

# RTO Insider

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

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February 16, 2021

## ERCOT, MISO, SPP Cut Loads in Wintry Blast

By Amanda Durish Cook and Tom Kleckner

ERCOT, MISO and SPP cut loads Monday as an unprecedented winter storm shut down wind turbines and fuel shortages idled gas-fired generation, reducing supply in the face of record winter demand.

SPP initiated its first rolling blackouts in its history, while ERCOT did so for the first time in a decade. For MISO, it was the second load-shedding event in less than six months. ERCOT prices have been touching the \$9,000/MWh cap since Saturday, while MISO saw prices close to \$1,000/MWh.

In a press conference Monday, Dan Woodfin, senior director of system operations, said multiple generators began tripping offline Sunday night in “somewhat rapid progression due to the weather” after the grid operator had set a new winter peak record of 69,150 MW earlier that evening.

At 1:25 a.m. CT, ERCOT declared a level 3

energy emergency alert and asked transmission owners to take 16,500 MW — or about 3.3 million homes — of load offline based on load-ratio-share basis.

About 34 GW was unavailable as of noon, including a significant number of gas units because of restrictions on the gas system and wind facilities because of icing on turbine blades.

“As more generators tripped offline, we had to implement more of these controlled outages to protect the system as a whole,” Woodfin said. “It became such a big number that the transmission providers are having difficulty with their normal rotations. They just don’t have enough options that don’t have critical facilities like hospitals and first-responders. They’ve kind of used all the circuits that they can to balance supply and demand.”

He added that ERCOT has seen a slow down in the number of generators tripping offline. “We don’t think these outages will be multiday



Iced meter in Texas | Kerrville Public Utilities Board

outages. We think they should be able to come back in a number of hours.”

The last time ERCOT had to institute rolling

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## Southeast Seeks FERC OK for Expanded Bilateral Market TVA, Southern, Duke Lead Proposed 11-state Market

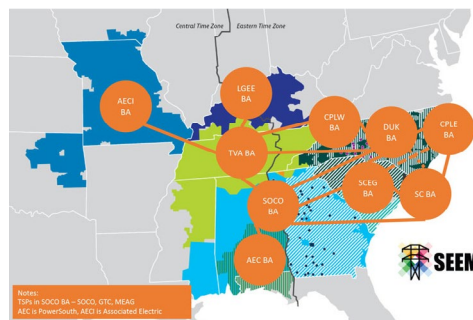
By Rich Heidom Jr.

Utilities and cooperatives in 11 Southeastern states on Friday proposed using automation and free transmission capacity to expand bilateral trading and allow 15-minute energy transactions.

Led by the Tennessee Valley Authority, Southern Co. and Duke Energy, the Southeast Energy Exchange Market (SEEM) seeks to reduce the “friction” in bilateral trading by using an algorithm to match buyers and sellers and eliminating transmission rate pancaking in the region’s 10 balancing authority areas.

Electric providers purchase cheaper power when they can back down more expensive generation in their own fleets; sellers earn profits to offset their operating costs.

To make a transaction currently “the parties must discover one another, negotiate the



The Southeast Energy Exchange Market would include 19 utilities and cooperatives in 11 states. | Southeast Energy Exchange Market

terms of the sale, arrange and pay for transmission service across all utilized transmission systems, and schedule the delivery of energy. All of this is done with ‘traditional’ methods of communication, by phone and electronically, thus creating transactional friction,” Southern

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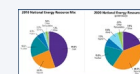
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## NetZero Insider

Your Eyes and Ears on Climate Policy and Adaptation  
Building & Transportation Electrification ■ Federal & State Policy

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**EEL: Net Zero by 2035**  
‘Incredibly Difficult’  
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**CPUC Triples**  
**Resource Projections**  
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**FCA 15 Closes with Big**  
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Your Eyes and Ears on the Organized Electric Markets  
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# NetZero Insider

Your Eyes and Ears on Climate Policy and Adaptation

Building & Transportation Electrification ■ Federal & State Policy



## Coming Soon: *NetZero Insider*

*The only publication covering climate policy from inside the room in D.C. and the state capitals*

The Biden administration and half of the states in the U.S. have pledged to reduce their carbon emissions to net zero by the middle of this century, an ambitious goal that scientists say is needed to address climate change.

Meeting states' goals will require decarbonization and electrification on an unprecedented scale, trillions in spending, and major changes to nearly every sector of the state economies, particularly transportation and buildings.

Despite the high stakes, news coverage of these initiatives, particularly at the state level, is spotty. *NetZero Insider* will fill the void for businesses, attorneys, environmental organizations and other stakeholders. Our reporters in D.C. and the state capitals will provide exclusive coverage of policymaking to adapt to climate change and reduce greenhouse gas emissions.

We go into the rooms to answer the questions: What approaches are working? Which are not? What's next?

The *NetZero Insider* website will be launching later this month. In the meantime, check out this preview of our coverage in *RTO Insider*:

- Net Metering Reform Means Asking New Questions
- As EVs Have Their Media Moment, Regulators Get to Work
- Utilities Urged to Improve EV Charging Efficiency
- Congress Urged to Codify Clinton Order on Enviro Justice
- CCAs Team Up to Buy Clean Energy, Storage Capacity
- Nev. Bill Would Spur Tx, Clean Energy Buildout
- NYPSC OKs Clean Energy Programs, Local Tx Planning
- Maine Lawmakers Chase Affordability in Energy Transition
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- Bipartisan Agreement on Minn. Climate Bills Unlikely
- NYISO Proposes 'Grid in Transition' Metrics
- Wash. EV Bills Spark Concern About Build-out
- Wash. House Tackles Bill to Cut Vehicle Emissions
- Inslee Pursues Climate Moonshot in 3rd Term

## Net Metering Reform Means Asking New Questions

*NARUC Panel Calls for Balance, Trade-offs and Keeping Policy Options Open*

By K Kaufmann

The future of net energy metering — and how solar owners should be compensated for the power they put back on the grid — begins with asking the right questions, says Mohit Chhabra, senior scientist at the Natural Resources Defense Council.

"We often talk about net metering as an absolute, when the question really is: net metering and what?" Chhabra said during a panel discussion on NEM on Feb. 9 at the National Association of Regulatory Utility Commissioners Winter Policy Summit. "What is the value of solar in my region? What are your energy and climate policy goals? Once you've determined that value of solar, how do you best reflect that in a way that's easy to understand and manage in rates?"

