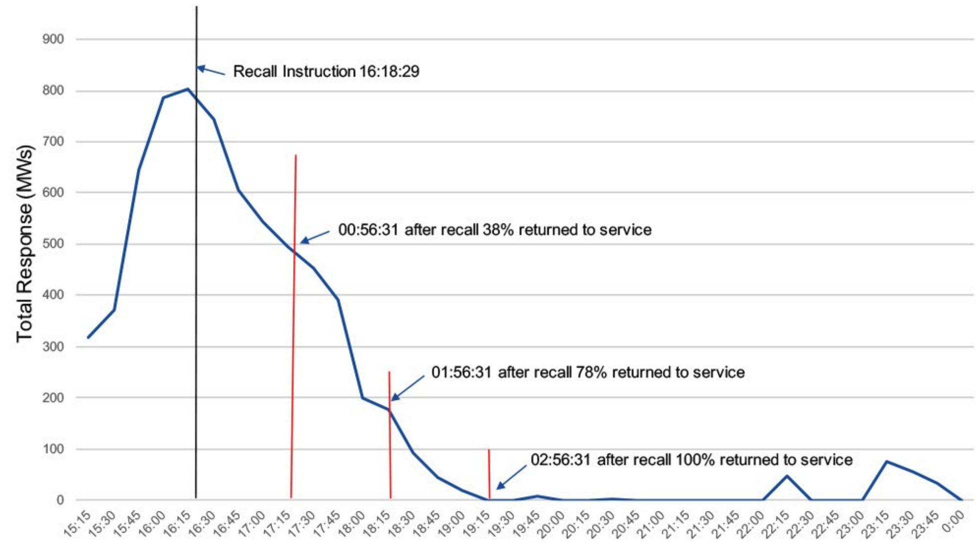
ERCOT's Technical Advisory Committee on Friday unanimously approved a change to the Resource Registration Glossary (*RRGRR021*) with an email vote.

RRGRR021 adds new data requirements to the glossary to account for submittal requirement fields for dynamic models, which are required by the Transient Security Assessment Tool (TSAT). The change, which was granted urgent status, allows the TSAT to calculate dynamic stability-related generic transmission limits in real time and help the operators maintain system reliability.

Committee members also directed the Wholesale Market Subcommittee to determine whether to modify the 10-hour restoration period for emergency response service (ERS). A reliability deployment price adder uses unrestored ERS to adjust the generation to be dispatched. ERCOT's protocols require the TAC to annually review the restoration period.

Several members expressed their openness to ERCOT recommending a new restoration period of as little as five hours.

The issue was discussed during a January joint meeting between the Wholesale Market and Demand Side working groups, but they were unable to agree on a recommendation.



Reliability deployment price adder ramp, Aug. 13 ERS deployment | © *RTO Insider*

During the information session, scheduled after the in-person TAC meeting was canceled, ERCOT legal staff told the committee it has scheduled an April 9 *workshop* to share its proposed changes to market-entry requirements for counterparties. Referencing the GreenHat Energy default in PJM, ERCOT's Juliana Morehead said the Texas grid operator wants to strengthen its oversight of various counterparties' financial health and prevent market exposure to potential bad actors. ■

— Tom Kleckner

ERCOT News

District Court Dismisses Texas ROFR Repeal

By Tom Kleckner

A U.S. district court last week dismissed with prejudice a lawsuit seeking to overturn a Texas law giving the state's incumbent utilities the right of first refusal over transmission projects (1:19-cv-00626).

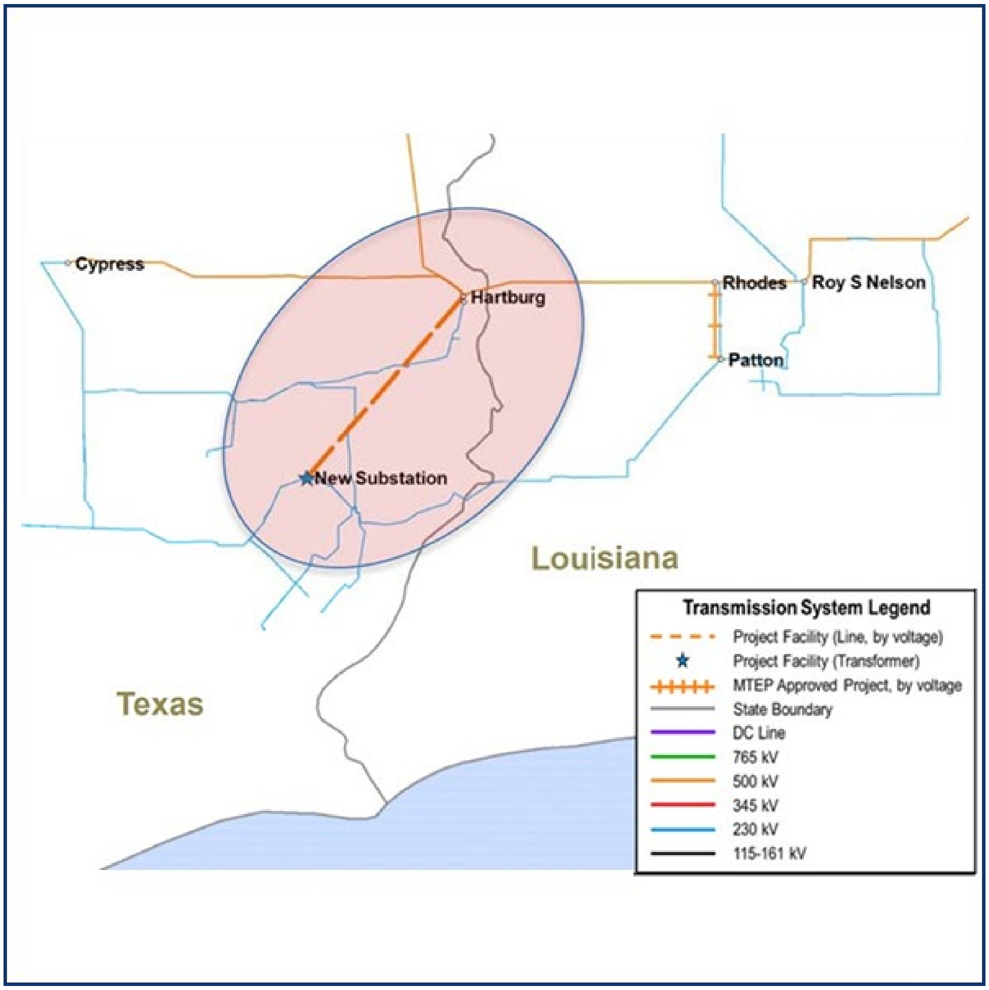
The District Court for the Western District of Texas on Wednesday effectively ended an attempt by a number of NextEra Energy subsidiaries to repeal the legislation (Senate Bill 1938), which they said discriminated against out-of-state transmission developers.

The court also denied intervention requests by nearly a dozen parties.

Passed last May, the law grants certificates of convenience and necessity to build, own or operate new transmission facilities that interconnect with existing facilities "only to the owner of that existing facility." (See Texas ROFR Bill Passes, Awaits Governor's Signature.)

District Judge Lee Yeakel said the plaintiffs, NextEra Energy Capital Holdings (NEECH) and four other NextEra transmission owner/developer entities, failed to demonstrate that the law discriminates against out-of-state transmission providers or has a discriminatory purpose or effect.

NEECH, NextEra Energy Transmission (NEET), NextEra Energy Transmission Midwest and Lone Star Transmission alleged that SB 1938 discriminates against interstate commerce by giving electric utilities that already operate in Texas the sole right to build transmission lines with an end point in the state. They based their reasoning on the Constitution's Commerce and Contracts clauses. (See NextEra Takes Texas to Court over ROFR Law.)



Hartburg-Sabine Junction project | *MISO*

The court found SB 1938 was not "analogous" to the cases the NextEra companies cited, "all of which involve the flow of goods in interstate commerce or burdensome requirements as a precondition for allowing the flow of goods in interstate commerce."

"SB 1938 does not purport to regulate the transmission of electricity in interstate commerce," Yeakel wrote. "It regulates only the construction and operation of transmission lines and facilities within Texas, which distinguishes it from the cases upon which plaintiffs rely."

Yeakel said the law does not single out Texas transmission providers "as the sole beneficiaries of the right of first refusal over out-of-state providers" and does not "overtly discriminate" by granting incumbent transmission providers the ROFR "because that preference does not discriminate against out-of-state providers."

"Indeed, most incumbent providers in Texas are owned by out-of-state companies, and SB 1938 allows out-of-state providers a means to enter the Texas market for transmission services by buying a Texas utility," Yeakel said.

The plaintiffs had claimed standing because the law jeopardizes its Hartburg-Sabine Junction competitive project in southeast Texas. NEET Midwest in 2018 won a competitive bid from MISO for the project, which would consist of a new 500-kV line, four 230-kV lines and a 500-kV substation.

MISO executives have acknowledged that the congestion-relieving project "may face challenges" as a result of the law, casting its future into doubt. (See Uncertainty Deepens for Hartburg-Sabine Project.)

Katie Coleman, counsel for the Texas Association of Manufacturers, said the industrial lobbying group agrees with the decision.

"Industrial companies in Texas see theoretical benefits to a bidding process for transmission but have yet to see a workable model," she said. "If and when the state wants to move in that direction, it needs to be done deliberately and with appropriate customer protections. Until then, having the current endpoint owners build new lines makes the most sense for customers and the state."

NextEra did not respond to a request for comment. ■

ERCOT News

Overheard at Infocast's ERCOT Market Summit

Magness: ERCOT Market Knows How to Manage Tight Reserves

AUSTIN, Texas — Infocast's annual ERCOT Market Summit last week brought together nearly 300 industry representatives and policymakers to discuss the Texas grid and the challenges it faces.

ERCOT CEO Bill Magness | © *RTO Insider*

ERCOT CEO Bill Magness keynoted the Feb. 25-27 event, cracking wise as he reviewed the system's performance during a pair of summers with record demand and tight reserves, while offering his 2020 vision.

"I get to talk about that a fair amount, as that's a characteristic of the ERCOT market these days," he said. "It always starts with, 'Tell me about this summer. I know what you did last summer.' So I soldier on."

Magness said he and his staff knew that the summers of 2018 and 2019 would be "pretty challenging" when more than 4.1 GW of the market's coal capacity was retired in 2017.

"Now that we've gone through both [summers], we know how the system performs with tight reserves," he said.

Despite a reserve margin of just 8.6% last summer, ERCOT was able to meet a record demand of 74.8 GW in early August, breaking the mark set in 2018 by more than 1 GW. The real problem came later in August and September, two of Texas' hottest months on record, when West Texas wind production dropped during the early afternoon hours. That created a trough of wind energy before coastal wind production picked up, forcing ERCOT to rely on emergency response service to meet demand.

The grid operator called two energy emergency alerts to address the loss of production. Prices, meanwhile, soared during the scarcity conditions, hitting their cap of $9,000/MWh.

"We saw a real solidifying of what's become a pattern, with the resource mix driven in large measure by the wind," Magness said. "Most of my mid-afternoons are spent watching the charts, to see if the wind catches up to the load or not. Consequently, we tend to see that our tightest reserves are during those times when we're in that trough of wind generation."

Infocast summit attendees listen to a panel discussion. | © *RTO Insider*

Staff are projecting an additional 7.6 GW of new capacity will come online for summer 2020, much of it renewable energy or smaller gas-fired peakers. The grid operator expects a reserve margin of 10.6% this year — still 3 points below its planning reserve margin target of 13.75% — and 18.2% in 2021.

"It's nice to see double digits, but that's not materially different from an operations perspective," Magness said. "People ask me, 'Are we out of the woods yet?' And I say, 'We have become skilled forest creatures.'"

ERCOT and its stakeholders are following the same playbook as they did in preparing for the last couple of summers: limiting transmission and generation outages, strengthening communication with market participants, setting up emergency transfers with neighboring grids, and calling on emergency reserves.

"We're fully engaged at ERCOT to facilitate whatever shows up," Magness said.

Participants Offer Kudos to ERCOT's Market Design

A panel of market participants followed Magness to the stage and added their insights on the ERCOT market's performance last summer and measures being taken to strengthen it.

Shell Energy North America's Resmi Surendran suggested the market might have been lucky last year, pointing out the heat didn't reach 2011 levels, when Texas recorded its hottest summer on record.

"It could have been much worse. If we had had 2011 weather, the peak would have been 78 GW, not 74 GW," Surendran said.

Katie Coleman, legal counsel for the Texas Industrial Energy Consumers trade group, responded that some of the credit for ERCOT's energy-only market must go to the market itself.

"We've been hearing for the past three summers how lucky we are," she said. "At some point, you have to start chalking it up to good market design and good market incentives."

As did other speakers, the panel lamented the lack of pricing signals incenting new baseload generation. Intermittent renewable resources continue to provide much of the new construction and capacity in ERCOT, but they also add more risk.

Referencing a 2014 Brattle Group *study* on an "economically optimal" reserve margin that suggested a 10.2% reserve margin would lead to a loss-of-load event (LOLE) once every three years, Lower Colorado River Authority's

ERCOT News

John Dumas highlighted the potential danger.

"Having a good market design is good. You can be a good driver, but your reaction time at 110 mph needs to be a lot quicker than at 65 mph," Dumas said. "When you're shrinking those reserve margins, you're taking on a lot more risk."

"The best way to describe the ERCOT market is that it works in practice, but not in theory," Coleman said. "We've gone from planning to a one-in-10 year [LOLE] standard and never had an event, to an event in three years, and we've never had it. I think the world is watching what the market is doing here, because consumers are paying less and because of the incentives we've created so that resources show up when they're needed the most."

The Public Utility Commission and ERCOT continue to tweak the market. The commission in January 2019 directed the grid operator to change its operating reserve demand curve, which provides a price adder during periods of generation scarcity, by combining its curves into a single curve and shifting the standard deviation in its LOLE probability.

Coleman said the standard deviation shift means "prices get higher and stay there longer." She said the curve combination is more significant because "it says how variable your reserves are year-round, and we're just going to peanut-butter that across all hours."

"It is certainly increasing pricing," she said. "The issue is not a matter of how much you increase prices … you'll still get the most economic resources. Right now, that's not thermal generation. If you incentivize thermal resources, I don't know anyone who thinks that's a good idea."

"You may not see any new build announcements from us, but we are putting in $100 million into our Texas fleet," said Calpine's Brandon Whittle, noting the upgrades will "capture extra megawatts" and provide more generation for the grid this summer.


Katie Coleman, TIEC, and Brandon Whittle, Calpine | © *RTO Insider*

ERCOT Works to Stay Ahead of Oil & Gas Growth

ERCOT is conducting its biennial long-term system assessment (LTSA) of the 345-kV system, which it is required to file with the state legislature each even-numbered year. Examining a 10- to 15-year planning horizon, the LTSA uses a range of scenarios to identify upgrades that are robust over a number of the scenarios or more economical than upgrades found in near-term assessments.

The 2018 LTSA *report* projected a significant amount of additional solar generation and transmission improvements needed to export solar and wind output from West Texas. Not mentioned in the overview is the load growth fueled by the petroleum-rich Permian Basin and other western plays.

"Oil and gas load has been a struggle for us," said ERCOT's Jeff Billo, senior manager of transmission planning. "New wires take four to five years to get constructed. The commitments of new growth we're getting from the oil and gas sector are only one or two years away."

"Oil and gas load continues to migrate further and further west," Magness said. "There wasn't much grid out there too long ago; it was pretty much the end of the system. Where there wasn't much grid before, we'll have to muscle it up pretty fast."

Billo said ERCOT has undertaken a number of initiatives, at the direction of PUC Chair DeAnn Walker, to review its processes and try to stay ahead of the load growth.

"Two things: Can we identify the need for new transmission to serve oil and gas customers sooner, and secondly, can we speed up our process?" Billo said. "Can we get the engineering, the planning done quicker so we can start the construction quicker?"


Kip Fox, Electric Transmission Texas | © *RTO Insider*

"It's pretty clear that new construction [in West Texas] is the No. 1 priority of this current commission," Electric Transmission Texas President Kip Fox said. "Oil and gas is the lifeblood of Texas. Getting power to those locations is important to the growth of Texas."

Potential Solar Projects Pose Challenges

ERCOT's *generator interconnection queue* numbered 613 requests as of Jan. 31, with a staggering total of 119.4 GW of capacity under some form of study. Solar requests account for more than half of that (73.6 GW), doubling wind requests (30.6 GW).


Tuan Pham, PowerFin Partners | © *RTO Insider*

Tuan Pham, CEO of solar developer PowerFin Partners, said there's a reason for the massive amount of solar capacity in the queue: the $15/MW application price.

"A structural problem at a high level is that the cost … is extremely low," he said. "It takes $15/MWh to get into the ERCOT queue, but the cost to build a solar project is about $1 million/MWh. [The application fee] might as well be zero. I don't believe the [numbers for] future buildout and supply of solar in the state."


Brandon Wax, J.P. Morgan | © *RTO Insider*

"I'll take the heavy under [bet] on everything that's in the queue," said Brandon Wax, executive director of commodities for J.P. Morgan. "What the market needs is dispatchable generation, and that is going to be really tough to build. The reserve margin I'm interested in is the reserve margin on those low-wind days. The next three to four years, you'll see a lot of solar, the occasional

ERCOT News

peaker and behind-the-meter generation."

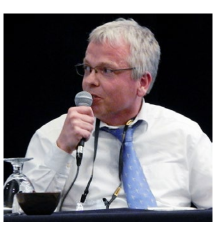
Solar energy has been concentrated in the solar-rich areas of barren West Texas. However, with transmission congestion becoming a factor, developers are now eyeing locations closer to load centers.

"We're seeing an unprecedented growth on the transmission system of renewable energy, but the great locations have all been sucked up," Fox said. He referenced the *Competitive Renewable Energy Zones* (CREZ) project that resulted in the construction of 3,500 miles of transmission, capable of carrying 18.5 GW of capacity, in illustrating today's problem.

"Build it, and they would come. They just didn't think they would come as much as they did," said Fox, whose joint venture between American Electric Power and Berkshire Hathaway Energy was responsible for 20% of the CREZ build. "There's a lot more requests for interconnections than the CREZ lines are capable of carrying."