First introduced by states when rooftop solar costs were high, NEM was intended to help residential customers offset their upfront costs by paying them retail electricity rates



| FLS Solar

for their excess power. NARUC said in a [FERC filing](#) last June that net metering programs are available in 48 states and D.C. (EL20-42). (See [FERC Rejects Net Metering Challenge](#).)

NEM has long been a flashpoint between

solar installers and utilities. Discussions have shifted toward looking at net metering in the larger context of rate redesign as increasing amounts of distributed energy resources come onto the grid. The issue now is not whether the

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incentive needs to change, but how, a theme echoed at a previous session at the Policy Summit. (See *Net Metering Successors Need 'Holistic Approach.'*)

"It's really a blunt instrument," said Emily Fisher, general counsel and corporate secretary at the Edison Electric Institute, the trade association for investor-owned utilities. "It needs to be refined because the value that rooftop solar provides is really dependent on where it is and when it's being used."

She reframed the question for the panel: "How do we make it the most useful tool possible for accomplishing the goals we collectively have?"

## A Mature Technology

Vermont provides a case in point. Net metering has driven a thriving solar industry in the state, where incentives are available not only for small rooftop installations but for commercial projects up to 500 kW, Vermont Public Utility Commissioner Sarah Hofmann said. The state also offers additional incentives for projects built in "preferred locations," such as brownfields or parking canopies, she said.

About 30% of the state's peak load now comes from net-metered solar, Hofmann said, but that success has come with problems. As in other states, Vermont utilities argue that net metering has shifted fixed costs for transmission and distribution from net-metered customers to those without solar, many of them low-income consumers. Bottlenecks are also occurring in remote areas of the state where new solar projects cannot export power without jeopardizing the grid, she said.

NEM "does have to change and evolve. Basically, [solar] is a mature technology at this point, and you make different regulatory decisions

when something has matured."

Vermont's most recent revision to the NEM compensation structure — the fourth since 2017 — will see residential rooftop rates step down from 17.4 cents/kWh to 16.4 cents and later in the year, to 15.4 cents.

## Incentive or Price Signal?

States with strong solar markets have rolled out a range of NEM successors, underlining the diverse, regional nature of possible alternatives. California has retained retail NEM but tied compensation to time-of-use rates.

Customers get a lower payback for excess solar put on the grid at mid-day, but pay higher, peak rates for power they use from the grid in the late afternoon and evening. As a result, the residential storage market has been growing in the state, allowing solar customers to store their mid-day power and either use it or put it back on the grid later in the day. The California Public Utilities Commission is now working on another update, NEM 3.0.

Hawaii, which has the highest penetration of rooftop solar in the nation, ended retail rate net metering in 2015. The state has since introduced tariffs that encourage customers to consume as much of the power they produce as possible, or limit the amount they can export, again raising consumer interest in residential storage.

Most recently, the Arizona Corporation Commission approved a technology-agnostic compensation plan for a range of DERs. Rates are based not on specific technologies, but on the resources or services they provide to the grid. (See *States Working out Details of 100%.*)

Kevin Lucas, senior director of utility regula-

tion and policy at the Solar Energy Industries Association (SEIA), said the initial successes of net metering in high-penetration markets underline why it should be retained in states where residential solar is still in its early stages. While acknowledging that changes are needed, he said, the rules should be kept simple, especially for residential and small business customers.

The residential solar market is itself resilient, adjusting to changes in net metering rates and the COVID-19 pandemic — a point often unacknowledged in policy discussions like those at NARUC. According to the most recent *market report* from Wood Mackenzie and SEIA, after a pandemic-related drop in the second quarter of 2020, residential solar has rebounded, and some installers are reporting strong pipelines. The two-year extension of the 26% federal investment tax credit for solar, enacted in December, should also help maintain market growth. (See *Wind, Solar, EE, CO2 Storage Win Tax Breaks.*)

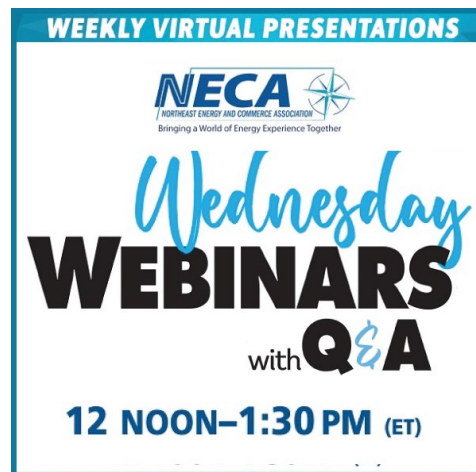
Going forward, rate and NEM redesign will require balance, tradeoffs and keeping all policy options open, Lucas said.

"When you get to very high levels of penetration and you start to focus on how do we deeply decarbonize the system, you start to have some unique trade-offs that you might not have had. The picture changes a bit as you advance," he said.

"It's good to remember that net metering isn't the only way to promote solar," Chhabra added. "Additional incentives could be built into rates. It's striking the right balance between sending more accurate price signals and sending the right level of support and having the right policies in place." ■



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## As EVs Have Their Moment, Regulators Get to Work

### Patchwork of State Laws Could Put Brakes on Market Growth

By Jonathan Berr

The media spotlight in 2021 on electric vehicles has been intense thanks to multibillion-dollar investment announcements from General Motors and Ford, and President Joe Biden's plan to convert the federal fleet to EVs. However, state utility regulators say unlocking the technology's potential is going to take some work.

Speaking at the National Association of Regulatory Utility Commissioners' (NARUC) Winter Policy Summit, regulators said that the media has hyped EVs before and that the public has qualms about the technology's cost and reliability, which need to be addressed. Bob Gordon, a member of the New Jersey Board of Public Utilities, outlined the industry's daunting challenges in a panel discussion Feb. 9.

"State utility regulators are wrestling with some very tough issues, such as are public incentives needed to advance electrification, and if so, how should it be done, and who should pay for it?" Gordon said. "Should the incentives be designed to promote vehicle sales or the development of charging infrastructure? What are the respective roles of utilities and private investors? How should we address equity concerns? And what is the appropriate role of the federal government as opposed to the states?"

### Patchwork of 50 Laws

EV industry challenges include a confusing and often contradictory patchwork of state laws that govern automakers.

For instance, more than a dozen states accept California's *emissions standards*, which are stricter than the EPA's because the Golden State's air pollution is the worst in the country. California and *Massachusetts* recently announced bans on new gasoline-powered vehicle sales beginning in 2035. New Jersey has *set a goal* of eliminating internal combustion vehicles by 2035, though it has stopped short of a formal prohibition.