Swaraj Jammalamadaka, Apex Clean Energy | © *RTO Insider*

"Transmission planning is a very complex thing. Not only are you planning for reliability, but you're planning for the future," said Swaraj Jammalamadaka, vice president of transmission for Apex Clean Energy. "The biggest change is the economics of renewables. There's demand for cheap, renewable resources. As Kip said, you build it and they will come. They've been waiting for a long time. It's not about congestion today, but forecasting tomorrow. Is the market actually responding to it? It's very complex to get market design and transmission planning right to ensure the right resources are being used."


Ingo Stuckmann, Wind Works Power | © *RTO Insider*

"As a wind or solar developer, you're trying to get your project online however, whenever," Wind Works Power CEO Ingo Stuckmann said. "If you look at the system, there's two elephants in the room. The first elephant is getting the transmission out in the West. We had this CREZ I system built, but where's our second CREZ system? I don't think there's an appetite for another CREZ system.

"The second elephant is the August summer


Steve Reedy (left), Potomac Economics, and Jeff Billo, ERCOT | © *RTO Insider*

scarcity pricing. How do you meet these prices? In Germany, they've designed a system that can be 100% renewable. That's the cheapest source of remediating all these peaks immediately."

Is Too Much Demand Response Too Much?

Potomac Economics' Steve Reedy, acting director of ERCOT's Independent Market Monitor, said the Monitor is a "pretty big fan" of demand response, be it emergency response service, charges during the four 15-minute coincident peak events during the summer months and "plain old" DR.

Reedy said while the first two DR schemes account for much of the response, he finds "plain old" DR the most exciting.

"That's what really helps the market become a market, where you actually have buyers and sellers meeting in the marketplace and responding to prices," he said. "You can respond to the shortage by building more generators, investing money in plants to make them more efficient, investing in tools and procedures to look at prices … that's the beauty of the energy-only market. The high prices we get during shortages sends price signals to the market, and the market determines the most efficient way to get energy to where it's needed."

Billo offered a transmission perspective on DR.

"You can't count on demand response for transmission," he said. "Demand responds to systemwide scarcity conditions, but that may or may not be when a local area is experiencing a transmission constraint, so it may not respond when you need it for transmission."

Scarcity Pricing Likely Again in 2020


Claudia Morrow, Vistra Energy | © *RTO Insider*

Claudia Morrow, vice president of commercial pricing for Vistra Energy, had a simple answer when asked whether the market would see another round of $9,000/MWh scarcity prices this summer.

"Until someone can forecast when the wind is going to blow and the sun is going to shine, that's going to be a challenge for the market and market participants," she said. "The answer is to invest and spend capital on plants, to be sure they're there when needed."

"The volatility will continue this summer," said Michael Enger, Austin Energy's energy market manager. "Our weather will determine whether we see the same magnitude of prices."

Fellow panelist Brad Richter, Citigroup Energy's origination director, cautioned against expecting any help from new baseload generation.

"The forward curves do not support additional generation. The market isn't sending price signals to give us more generation," he said. "We're increasingly in an environmental market. It's all sunshine and wind, and it's going to keep happening because the forward curve is not incenting new generation."

What will it take to incent new generation?

"Brownouts … that's the kind of signal the market's going to need to wake up and have assets in place to support the market," Richter said. ■

— Tom Kleckner

ERCOT News

Texas PUC Briefs

Walker Asks to Widen Pool of Reliability Monitor Contractors

Public Utility Commission of Texas Chair DeAnn Walker last week directed staff to open a rulemaking that widens the pool of applicants for ERCOT's reliability monitor.

The PUC's rules limit the number of entities that can be contracted by the commission and ERCOT as the grid operator's reliability monitor (*25.503*). They direct the commission to consider independence and objectivity, experience, familiarity with the ERCOT region, cost effectiveness and managing confidential information.

The Texas Reliability Entity has served as ERCOT's reliability monitor since July 2010, assuming the responsibilities once held by the grid operator. Texas RE recently had its contract renewed through 2023.

"I'm not saying we need to walk away from the Texas RE. I'm saying we need to have a rule that gives us a larger pool," Walker said during Friday's open meeting.

Commissioner Arthur D'Andrea agreed. "Competition's a good thing," he said.

"We take pride in the vital role we play in assuring electric reliability in Texas and look forward to continued collaboration with the PUCT," a Texas RE spokesperson said.

Jaren Taylor, Oncor counsel

Final Tx Line for LP&L Transition OK'd

The PUC cleared the way for the final transmission line necessary to integrate 470 MW of Lubbock Power & Light's load into ERCOT by approving a *proposal for decision* from the State Office of Administrative Hearings (*49151*).

The commissioners rejected arguments by a lone intervenor that the line, planned as a single-circuit, 345-kV line that links with LP&L's 115-kV system, be built at 115-kV with an additional substation. The intervenor's legal counsel noted that 345-kV lines require 175 feet of right of way and 115-kV lines only 60 feet.

Oncor legal counsel Jaren Taylor said the substation would incur additional costs. The project could cost as much as $88.6 million. Oncor is responsible for building the line, which will be between 22 and 33 miles long, but LP&L will own and operate the line.

A final order will likely be issued during the PUC's next open meeting on March 12. The PUC's decision keeps LP&L on a path to meet its June 2021 deadline to join the ERCOT grid. (See "LP&L Welcomed into ERCOT," *Texas PUC OKs Sempra-Oncor Deal, LP&L Transfer*.)

PUC Chair DeAnn Walker (center) confers with Commissioners Shelly Botkin (left) and Arthur D'Andrea.

Settlement Reduces AEP Texas Revenue Requirement by $40M

The commissioners approved a *settlement* between AEP Texas and PUC staff, the Office of Public Utility Counsel and other entities that will result in a $40 million "black box" reduction in the utility's total base rate revenue requirement (*49494*).

A final order has yet to be drafted, but the settlement will result in a 9.4% return of equity for AEP Texas and numerous ring-fencing measures.

AEP Texas had asked for annual distribution revenues of $59.1 million in its annual distribution revenues. ■

— Tom Kleckner

ISO-NE News

Conn. Lawmakers Seek to Balance Energy Goals, Costs

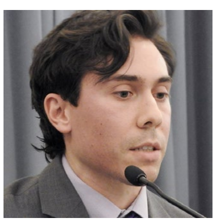
By Michael Kuser

HARTFORD, Conn. — Lawmakers will this legislative session continue to focus on efforts to transition the state to renewable energy and a carbon-neutral grid by 2040 while protecting ratepayers who already pay the highest electric bills in the continental U.S., industry participants heard last week.

Marissa Gillett, PURA | *© RTO Insider*

Leaders of the General Assembly's Energy and Technology Committee spoke to about 100 members of the Connecticut Power and Energy Society (CPES) and the state's bar association at the University of Connecticut School of Law on Feb. 24. The meeting came a month after Connecticut regulators convened a public hearing to examine whether ISO-NE's wholesale electricity markets are effective in serving the state's clean energy objectives. (See *Connecticut Weighs Pros, Cons of ISO-NE Markets*.) Public Utilities Regulatory Authority (PURA) Chair Marissa Gillett attended the discussion but did not comment.

Building on Success



Rep. David Arcont | © *RTO Insider*

"I think we're going to try to continue and build on the successes that we had last year in our two major pieces of legislation, offshore wind and *HB 5002*," said Rep. David Arconti (D), the committee's co-chair, referring to a bill (*HB 7156*) authorizing the procurement of up to 2 GW of offshore wind and another authorizing procurement of energy derived from anaerobic digestion.

"A lot of our colleagues like to talk about energy in terms of what are we doing to address climate change, but when you get into the weeds of energy policy, it gets much more difficult to navigate those waters because there are so many other factors you have to consider," Arconti said. "The top two obviously for me leading this committee are utility costs and the reliability of the grid."

"One of the things we do as legislators is try to stand on the cutting edge of technology and bring forward those policies that are going to help Connecticut, but at the same time look out for our ratepayers," said Rep. Charles Ferraro (R), one of the ranking members on the committee.

Rep. Charles Ferraro | *© RTO Insider*

"We're very focused on moving us to a more renewable future, and Gov. Ned Lamont's initiative for a carbon-free grid is something we're trying to turn into policy in a reasonable way, knowing that Connecticut already has the highest electric rates in the country," said Sen. Norm Needleman (D), co-chair of the committee. "Advancing that agenda without breaking the backs of people and businesses who live here is the dancing on the head of a pin that we're trying to do."

Sen. Norm Needleman | *© RTO Insider*

As for offshore wind, Needleman said Connecticut is uniquely positioned with two deepwater ports, Bridgeport and New London, which do not have bridges separating the piers from the open water.

"Connecticut has the opportunity to be a leader and the location for a lot of offshore wind deployment," Needleman said.

Tech and Tax Solutions

Sen. Paul Formica (R), the other ranking member, could not attend last week's discussion but was *quoted* in The Connecticut Examiner in January as favoring energy storage as a solution to the variability of solar and wind.

Formica said he is "working with leaders in the energy sector on the mechanics of a bill that will incentivize the creation of 'pockets' of megawatt storage along the transmission line, which could prevent blackouts during major weather events," the Examiner reported.

Arconti said, "The goal of the bill is to bring the storage industry here to Connecticut, and storage is how we're going to solve the intermittency issues of renewable energy."

He said the legislation will contain "a very ambitious goal" of 1,000 MW of energy storage by 2030 "to mirror some of the programs we have with the offshore wind." Lawmakers will also ask PURA to "leverage all the great work they've been doing on the grid modernization *dockets*, specifically the energy storage section," he said.

The CPES and Connecticut Bar Association hosted a legislative update in Hartford on Feb. 24. | *© RTO Insider*

Needleman brought up the need to tax commercial solar developers who he thinks enjoy an unfair property tax break on solar arrays between 1 and 5 MW, in many cases to the detriment of rural communities.

"I believe that the threshold at which we levy property tax is way too high, and a lot of those power plants are benefiting wealthier communities," Needleman said.

He said he is working on legislation that would lower the tax threshold for commercial generation and would base the property tax only partly on project location in order to prevent developers from avoiding taxes.

Speaking about non-wires alternatives, microgrids and distributed energy resources, Needleman said he is "a big fan" of DER but thinks a microgrid powered by natural gas would conflict with public policy given the "big push to restrict the amount of natural gas we are using moving forward."

"I have not been a huge fan of the state rushing headlong one way and now trying to do a gigantic reversal of policy that was put in place the last decade," Needleman said. "It doesn't make a lot of sense to set public policy with radical shifts. I think we need to be sensible. ... We need realism, not just aspirational policy." ■

ISO-NE News

ISO-NE: States Must Lead on Carbon Pricing

By Michael Kuser

ISO-NE CEO Gordon van Welie said Thursday that implementing a carbon price in New England's wholesale power markets would be "simple" but that state officials need to signal their support before the RTO can act.

Van Welie made his comments in his *response* to a Feb. 19 letter from U.S. Sens. Ed Markey (D-Mass.), Bernie Sanders (I-Vt.) and Sheldon Whitehouse (D-R.I.) expressing concern that the RTO "is pursuing certain changes to the energy market at the expense of the region's environmental goals and related clean energy and energy efficiency policies."

"If ISO-NE believes that the region's clean energy goals can be addressed by integration of a carbon price into the energy market, what is stopping ISO-NE from studying this as a potential policy pathway and ensuring that New England stakeholders have accurate background on these policies?" the senators asked.

They noted the October *report* commissioned by NYISO, which concluded that carbon pricing would help New York achieve its goal of getting 70% of its electricity from renewables by 2030. (See *NYISO Study: Carbon Charge to Help NY Climate Goals*.)

"ISO-NE should commission a similar report … and take a larger leadership role in engaging more proactively in policy development," they wrote.

Van Welie said that while the RTO supports carbon pricing, "we are mindful of concerns raised by the New England states regarding a carbon price in the wholesale markets, including limitations on the states' ability to influence a federally regulated carbon price. We take these concerns seriously and appreciate the relationships we have developed with the states and the New England Power Pool stakeholders over the last several decades. Therefore, any effort to study carbon pricing requires further discussion in the regional stakeholder process — a process that is improved with input (like this exchange) from members of the region's congressional delegation."

Van Welie said "pricing carbon could be implemented by state or federal policy including through the existing Regional Greenhouse Gas Initiative structure."

But while Massachusetts and Connecticut have pursued ambitious environmental policies, including contracting for offshore wind, other New England states have been reluctant to reduce RGGI's emission limits enough to make state-subsidized resources economic in the RTO markets. "What I want is not to pay for Massachusetts' and Connecticut's policies," New Hampshire Public Utilities Commissioner Robert Scott told a FERC technical conference in 2017. (See *ISO-NE Two-Tier Auction Proposal Gets FERC Airing*.)

Van Welie quoted from his November response to a similar missive from seven U.S. senators from New England, saying that pricing carbon through regional wholesale markets "is a simple and easily implemented mechanism for reducing (or eliminating) carbon and sparking a clean energy transition."

The seven senators had urged ISO-NE to "return to the table with stakeholders" and more closely align its fuel security initiative with state policies seeking to speed the transition to renewable energy resources. (See *Senators Ask ISO-NE to Heed States on Clean Energy*.)


ISO-NE CEO Gordon van Welie | © *RTO Insider*

The senators criticized ISO-NE for "pursuing a patchwork of market reforms aimed at preserving the status quo of a fossil fuel-centered resource mix" and having "charted its own path forward and pursued unpopular initiatives" such as Competitive Auctions with Sponsored Policy Resources and the Inventoried Energy Program.

In last week's response, van Welie insisted ISO-NE has long supported carbon pricing.

"The relative ease of implementation is particularly attractive when compared to some of the more detailed market changes we have made in the past (and that may be required in the future) to protect market efficiencies as states take actions outside the wholesale market to meet their policy goals," van Welie said. ■

MISO News

MISO Mapping out DER Challenges, Benefits

By Amanda Durish Cook

The growth of distributed generation means the MISO grid will become increasingly fraught with planning challenges that require target responses, stakeholders heard last week.

"We're doing our best to adapt, and no one really knows what the future holds, but we can add more visibility into our planning processes," MISO DER Program Director Kristin Swenson said during a joint workshop hosted by the RTO and the Organization of MISO States on Feb. 25. The workshop was the latest in a series that the organizations have been hosting since 2017 to prepare for grid changes under widescale DER adoption. (See *MISO Explores Changes to Accommodate DER*.)

Swenson also said MISO is beginning to see improved coordination between transmission and distribution systems for planning purposes.

MISO contains about 4.5 GW of unregistered DERs in its footprint, according to an OMS survey completed last year. (See *OMS: 4.5 GW of Unregistered DERs in MISO*.) It also has about 16 GW in registered DERs participating in the market both in front of and behind the meter. For now, MISO's definition of DER includes demand response and energy efficiency. RTO staff say its DER definition could change when FERC issues its own definition.

Iowa Utilities Board attorney David Schmitt said that a few MISO utilities with large penetrations of DERs in their territories have experienced backflow on the transmission system, though most have yet to experience any impacts.

Swenson said the distribution system in some instances can provide a more attractive means of connecting to the grid for new, smaller generators than the MISO system, which is running out of capacity in the West region.

"We have folks who are frustrated with the MISO interconnection queue who turn to the distribution system. There is distribution capacity in some cases where there isn't transmission capacity. … I can imagine that can provide a path to getting a project done that otherwise couldn't be," Swenson said.

DER experts said MISO should plan for an uneven adoption across the footprint, with some areas becoming hotspots of activity.

Stacy Van Zante, manager of delivery system planning for Alliant Energy, said her company's Iowa subsidiary, Interstate Power and Light, contains about 204 MW of distributed generation, with 4,441 interconnections on the distribution system.

| Alliant Energy

"In some areas, we don't see a lot of distributed resources, but in other areas, what's happening in Iowa is akin to California," Van Zante said, describing neighborhood hotspots of solar adopters or projects on college campuses. "People are adopting at different rates."

Planning for Every Hour

Van Zante said Alliant will examine the possible benefits of wind interconnections on the distribution system. If a distributed resource can benefit the surrounding system, the interconnection customer won't bear the entire cost of the interconnection, she said.

She also noted Alliant has found that wind interconnections cause "wear and tear" on load tap changers on station transformers.

"We lived at the world of peaks, but that's changing. There's a lot of activity on the system," Van Zante said, adding that Alliant is looking at the need for 8,760 hourlong load profiles for planning — one for each hour of the year.

"We want to avoid stranded investments," she said.

Richard Mueller, DTE Energy's manager of engineering technology, also agreed that planning is quickly evolving from peak loads.

"It's changing the times we're evaluating," Mueller said.

John Schmall, of ERCOT's Dynamic Studies Department, said the grid operator has tracked some of its DER influx by requiring distributed generators greater than 1 MW that plan to export energy into the distribution system to register with it.

However, he said ERCOT is still grappling with the challenges DERs can present to transmission planning, like accurate DER modeling and aggregation, and how to best represent unregistered DERs in planning and forecast their growth. He also said ERCOT is also studying DER impact on voltage recovery.

Schmall also agreed that peak times will become increasingly hard to predict.

"When you have a mix of solar and wind, and a diesel generator and energy storage, that's something that will be a challenge in getting that information, to know when you charge and don't charge. … There are big question marks that still need to be worked out," Schmall said.

MISO currently makes DER penetration projections in the roughly 15-year future scenarios used in its annual Transmission Expansion Plan (MTEP), using estimates from Applied Energy Group, which is currently wrapping up updated DER forecasts for MTEP 20.

MISO will hold another DER workshop March 31 that will focus on DERs and how they could affect the RTO's markets. ■

MISO News

MISO Committees Tackle Queue, Tx Planning Disparities

By Amanda Durish Cook

Two MISO planning committees are set to begin discussions on what the RTO can do to break down walls between the annual Transmission Expansion Plan and network upgrade planning for the generation interconnection queue.

Neil Shah, MISO | © *RTO Insider*

Speaking during a Coordinated Planning Process Task Team conference call Feb. 24, MISO Senior Manager of Economic Planning Neil Shah revealed a *list* of transmission planning topics to be divided between the Planning Subcommittee and Planning Advisory Committee.

The task team has been compiling ways MISO could increase consistency between its MTEP and queue processes since January. Stakeholders have *suggested* that the RTO better align the timelines of MTEP and interconnection planning and ensure their respective studies draw on more similar data, including dispatch assumptions. The synchronization effort could have MISO approving more transmission projects by MTEP 21. (See *MISO Seeks Ideas for Streamlined Tx Planning*.)

Stakeholders also suggest MISO link its annual transmission planning process with network upgrade planning. Renewable proponents and some state regulators have repeatedly said the RTO is unfairly relying on interconnection customers to finance increasingly expensive new transmission capacity under the pretext of network upgrades and may be neglecting a responsibility to get major transmission projects approved in its transmission packages. Renewable advocates have questioned why interconnection studies show the need for expensive transmission upgrades when MTEP studies do not.