"A patchwork certainly makes things much more difficult," said Dan Bowerson, director of environment and energy at the Alliance for Automotive Innovation. "We've seen a lot of areas where mandates don't necessarily make markets."

Tesla and Uber recently joined forces with smaller rivals including Rivian and Lucid Mo-



| EVgo

tors to form a trade group, the Zero Emission Transportation Association, which is targeting 2030 for 100% of new car sales to be electric.

The 2030 goal is "something we think from a raw materials perspective, a consumer perspective and a technology perspective is achievable," said Tesla Senior Global Policy Director Rohan Patel.

### Automakers Seek to Make the Leap

Automakers currently make about 40 EV models. In five years, they will offer 130 EVs, making up 1% of all vehicles on the road, according to Bowerson. Dismissed by automakers for years, EVs are now seen as vital in fighting climate change.

Even so, the technology remains a tough sell to many consumers.

"So, that leaves traditional auto manufacturers, such as Ford and G.M., trying to figure out how to make this leap before the government mandates electric vehicles [or] they have their lunch eaten by companies like Tesla," Chairman Jason Stanek of the Maryland Public Service Commission said.

Utilities have an integral role in promoting EVs.

For instance, Baltimore Gas and Electric provides calculators on its website to enable consumers to compare the costs of fueling a

conventional vehicle to powering an EV. It also provides information on the environmental benefits of EVs and offers special electric rates to EV owners.

"Often when a customer purchases an electric vehicle, they're looking to their utility for information on when it's best to charge and are there any special rates available to them," said Kristy Fleischmann Groncki, manager of strategic programs at BGE. "They ask questions about how to have a charging station [installed]."

### Charging Network Challenges

Still, more work is needed to establish a charging network that is extensive enough to combat "range anxiety," the fear that an EV will run out of power. Royal Dutch Shell's plan to up its global EV charging network from 60,000 chargers to 500,000 by 2025 reflects the goal of making vehicle charging as convenient as filling up at the gas station.

The industry is also facing legal issues, such as the decades-old federal *law* that prevents thousands of rest stops on federal highways from offering charging for EVs.

Tesla is developing a charging network though it loses money on the service, Patel said.

"I don't know of a good business case for charging infrastructure, period, let alone, charging infrastructure in places that have low utilization," he said. "We're investing a ton of money into those charging stations because we know that that's the way to drive vehicle sales growth." ■



Maryland PSC Chair  
Jason Stanek | @RTO  
Insider

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## Utilities Urged to Improve EV Charging Efficiency

By Jennifer Delony

Utilities need to offer electric vehicle rate designs that will encourage customers to use EVs in the most efficient ways possible, such as utility-managed charging, according to Rachel Gold, director of the utilities program at the American Council for an Energy-Efficient Economy.

“A lot of utilities around the country are offering rate designs [for grid services],” Gold said during a National Association of Regulatory Utility Commissioners Winter Policy Summit panel discussion Wednesday. But “there are very few utilities that are offering managed charging programs right now.”

She also discussed utilities’ role in charging infrastructure deployment.

“Most of the investment that we’ve seen [by utilities] has been targeted at the traditional role of the utility as an infrastructure company,” Gold said, especially, she added, in Level 2 charging infrastructure.

She said utilities could focus on incentivizing investments in fast charging infrastructure,

specifically fast charging usage by EV fleets.

Within charging infrastructure investment strategies, utilities have been successful in targeting opportunities to address multiple market and community benefits at once.

“We’ve seen utilities targeting low-income, economically distressed or environmental justice communities,” Gold said. “We’ve also seen targeting at bus charging or medium- and heavy-duty fleet charging in places where there’s an air quality benefit and, in particular, where there’s an air quality benefit that overlaps with low-income communities.”

### Colorado’s Approach

Colorado Public Utilities Commissioner John Gavan said utilities in his state were directed by law in 2019 to develop transportation electrification plans that would help the state reach its target of putting 940,000 EVs on the road by 2030.

“Today we only have 33,000 EVs on the road, with less than 4,000 charging ports across the entire state,” he said. “Growing to a 940,000-vehicle level — which would be half

our cars — by 2030 represents a huge shift for the state.”

While most of the utility plans on transportation electrification in Colorado focus on building out charging infrastructure, regulators worked to ensure utility activity does not conflict with the emerging private charging economy, Gavan said.

He said that the initial charging infrastructure deployments under the transportation electrification plan from Xcel Energy Colorado focused on multifamily dwellings and lower-income neighborhoods. The utility is also focusing on Level 2 and fast charging deployments for areas that do not support a strong commercial business case.

Gavan said that the PUC has allowed Xcel to own EV charging infrastructure and promote managed charging, “but we did not support a broad EV purchase rebate.” The commission instead targeted the rebate program to income-qualified buyers.

That program investment, he said, totals \$107 million over three years and carries a monthly bill impact of 68 cents per ratepayer. ■



Building and incentivizing EV charging, like the home charger shown here, is an emerging role for utilities in the coming transportation electrification. | Enel X

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## Congress Urged to Codify Clinton Order on Enviro Justice

By Jennifer Delony

President Biden's early directives on environmental justice do not go far enough, Kerene Tayloe, director of legislative affairs for WE ACT for Environmental Justice, told a U.S. House of Representatives subcommittee Feb. 9.

Rather than just receiving an update from Biden, Tayloe said, President Bill Clinton's 27-year-old Executive Order 12898 should be codified.

"Depending on the president in office at the time, [EO 12898] doesn't always get the attention and federal support that we need, so in addition to updating and strengthening the executive order, we also think it's critical to codify that order," she told members of the House Energy and Commerce Subcommittee on Environment and Climate Change.

Biden signed an executive order on Jan. 27 that established the Environmental Justice Interagency Council and Environmental Justice Advisory Council within the White House. He directed those bodies to advise the administration on ways to update EO 12898.

The original purpose of Clinton's order was to bring attention to how federal actions affect the environmental and human health of minority and low-income communities. That order also established an Interagency Working

Group, but Tayloe said the order could be strengthened by ensuring there is a focus on environmental justice across government agencies.

Rep. Raul Ruiz (D-Calif.) said during last week's hearing that he will reintroduce legislation that would, among other things, codify parts of EO 12898. Called the Environmental Justice Act, the bill was introduced last year and passed the House as part of the Clean Economy and Jobs Innovation Act.

"I'm hoping it will get signed into law this Congress because codifying the order will strengthen compliance and protection," Ruiz said.

### Justice40

In her testimony, Tayloe outlined ways that communities of color can be part of the work the Biden administration has initiated on climate and environmental justice.

She applauded Biden's Justice40 initiative, which seeks to deliver 40% of the benefits of federal climate investments to disadvantaged communities, but she also urged inclusiveness in that process.

"I think it would be critical to have very strong engagement with communities for us to articulate how we would like to see that 40% [realized]," she said, adding that workforce development and transportation are among



Kerene Tayloe, director of legislative affairs for WE ACT, speaks during a virtual hearing of the House Energy and Commerce Subcommittee on Environment and Climate Change | U.S. House Energy and Commerce Committee

the ways WE ACT might like to see funds allocated.

Tayloe said prioritizing communities of color for Justice40 recognizes that those communities have been disproportionately affected by climate change.

"While we all are experiencing extreme heat and storms, unfortunately our communities get the brunt of that, and unfortunately there hasn't always been the same level of support in helping [those communities] recover from these major climate experiences," she said.

She said Justice40 needs to ensure that environmental justice organizations "be at the table."

### Working Group

Federal action on climate change, Tayloe said, also would benefit from a climate justice working group similar to one established in New York state under the Climate Leadership and Community Protection Act (CLCPA).

The New York working group includes community stakeholders, such as WE ACT, and government experts to guide clean energy investment.

"We're really proud of the work that we did around CLCPA to get that passed," she said. "For New York to lead the country in creation of such important climate policy shows what we can also duplicate it at the federal level, and having a working group for communities to be a part of is critical!" ■



Members of the House Subcommittee on Environment and Climate Change heard from witnesses on federal climate leadership and the role of environmental justice. | Raul654, CC-BY-SA-3.0-migrated, via Wikimedia Commons

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## CCAs Team up to Buy Clean Energy, Storage Capacity

By Hudson Sangree

Eight of California's community choice aggregators said Feb. 8 they will join forces to create one of the state's largest procurement entities to buy renewable energy and storage capacity.

Together the CCAs in Northern and Central California represent 2.6 million customer accounts with load equivalent to about 40% of Pacific Gas and Electric, the state's largest utility.

PG&E has 5.1 million customers, slightly more than the state's second largest utility, Southern California Edison. San Diego Gas and Electric, the state's third largest utility, has 1.4 million electric customers.

"Overcoming our climate crisis and making our grid clean and reliable will require the kind of strength in numbers that these eight CCAs are showcasing," Peninsula Clean Energy CEO Jan Pepper said in a statement.

The members of the new joint powers authority (JPA), called California Community Power,

are Peninsula, Central Coast Community Energy, East Bay Community Energy, MCE (formerly Marin Clean Energy), Redwood Coast Energy Authority, San Jose Clean Energy, Silicon Valley Clean Energy and Sonoma Clean Power. A ninth CCA, CleanPowerSF, is pursuing membership.

The JPA, an organization of public entities representing separate jurisdictions, will have greater negotiating power and be able to procure larger amounts of renewable and storage resources than individual CCAs, members said.

"Over the years, as the CCA movement has grown, there has been an increase of CCA joint procurement efforts for large-scale renewables and energy storage projects," Beth Vaughan, executive director of the California Community Choice Association (CalCCA), said.

One combined effort involves procuring 500 MW of long-duration storage in a 10-year contract. The request for offers was issued in October and the CCAs are evaluating proposals, with a final decision expected by July.

CCAs have spread rapidly in the past decade, drawing ratepayers from the state's three large investor-owned utilities, and now serve roughly 11 million customers in 190 cities and counties, according to CalCCA. Many have more aggressive clean energy goals than California's mandate, under Senate Bill 100, that load-serving entities provide retail customers with 100% clean energy by 2045.

Divisions remain, however, with some lawmakers and state regulators concerned about whether CCAs can procure sufficient resources to meet demand. (See [Calif. Lawmakers Reveal Growing Divisions over CCAs.](#))

In June, the California Public Utilities Commission named PG&E and Southern California Edison, the state's two biggest investor-owned utilities, as central buyers to procure resources for LSEs in their service territories, including CCAs, that are unable to meet demand. (See [California PUC Approves Microgrids, Fire Plans.](#))

Whether the formation of the JPA alleviates concerns about CCAs resource adequacy remains to be seen. ■



CCAs are banding together to buy renewables and storage. | Silicon Valley Clean Energy



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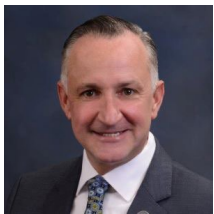


## Nev. Bill Would Spur Tx, Clean Energy Buildout

Other Bills Tackle 'Classic Car' Emissions, Gas Investments, Energy Efficiency

By Elaine Goodman

Nevada lawmakers are planning to introduce an array of clean energy bills during the 2021 legislative session, including a measure that could pave the way for a massive expansion of electric transmission in the state.



Sen. Chris Brooks | Nevada Legislative Counsel Bureau

Sen. Chris Brooks (D) is crafting a bill that he says would incentivize and prioritize new electric transmission in the state, potentially creating about \$10 billion worth of investment in clean energy.

"I'm really looking forward to being able to

expand the clean energy opportunities in the state of Nevada through transmission investment," Brooks said during a meeting this month hosted by the Nevada Conservation League. "I think it's long overdue."

Brooks told *RTO Insider* that he's still working with stakeholders to hammer out details of the bill, which had not yet been introduced. While specifics of the proposal were not yet available, he said the incentives are not likely to be financial. Instead, the bill would provide ways to facilitate new transmission projects.

Transmission won't be the only focus of Brooks' omnibus legislation, which the senator informally called his "big energy bill." Other components will include plans for electric vehicle charging infrastructure and measures that would create rooftop solar energy opportunities for renters and multifamily housing residents.

Another piece of the legislation aims to align electric utilities' integrated resource planning process with the state's carbon reduction goals.

"It won't just be the renewable portfolio standard anymore that is guiding how we invest in clean energy in the state," Brooks said. "We're actually going to use the carbon reduction goals of the state to guide clean energy investments."

The Nevada legislature, which meets every other year, convened on Feb. 1 for a session that will run through May 31. Brooks and other lawmakers outlined their clean energy plans

during a Nevada Conservation League meeting on Feb. 1, held via Zoom.

Although lawmakers are grappling with the COVID-19 pandemic's economic impacts, they said they are still determined to make progress toward climate objectives this session. Nevada has set a goal of net-zero greenhouse gas emissions by 2050.

"Even in the midst of a pandemic, even in the midst of a massive economic downturn, we can take advantage of this legislative session to move the ball forward on climate and also create jobs — good-paying jobs — and tax revenues," Brooks said. "We can achieve all of the goals at the same time."