The PSC will review the study objectives, methodologies and modeling assumptions behind existing MISO reliability planning, economic planning, transmission service requests, and generator interconnection and retirement processes.

Once it compares the processes, the PSC may choose to make changes to certain methodologies and modeling assumptions to "ensure comparable treatment," according to MISO.

The PAC will be tasked with the remainder of the possible planning overhaul, including devising a process for study coordination and data exchange to help MISO's planning processes identify transmission needs "that are common to generator interconnection, reliability planning and economic planning process."

The committee will also explore how it might design a multipurpose project designation for the Tariff that combines aspects of generation interconnection, baseline reliability and/or market efficiency projects.

Finally, the PAC will scrutinize the timing behind reliability planning, economic planning and generator interconnection processes to see how they can better align project evaluations to ensure that a recommended transmission upgrade receives the most precise project designation.

"If we coordinate and exchange information across the three planning processes, instead of us pursuing different, smaller upgrades in different processes, we have an opportunity to recommend a bigger, better project that can take care of multiple issues," Shah said, referring to MTEP planning and necessary network upgrades identified in the generation interconnection queue.

"We could be laying the groundwork for how we restructure project categorization," Wisconsin Public Service Commission economist Enrique Bacalao said.

Bacalao said the "natural evolution" of the PAC and PSC discussion could be that MISO reorganizes its planning processes so that "certain projects have more than one component to them" and are cost allocated accordingly.

Clean Grid Alliance's Natalie McIntire asked why MISO's list didn't include the possibility of a consolidation of the generator interconnection and MTEP planning processes.

"We could potentially see that merging the processes could be helpful," McIntire said.

That move could be on the table, Shah said, but MISO doesn't want to prescribe any action at this point by specifically directing the PAC to consider it.

Shah said he will brief the issues list to more stakeholders at the PAC's March 11 meeting. Multiple stakeholders thanked Shah for capturing the nuanced issues in the to-do list. ■

MISO News

Consumers Energy Accelerates Zero-carbon Target

By Amanda Durish Cook

Consumers Energy last week announced it plans to achieve net-zero emissions by 2040, putting the utility on track to achieve that goal a decade earlier than most of its peers in the industry.

The announcement on Feb. 24 means the Michigan utility will aim to offset all carbon emissions created by the electricity it generates or purchases within two decades.

In a *release*, CEO Patti Poppe admitted Consumers doesn't have "all the answers yet" for reaching the goal but said it could counteract lingering emissions with "carbon sequestration, landfill methane capture or large-scale tree planting."

Vice President of Public Affairs Roger Curtis said the move makes Consumers "the largest energy company in U.S. to plan net-zero this soon."

"We have confidence in our ability to achieve that lofty ambition, though it's about a decade earlier than most because of our Clean Energy Plan," Poppe said in a video circulated by the utility. The *Clean Energy Plan* refers to the company's 2019 integrated resource plan, which contains a goal to eventually meet 90% of Michigan's energy needs with clean resources in addition to the new net-zero target. Consumers serves 6.7 million of the state's almost 10 million residents.

"Consumers Energy is proud to take a stand for Michigan and for the planet. We are committed to take actions that eliminate our carbon footprint and do our part to combat climate change," Poppe said. "Our Clean Energy Plan already is focused on protecting the planet, and our net-zero pledge takes that commitment to the next level."

Consumers previously committed to an 80% reduction in carbon emissions from 2005 levels by 2040, a goal shared by Michigan's other large utility, DTE Energy.

But the two companies now appear to be headed in different directions.

While DTE in 2018 *announced* it would strive for net-zero carbon emissions by 2050, its most recent IRP was recently sent back for major changes by the Michigan Public Service Commission, which ruled DTE hadn't properly accounted for the benefits of renewable generation and relied too much on existing coal and natural gas generation. (See *Michigan PSC Orders DTE to Redo IRP*.)

Consumers, on the other hand, received *approval* in June for an IRP that proposed eliminating its coal fleet and reducing emissions from power plants by 90% by 2040. The company plans to retire the D.E. Karn plant in 2023 and idle Units 1 and 2 at its J.H. Campbell plant as early as 2025, replacing them with energy efficiency, solar and wind farms, and battery storage. The utility has already retired seven coal-fired power plants.

Fading Love for Coal

Poppe, who herself held positions at DTE until 2010, has been uncharacteristically candid for a utility CEO about Consumers' obligation to cut emissions to mitigate the effects of climate change and her changing attitude toward coal-fired generation. She has repeatedly admitted she once dismissed climate predictions as alarmist.

Consumers Energy CEO Patti Poppe in a Feb. 24 video released by the utility

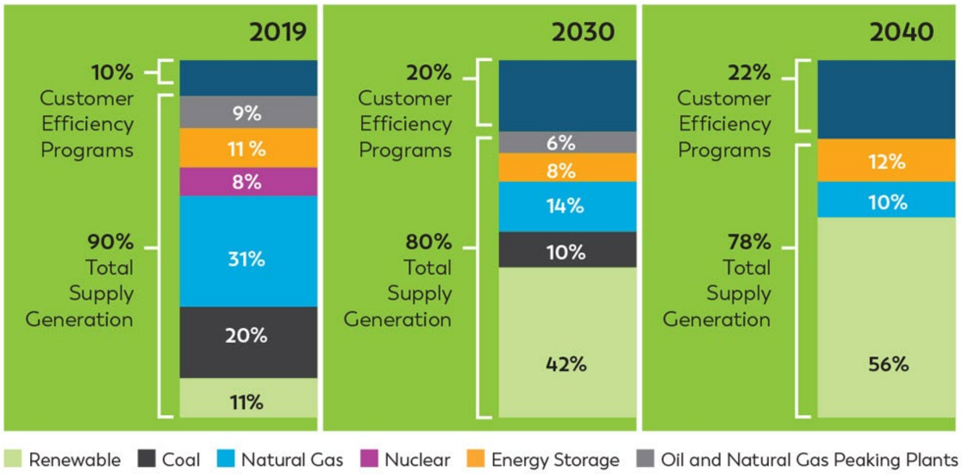
"On that last day at every facility … it's a heart-wrenching sort of day because of the effect and the change that's happening to the people there," Poppe said of attending coal plant closures on a Feb. 18 edition of the *podcast* "Illuminators," which chronicles transformation and disruption in the energy industry.

"But you know, my co-workers are very proud of what they've done — as they should be — and very realistic and customer-centric to say that we care about our future generations and we care about making sure that we can, at the end of our days, look back and say that we did everything that we could to protect future generations from the effects of climate change.

"That just supersedes … in these tough decisions. But on the day of, you can bet, it's a tough day for the people who are so deeply affected by the change," Poppe said, who also admitted to once having a bumper sticker on her electric car that read, "I love coal."

She told the the podcast's host that she's since swapped it for a pink sticky note on her wall that reads, "I used to 'heart' coal."

"I do think that coal had its time and place, and now we have the really great fortune that the economics have changed. We've got other clean energy technologies that can help us in ways that were not possible before. … We used to have this sucker's choice: You can have clean energy — it's just going to be expensive. Or, you can have the cheap and dirty stuff. Take your pick. We sold that story for a long time, and the reality is we don't have to make that sucker's choice anymore," Poppe said. ■



Clean energy plan electric capacity by fuel source (megawatts) | *Consumers Energy*

MISO News

January Proves No Trouble for MISO

By Amanda Durish Cook

CARMEL, Ind. — A mild winter across the Midwest footprint made for an easy January for MISO operators, stakeholders heard last week.

"Load is down; temperatures for the footprint are higher than usual. It's been a mild winter so far," Rob Benbow reported at a Reliability Subcommittee meeting Thursday. He added that MISO months before had forecasted a warm winter.

Load for the month averaged almost 76 GW, down from 80.2 GW in January 2019. The month's 94.4-GW peak load on Jan. 21 was also significantly lower than the 101-GW peak experienced last January. MISO staff in fall predicted a 104-GW peak, with the highest risk of emergencies in January. (See *MISO Taking Pains to Prepare for Moderate Winter*.)

Real-time prices were similarly down at an average of $21.21/MWh, a 27% decrease year over year.

January marked MISO's seventh straight month without any maximum generation alerts, warnings or events. Between May and June 2019, the RTO experienced seven maximum generation actions. MISO had not experienced an emergency-free January since 2017.

Benbow said MISO South was under a severe weather alert Jan. 10-11 as a band of tornados and strong winds traveled across eastern Texas, Louisiana and Alabama. He said that while the region experienced some transmission losses over the two days, MISO operators were able to work around them and avoid escalation.

Nov. 13 Revisit

So far, MISO's only notable cold-weather event remains outside the winter months, when the Southeastern U.S. was hit with a cold snap Nov. 13 that sent temperatures plummeting 25 degrees Fahrenheit below normal in some cities.

"We had a relatively warm summer and fall, then we got this cold weather blast," said Gerald Rusin, senior adviser for MISO South operations. "MISO did see the cold weather coming and was prepared for it." The RTO experienced about 5 GW of capacity losses in the face of cold weather-related outages and contingencies.

However, SPP also declared a Safe Operating Mode (SOM) and requested that MISO limit flows to 1,500 MW on the regional dispatch transfer limit between its Midwest and South regions, down from the usual 3,000 MW southbound and 2,500 MW northbound limits. The RTOs' SOM joint agreement is meant to keep an abnormal operating event in either grid operator's territory from progressing into an emergency.

"Did we understand that it was going to be a challenging day? Yes. Did we expect SPP to request to cut the limit by half? No," Benbow told stakeholders.

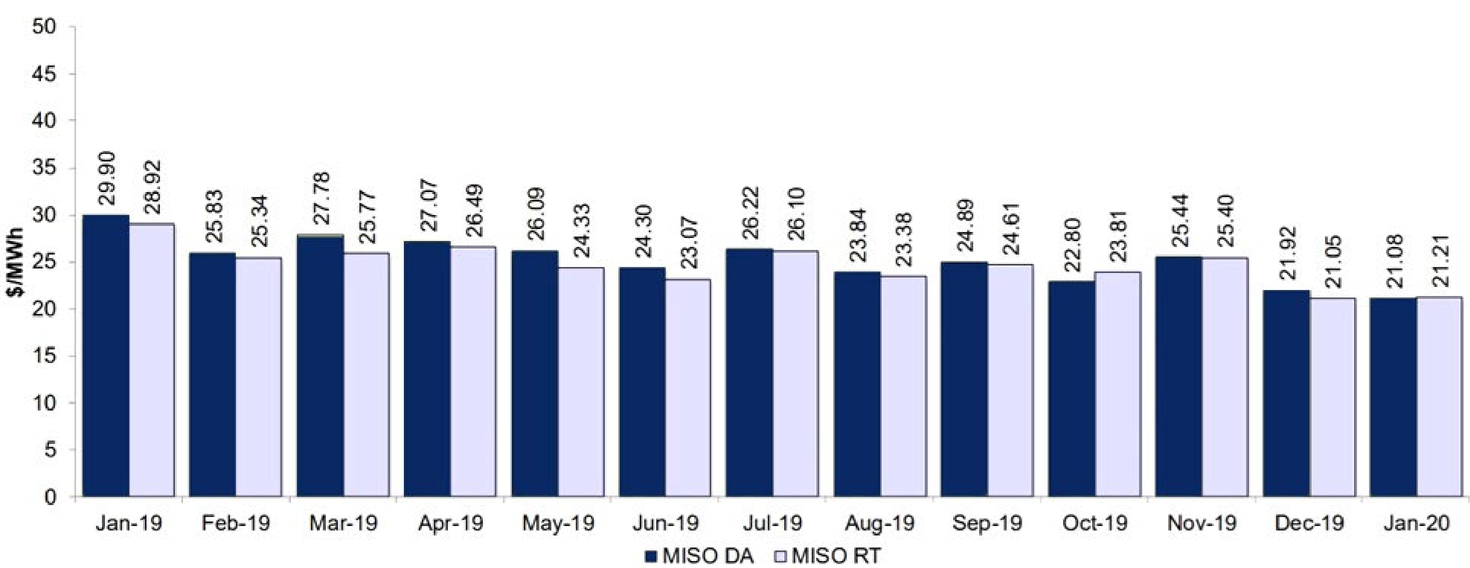
MISO's Independent Market Monitor in January said he continues to investigate whether SPP should have made an intermediate move, including requesting unit redispatch or transmission loading relief, before calling for the "sledgehammer" transfer limit derate. The Monitor said SPP gave little warning before the request, leaving MISO with significant congestion costs. (See "Monitor Examining SPP's Fall Transfer Derate," *MISO Market Subcommittee Briefs: Jan. 8, 2020*.)

As a result of the incident, Rusin said the RTOs have agreed to a "refresher training" for their control room operators on how to use their congestion management tool for flowgates.

Rusin also said MISO is taking pains to ensure that neighboring reliability coordinators communicate system conditions to one another.

"It's just bringing all the RCs together before an event occurs to make sure they're talking to each other," Rusin said.

MISO also said it needs to ensure that when SPP requests a new regional dispatch transfer limit, any ensuing temporary calculations are reflected in all of MISO's impacted market processes. ■



MISO day-ahead and real-time prices January 2019 to January 2020 | *MISO*

MISO News

FERC Rejects MISO Expansion of Market Mitigation

By Amanda Durish Cook

FERC last week rejected MISO's bid to expand its Independent Market Monitor's physical withholding mitigation to include non-capacity resources.

MISO had sought to change its resource adequacy construct to remove provisions that exempt all resources that aren't planning resources from physical withholding penalty charges in the day-ahead market. On Friday, however, the commission said the proposal was too vague and could effectively subject the RTO's non-capacity resources to a must-offer rule (*ER20-668*).

MISO Monitor David Patton | © *RTO Insider*

Monitor David Patton had said the proposal would remedy a "flaw" in MISO's Tariff that excludes non-capacity resources from physical withholding mitigation even if they have market power.

MISO and its Monitor introduced the idea with stakeholders last summer. Patton said the expansion of mitigation would apply only in "clearly" uneconomic behavior from units. Suppliers without market power will not be subject to the new rule and are not under an obligation to offer, he said at the time. (See *MISO, Monitor Strengthening Mitigation Measures*.)

The RTO had proposed that behavior wouldn't be deemed physical withholding if a market participant "reasonably expected the costs of making its resource available to be higher than the resource's expected net revenues from being available."

But FERC said MISO's proposed process "lacks sufficient clarity to distinguish between non-capacity resources legitimately withheld from day-ahead markets due to economic reasons and those withheld in an attempt to exercise market power."

The commission said the proposal's ambiguity "places non-capacity resources at risk of being penalized in circumstances that do not warrant it." FERC said it was unclear whether MISO's market participants would have to prove their units weren't "economically viable prior to each day-ahead hour."

The commission also said MISO's Tariff change was silent as to how seasonally available resources would be treated if an operator decides that it's economic to operate on a day when it would normally be idled.

FERC also agreed with protesters that MISO's provision could have the effect of forcing non-capacity resource operators to make offers in the day-ahead market rather than risk potential sanctions. Protesters included several MISO generators, the Electric Power Supply Association, Calpine, Midwest Power Producers, the New England Power Generators Association and the National Hydropower Association.

"MISO's proposal may effectively create a must-offer obligation on resources that do not receive a corresponding capacity payment," FERC said. Even though the Monitor promised in an affidavit to be on-hand to discuss ahead of time whether a unit should offer into the day-ahead market, FERC pointed out that MISO didn't include the pledge in its proposed Tariff language.

Glick Advises Alternate Course

Commissioner Richard Glick tacked a fuller explanation at the end of the order to explain his rejection and urge MISO to find another solution.

"I agree with my colleagues that MISO's proposal casts too wide a net, putting certain non-capacity resources at risk of being penalized even when they lack market power and, therefore, have no incentive to withhold their capacity for the purpose of driving up prices," Glick wrote in a concurrence.

However, Glick said he shared MISO's concern that non-capacity resources could exercise market power through physical withholding.

"The Market Monitor has observed what appear to be exercises of this type of market power by non-capacity resources in MISO over the past several years. Addressing the potential for market participants to exercise market power is critical and would not, in and of itself, require the imposition of a must-offer obligation on non-capacity resources," Glick said.

Glick said MISO, the Monitor and the stakeholder community should devise another way to prevent non-capacity resources from exercising market power. ■

NYISO News

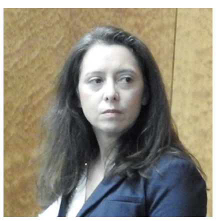
NY Renewable Supporters Push for New Siting Agency

By Michael Kuser

ALBANY, N.Y. — For years, the Alliance for Clean Energy New York (ACE NY) has advocated for a more standardized siting process for renewable energy projects in the state. Now it has a proposal from Gov. Andrew Cuomo to help push through the state legislature.

Getting the legislature to pass a budget amendment to create the proposed Office of Renewable Energy Permitting "certainly is our top priority," ACE NY Director Anne Reynolds told a legislative breakfast she hosted Thursday.

Cuomo earlier in February *announced* the plan to amend this year's state budget to streamline the siting process for large-scale renewable energy projects. (See *Cuomo Proposes Streamlining NY's Renewable Siting*.)



Jennifer Maglienti, N.Y. governor's office | *© RTO Insider*

The proposed budget *bill* aligns state law, bureaucratic practices and policies — including property tax laws — with the clean energy goals outlined in last July's landmark Climate Leadership and Community Protection Act (CLCPA) (*A8429*), said Jennifer Maglienti, assistant counsel to the governor's office.

Transmission Warranty

"Siting is a process that needed to be turned around in order to meet the goals, and the goal here was to do a soup-to-nuts rewrite, to look at not just generation, but also to deal with transmission," Maglienti said.

To facilitate development of bulk transmission, policy planners first needed to address the timing of the *Article VII process*, which covers the need for a project, as well as its environmental impacts, and create automatic time frames, she said.

"What we'd like to do in the siting process is have a one-year time frame for review ... and we also want to look at where are there constraints," Maglienti said. "One large portion of the bill is to deal with how to get the DPS [Department of Public Service] along with a lot of other partners to do a comprehensive study to decide where are there constraints on the grid."