### 'Classic Car' Loophole

In addition to Brooks' energy bill, Assemblyman Howard Watts (D) is planning a bill to reduce vehicle emissions by closing what's been called the state's "classic car" loophole.

The state allows cars that are 20 years or older to be registered as classic vehicles, which exempts them from smog checks. Critics point to cars that many people wouldn't consider a classic — such as a 2000 Honda Accord — which may qualify for the exemption and remain on the roads as gross polluters.

Watts said his bill would not only close the classic car loophole but also increase smog check fees to raise funds for a variety of programs. Those would include assistance to low-income residents to repair their cars to meet emission standards or even to buy a new electric vehicle.

Chispa Nevada, a Las Vegas-based environmental conservation organization, has championed the proposal.

"We like the idea of creating/identifying funds for programs that help low-income customers repair their polluting vehicles or replacing them with cleaner versions like ... low- or zero-emission cars," Program Director Rudy Zamora said. "Oftentimes when we talk about electric vehicles, we forget about our communities — low-income communities, communities of color."



| DOE

### Natural Gas Under Scrutiny

The Natural Resources Defense Council (NRDC) is also crafting legislation for the 2021 session.

One proposed bill calls for increased scrutiny of investments in natural gas infrastructure.

"As Nevadans use less methane gas in homes and businesses ... gas utilities are at risk of wasting ratepayer money on unnecessary construction projects," said Dylan Sullivan, a senior scientist with the NRDC. Sullivan said Assemblywoman Lesley Cohen (D), had agreed to sponsor the bill.

NRDC's second piece of proposed legislation would focus on energy efficiency programs. Although NV Energy runs a number of such programs, Sullivan said the utility is not doing enough. The bill would make some energy-savings targets mandatory and increase targets for programs geared toward low-income residents. The bill would also give regulators the option to designate a third party to run the programs.

Two bills are likely to come out of the Legislative Committee on Energy, a panel of six lawmakers that meets between legislative sessions to discuss energy matters. Assemblywoman Daniele Monroe-Moreno (D) chairs the committee, and Brooks is vice chair.

One of the committee's proposals would amend the Nevada constitution to allow proceeds from gas taxes or vehicle license and registration fees to be used for transit projects. Currently, the use of those funds is restricted to the construction, maintenance, operation and repair of public highways.

The second proposal would establish a working group to develop preliminary plans for a sustainable system of transportation funding. The group would study topics including the needs of bicyclists, pedestrians and transit users, as well as ways to reduce transportation-related GHG emissions. ■

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## NYPSC OKs Clean Energy Programs, Local Tx Planning

By Michael Kuser

The New York Public Service Commission on Thursday approved several programs to speed up the state’s transition to renewable energy.

The measures include money for communities hosting solar or wind resources and those losing old power plants and their tax payments, new regulations on handling utility and customer data related to energy usage, and a mechanism for utilities to bypass rate case proceedings in local transmission planning.

The PSC also granted a certificate of environmental compatibility and public need to New York Transco to build a new, double-circuit 54-mile 345/115-kV transmission line, estimated at \$530 million, along the Hudson River from near Albany down to Dutchess County (Case No. 19-T-0684). The commission also approved the 20-mile, 345-kV Empire State Line project by NextEra Energy Transmission New York in the western part of the state (Case No. 18-E-0765).

New York state agencies last month released a study that urges faster permitting, planning and approval to build the transmission needed to integrate nearly 40 GW of new renewable

energy into the grid over the coming decades. (See *NY Grid Study Pushes Meshed OSW Tx, Coordination.*)

The commission’s fast pace is being driven by New York’s Climate Leadership and Community Protection Act (CLCPA), which requires the state to consume 70% renewable electricity by 2030, switch to 100% zero-emission power by 2040 and reduce greenhouse gas emissions to 85% below 1990 levels by midcentury.

### Utility Leverage

The PSC unanimously approved a “Phase One” local transmission planning mechanism that allows utilities to bypass the usual rate case process and acquire funding approval by petitioning the commission for such authority (Case No. 20-E-0197).

The state’s investor-owned utilities on Nov. 2 jointly filed a *report* in which they collectively proposed to undertake about \$7 billion in transmission and distribution upgrades by 2025 (Phase One) and another \$10 billion in projects for the following five years (Phase Two). (See *Meshed OSW Tx Grid May Work Best, NY Officials Hear.*)

The commission’s order said that relying

strictly on rate case cycles to provide for cost recovery of proposed Phase One projects may delay achievement of CLCPA goals.

“However, we expect that this mechanism will be needed only in the short term ... and once those [CLCPA] deadlines and requirements are incorporated into the utilities’ capital planning processes and rate plans, the commission does not anticipate a continuing need to rely on petitions for incremental funding of Phase One projects,” it wrote.

“In my eyes, this is a thoughtful and practical item founded on an open and thorough process founded on ample opportunity for input, and in fact ample and helpful uptake on that opportunity,” said PSC Chair John B. Rhodes, presiding over his last session before his term of office expired Feb. 1. “It represents the next milestone to developing out the grid that we know we will need, in today’s case both on the distribution and local transmission side of the grid.”