(Standing at right, left to right) Anne Reynolds, ACE NY; Jennifer Maglienti, New York governor's office; and Julie Tighe, New York League of Conservation Voters, address a legislative breakfast hosted by ACE NY in Albany on Feb. 27. | *© RTO Insider*

The budget amendment calls for the DPS to work with NYISO, the state's two power authorities and the utilities to perform a "power grid study" for the purpose of "identifying distribution upgrades, local transmission upgrades and bulk transmission investments" needed to meet the CLCPA goals.

The budget bill says the state "shall provide for timely construction of new, expanded and upgraded distribution and transmission infrastructure," which may include "submarine transmission facilities needed to interconnect offshore renewable generation resources to the state's transmission system."

Anbaric and other transmission developers have argued that having individual wind farms build separate radial lines to shore will be more expensive, more environmentally intrusive and less resilient than networked, open-access facilities. (See *Anbaric Pushes Offshore Grid Plans*.)

"Anbaric applauds the Cuomo administration's continued support for transmission's essential role in reaching the state's carbon reduction and offshore wind goals," Theodore Paradise, Anbaric senior vice president for transmission strategy, told *RTO Insider*.

The CLCPA calls for 70% of New York's electricity to come from renewable energy resources by 2030 and for electricity to be 100% carbon-free by 2040.

The law also calls for doubling distributed solar generation to 6 GW by 2025, deploying 3 GW of energy storage by 2030 and raising energy efficiency savings to 185 trillion BTU by 2025, in addition to nearly quadrupling New York's offshore wind energy target to 9 GW by 2035.

Statutory Process

New York in 2011 revised Public Service Law *Article 10* to unify siting reviews of new or modified electric generating facilities under one state agency, the Board on Electric Generation Siting and the Environment.

"Certainly Article 10 was set up for a good reason, and the processes set up for a good reason ... but it's going to be an entirely new office, and certainly with a lot of cooperation from the regulatory agencies," Maglienti said.

The executive branch proposes that the New York State Energy Research and Development Authority will collaborate with the Department of Environmental Conservation (DEC) and DPS to develop build-ready sites for renewable energy projects.

"We want to think about how we're going to encourage local participation, finding a way to help local communities contribute to the process," Maglienti said. "We want the [Public Service Commission] to determine how those communities benefit, and for NYSERDA to get a site build-ready.

"When we talk about the siting of wind and solar, we're talking in some cases about off-the-shelf technology, and we don't need to get

Continued on page 23

NYISO News

Avangrid Optimistic on NECEC, OSW

'Disappointed' with 2019 Earnings

By Michael Kuser

Avangrid said last week it expects to begin construction this year on the New England Clean Energy Connect (NECEC) project to bring Canadian hydropower to Massachusetts despite a potential referendum on the project in Maine.

"We still expect to start construction in the third quarter of 2020 and start operation by the end of 2022," CEO James P. Torgerson said on the company's earnings call Feb. 25.

Torgerson said the $950 million, 1,200-MW project won certification from the Maine Land Use Planning Commission on Jan. 8 and the state Department of Environment Protection's final decision is expected in April, with the U.S. Army Corps of Engineers approval expected 60 to 90 days later. ISO-NE approval is expected in the first quarter.

A presidential permit, which is not needed to start construction but is to cross the border, is expected to be issued approximately 60 days after the corps' and RTO's approvals.

Although most of the 145-mile line would follow existing utility paths, it would require removing trees for 53 miles through western Maine. On Feb. 3, opponents of the project *submitted* more than 75,000 signatures to election officials, above the 63,000 signatures that must be certified to put the issue on the November ballot.

While opposition to the transmission project remains, "we have contributed resources for our political action committee, called Clean Energy Matters, dedicated to helping Maine voters understand the benefits of NECEC and correct misinformation about the project," Torgerson said.

Earnings

Torgerson said the company was "very disappointed with our financial results, which were below our expectations." The company *reported* net income of $700 million ($2.26/share) for 2019, compared to $595 million ($1.92/share) for the previous year. But adjusted net income for the year was $673 million, down from $684 million in 2018. In the fourth quarter, earnings were $223 million ($0.72/share) versus $119 million ($0.38/share) a year earlier.

The company said low wind production hurt results in its Renewables business, while its Networks business was hit by outage restoration and staging costs and a penalty over its 2018 storm response in New York. (See *NYPSC Dings Utilities for 2018 Reliability, Safety*.)

But the company said it will benefit soon from higher rates in New York and Maine. Torgerson announced that the company would notify the New York Public Service Commission, in a *letter* filed Wednesday, that they had reached settlement in the New York State Electric and Gas and Rochester Gas and Electric rate cases.

"We recently received a final decision from the Maine Public Utilities Commission in the [Central Maine Power] distribution rate case and the metering and billing dockets," Torgerson said. "Now our rate cases in New York and Maine represent about 55% of our total rate base with new rate plans going into effect this year. In Maine, it will be on March 1, and then in New York, it should be in May, depending on the settlement [that] we're drafting now."

Renewables

While the Renewables division continues with its onshore wind and solar growth, having completed 831 MW of projects last year and projecting 700 MW of new projects to be

Vineyard Wind plans to use Bridgeport, Conn., as the primary port for construction, operations and maintenance on its 800-MW Park City offshore wind project. | *Vineyard Wind*

NYISO News

completed in 2020, the company also is looking offshore for future growth.

Avangrid is a 50/50 partner with Copenhagen Infrastructure Partners in Vineyard Wind, which has separate 800-MW offshore wind contracts with Massachusetts and Connecticut. It also controls a wind lease area off North Carolina in its own right.

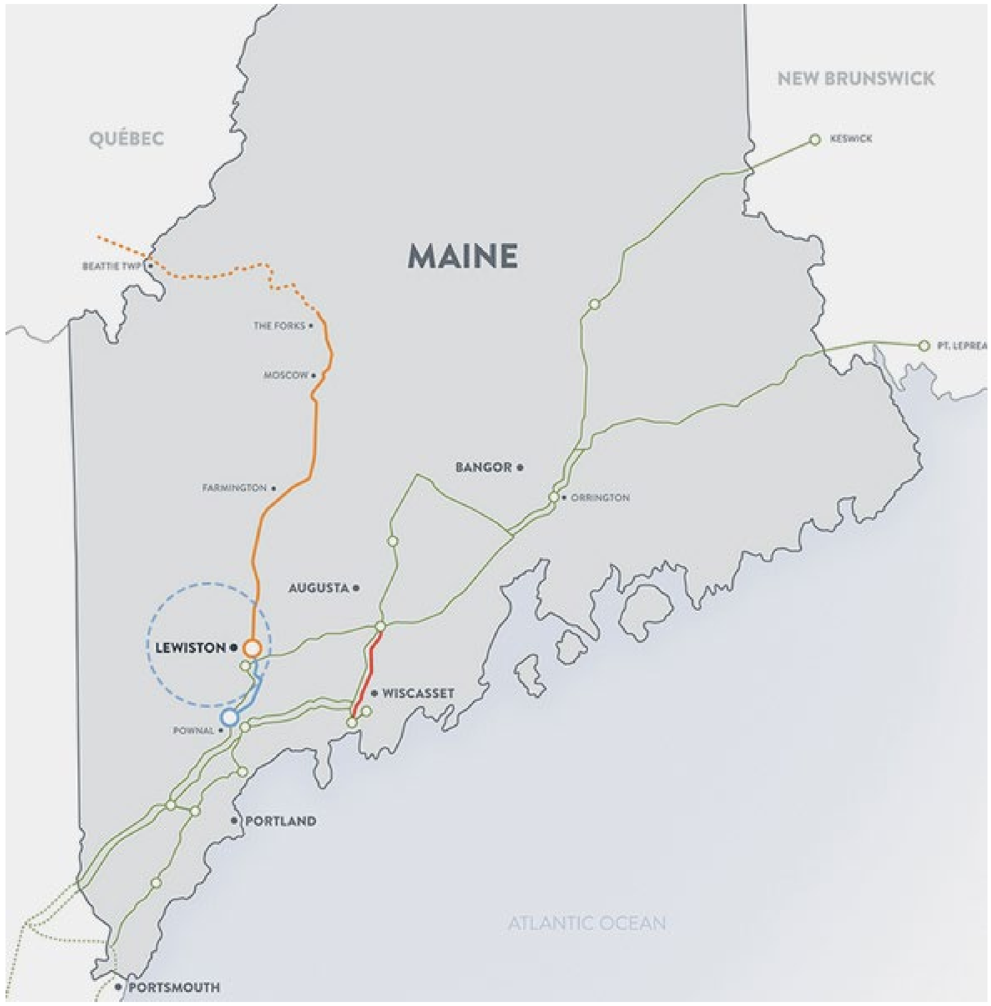
The U.S. Bureau of Ocean Energy Management in February published a revised timetable for Vineyard Wind, with a final supplemental environmental impact study on Nov. 13 and the record of decision by Dec. 18. (See *Offshore Wind Slogs Forward in Massachusetts*.)

"Considering the revised base case, we target a commissioning date no earlier than 2023, [and] we also see no risk of the [power purchase agreement] termination under a later commissioning date," Torgerson said. "The good thing is, with this later date, it will also help develop synergies with our Park City Wind. ... Our Vineyard Wind joint venture was selected in Connecticut's offshore wind [request for proposals] in December."

In October, Vineyard Wind announced it had selected *Marmon Utility* to supply cables for the Connecticut wind farm. "Park City Wind has the potential to establish Bridgeport as an offshore wind hub," Torgerson said.

Avangrid's Kitty Hawk lease area off North Carolina, which has a potential capacity up to 2.5 GW, received Site Assessment Plan approval by BOEM on Feb. 20, he said. ■

Earnings call transcript courtesy of Seeking Alpha.



Although most of the 145-mile New England Clean Energy Connect transmission line would follow existing utility paths (solid orange line), it would require removing trees for 53 miles through western Maine (dotted orange line). | *Avangrid*

NY Renewable Supporters Push for New Siting Agency

Continued from page 21

into long, protracted conversations about what those impacts might be and how they might be mitigated," she said.

Community Concerns

"We met with a lot of communities and stakeholders to go through what issues people were facing when they're trying to get more renewable energy projects sited, and we have communities who have concerns as well as developers and environmental groups who have concerns," said Julie Tighe, president of the New York League of Conservation Voters.

Cuomo's leadership on the siting issue is critical, Tighe said: "Having worked in the administration myself, I know that when the governor decides to do something, and he puts his mind to it, it gets done."

DEC is well known as a conservation organization, being the largest landowner in the state of New York, and is better equipped to do siting on a regional basis, Tighe said.

"You get a much more comprehensive, regionally important project by having a mitigation bank rather than doing a one-off," Tighe said. "We'll probably want to see a little more specificity around that, but I think it's a really important component and something that the legislature should advance and embrace."

According to EPA, a mitigation bank is a wetland resource area that has been restored, established, enhanced or preserved to provide compensation for unavoidable impacts to aquatic resources permitted under *Section 404* of the Clean Water Act, or a similar state or local wetland regulation.

"We very much appreciate having a process that's just looking at renewable energy, and including transmission in that," Tighe said. ■

PJM News

PJM Stakeholders Debate Credit Rule Changes

By Rich Heidorn Jr.

Burned by the GreenHat Energy default, PJM stakeholders appear to favor the RTO's efforts to improve its risk evaluations of market participants. But some of the RTO's proposed new procedures may face challenges before FERC.

During a daylong "page turn" of proposed Tariff and Operating Agreement revisions Wednesday, several stakeholders complained some of PJM's proposed definitions are overly broad and said it seeks excessive authority to respond to credit risks.

The special *meeting* of the Markets and Reliability Committee covered language to implement rule changes approved by the *Financial Risk Mitigation Senior Task Force* (FRMSTF) in December. The RTO wants to bring the language to a vote of the MRC and Members Committee on March 26.

When task force members were asked whether they prefer changing the rules, all but four of 157 voters opposed the status quo (97%). But the proposed changes were *approved* on a more modest 101-57 vote (64%).

Wednesday's session was an often tedious, occasionally fractious walkthrough of more than 100 pages of language changes in three sections of the OA and four sections of the Tariff.

Written Comments

Sparks flew early in the meeting when PJM officials refused to commit to accepting additional written comments, saying they wanted the meeting to be a "working session" to get stakeholders' feedback.

"It's very hard for us to provide comments on the fly," said Noha Sidhom, of TPC Energy Fund, explaining that stakeholders might need to consult with their companies' lawyers before taking a position. [Editor's Note: Given an opportunity to review her quote per *Manual 34*, Sidhom said it was inaccurate but declined to say what was incorrect.]

Paul Sotkiewicz, E-Cubed Policy Associates | *© RTO Insider*

"For PJM not to be upfront and not consider written comments, you're setting yourself up for further delay and protests at FERC," said economist Paul Sotkiewicz of E-Cubed Policy Associates, representing Elwood Energy. "It just leaves us feeling powerless."

Dave Anders, PJM | *© RTO Insider*

"That's not my aim at all," responded PJM facilitator Dave Anders. "I'm calling an audible. Let's say we'll accept written comments."

PJM Chief Risk Officer Nigeria Poole Bloczynski | *© RTO Insider*

But PJM Chief Risk Officer Nigeria Poole Bloczynski wasn't willing to commit, citing concerns that some comments may be company-specific. "We haven't said 'no,'" she said, saying the decision on written comments would be made at the end of the session. "We want to make sure everyone hears the same thing."

Sotkiewicz acknowledged Bloczynski's concerns. "We're not trying to have a one-on-one with PJM" through written comments, he said. But he said "from a due process standpoint, [rejecting written comments] doesn't sound good. We can avoid a lot of that dust-up at the commission."

PJM ended the meeting saying it would accept proposed changes to the language through Friday.

Jen Tribulski, PJM | *© RTO Insider*

Facilitator Jen Tribulski said the proposed changes should be limited to changing terms "that you can't live with" and not repeating issues raised during Wednesday's session. "We would hope at this point that there's not going to be a ton of redlines."

"We want to reiterate: No comments," Bloczynski said. "We're looking for actual redlines."

Internal Credit Score	Risk Ranking	Tangible Net Worth Factor	Maximum Unsecured Credit Allowance ($ Million)
1.00 – 1.99	1 – Very Low (AAA to AA-)	Up to 10.00%	$50
2.00 – 2.99	2 – Low (A+ to BBB+)	Up to 8.00%	$42
3.00 – 3.49	3 – Low to Medium (BBB)	Up to 6.00%	$33
3.50 – 4.49	4 – Medium (BBB-)	Up to 5.00%	$7
4.50 – 5.49	5 – Medium to High (BB+ to BB)	0%	$0
> 5.49	6 – High (BB- and below)	0%	$0

PJM proposes to determine a market participant's unsecured credit allowance based on its "internal credit score" and other parameters. | *PJM*

PJM News

The MRC will hold another special session March 13, at which PJM staff will review changes made in response to the redlines or oral feedback.

'Unreasonable Credit Risk'

There was no shortage of oral comments during the meeting, including frequent debate over whether the language was overly prescriptive or too vague.

Sotkiewicz complained that the rules would give PJM too much discretion to address what the rules call an "unreasonable credit risk," noting that the term is undefined in the Tariff.

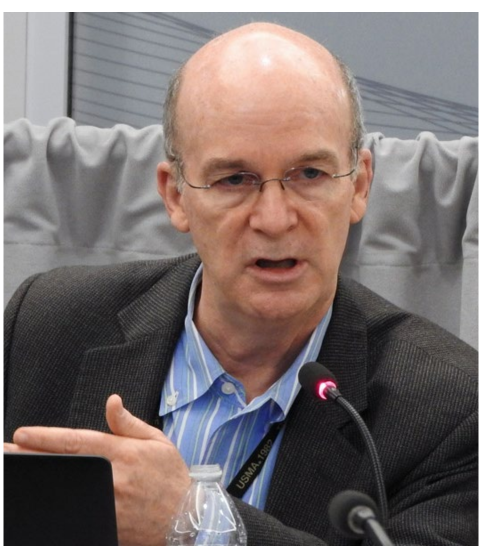
"There's just too much latitude given to PJM to make calls on particular market participants," he said. "It's totally undefined and totally open to interpretation."

Attorney Steve Huntoon, representing H-P Energy Resources, said PJM's proposed changes to the term "market participant" could subject transmission customers and individual generators to burdensome reporting requirements.

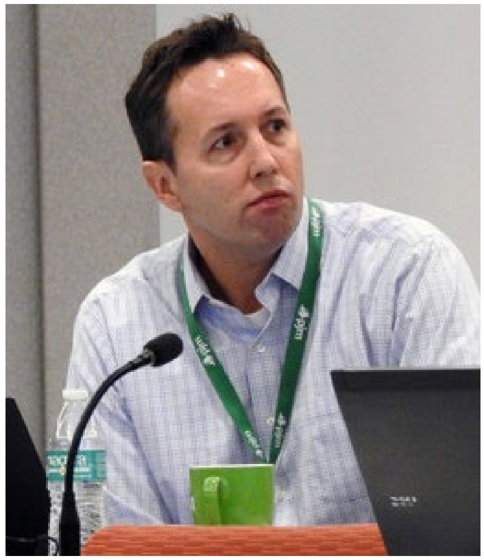
He said stakeholders should vote against any change in the definition.

Anders responded by asking members to avoid advocacy over the coming vote. "We're trying to work this out [collaboratively]," he said. "We're trying to get it over the finish line so everyone can vote yes."

At the end of the meeting, Tribulski promised PJM would address concerns that the term could apply to transmission customers. "We definitely heard the feedback," she said. "So, we will tighten that up."



Bob O'Connell, Panda Power Funds | © *RTO Insider*



Joe Wadsworth, Vitol | © *RTO Insider*

'Key Personnel'

PJM also received pushback on its plan to review whether an applicant to trade in PJM markets has "principal or key personnel in common" with a former member that has defaulted in PJM or other RTO/ISO markets.

Bob O'Connell of Panda Power Funds asked PJM to delete the term "key personnel," saying if an individual is not an officer, "they're not a key person."

PJM attorney Jacqui Hugee disagreed, citing PJM's experience with GreenHat, whose two principals had come to FERC's attention for their roles in J.P. Morgan Ventures Energy Corp.'s scheme to manipulate the CAISO and MISO markets between 2010 and 2012. (See *Doubling Down — with Other People's Money*.)

"If they go somewhere else and they're not the principal of the company … I'd want to know that. … We want to know about these bad actors."

O'Connell said he understood Hugee's concern but worried about how applicants would meet the requirement. "Do I have to submit my full roster of employees?" he asked. "The issue is not the concept. The issue is the application."

Sotkiewicz said PJM would be exceeding its authority by performing "*ex ante* enforcement."