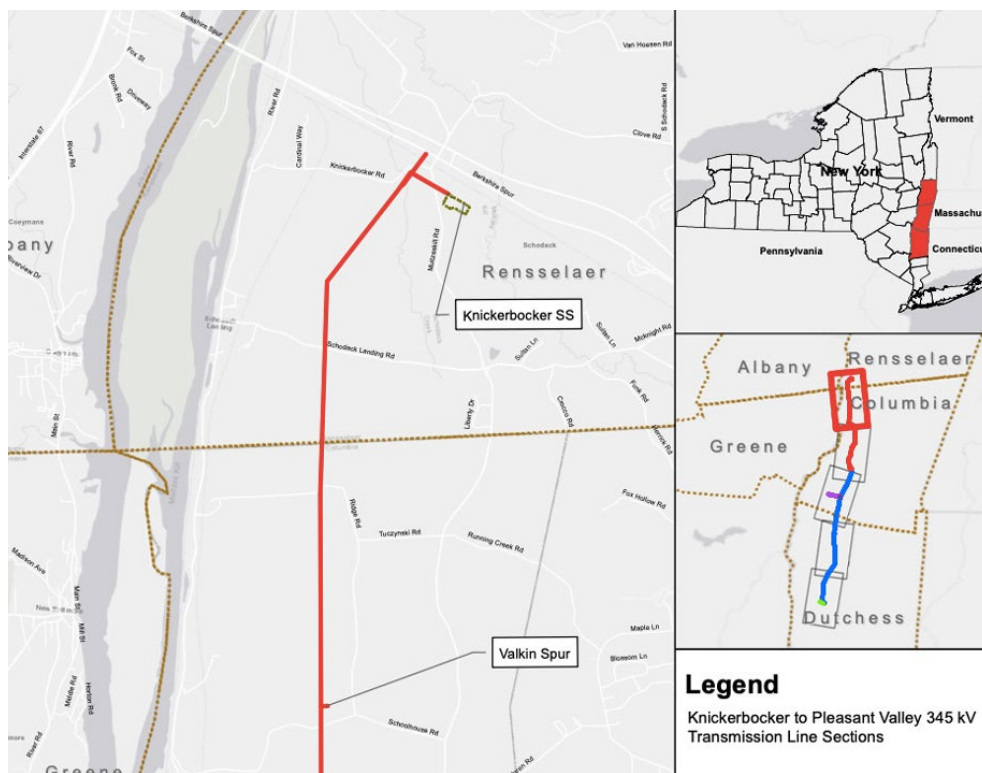
“This really does mark the change in how transmission planning moves from serving native load, exclusively at lowest cost, to a more environmentally sensitive and environmentally driven system,” Commissioner John Howard said. “Most of the items here on Phase One were going to go forward regardless of the CLCPA, and we do get some tremendous environmental benefits by their construction.”

Most comments on the docket supported approval of the proposed Phase One projects, but the state’s Utility Intervention Unit, the City of New York and LS Power Grid New York filed comments opposing some or all of the projects on the basis that they either go beyond the scope of the PSC’s initial grid study order last May or that the utilities failed to provide adequate details or cost information.

In its *comments*, Multiple Intervenors, a coalition of about 60 large industrial, commercial and institutional energy customers, asked “that more robust cost-containment measures be applied to CLCPA-driven projects and especially those approved outside of the rate case process.” The group recommended NYISO’s public policy transmission planning process as a framework under which “developers submit highly detailed proposals” to allow the ISO to assess viability and sufficiency.

### Relying on Property Taxes

The PSC unanimously approved a program that provides bill credits to residential electric



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customers in municipalities in which major renewable energy facilities are located, possibly dampening local opposition to such projects (Case No. 20-E-0249).

The type and size of the facility determine the amount of the credit. Any new solar or wind project greater than 25 MW that goes into service after April 2020 will be required to pay the utility serving the affected municipalities an annual fee of \$500/MW and \$1,000/MW of nameplate capacity, respectively.

Howard was not entirely pleased with the host community benefit program but said he was encouraged by the provisions to assess its effectiveness every two years.

“In the interim I would urge all municipalities that border host communities for large-scale renewable projects engage in the siting process to assure that any affected residences receive compensation under this program,” he said.

Two other energy-related items on the consent agenda had one or two votes in opposition, either from one or both of the Republican members on the five-member commission.

Commissioner Diane X. Burman provided the only dissenting vote on creating an integrated

energy data resource that will provide a platform for collecting, integrating, managing and accessing customer and system data from the state’s energy utilities (Case No. 20-M-0082).

“While I think that the proposal for a statewide integrated energy data resource may have some merit, it is something we should not undertake as a commission right now,” Burman said, adding that the arrangement needs more discussion. “Frankly, I think we can and should wait until the new, permanent chair to decides if this is the direction ... to have staff deeply invested in.”

Both Burman and Howard voted against authorizing the New York State Energy Research and Development Authority (NYSERDA) to provide approximately \$12.5 million each year through 2029 to help local communities offset the loss of property taxes that typically occurs when a large power plant closes (Case No. 20-E-0473).

The plant closing mitigation program will not be backed by imposing incremental funding obligations on ratepayers. Instead, NYSERDA would transfer Regional Greenhouse Gas Initiative (RGGI) funding to Empire State Development for the program, with aid not to exceed \$112.5 million in total through 2029.

“I must say I’m very troubled by this item for several reasons, first being the use of RGGI funds to compensate communities for loss of property tax revenues due to power plant closures,” Howard said.

The legislature has the power to compensate the loss of tax revenue in various ways, and the new program “takes off any veil” from RGGI and related fees on emitters or ratepayers being taxes, and in fact fungible, thus able to be used for purposes not foreseen when the environmental programs were created, he said.

“This is a perfect example of our state’s over-reliance on property taxes to fund essential local services,” Howard said. “No state taxes energy infrastructure to the extent that we do in New York. ... We also need to understand that massive capital investments to meet the carbon reduction goals of the CLCPA will only exacerbate this this very flawed system.”

The PSC approved a resolution to petition Gov. Andrew Cuomo to increase the number of commissioners on the board from five to seven, given the increasing workload for commissioners and staff. The session closed with PSC Secretary Michelle Phillips reading a resolution from staff and commissioners thanking Rhodes for his “faithful service to the residents of New York.” ■



Funding for the Electric Generation Facility Cessation Mitigation Program is intended to help towns like Cortlandt and Buchanan, which will lose millions in tax payments from the imminent closure of the Indian Point nuclear plant. | Port Cortlandt

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## Maine Lawmakers Chase Affordability in Energy Transition

By Jennifer Delony

Maine legislators and officials gave a preview of their work this year in implementing the state's energy policies while keeping costs to consumers low.

Following a surge of new climate-related legislation passed in Maine last year, state legislators are now trying to balance the need to meet mandates without burdening ratepayers.

Understanding the financial ramifications of energy-related policies "is constantly my No. 1 priority," Sen. Trey Stewart (R) said Wednesday during a [preview](#) of the joint Energy, Utilities and Technology (EUT) Committee's work this legislative session.

Stewart called Maine's new climate laws "admirable," but he said the costs of achieving them "will become a problem at some point." Last year the Legislature passed legislation relating to, among other things, the state's emissions and renewable portfolio standard; net metering; offshore wind; heating; electric vehicles; and transmission alternatives.

This year's legislative session will give lawmakers a chance to adjust the bills passed last year, Dan Burgess, director of Maine's Energy Office, said during the webinar, hosted by E2Tech.

"I think [this session] is an opportunity to continue the progress that we've made in order to create economic opportunities within the energy space and to ensure that we're keeping affordability in mind," he said.

Rep. Nicole Grohoski (D) said that her priority for this session is to make sure that the energy transition is affordable and equitable for residents. She said the EUT Committee will consider a group of bills that deal with financing and accessing lower-cost capital.