PJM attorney Steve Pincus said the RTO is using FERC guidance and trying to be practical: "It's not productive to try to define every particular scenario," he said.

Strategy Changes

Joe Wadsworth of Vitol challenged a requirement that market participants notify PJM of "material changes to [the company's] business strategy."

"I don't see how that informs PJM on anything about the financial strength of an entity," Wadsworth said. "It's an overreach. At the end of the day, it's the money. Do you have the money to support your position?"

Bloczynski said if a long-time financial transmission rights trader suddenly stops trading, "that's noticeable. … We're going to ask questions.

"Or you've acquired a new business ... and will be participating in a different way," she continued. "That's something we're going to want to know about."

It's okay for PJM to ask questions, responded Robert Viola, director of legal and compliance for Vitol. "The way this is written, if we don't [disclose] it, we're in breach of the Tariff."

Anders said PJM will seek to address the concerns. "That sounds like a hot button for you," he said.

The proposed rules include a table showing how PJM will determine a participant's unsecured credit allowance based on parameters including the "internal credit score" assigned by the RTO. The credit score will be based on PJM's evaluation of the companies' profitability, liquidity and other measures.

Bloczynski said PJM would not make public its scoring model to avoid companies "manipulating their financials" to obtain a higher rating.

Jim Davis of Dominion Energy said PJM should rely on the ratings of external credit rating agencies where available, saying they are "very experienced" and "may have access to company personnel that PJM credit staff may not have access to."

But Bloczynski said rating agencies' gradings haven't always been accurate, noting companies that were "rated investment grade and next day defaulted."

Finding the Balance

Bloczynski also pushed back on some language changes, saying the existing terms — such as a reference to the "five most senior principals" — were added in response to earlier stakeholder requests for more detail.

She said PJM was seeking an appropriate balance. "We can be very prescriptive … and box ourselves in, or we can use some reasonable business practices, and that's what we're trying to do." ■

PJM News

PJM Panel Weighs Impact of Pa., Va. Joining RGGI

Border Adjustment also Reviewed

By Rich Heidorn Jr.

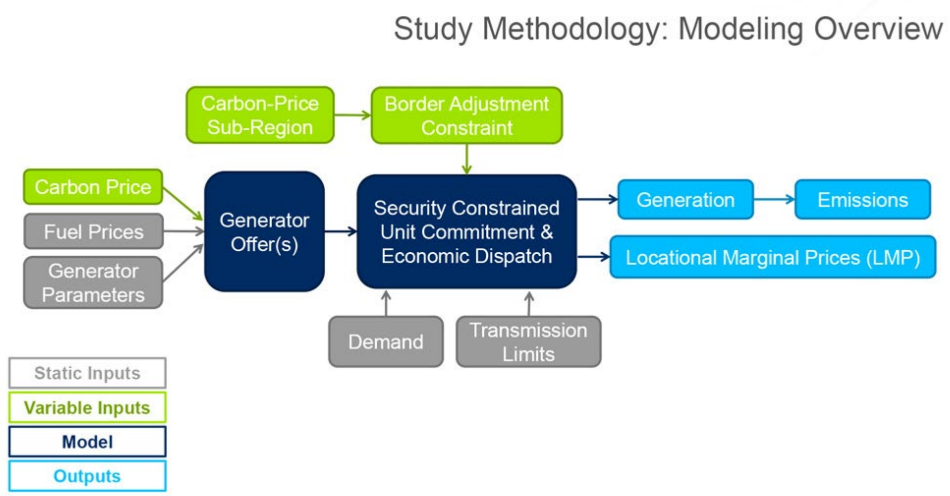
A PJM task force considering the implementation of carbon pricing continued its education sessions last Tuesday with an analysis on the impact of Virginia and Pennsylvania joining the Regional Greenhouse Gas Initiative (RGGI).

At its sixth meeting since its formation last summer, the *Carbon Pricing Senior Task Force* heard PJM officials walk through an analysis of the impact on emissions, prices and interregional trading of a "carbon price region" composed of up to five PJM states.

RGGI, which includes New York and the six New England states, currently has only three PJM states: Delaware, Maryland and New Jersey.

However, Virginia would join RGGI under the *Clean Economy Act*, which passed both houses of the state's legislature late Wednesday.

Pennsylvania Gov. Tom Wolf issued an *executive order* in October directing state officials to develop a rulemaking by July 31 for joining RGGI, although his authority to do so has been challenged by the Republican-controlled legislature. (See *Critics: Pa. RGGI Hearing Stacked with Detractors*.)



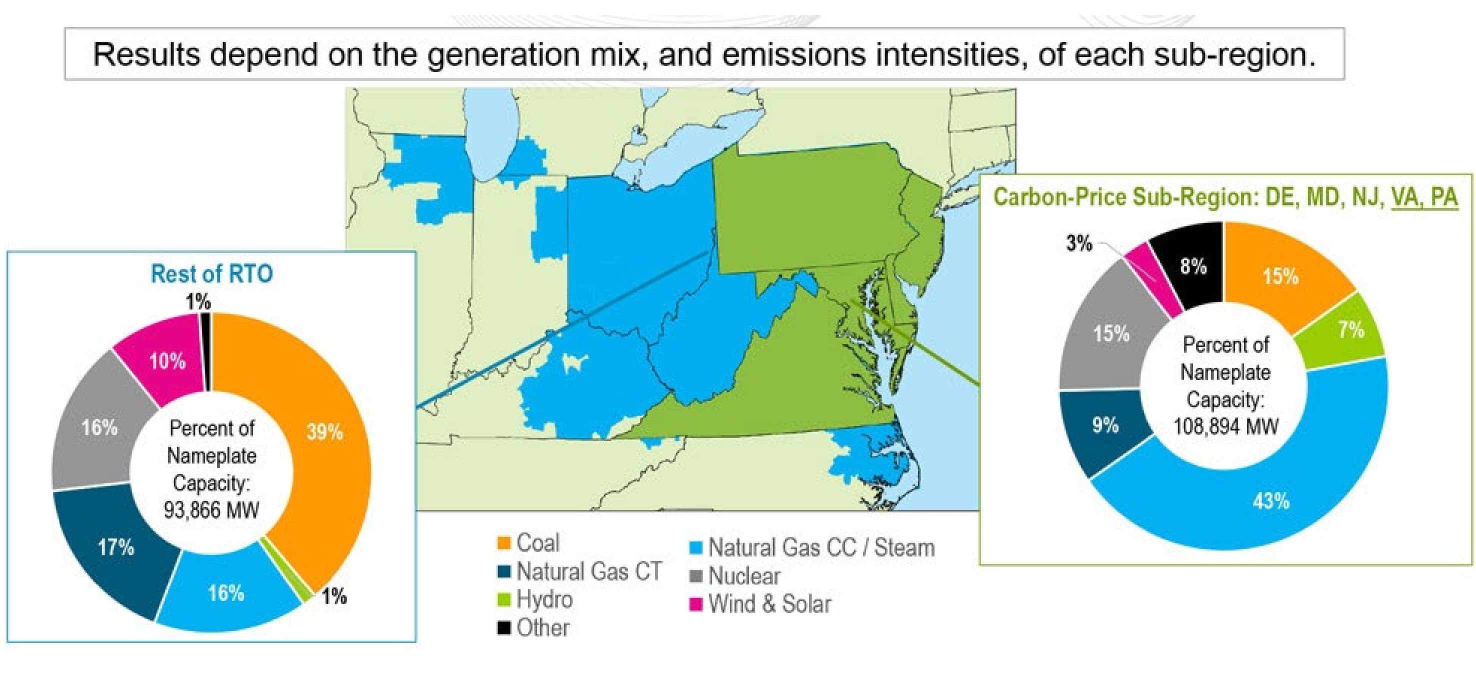
Study methodology | *PJM*

Although PJM officials have taken pains to emphasize that the analysis is theoretical and that the RTO is not proposing a carbon price, it has said a carbon price could provide a way for ensuring states' clean energy policies do not distort wholesale markets. (See *PJM: Carbon Pricing the Answer to Subsidy Dispute*.)

Analysis

PJM's analysis compared the status quo with a region pricing carbon at a low-end reference of $6.87/short ton (the trigger price for the RGGI Emissions Containment Reserve) and a high-end reference of $14.88/short ton (the trigger for the RGGI Cost Containment Reserve).

The analysis modeled the year 2023, the most



Carbon subregion (in green) including RGGI states and Pennsylvania and Virginia | *PJM*

PJM News

recent planning case from the Regional Transmission Expansion Plan and market efficiency process.

It used PLEXOS software to simulate the commitment and dispatch of resources and the resulting market and emissions outcomes. Resources both internal and external to PJM were included in the optimization.

The analysis of adding Virginia without Pennsylvania found that at a price of $14.88/ton, emissions in the carbon zone would decrease from 52 million tons of CO_2 for the year to 35 million tons. That reduction would be almost entirely offset by an increase in emissions in the rest of PJM, resulting in only a small reduction in total emissions from 278 million tons to 277 million. Meanwhile, NO_x and SO_2 emissions for the entire RTO would actually increase.

But the analysis also found that PJM would increase its net exports from about 37,000 GWh to more than 45,000 GWh, meaning that the PJM region would be providing substantially more power to its neighbors without increasing its emissions.

"If you look at emissions across the entire [Eastern] Interconnection outside of PJM, it's not a wash," said economist Paul Sotkiewicz, representing Elwood Energy. "But I think what that also tells us is that trying to cure leakage within PJM is a fool's errand because it's going to leak to outside of PJM. … It's going to leak one balancing area away from PJM [where] PJM has no control."

When including Pennsylvania in the carbon region, PJM-wide CO_2 emissions would drop from 278 million tons to 259 million tons at a $14.88/ton price, with reductions of NO_x and SO_2 emissions as well. In this case — without any border adjustments to capture leakage — PJM's net exports would drop substantially.

Leakage

PJM also found that a one-way border adjustment would have very little impact on generation in either the carbon region or the rest of the RTO at either the low- or high-end price for carbon. The modeling of the one-way adjustment — capturing transfers into the carbon region — was based on the 2013 draft final proposal for CAISO's Energy Imbalance Market.

But the two-way border adjustment — covering transfers into and out of the carbon region — would result in a big increase in generation inside the carbon zone and a smaller decrease in generation outside of it, with a large increase in net generation exports.

"One way doesn't do much," PJM's Anthony Giacomoni said.

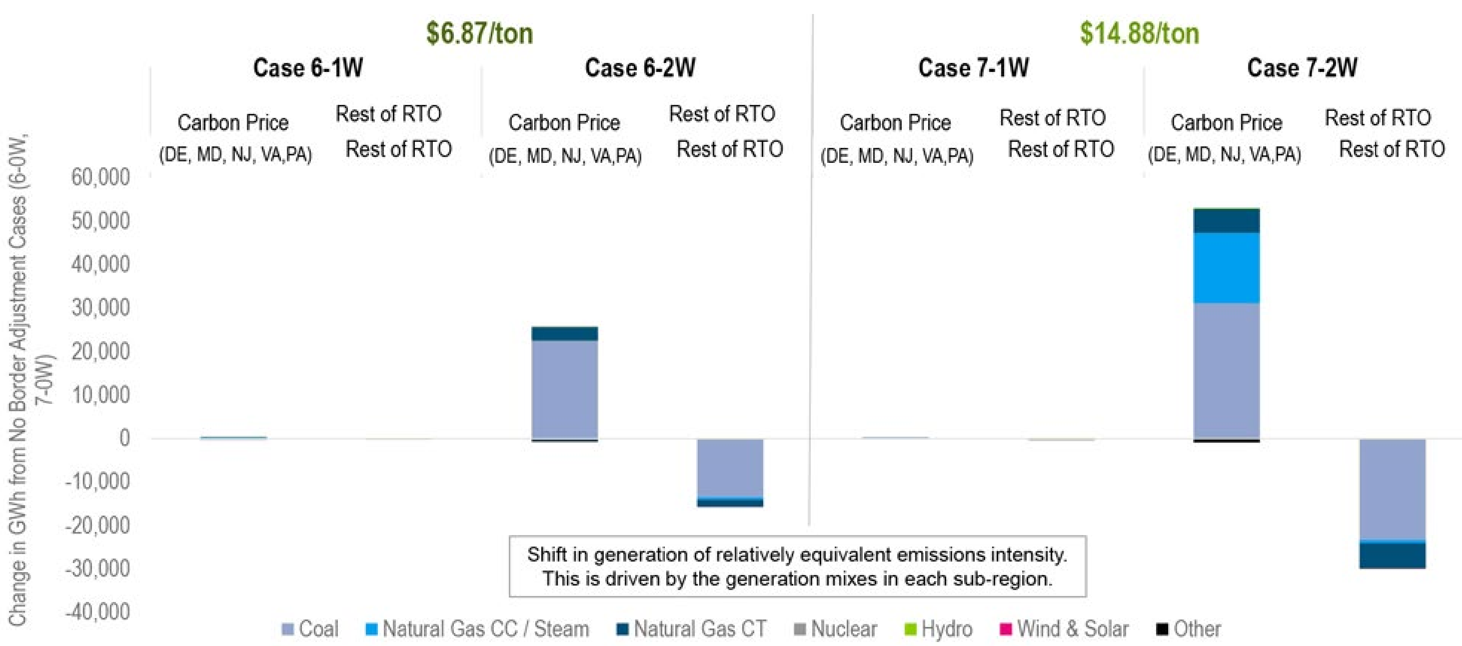
PJM officials cautioned that their analysis did not consider state-specific approaches such as programs that reduce electricity demand or load-based greenhouse gas compliance obligations.

It also did not capture how higher power prices could affect power demand. "We can add a low-demand sensitivity" in the future, PJM's Natalie Tacka said in response to a request for that data.

Next Steps

Task force facilitator Jennifer Tribulski said the group will meet next on March 27, when it will consider the legal, regulatory and technical considerations of a carbon pricing program.

Tribulski said the RTO will also issue a call for speakers for that meeting. "We want to hear about … what you expect to see; what you'd like to see in future meetings so we can really gauge where we are and what comes next." ■



Shift in generation production by subregion from adding one-way (1W) and two-way (2W) border adjustments | *PJM*

PJM News

PSEG's Izzo Skeptical of FRR Option

Buoyed by NJ Support for Nukes

By Rich Heidorn Jr.

Public Service Enterprise Group CEO Ralph Izzo expressed skepticism Wednesday that New Jersey utilities will abandon the PJM capacity market over the expanded minimum offer price rule (MOPR).

"We will work cooperatively with the Board of Public Utilities in New Jersey and PJM to find the best path forward, whether that is to bid and clear the capacity auction under a business-as-usual scenario, or seek the FRR [fixed resource requirement] alternative in partnership with New Jersey to preserve its preferred zero-carbon resources," Izzo said during PSEG's fourth-quarter earnings call.

"New Jersey would have to have either a zonal or statewide FRR, which to me is suboptimal … because now you're going to be solving a small problem with a rather large tool," Izzo said. "If your aspirations are for 7,000 MW of offshore wind, you need to pull out 15,000 MW from the capacity market. Seems to be a bit of overkill."

Taking the FRR option could leave behind a residual capacity market that is "grotesquely oversupplied … crushing capacity prices," he added. "I mean, there's just a ton of questions."

Izzo noted that New Jersey will not have offshore wind collecting subsidies until 2024. "So, it doesn't start paying double [for capacity] until the second auction from now. … I do think that there will be adequate time for New Jersey to avoid double paying for capacity 2024. It won't be a walk in the park."

FERC ordered PJM in December to expand its MOPR to include new state-subsidized resources, as well as existing nuclear units receiving zero-emission credits (ZECs) such as PSEG's Hope Creek and Salem 1 and Salem 2 plants.

"The ability of the nuclear plants to clear in [PJM's capacity market] will depend on the level of the applicable generic offer floors, as well as the offer floor levels that would be derived via the unit-specific exception, should one or more of the units elect that option," the company said in its *10-K filing*.

Izzo said he is optimistic because New Jersey's *Energy Master Plan* expects nuclear power to be an important generation source through 2050, when the state hopes to reach its goal of 100% "carbon neutral" electric generation. "So that has to be economically supported," he said. "No. 2, we have fossil assets that are located close to the load centers and have deliverability advantages that will [be] important factors in any capacity reliability construct that is created.

Bridgeport Harbor 5, a 485-MW combined cycle plant in Connecticut that began operating last year, is PSEG's largest generating unit in New England. | *PSEG*

"And let's remember that the underlying rationale for FERC's action was to eliminate price suppression caused by units that were receiving out-of-market payments," he added.

While Izzo said the company is "strongly supportive" of New Jersey Gov. Phil Murphy's goals of reducing electric usage by 2% and gas usage by 0.75% in five years, he seemed to question the master plan's long-term goal of cutting gas use to one-fifth of current consumption by 2050.

"From a practical standpoint, 80% of New Jersey households already use natural gas to heat their homes or to cook, and in fact, many of our customers converted to natural gas from using oil or electricity for these purposes," he said. With a conversion cost of at least $10,000 per customer, the transition "would be a significant economic burden on every household and contrary to most customers' personal preferences," he said.

Earnings

PSEG *reported* operating earnings of $330 million ($0.64/share) in the fourth quarter, up from $284 million ($0.56/share) in 2018. For 2019, the company reported operating earnings of $1.67 billion ($3.28/share) versus $1.58 billion ($3.12/share) the year before.

The company said its ZEC revenues added 6 cents/share for the quarter and 18 cents/share for the year. The payments, equivalent to about $10/MWh, are recovered through a non-bypassable distribution charge of 0.4 cents/kWh.

The BPU has authorized ZEC payments through May 2022, a decision that has been appealed by the Division of Rate Counsel. State law requires PSEG to reapply for any subsequent three-year periods.

Net income for 2019 included a loss recorded on the third-quarter sale of PSEG Power's 800-MW interest in the coal-fired Keystone and Conemaugh coal-fired units in Pennsylvania. The company said it expects to eliminate all coal-fired generation from its fuel mix by mid-2021 with the early retirement of Bridgeport Harbor 3, Connecticut's last coal-fired generator.

The company said it has reached an agreement to sell its 200-MW interest in the Yards Creek pumped-storage generating station in New Jersey, which it owns jointly with FirstEnergy. "The sale reflects our ongoing commitment to optimize the value of the generating fleets," the company said. "These proceeds will add to the improved cash flow at Power, given the completion of the combined cycle construction program and Power's declining capital needs."