Those bills address, for example, commercial property-assessed clean energy (C-PACE) financing, heat pump incentives and even a green bank, she said. In addition, there are legislative efforts related to creating a consumer-owned utility to unlock access to revenue bonding and low-cost capital for a large-scale grid buildout to support electrification of major sectors.

Grohoski said that she is sponsoring a bill this year to create a generation authority in the state that would also provide nontaxable low-cost capital through revenue bonds for local



Maine lawmakers are looking at ways to make the state's climate goals, such as putting 41,000 electric vehicles on the road by 2025, affordable for ratepayers. | [Chevrolet](#)

clean energy developers.

### New Reports

Burgess said that the Energy Office will release information soon related to progress of the Maine Climate Council's strategic initiative to create a clean transportation roadmap for the state. Initial estimates from the council show that the state needs to have 41,000 light-duty EVs on the road by 2025 to meet its emissions goal for 2030.

The roadmap, Burgess said, will help identify issues that must be addressed to advance clean transportation across all EV classes and public transportation.

The Energy Office also is preparing to release a report about the Climate Council's call for modernizing Maine's buildings. Burgess said the report will identify the current state of building efficiencies and opportunities for advancing home weatherization programs, appliance standards and C-PACE programs.

### Commission Initiatives

The Maine Public Utilities Commission is working to overcome significant technical challenges related to clean energy mandates put in place by the Legislature, while also acknowledging the importance of minimizing costs for consumers and businesses.

Chairman Philip Bartlett said the commission

currently has a working stakeholder group of industry and utility representatives to examine the interconnection of distributed energy resources. The working group issued a notice Feb. 9 seeking input on the review process for small DER projects. Bartlett said that some small projects are subject to a higher level of review than others, causing "significant delay and added expense."

As part of that inquiry, he said, the group will consider penalties for utilities if they do not meet interconnection requirements.

The PUC also will be opening a proceeding to looking into Central Main Power's (CMP) recent claim that it needs to complete upgrades at more than 100 substations to connect new DERs to the grid.

"It's important to consider the timeline with respect to when CMP became aware of this problem ... and how projects are being impacted," Bartlett said.

To ensure that Maine can interconnect high levels of DERs in the future, the commission will open a separate proceeding to consider distribution system design changes. The proceeding also will work to improve data collection and transparency.

"It is important to assess what is needed for the grid of the future, and we cannot minimize costs without good information to help drive decision-making," Bartlett said. ■

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## New Mass. Bill Targets Home Retrofits

*Legislation Crafted by New Coalition on Climate and Economic Inequity*

By Emily Hayes

Members of the Massachusetts legislature on Thursday announced new bills to lower emissions, launch a new source of employment and combat racial inequities.

The Building Justice with Jobs Act, supported by Rep. Maria Robinson (D), Rep. David LeBoeuf (D) and Sen. Marc Pacheco (D), seeks to retrofit 1 million homes to be energy efficient in 10 years by strengthening insulation and upgrading heating and cooling systems.

Retrofitting 100,000 homes per year for the next decade would bring unionized jobs to the state for those struggling financially in the wake of the COVID-19 pandemic, Robinson said at a launch event for the Mass Renews Alliance, a coalition of labor, youth, climate and social justice organizations focused on climate, racial and economic justice issues in the state.

Alan Palm, director of 350 Mass' organizing efforts, said most homes in Massachusetts are older, with poor insulation and ventilation. Those homes also have low indoor air quality from burning fossil fuels on site and high

utility bills.

Heating and cooling infrastructure in homes and commercial buildings are the second-largest source of emissions in Massachusetts after transportation, according to state [data](#).

Massachusetts is also home to three of the top 100 asthma capitals of the U.S., [according to](#) the Asthma and Allergy Foundation of America. Springfield is at the top of the list, followed by Boston at No. 8 and Worcester at 30.

"The Building Justice with Jobs Act puts substance to the commonwealth's goal of net-zero emissions by 2050 by fixing the homes in the greatest need," Palm said. The legislation would allow for the installation of electric heat pumps and weatherization measures to make homes "healthier, more comfortable and more resilient," he said.

Concentrations of housing that do not meet those efficiency standards fall along racial and income lines because of "generations of discriminatory policies," Palm said. Environmental justice communities will be prioritized in the legislation's outreach and access to program benefits.

U.S. Rep. Ayanna Pressley (D) said the announcement of new legislation and the launch of the Mass Renews Alliance "cannot be more relevant or more timely given what's at stake for our collective future."

"We can't find the most durable and lasting policy changes until and unless every community is included in the decision-making process," Pressley said of the new bill, which aims to holistically address the intersection of climate change, racial injustice and economic recovery after the COVID-19 pandemic.

Pacheco said the group's work complements what is happening at the federal level with President Biden's pandemic recovery plan, which he said puts climate change and justice for communities impacted the most at the center of his response to the virus.

State Sen. Joseph Boncore (D) and Rep. Adrian Madaro (D) are also introducing the Food Justice and Climate Act, which aims to create a local food system that reduces food waste and lessens the environmental impact of the state food system. The bill would also encourage gardening in environmental justice communities, Boncore said. ■



A new bill in Massachusetts seeks to retrofit 1 million older homes, like these brick tenements in Holyoke, that make up much of the state's housing stock. | *Simtropolitan*, CC-BY-SA-4.0, via [Wikimedia Commons](#)

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## Tx Planning in Boston Collides with Climate Goals

By Emily Hayes

A public meeting held Feb. 8 for a planned electrical *substation* in the East Boston neighborhood shined a light on the juxtaposition of long lead times for transmission planning and new energy transition goals.

Eversource Energy first identified a need for new transmission to accommodate increased demand in the East Boston area in 2014. Two new transmission lines were built between existing substations in the nearby cities of Chelsea and Everett as part of the utility's Mystic-East Eagle-Chelsea Reliability Project.

But opponents of the new substation argue that renewable resources could meet that demand.

The substation was approved for construction by the Massachusetts Energy Facilities Siting Board (EFSB) in 2017, with the condition that Eversource and the city of Boston consider moving the substation away from a fish processing company and closer to a playground. The board held the meeting to determine whether to approve the change. Opponents of the project called on the board to reconsider the project based on public health and clean

energy concerns.

Marcos Luna, a local resident and professor in the Geography and Sustainability Department of Salem State University, said during the meeting that the policies that allow for the approval of the substation “lag reality” given the state's target for net-zero emissions by 2050.

An *analysis* led by the Union of Concerned Scientists (UCS) found that installing rooftop solar panels in the East Boston neighborhood could meet increased electricity demand in the area while cutting customers' electric bills and reducing emissions.