PSEG Power completed its 1,800-MW combined cycle gas turbine construction program with the addition of the Keys Energy Center in Maryland and Sewaren 7 in New Jersey in 2018, as well as Bridgeport Harbor Station Unit 5 in Connecticut last year.

Izzo took note of ISO-NE's February capacity auction for 2023/24, which cleared at a record low. (See *ISO-NE Capacity Prices Hit Record Low*.)

But he said the 485-MW Bridgeport Harbor 5, the company's largest unit in New England, "cleared the 2019/20 auctions and locked in $231/MW-day capacity payments for seven years, thereby limiting our exposure to this latest auction result." ■

Earnings call** transcript **courtesy of Seeking Alpha.

PJM News

PJM Stakeholders Get First Look at MOPR Floor Costs

Continued from page 1

Energy & Ancillary Services Offset

PJM's Pat Bruno began the session with a *presentation* on the differences between the use of forward-looking and historical E&AS revenues. The E&AS will be subtracted from generators' going-forward costs to determine unit-specific net ACRs.

The RTO and its Independent Market Monitor currently calculate unit-specific offer caps with a simple average of net E&AS revenues from the three most recent calendar years.

Bruno said PJM intends to allow use of both historical and forward-looking E&AS revenues in determining MOPR offer floors for both new and existing units, consistent with its previous policy on new units.

He acknowledged this could result in an existing unit's net ACR floor price being above its net ACR offer cap. In such cases, he said, the seller will be required to offer at the floor price.

Becky Robinson of Vistra Energy said the possibility of the floor price exceeding the price cap "is creating a dartboard for people to criticize the justness and reasonableness" of MOPR floor prices. But she said it was unlikely to happen. "Why would anyone use forward-looking [prices] if it would make their MOPR floor price higher?"

'Irrational' FERC Ruling on Maintenance

Monitor Joe Bowring gave a short *presentation* on the IMM's ACR template and discussed the development of E&AS offsets, including the treatment of major maintenance.

Bowring cited what he called the "unintended consequences" resulting from an April 2019 FERC order requiring that major maintenance costs be allowed in energy offers and no longer included in net ACR calculations (*ER19-210*). Bowring said the "irrational definition of major maintenance" was made at PJM's request and over the IMM's objection. (See *FERC to PJM: Clarify Allowable Costs for Energy Offers*.)

"The FERC decision removed major maintenance from gross ACR, which would reduce net ACR if nothing else changed. Historical net revenues should not be reduced after the fact by subtracting major maintenance as PJM and Brattle propose. That would effectively mean that ACR was not reduced. Price-based offers were used in the calculation of historical net revenues. If participants wanted to include major maintenance in their energy offers, they would have done so," Bowring explained after the meeting. "Similarly, for going-forward net revenues, there is no reason to assume that participants will include major maintenance in their energy offers. We have seen no evidence that they do."

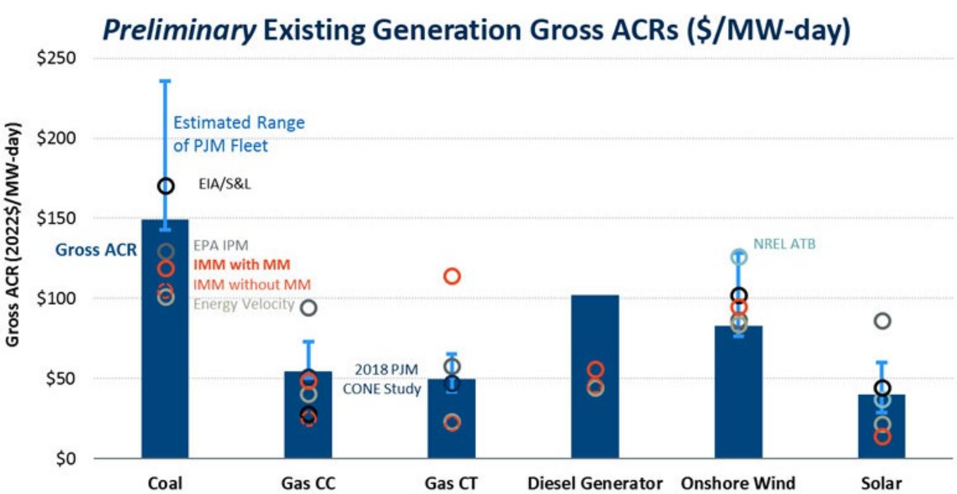
Reducing net revenue to reflect major maintenance would improperly assume that all generators include 100% of their maintenance costs in their offers, Bowring said. "We didn't see any bump [in prices] after the FERC order. Forwards didn't really change."

"Arbitrarily adding major maintenance costs to energy offers will inappropriately reduce net revenues and increase net ACRs," he added.

Bob O'Connell of Panda Power Funds said FERC's policy might cause units to run even when LMPs are below their operating costs just to minimize maintenance expenses from start-ups, citing a "rule of thumb" that one start is equal to 20 base hours. That, he said, could suppress energy prices in off-peak hours.

Bowring said O'Connell's scenario seemed logical but that there was no way for the Monitor to quantify such behavior in unit-specific ACR calculations.

"We put a list of items that shouldn't be included in major maintenance in our filing, and FERC copy and pasted it in the definition of what should be" included, Bowring said.



Preliminary Existing Generation Gross ACRs (2022$/MW-day)

Technology	Representative-Low	Representative Plant	Representative-High
Single-Unit Nuclear		**$892**	
Multi-Unit Nuclear	$568	**$609**	$689
Coal	$143	**$149**	$235
Gas CC	$50	**$55**	$73
Gas CT	$42	**$50**	$65
Diesel Generator		**$102**	
Onshore Wind	$76	**$83**	$128
Solar PV	$29	**$40**	$60

The Brattle Group's preliminary gross avoidable-cost rate (ACR) for existing generating resources, showing low, high and "representative" costs ($/MW-day) | *The Brattle Group*

PJM News

'Representative' Resources

Michael Hagerty, Brattle | © *RTO Insider*

Brattle's Michael Hagerty presented the consulting firm's preliminary default ACR values.

The group listed costs it considered most representative of each technology along with "representative low" and "representative high" costs to provide a range PJM could consider in its filing. "Not the lowest of the low and the highest of the high," Hagerty said.

The selection of the "representative" plant for each technology was based on several characteristics, including the distribution of plants by age, state, capacity and — for fuel-burning resources — post-combustion controls.

Hagerty said the firm identified the primary factors affecting cost across fleets and compared publicly available costs with those in a confidential generation project database from design firm *Sargent & Lundy*.

The "very significant range of plants within each technology … creates a bit of a challenge," he said. "Our intent was to show what we see in the existing fleet and leave it to PJM to determine where they want to be on this scale."

PJM Vice President of Market Services Adam Keech said it was too soon to say "what [costs] we think is reasonable."

"We're still digesting the data ourselves," he added.

Brattle noted that its gross ACR values for nuclear units are about 12% lower than the Monitor's largely because of lower capital cost assumptions and because it estimated that about $1/MWh of operations and maintenance costs should be accounted for in the estimate of net E&AS revenues. Bowring said the $1 reduction was inconsistent with the FERC order on maintenance.

Exelon's Jason Barker said the Monitor's characterization of what constitutes variable operations and maintenance (VOM) costs are "illogical and wrong." Barker indicated that the nuclear capital costs referenced in the Nuclear Energy Institute data, upon which Brattle and the Monitor have relied, are not the classes of costs described in the FERC order.

"It's not our characterization. It was FERC's," Bowring responded.

Energy Efficiency

Brattle calculated a net CONE of $230/MW-day (ICAP) for energy efficiency based on analysis of EE programs of four utilities in PJM: American Electric Power, Baltimore Gas and Electric, Commonwealth Edison and PPL.

It noted its net CONE for PJM EE was higher than estimates for ISO-NE, saying it was because of lower assumed wholesale energy prices in PJM ($29/MWh vs. $60/MWh in ISO-NE).

Brattle calculated net CONE by subtracting wholesale energy savings and transmission and distribution savings from gross CONE but did not consider any capacity savings.

PJM's Jeff Bastian said capacity market benefits were not included for EE just as they were excluded from the calculations for generating resources.

Bruce Campbell, CPower Energy Management | © *RTO Insider*

"This is a load-side resource," responded Bruce Campbell of CPower Energy Management. "It's different than a generator."

Tom Rutigliano of the Natural Resources Defense Council said Brattle appeared to be "vastly undervaluing" EE, saying it should be assessed from the point of view of the asset owner. In addition to including capacity benefits, that means energy savings should be valued at the retail — not wholesale — rate, he said.

"This stuns me that you simply ignore the capacity benefit at the customer level," Campbell

Resource Type	Gross CONE ($/ICAP MW-Day)	EAS Revenue Offset* ($/ICAP MW-Day)	Net CONE* ($/ICAP MW-Day)
Nuclear	2,064	366	1,698
Coal	1,149	45	1,104
Combined Cycle	320	85	235
Combustion Turbine	294	26	268
Solar PV**	290	101	449
Onshore Wind**	420	173	1,681
Offshore Wind**	1,155	307	3,261
Battery Storage	464	N/A	N/A

* Placeholder value using EAS Revenue Offset from October 2018 filing.

** Net CONE values for Solar PV, Onshore Wind and Offshore Wind reflect capacity value based on 42%, 14.7% and 26%, respectively of the nameplate rating of these resource types and are expressed in $/UCAP MW-day

PJM's preliminary net cost of new entry (CONE) values, including energy and ancillary service (E&AS) revenue offset | *PJM*

PJM News

added. "You recognize the energy savings, but you don't recognize the capacity savings. That just seems inconsistent to me."

Errors on Solar PV?

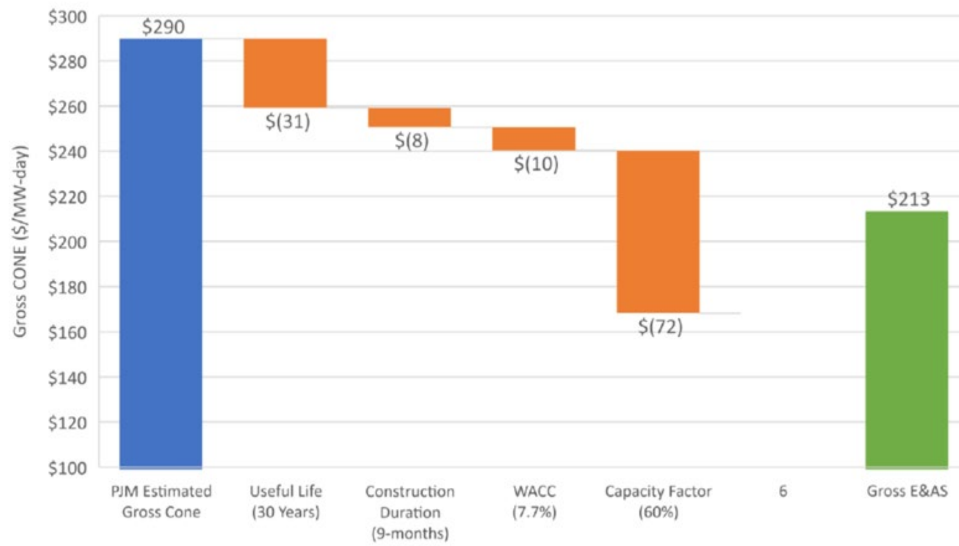
Michael Borgatti, Gabel Associates | © *RTO Insider*

The three-hour meeting ended with a *presentation* by Michael Borgatti of Gabel Associates on how resources seeking unit-specific price floors would document their actual costs. "The fundamental rule in the Tariff is you have to be able to provide the same level of detail and support as in [PJM's] CONE study. That is a reasonable standard," he said.

Borgatti used an example of a 100-MW single-axis tracking solar PV array to identify what he said are errors in PJM's assumptions. Correcting PJM's assumptions on useful life (30 years, not 20), construction duration (nine months), weighted average cost of capital (7.7%, not 8.2%) and capacity value (60%, not 42%) reduced the gross CONE from $290/MW-day to $168/MW-day, he said.

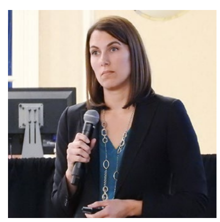
Separately, he offered a Lazard proxy that set gross CONE at $143/MW-day, which he said represented "what you should expect market participants to" submit. "There's a delta there [between $168 and $143], but it's not significant," he said.

With a $213/MW-day E&AS offset, he added, net CONE is zero.



Gabel Associates says correcting errors in PJM's assumptions on useful life, construction duration, weighted average cost of capital (WACC) and capacity factor reduced the gross CONE for a 100-MW single-axis tracking solar PV array from $290/MW-day to $168/MW-day. | *Gabel Associates*

MIC Chair Lisa Morelli said Borgatti's presentation would inform PJM's compliance filing and future discussions on MOPR procedures. She joined Keech in apologizing that some materials for Friday's meeting were not posted until just hours beforehand.



Lisa Morelli, PJM | © *RTO Insider*

"You are … getting real-time updates of the latest and greatest PJM thinking," she said. "It's a pretty heavy lift within the 90-day compliance [deadline]. You're seeing a race to the finish."

Next Meeting

The next scheduled discussion on MOPR will be the MIC's regular meeting March 11. Morelli said the afternoon would be reserved for MOPR, "if not more."

"We can't sweep aside all MIC business." ■

PJM News

FERC OKs Allocations as PJM Adds $237M to RTEP

By Rich Heidorn Jr.

FERC last week approved PJM's updated annual cost responsibility assignments for projects in the Regional Transmission Expansion Plan (RTEP) over the objections of Old Dominion Electric Cooperative (ODEC), which said the RTO should be required to provide more information (*ER20-717*).

Included in the approvals are assessments for regional facilities, necessary lower-voltage facilities and merchant transmission facilities with firm withdrawal rights, based on the zones' and facilities' peak load in the 12 months ending Oct. 31, 2019.

ODEC asked FERC to order PJM to specify each zone's peak megawatt value and the date and time of the peaks, which were not included in the RTO's Dec. 31 cost allocation filing. The commission said ODEC should seek the information through the Transmission Expansion Advisory Committee and noted the data are "readily available" on the RTO's *website*.

$237M in RTEP Additions

The ruling came a week after the PJM Board of Managers added almost *$237 million* in baseline transmission projects to the RTEP: FERC Form 715 transmission owner criteria projects totaling $202.37 million and RTO baseline reliability projects totaling $34.6 million.

American Electric Power is responsible for $188.4 million in Form 715 improvements, including projects to correct N-1 and N-1-1 thermal and voltage violations in the western Fort Wayne, Ind., area for contingencies in the Carroll, Sorenson, Columbia and Whitley stations.

Another AEP project will correct N-1-1 thermal and voltage violations on the Bradley-Sun 46-kV line section and Tams Mountain-Glen White 46-kV line section.

Also making Form 715 improvements is American Municipal Power, which is spending $7.5 million for a new 0.3-mile 138-kV, double-circuit line tapping the Beaver-Black River 138-kV line and expansion of the Amherst No. 2 substation.

Two TOs are making investments driven by reliability or baseline load growth.

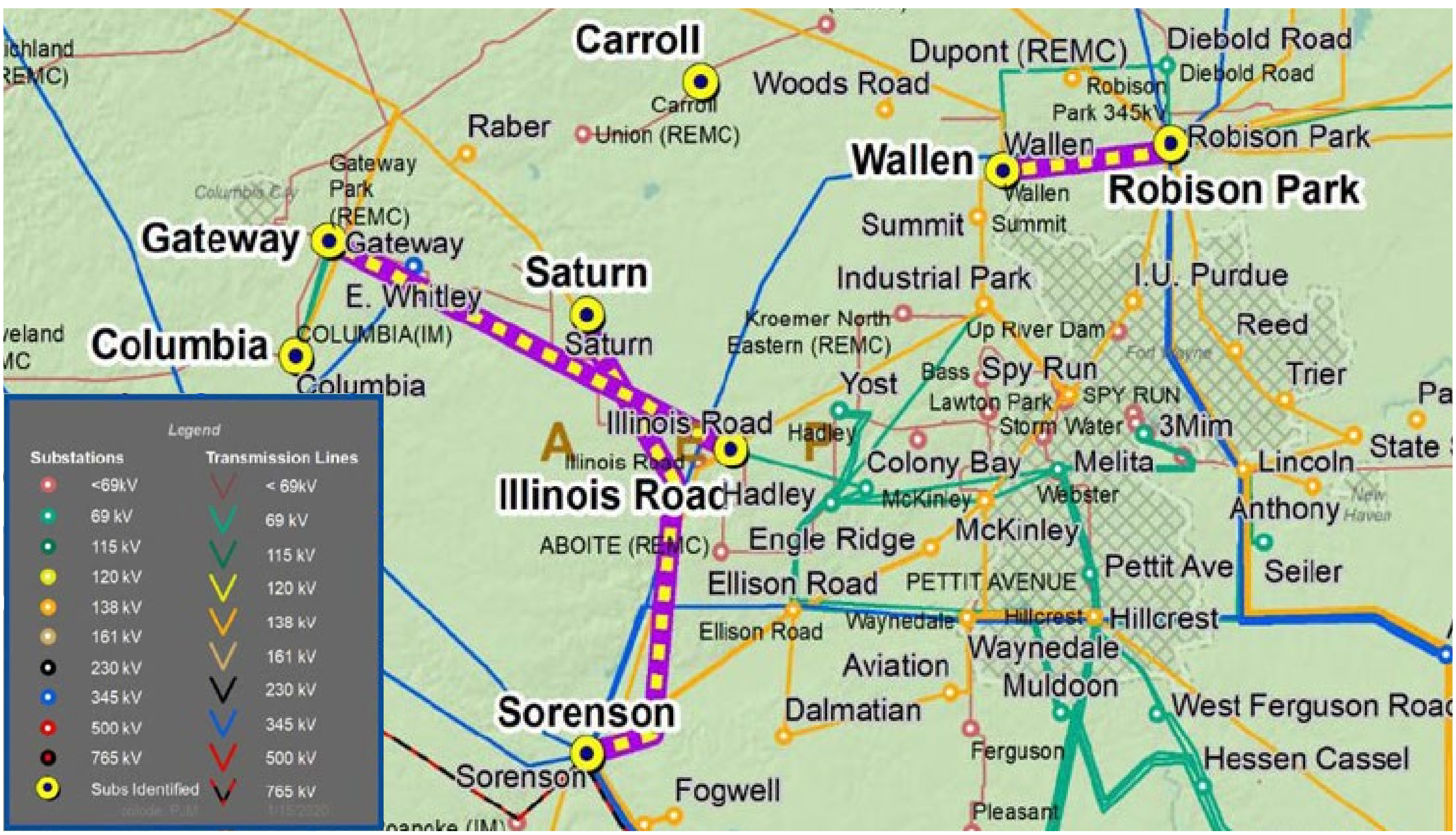
Delmarva Power & Light is spending $20.5 million to rebuild 12 miles of the Wye Mills-Stevensville 69-kV line and reconductoring the Silverside-Darley 69-kV line and replacing terminal equipment.

FirstEnergy's American Transmission Systems Inc. (ATSI) is spending $14.1 million to reconductor an 8.4-mile section of the Leroy Center-Mayfield Q1 line between Leroy Center and Pawnee Tap.

The spending approved Feb. 20 is in addition to $163 million in projects, mostly to address baseline reliability criteria violations, which the board approved Dec. 3.

Previously approved baseline projects to replace three 230-kV breakers in the PSEG zone in Bergen County, N.J., totaling $3 million are no longer required and have been canceled.

Since 2000, PJM has authorized $37.8 billion in RTEP projects. ■



PJM's board approved AEP'S $188.4 million project to correct N-1 and N-1-1 thermal and voltage violations in the western Fort Wayne, Ind., area for contingencies in the Carroll, Sorenson, Columbia and Whitley stations. | *PJM*

PJM News

PJM Backs off Black Start Fuel Rule

State Officials Opposed Increased Costs

By Rich Heidorn Jr.

Facing opposition from state regulators and consumer advocates, PJM said Monday it will suspend an initiative that could tighten fuel requirements for black start resources.

PJM's David Schweizer told a special meeting of the Operating and Market Implementation committees that the *initiative* will go on "hiatus" for several months to allow the RTO to do additional analysis on the potential benefits of requiring some or all black start resources to have a secondary source of fuel in addition to their primary source.

Citing potential capital costs of up to $513 million, the Organization of PJM States Inc. (OPSI) told PJM in a *letter* Feb. 13 that "with no clear measure of benefit or risk reduction ... there is not a strong foundation at this time to support any of the options" under consideration. It recommended "stakeholders consider refocusing their efforts towards exploring risk-informed measures that would be used to better define black start resource availability expectations."

Based on OPSI's feedback and discussions with other stakeholders, Schweizer said PJM concluded the "best approach is to step back and further assess the impacts" of the proposals before bringing any of them to a vote. The MIC had been planning a vote on the packages in a special session before its regular March 11 meeting. That special meeting has been canceled.

PJM called for the initiative in 2018, noting that the only fuel assurance requirement for black start resources is that they maintain enough for 16 hours of run time.

During the hiatus, Schweizer said the RTO will pursue a "three-pronged" research project, including expanding a previous study on the impact of delayed restoration resulting from the unavailability of black start units lacking fuel.

"We may look at expanding that analysis to look at more transmission operator zones or a different type of analysis with different assumptions," he said.

RTO staff also "will look at something with respect to gas pipeline assessment impact analysis" and seek to estimate the economic impact of a delayed restoration "to address the concerns that the state commissions have raised," Schweizer said.

He said the studies will take "several months to six months." Staff will provide more details on the studies and timeline at the Market and Reliability Committee's March 26 meeting.

In the meantime, he said, PJM also will propose a new problem statement and issue charge on

David Schweizer, PJM | © *RTO Insider*

the "rather urgent" need to update black start testing requirements. It also would consider updating black start termination and substitution rules and the capital recovery factors for compensation to reflect current tax laws and interest rates.

"ODEC will be very pleased to hear this news," Old Dominion Electric Cooperative's Adrien Ford said of PJM's decision to conduct additional analysis on fuel security before seeking a vote.

Continued on page 34

Package	Level of Fuel Assurance	Capital Cost to Convert Black Start Fuel Assured Units	Increase in Annual Revenue Requirement for Capital Recovery Period
A (PJM/Calpine) & B (Monitoring Analytics)	All black start resources allocated to a TO zone	$513M	$67.2M/yr
D (D.C. OPC/Exelon)	Minimum of one black start resource (on a unit count basis) fuel assurance conversion for each TO zone, any additional based on a cost-benefit analysis	$13M-$513M	$1.9M/yr-$67.2M/yr
E (Consumer Advocates)	Minimum of one black start resource (on a unit count basis) fuel assurance conversion for each TO zone	$13M	$1.9M/yr

PJM stakeholders are considering proposals that could add $1.9 million to $67 million in annual spending on black start resources. The RTO currently spends $65 million a year. | © *RTO Insider*

PJM News

Consumer Advocates Appeal MOPR Order to DC Circuit

Tolling Order Challenge Eyed

By Rich Heidorn Jr.

State consumer advocates asked the D.C. Circuit Court of Appeals on Friday to review FERC's Dec. 19 order expanding PJM's minimum offer price rule (MOPR) — despite the fact that the commission has not acted on numerous requests for rehearing.

FERC's December order extended the MOPR to all new state-subsidized resources, saying it was needed to combat price suppression in the RTO's capacity market (EL16-49, EL18-178). (See related story, *PJM Stakeholders Get First Look at MOPR Floor Costs*.)

As is standard practice, FERC issued a *tolling order* Feb. 18 giving itself more time to respond to the requests filed Jan. 21 for rehearing and clarification. (See *PJM MOPR Rehearing Requests Pour into FERC*.)

The advocates for New Jersey, Maryland, Delaware and D.C. asked the court to hold their *petition for review* in abeyance, acknowledging that it could be dismissed under the court's "current precedent," which holds that FERC's rulings are not "final" orders ripe for judicial review while rehearing is pending.

The advocates said they filed the petition "out of an abundance caution" because of the pending *en banc* review in *Allegheny Defense Project v. FERC* over whether the Natural Gas Act authorizes FERC to issue tolling orders that extend the statutory 30-day period for commission action on rehearing requests (No. 17-1098).

The advocates said they feared that awaiting further commission action before seeking judicial review of the Dec. 19 order could deny them the right to do so. "For the reasons stated here, petitioners ask that the court hold this petition in abeyance until the issuance of a decision by this court in *Allegheny Defense*," they wrote.

If the court decides FERC cannot issue such tolling orders under the NGA, the advocates said, "that determination would almost certainly mean that FERC cannot do so under the counterpart provision of the [Federal Power Act]. If such a determination were accorded retroactive application, then the [Feb. 18] tolling order would be a nullity, petitioners' request for rehearing would be deemed to have been denied by operation of law on Feb. 20, 2020 (i.e., 30 days after the filing of the request for rehearing), and the 60-day time period for petitioners to seek judicial review of the Dec. 19 order would have begun on Feb. 21, 2020."


E Barrett Prettyman D.C. Circuit Courthouse

Oral arguments in *Allegheny Defense* are scheduled for March 31, with a ruling expected this summer or early fall.

In a note to its clients Monday, ClearView Energy Partners said that the advocates' "long shot" petition could spur FERC to act more quickly on rehearing, noting that the commission has yet to act on rehearing on its June 2018 order that found PJM's capacity market unjust and unreasonable and led to the December order.

"A decision that changes the court's interpretation of FERC's tolling order authority this fall could potentially complicate the ability of PJM to hold auctions late in 2020 or early in 2021 as it currently plans, as these petitioners may then have grounds to seek an injunction pending appeal," ClearView said. ■

PJM Backs off Black Start Fuel Rule

State Officials Opposed Increased Costs

Continued from page 33

Before adjourning the meeting, stakeholders heard summaries of two *alternatives* to the PJM/Calpine proposal that 100% of black start units have a secondary fuel source. PJM *estimates* its proposal would require $513 million in capital spending, increasing annual revenue requirements by $67.2 million over the current $65 million.

Alternative Plans

Greg Poulos, executive director of the Consumer Advocates of the PJM States (CAPS), offered a proposal that would limit fuel assurance requirements to one resource per TO zone. "I didn't see the votes [of consumer advocates and load interests for] going any higher than that. That's why I put this together," he said.

Poulos said the proposal was based on discussions with "a couple" of state advocates' offices but was not an official CAPS proposal, which would require a vote of members. PJM estimated the capital cost of the proposal at $13 million, or $1.9 million per year.

After the Feb. 5 MIC meeting, Exelon and the D.C. Office of the People's Counsel joined on a proposal that each TO zone have at least one fuel-assured black start resource, with additional fuel-assured resources being awarded based on a cost/benefit analysis performed by PJM with input from the TO. (See "States, Advocates Unsure of Black Start Fuel Assurance," *PJM MIC Briefs: Feb. 5, 2020*.) PJM estimated the cost would fall between Poulos' and the RTO's plan.

Tom Hyzinski of GT Power Group said that even doubling black start costs would add only $2.50/year to his electric bill for an all-electric home. "It's been asserted that the benefits [of the PJM/Calpine proposal] haven't been shown," he said. "The cost of even the most expensive option is relatively modest."

Erik Heinle of the D.C. OPC noted that the costs would not be spread evenly over the RTO's footprint. "Some zones wouldn't pay anything; others would be hit more substantially," he said.

Thus, he said, PJM should allow state regulators to determine their "risk tolerance."

"It would be their ratepayers who would be responsible for coming up with that difference," he said. ■

PJM News

NJ Sets Schedule for OSW Procurements

By Rich Heidorn Jr.

Gov. Phil Murphy | © *RTO Insider*

New Jersey Gov. Phil Murphy said Friday the state will procure the remainder of its 7,500-MW offshore wind goal in five solicitations through 2028.

Murphy issued an *executive order* last November directing state officials to acquire 7,500 MW of offshore wind by 2035. The state awarded a contract for 1,100 MW to Ørsted in June 2019. Commercial operation is projected for 2024. (See *New Jersey Doubles OSW Target*.)

On Friday, Murphy *announced* the state will issue a solicitation for an additional 1,200 MW in the third quarter, with bids due in the fourth quarter and the award announced in the second quarter of 2021. Commercial operation is projected for 2027.

The governor also announced four additional solicitations through 2028, with commercial operation completed between 2029 and 2035.

Murphy said he released the schedule to provide the certainty needed by developers, original equipment manufacturers and others in the OSW supply chain.

"By announcing this planned solicitation schedule, we are demonstrating to our partners in industry and labor that we are committed to implementing this process in a thoughtful way that ensures economic growth for New Jersey," Murphy said.

"New Jersey opened the largest single-state solicitation, is building a supply chain that will support projects up and down the East Coast, and is poised to double our offshore wind capacity," New Jersey Board of Public Utilities President Joseph Fiordaliso said. "Offshore wind is a critical component in realizing the governor's vision of 100% clean energy by 2050 and ensuring our planet survives for future generations."

Murphy said the schedule could be revised based on the "transmission solutions and development schedule, the status of additional lease areas, permitting, port readiness, establishment of a supply chain, workforce training and cost trends."

Murphy's statement did not address concerns that state ratepayers might have to pay for the generation without it receiving any offsetting revenue from the PJM capacity market. In an *RTO Insider* webinar on Feb. 19, Fiordaliso said FERC's Dec. 19 order requiring PJM to apply its minimum offer price rule to all new state-subsidized resources was an effort by the Trump administration to throw "roadblocks" in the way of New Jersey's clean energy policies. (See *PJM's MOPR Quandary: Should States Stay or Should they Go?*)

NJBPU President Joseph Fiordaliso | © *RTO Insider*

Liz Burdock, CEO of the Business Network for Offshore Wind, thanked the governor for responding to its request for a multiyear schedule of solicitations and said she hoped other East Coast states would follow suit.

"However, we are also concerned that the state does not currently have a long-term comprehensive plan for working with utilities, regional transmission organizations and other grid experts to ensure that the state's energy systems are ready for the massive gigawatts of power that will be generated off the New Jersey shoreline starting in 2024," she said in a *statement*.

"Grid and transmission planning is key to ensuring the steady growth of the U.S. offshore wind industry in the long term. We only have a few years to modernize and increase the capacity of the onshore grid to handle the double task of the electrification of transportation (electric vehicles) and the greatly increased generation of clean energy from offshore wind and solar." ■

Proposed OSW Solicitation Schedule through 2035

Solicitation	Capacity Target MW	Issue Date	Submittal Date	Award Date	Estimated Commercial Operation Date
1	1,100	Q3 2018	Q4 2018	Q2 2019	2024
2	1,200	Q3 2020	Q4 2020	Q2 2021	2027
3	1,200	Q3 2022	Q4 2022	Q2 2023	2029
4	1,200	Q2 2024	Q3 2024	Q1 2025	2031
5	1,400	Q2 2026	Q3 2026	Q1 2027	2033
6	1,400	Q1 2028	Q3 2028	Q1 2029	2035

| Phil Murphy

Company News

CenterPoint's Somerhalder Focused on Core Business

By Tom Kleckner


John Somerhalder, CenterPoint's interim CEO | CenterPoint

CenterPoint Energy interim CEO John Somerhalder said he was "honored" to step in as a placeholder when he introduced himself to financial analysts during the company's quarterly earnings call Thursday.

"Alongside our leadership team, I am excited to move this company to deliver strong results and drive shareholder value," he said during the call.

Somerhalder, a member of CenterPoint's board, was named to temporarily replace Scott Prochaska, who unexpectedly stepped down Feb. 19. (See *Prochazka Steps down as CenterPoint CEO*.)

CFO Xia Liu handled the majority of the analysts' questions, but Somerhalder was quick to respond when an analyst asked when a permanent CEO would be named.

"I am interim president and CEO. I have no timeline or no time limit," he said. "I am here; very proud to be here; very focused on executing on the strategy for as long as required until the right transition to a permanent CEO at the right time is made."

Somerhalder said CenterPoint earned $1.25 billion in cash from the recent sail of its natural gas retail business and two natural gas pipeline contractors. The proceeds will be used to pay down debt as the Houston-based company focuses on its core utility business.

"Our board is very focused on exactly what we're focused on," Somerhalder said. "They see the value of our utilities. They see the value of investment in rate base growing those earnings. … And so that strategy is what they support and what they believe is appropriate moving forward."

CenterPoint *reported* fourth-quarter earnings of $231 million ($0.45/share), exceeding its 2018 fourth-quarter performance of $160 million ($0.36/share) and expectations of analysts surveyed by Zacks Investment Research, which had projected the same earnings per share as last year.

For the year, the company reported a profit of $895 million ($1.79/share), up from 2018's earnings of $698 million ($1.60/share).

CenterPoint's stock price jumped to $25.27 shortly after the earnings announcement. It closed down for the week and the year at $23.02. ■

NRG Income Rises on Generation, Tax 'Release'

By Michael Kuser

NRG Energy on Thursday *reported* 2019 income from continuing operations of $4.1 billion, compared to $460 million for the previous year, the large difference driven by the release of a $3.5 billion tax valuation allowance. Adjusted EBITDA was almost $2 billion, up from almost $1.8 billion in 2018.

In a call with analysts, NRG CEO Mauricio Gutierrez highlighted the company's signing of 1.6 GW of medium-term solar power purchase agreements in ERCOT, its $300 million acquisition of Stream Energy and the return of its 385-MW natural gas-fired Gregory plant in Corpus Christi, Texas, to service before the summer.

Gutierrez said the purchase of Stream, with 600,000 electricity and gas customers in Pennsylvania and Texas, adds "important capabilities to our retail portfolio," aiding its move to balance generation and retail.

Adjusted EBITDA for generation rose 24% year-over-year to $1.1 billion on higher realized power prices. Retail EBITDA dropped 3% to $920 million primarily because of higher supply costs.

NRG generates electricity and provides electric power and natural gas to more than 3.7 million residential, small business, and commercial and industrial customers in the U.S. and Canada.

Texas Hold 'em

Electric demand in ERCOT continues to grow at the fastest pace in the nation, between 2 and 3% per year for the foreseeable future, the company reported. "This requires a tremendous amount of generation investments simply to maintain the current low reserve margin," Gutierrez said.

The company expects ERCOT to remain tight and volatile for the foreseeable future. "Regulators in ERCOT continue to refine our scarcity pricing mechanism to incentivize new generation, which is predominantly renewable and intermittent, while adequately compensating existing resources that provide firm generation," Gutierrez said.

He also praised FERC's Dec. 19 ruling that expanded PJM's minimum offer price rule (MOPR) to state-subsidized resources. (See *PJM's MOPR Quandary: Should States Stay or Should they Go?*)

"This ruling is just the most recent in a series of market reforms that PJM and FERC have undertaken since 2004 to protect the integrity of competitive markets," he said.

Low Carb Diet

The company aims to reduce its carbon emissions by 50% by 2025 and to net zero by 2050.

"We are already 83% of the way to our 2025 goal, with clear line of sight to achieve it with our current portfolio," Gutierrez said. "We have reduced our carbon emissions by 40 million metric tons in just the last 10 years. That is the equivalent of taking 9 million cars off the road every year.

"In just the last six years, coal as a percentage of our total revenues has decreased 55%, and that is inclusive of capacity revenues," Gutierrez said. "This is an important distinction, as energy revenues have been the bulk of the decline, and our coal assets in the East now act primarily as insurance for grid reliability and not for electric generation." ■

Call transcript courtesy of Seeking Alpha.

Company Briefs

OGE Files $810M Rate Recovery

OGE Energy on Thursday *reported* 2019 earnings of $433.6 million ($2.17/share), up from $425.5 million ($2.13/share) in 2018. For the quarter, OGE's earnings of $35.4 million ($0.18/share) were down from the year prior, when the company had earned $54.7 million ($0.27/share).

CEO **Sean Trauschke** told analysts that the company filed a rate plan last week with the Oklahoma Corporation Commission, seeking $810 million in costs for the grid improvement plan. Trauschke said the plan will make OGE's system "more reliable, more resilient, more secure and more efficient" with new technology, equipment and communication systems that "promote a self-healing grid."

The company's stock price lost more than 11% of its value — in line with last week's overall market performance — following the earnings announcement, falling from $43.12 and closing the week at $38.10.

Vistra Earnings Again Top Guidance Midpoint

Vistra Energy on Friday *reported* adjusted year-end earnings before interest, taxes, depreciation and amortization (EBITDA) of $3.39 billion, the fourth straight year its financial results have come in above the midpoint of Vistra's guidance of $3.22 billion to 3.42 billion.

For the quarter, Vistra said its adjusted EBITDA was $775 million, up from $720 million a year ago. The Irving, Texas-based company reaffirmed its 2020 adjusted EBITDA guidance range of $3.29 billion to 3.59 billion.

Vistra's share price opened at $20.43 on Friday, a 16-cent drop from the previous close, and ended the week down at $19.23. The company's 52-week low is $18.75.

BP Pulls out of Trade Groups over Climate Change

BP last week announced it has decided to pull out of trade groups American Fuel and Petrochemical Manufacturers, Western Energy Alliance and Western States Petroleum Association because their policies no longer align with its views on climate change.

The company also said that its interests were only "partially aligned" with five other groups, including the American Petroleum Institute and the U.S. Chamber of Commerce, but recent changes in their climate policies were "now more closely aligned with BP."

The move marks another effort by BP to move beyond its traditional business as an oil company, as two weeks ago the company said it aimed to become net-zero emissions by 2050.

More: *Houston Chronicle*

El Paso Electric Profits Climb to $123M in 2019

El Paso Electric released its full 2019 financial report last week, showing increased profits of almost 46% to $123 million. It will be the last full-year, public report the company will file if its pending $4.3 billion sale to the JPMorgan Chase-tied Infrastructure Investments Fund (IFF) is completed.

Most of the increase was tied to gains in a Palo Verde nuclear plant investment fund, which is designated to pay for costs tied to the eventual closure of the plant. However, accounting rules require growth in the investment fund to be recorded as company income. Without the $38.5 million gain in the fund, the utility's profit declined 2.6% from 2018 to $92.2 million.

Most of the decrease in profit (when the Palo Verde gains are subtracted) is tied to the $12.1 million in legal and other costs spent for the pending sale to IIF. Those costs, projected to be $43.2 million by the time the sale is completed, will be paid by stockholders and not by ratepayers.

More: *El Paso Times*

Eversource to Buy Columbia Gas

Eversource Energy last week announced it has reached an agreement to buy the Massachusetts natural gas assets of Columbia Gas for $1.1 billion from NiSource. Eversource and NiSource are expected to close the deal by the end of this third quarter, but it will require approval from the Massachusetts Department of Public Utilities and the U.S. Justice Department.

The announcement came on the same day Columbia Gas agreed to pay $53 million in a plea agreement with federal prosecutors over the 2018 gas explosions in the Merrimack Valley region. Under the agreement, liabilities related to the explosions will remain the responsibility of NiSource.

From: *MassLive*

FEMA Claims PG&E's Poor Line Maintenance Means Liability for Fires

Federal Emergency Management Agency attorney Michael Tye last week argued to U.S. Bankruptcy Judge Dennis Montali that Pacific Gas and Electric poorly maintained its power lines despite knowing they were likely to cause fires and therefore owes the government nearly $4 million.

The request could have an impact on the outcome of PG&E's bankruptcy, as a settlement between the utility and fire victims' lawyers requires any money owed to the federal or state governments must come from the same $13.5 billion trust intended to pay individuals. Therefore, if FEMA prevails, it will leave a lot less money available for the victims.

PG&E and victims' lawyers urged Montali to reject the claim, along with another from the California governor's Office of Emergency Services. Most the state's $2.7 billion request overlaps with FEMA's. Montali did not rule on the matter but said he would make a decision as quickly as possible.

More: *San Francisco Chronicle*

PPL's Spence Retiring

PPL announced Wednesday that CEO Bill Spence will retire June 1 and be replaced by PPL President and Chief Operating Officer Vincent Sorgi. Spence, who joined PPL in 2006 and was named CEO in 2011, will take a position as nonexecutive chair of the company's board of directors.

Sorgi, who joined PPL in 2006, helped spin off its generation business as the company's chief financial officer and vice president. He was promoted to president and COO last July.

Sorgi's 25 years of utility experience included previous stints at Public Service Enterprise Group and Deloitte & Touche. He holds a bachelor's degree in accounting from Pennsylvania State University and a master's degree in business administration from Villanova University.

More: *PPL*

SCANA, Former Execs Sued for 'Fraud' over Failed Nuclear Project

The U.S. Securities and Exchange Commission and the office of the U.S. Attorney for South Carolina last week accused SCANA and two executives of lying to the public about the V.C. Summer nuclear project, saying it had "repeatedly deceived" investors and regulators by hiding its mounting problems.

The suit claims former CEO Kevin Marsh and former Executive Vice President Steve Byrne privately harbored dire concerns about the $9 billion V.C. Summer nuclear plant while they publicly sought to convince regulators and investors everything was under control. One executive summarized the divide, saying the company's top brass "flew around the country showing the same damn construction pictures ... while the whole [expletive] was going up in flames."

The lawsuit seeks unspecified damages from the company, Marsh and Byrne, including bonuses earned for overseeing the unfinished plant. It also aims to ban Marsh and Byrne from working for another publicly traded company.

More: *The Post and Courier*

Federal Briefs

EPSA Supports Carbon Pricing

The Electric Power Supply Association last week announced its support for carbon pricing or other economy-wide, market-based mechanisms intended to reduce carbon dioxide emissions.

"EPSA and its members support efforts to combat climate change through transparent, open and nondiscriminatory competitive markets, such as an economywide price on carbon," EPSA CEO Todd Snitchler said. "Markets do not stand in the way of state energy goals; states and taxpayers benefit when markets encourage generators to make smart investments and retire older plants as cleaner fuels and technology become cost competitive. A competitive market approach will deliver results faster and at lower cost than a rigid patchwork of state mandates."

More: *EPSA*

FERC Grants SPP Delay on Order 841 Compliance

FERC last week granted SPP a deferral until Aug. 5, 2021, as the effective date for Tariff revisions to comply with Order 841, which required grid operators to open their markets to storage providers.

The commission acted in response to a request from SPP, which said it needed 18 months to implement software changes to its new Settlement Management System, which went live on Feb. 5. The commission had approved the Tariff revisions in October 2019 with an effective date of July 17, 2020. (See *FERC Partially OKs PJM, SPP Order 841 Filings*.)

FERC acknowledged that the delay will affect the ability of NextEra Energy Resources' 10-MW/20-MWh Rush Springs electric storage resource to participate in the SPP market. "However, we agree with SPP that some uncertainty was inherent in the commercial decision for the Rush Springs resource to participate in the SPP market prior to implementation of SPP's Order No. 841 compliance filing. Given SPP's statement that it requires additional time for changes to its markets and settlements systems, we believe that granting in part SPP's request is necessary in order to allow SPP to successfully implement the changes required by Order No. 841."

More: *ER19-460-004*

GOP Lawmaker Accuses Trump of 'Playing Politics' with Yucca Reversal

Rep. **Dan Newhouse** (R-Wash.) last week accused the Trump administration of "playing politics" with its reversal on funding for the Yucca Mountain nuclear waste repository in Nevada.

"I can't tell you how disappointed I was to see this administration playing politics with something as important as completing the permanent solution to our nation's high-level nuclear waste," Newhouse said. "This budget is ... a total waste of resources and a distraction from solving this very important issue."

Earlier this month, Trump announced he no longer supports funding the Yucca nuclear waste site, reversing his position on the matter in a key state in November's elections. The change was reflected in his budget proposal for fiscal year 2021. Furthermore, Energy Secretary Dan Brouillette said the administration would not proceed with either licensing for Yucca or an interim storage facility.

More: *The Hill*

Natural Resources Committee Battles over Tree-planting Legislation

A House Natural Resources Committee panel last week considered two bills that aim to reach net-zero greenhouse gas emissions on public lands by 2040 and plant trees to capture carbon.

Rep. **Raúl Grijalva's** (D-Ariz.) bill, which was introduced last year, would halt fossil fuel production on public lands for at least a year. It would also set five-year targets the Interior Department must meet en route to achieving net-zero emissions on public lands.

Rep. Bruce Westerman's (R-Ark.) tree-planting bill was met with skepticism, as most said it would not do enough to mitigate climate change. This bill aims to set targets for increasing domestic wood growth. Yale University professor Carla Staver said that while "forests do have a role to play ... tree planting alone will not fix our ongoing climate emergency."

More: *The Hill*

Opponents Fault Trump Proposal to Cut Environmental Reviews

Democratic lawmakers, state officials and members of disadvantaged communities spoke out last week against the Trump administration's proposal to streamline reviews of proposed infrastructure under the National Environmental Policy Act.

Many of those speaking at the hearing in an Interior Department auditorium in D.C. were black, Latino and tribal local activists from communities already dealing with pollution from oil refineries, chemical plants, government facilities and other big sources. They credited the half-century-old NEPA with giving poorer communities without much political or economic clout a platform to negotiate with government regulators and big industries.

Business representatives, meanwhile, complained about yearslong environmental reviews under the current rules. The proposed changes mean "timely federal permitting decisions for critical infrastructure projects," encouraging projects like road and bridge building that would ease traffic, reduce highway pollution and improve public safety, said Chad Whiteman, a vice president of the U.S. Chamber of Commerce.

More: *The Associated Press*

FTC Contests Proposed Coal Mining Merger

The Federal Trade Commission last week issued a complaint against the merger between Peabody Energy and Arch Coal, who together account for 60% of coal production in the Powder River Basin in Wyoming, saying the competition to keep prices down would go away.

"That loss of competition would likely raise coal prices to power-generating utilities that provide electricity to millions of Americans," FTC Bureau of Competition Director Ian Conner said.

The FTC requested a temporary restraining order and preliminary injunction in U.S. district court to keep the joint venture from occurring before an administrative trial occurs. Meanwhile, the companies vowed to fight the complaint and keep pursuing the merger.

More: *The Associated Press*

Supreme Court Signals Resistance to Blocking Atlantic Coast Pipeline

The Supreme Court last week suggested it was unlikely to block the $8 billion Atlantic Coast Pipeline, which would transport natural gas from West Virginia to sites in Virginia and North Carolina.

In 2018, the 4th U.S. Circuit Court of Appeals said the U.S. Forest Service did not have the authority to grant a special-use permit that allowed the developers to construct a segment underneath a section of the Appalachian Trail. During arguments last week, some justices questioned that ruling. Chief Justice John Roberts said the environmentalists' arguments could erect an "impermeable barrier" that would prevent any pipeline from crossing the trail and reaching East Coast customers.

The key legal issue involved the intersection of federal agencies and governing statutes, as well as metaphysical discussion of what the word "land" means. The trail is administered by the National Park Service, and environmentalists say this means USFS can't grant the permit. Pipeline developers and the Trump administration say the trail isn't land, but a footpath that traverses land, meaning the pipeline permit is valid.

More: *The Wall Street Journal*

Wind Surpasses Hydro as Most-used US Renewable Electricity Source

U.S. annual wind generation exceeded hydroelectric generation in 2019 for the first time, as wind totaled 300 million MWh and exceeded hydroelectric by 26 million MWh, according to the Energy Information Administration.

Wind capacity additions totaled 10 GW in 2019 (3.8 GW in the fourth quarter), making it the second-largest year for wind additions behind only 2012. Although total installed wind capacity surpassed total installed hydroelectric capacity in 2016, it wasn't until last year that wind generation surpassed hydroelectric generation.

More: *EIA*

State Briefs

ARIZONA

Ducey Signs Bill Prohibiting Local Bans on Natural Gas

Gov. **Doug Ducey** has signed into law House Bill 2686, which will prevent cities and towns from banning natural gas, despite opposition from major cities.

The pre-emption law prevents municipalities from discriminating against utilities in issuing building permits and making zoning decisions, but is expected to benefit the gas industry. The bill was pushed by Southwest Gas, a major gas company in the state, saying the legislation would ensure "homeowners, builders or business owners have access to balanced energy solutions that are efficient, affordable and clean."

The Arizona Chamber of Commerce cited polling that showed 82% of natural gas customers last year were "strongly opposed to natural gas being eliminated from their homes" and added that "74% of respondents were largely unaware of policies to remove the option of natural gas as an in-home energy source."

More: *Phoenix New Times*

CALIFORNIA

PG&E Faces Largest-ever PUC Fine Over Wildfires

The Public Utilities Commission last week issued an administrative law judge decision imposing more than $2 billion in penalties against Pacific Gas and Electric for the utility's role in the 2017 and 2018 wildfires. The penalty — which increased by $462 million (27%) the amount in a settlement between PG&E, the PUC's Safety and Enforcement Division and Office of the Safety Advocate, and the Coalition of

California Utility Employees — is the largest ever assessed by the commission. If PG&E agrees to the modified settlement within 20 days, and no party appeals and no commissioner requests review, it will become the final decision of the PUC.

Of the $2.14 billion penalty, about $1.8 billion would come from forcing shareholders to pay for wildfire expenses that the company would have otherwise tried to recover in rates, along with a $200 million fine to the state's general fund. Also, PG&E would have to spend $114 million on some fire safety efforts — a $64 million increase from the settlement's original plan.

More: *San Francisco Chronicle*

Tesla, PG&E to Build Clean Energy Facility in Monterey County

The Monterey County Planning Commission last week unanimously approved a joint, clean-energy battery farm project between Tesla and Pacific Gas and Electric that officials say would be the largest of its kind in the world. Groundbreaking is tentatively slated for this month with completion scheduled for the end of the year.

The companies would build a wind and solar power storage facility at the Moss Landing power plant, which would use hundreds of lithium batteries to store renewable energy and use existing power lines to transmit energy.

More: *KNTV*

DELAWARE

Judge Nixes Environmental Agency Challenge to Utility Rules

Superior Court Judge **Ferris Wharton** last week rejected a challenge by the Department of Natural Resources and Environmental Control and ruled that it has no standing to challenge regulations issued by the Public Service Commission regarding renewable energy requirements.

Wharton agreed with the commission and the Division of the Public Advocate that the department had no standing to sue because it was neither a "person" nor "aggrieved" under the state's Administrative Procedures Act. The ruling is the latest in a long-running dispute over which agency has the authority to develop regulations regarding how minimum renewable energy purchase requirements can be frozen if they become too costly for ratepayers.

More: *The Associated Press*

IOWA

Cedar Rapids Takes Stand on Climate Change

The Cedar Rapids City Council last week approved a resolution that recognizes climate change and adopted targets for emissions reduction and renewable energy expansion.

Officials said the resolution is a continuation of efforts undertaken previously, including a municipal sustainability plan for city operations. Some of the community's goals include reducing carbon emissions by 45% by 2030, achieving net-zero carbon emissions by 2050 and having renewable energy supply at least 70% of electricity by 2050, among others.

More: *The Gazette*

MAINE

EV Charging Stations Get Boost from Regulators

The Public Utilities Commission last week approved $480,000 in rebates for electric vehicle charging stations.

Through a rebate program run by Efficiency Maine Trust, 60 rebates will be provided for $4,000 each. These rebates will be for Level 2 charging stations. Eighty percent of the rebates will be offered to customers in Central Maine Power's (CMP) service area, with the rest in Emera Maine's. A separate program run by CMP will provide $4,000 in "make ready" work for the electrical infrastructure required to provide for 60 Level 2 charging stations. This program will be offered as an alternative to Efficiency Maine's rebate program, to learn which approach is preferred by customers.

"The commission is pleased to make these awards today to support electrification of the transportation sector," PUC Chair Philip Bartlett said. "As pilots, each program will provide valuable information to inform future policies to support EV deployment in Maine."

More: *Portland Press Herald*

Former Gov. Says He Was Paid to Advocate for CMP Corridor

Former Gov. **Paul LePage** (R) last week confirmed he was paid $7,500 by lobbying firm Mitchell Tardy Jackson to advocate for Central Maine Power's (CMP) hydropower corridor in 2019. LaPage was defeated in 2018 by Gov. Janet Mills (D), who has also shown support for the corridor.

LePage admitted that he was paid by the high-powered lobbying firm, which has worked for CMP since last year, to fend off legislative proposals aimed at killing the $1 billion, 145-mile transmission line proposal that would bring Hydro-Quebec power to the regional grid.

Josh Tardy, a principal at Mitchell Tardy Jackson, declined to give specifics on LePage's work but said he has "extensive political, business and social networks" that are "invaluable" for corridor backers.

More: *Bangor Daily News*

MONTANA

Helena City Commission Backs 100% Clean Electricity by 2030

The Helena City Commission last week unanimously backed a resolution to set a goal of switching to 100% clean, renewable electricity by 2030. The city currently gets 39% of its electricity from fossil fuels.

The proposed resolution calls on leaders to act "swiftly and decisively" to address impacts from climate change and lays out possible actions city leaders could take to move toward clean energy.

City Commissioner Andres Haladay said the resolution will only be a beginning as city leaders will become more forceful in advocating for the transition to cleaner power.

More: *KTVH*

NEW HAMPSHIRE

House Bill Would Require HOAs to Allow Solar Installations

A bipartisan group of lawmakers last week held a work session on a bill that would require condominium and homeowners' associations (HOAs) to allow the installation of solar arrays.

The bill says HOAs must treat solar installation requests as they would any other architectural change and cannot restrict them for aesthetic reasons. It also prohibits restricting solar installations in home deeds or making rules that would increase solar use costs more than 10%.

The bill is expected to hit the House floor by early March.

More: *New Hampshire Public Radio*

NEW MEXICO

PRC Examiners Support Abandoning San Juan Generating Station

Examiners overseeing Public Service Company of New Mexico's (PNM) plans to abandon the coal-fired San Juan Generating Station have recommended the Public Regulation Commission approve the utility's request, saying that hearings have shown "abandonment will cost ratepayers less over the next 20 years than PNM's continued operation of the plant." Most of those savings will come from replacing the electricity with solar, wind, battery storage and natural gas.

In a separate decision, the examiners also recommended PNM be allowed to use bonds to finance up to $361 million related to the abandonment, which would be paid by customers through a surcharge. Use of the bonds to finance the transition from coal is authorized by the Energy Transition Act. The bonds guarantee PNM would recover $283 million in lost investments that come from abandoning the plant ahead of schedule. In exchange, company shareholders must forgo profits on investments recovered through bond financing.

More: *Albuquerque Journal*

OREGON

GOP Senators Boycott Session

For the second time in less than a year, 11 Republican senators walked out of the State Capitol to protest Senate Bill 1530, which aims to cut the greenhouse gas emissions, and prevented the Senate from taking votes.

SB 1530 seeks to cap and shrink greenhouse emissions by creating a market for allowances or permits for companies to pollute. The idea is to nudge the economy away from fossil fuels and toward renewable sources. The walkout, which was anticipated since lawmakers convened in early February for a session that must finish by March 8, could also derail or postpone proposals to ease the homelessness crisis, boost funding for state troopers or tighten gun laws.

If Senate President Peter Courtney wishes, Gov. Kate Brown can call on the State Police to bring the legislators back, as she did last year when Republicans did the same thing. Brown could also call a special session, which would have no mandatory end date, but she has yet to reveal her plans.

More: *Oregon Capital Bureau*