UCS conducted the study with GreenRoots, a local environmental justice organization, and found that deploying rooftop solar on a third of triple-decker buildings in the area could provide close to 10 MW of solar capacity and that the households identified in the study could save \$60 to \$120/month on their electricity bills.

Pairing those solar systems with a typical battery system could add more than 9 MWh of energy storage, the study said. Furthermore, the systems in aggregate could cost 40% less than the \$50 million Eversource proposal.

The study also found that the solar systems could reduce emissions from electricity consumption in the buildings by 40% compared to using power generated by fossil fuels. With energy storage batteries, the solar could reduce emissions by 70%.

### Demand Concerns

Patrick Woodcock, commissioner of the Massachusetts Department of Energy Resources, told attendees of the EFSB meeting that increasing electrification of buildings and transportation will drive up load, particularly for heating.

“We are increasingly seeing electrification as our long-term, upcoming plan” for reducing emissions in the state, he said, necessitating additional transmission infrastructure.

He noted that adding that solar and energy efficiency standards are also driving load down, but there is not a consensus on how that trend will manifest in the area around the planned substation.

Bryndis Woods, a senior researcher at the nonprofit consulting group Applied Economics Clinic, said that Eversource has not presented sufficient evidence for the need of the planned substation. The company is basing its load increase forecast on a 2015 ISO-NE Capacity, Energy, Loads and Transmission report, which predicted a 1% increase in load per year.

Woods testified that local load has only been growing by 0.4%/year, and load growth in the area is forecasted to be flat to negative.

Bob Clarke, director of transmission and citing for Eversource, told *RTO Insider* that while the utility does not expect load to increase as much as it originally predicted in East Boston, the Chelsea substation's load will exceed system capacity by 2022, and there is no room to expand that substation.

Eversource's forecasting is different from ISO-NE's, said David Rosenzweig, the attorney representing the utility before the EFSB. Logan Airport, which is in East Boston, is expecting a 10-MW increase in demand because of expansion, and new planned development in the area will consist of 10.5 million square feet of mixed-use building space to be constructed over the next 20 years, Rosenzweig said.

With these significant load increases, East Boston is “in great vulnerability” of supply shortages or even outages if the substation is not built, he said. ■



Residents in Boston are questioning the justification for a local substation project that Eversource says is important for maintaining reliability among increasing electrification. | *Famartin*, CC-BY-SA-4.0, via *Wikimedia Commons*

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## Bipartisan Agreement on Minn. Climate Bills Unlikely *State Falling Short of Goals Set in 2007*

By Dana Melius

Minnesota has fallen far short of emission reductions established in 2007 by Republican Gov. Tim Pawlenty, but the chance for bipartisan agreement on a course correction appears slim, according to legislative leaders on both sides of the aisle.

Considered historic at the time, the bipartisan “Next Generation Energy Act” requires the state to cut overall greenhouse emissions by 30% by 2025 and 80% by 2050. But emissions have declined by just 8% from 2005 levels, the Minnesota Pollution Control Agency *reported* last month.

While the report applauded the state government’s move to more electric vehicles and the energy industry’s move away from coal-fired power plants in favor of carbon-free wind and solar, MPCA officials also said the state has made little progress in the areas of transportation and agriculture.

On Jan. 21, Gov. Tim Walz *announced* a four-part plan by the Democratic-Farmer-Labor party to accelerate the state’s efforts, including a requirement that the state’s electric utilities use only carbon-free resources by 2040.

It would also require that utilities prioritize energy efficiency and clean energy resources over fossil fuels when proposing to add new

generation, allowing new fossil fuel resources only if necessary for reliability and affordability. Walz would also raise energy efficiency standards and set a state goal of cutting greenhouse gas emissions from existing buildings in half by 2035. “The time to fight climate change is now,” Walz said.

But State Senate Majority Leader Paul Gazelka (R) said his current session priorities are substantially scaled back because of the coronavirus pandemic and an anticipated \$1.3 billion budget shortfall.

“We knew that we were going to be in trouble [financially] this year,” Gazelka said in a January capitol report regarding session priorities. “And we’re not going to [balance the budget] by raising taxes.

He added that with limited floor action because of COVID protocols, he’s encouraged legislators in both the Senate and the House to “think about doing less.” His priorities this session focus on three key items: the budget, redistricting and dealing with pandemic issues.

“We’ve got to get our businesses open,” Gazelka said. “The rest can wait until next year.”

Despite the prospects of a divided legislature, DFL leaders have already pitched proposals with the hope that the Republican-controlled Senate might consider renewed goals for cutting emissions.

“This is an issue of our times, and it’s urgent



Gov. Tim Walz | Gov. Tim Walz



Senate Majority Leader Paul Gazelka (R) | Minnesota Legislature

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that we deal with it," Senate Minority Leader Susan Kent (DFL) said. While she said the state has made some headway on reducing emissions, transportation remains the number one concern, and a faster move to electric vehicles is a key to addressing it.

But Republicans prefer to stick with the targets set in the 2007 bill. The GOP's relationship with Walz has been heading south for several months. The two sides have argued often and publicly about the governor's use of emergency powers because of the pandemic. There have been several legislative attempts to curtail Walz's emergency powers, but they have all been stopped by the DFL-controlled House of Representatives.

Gazelka said his party believes it is long past time to allow the Senate and the House to address the state's economic issues, and that decisions "should not be given to one person for over a year."

Republicans have also criticized the state's vaccination rollout as being confusing and slow, and there has been a growing rural-urban split over how to fund economic recovery efforts for businesses impacted and destroyed in Minneapolis during the days following the death of George Floyd on May 25.

Despite a slim Senate margin, Republicans believe they have somewhat of a mandate judging from the November elections which saw their party gain five seats in the House, primarily in rural Minnesota. While the DFL still holds a 70-64 edge in the House, Republicans hold a 34-31-2 advantage in the Senate.

Two former DFL members, Rep. David Tomasoni (I) and former House Majority Leader, Rep. Tom Bakk (I), have left the party and plan



Sen. Dave Senjem (R) | Minnesota Legislature

**“As one of the fastest warming states in the nation, Minnesota needs strong, resilient infrastructure to withstand the impacts of climate change.”**

—Rep. Jamie Long (DFL)

to caucus with Republicans.

A bill sponsored by Rep. Jamie Long (DFL) that would set benchmarks for meeting Walz's 2040 goal was the first clean energy measure to get a hearing in the new legislative session. And on Jan. 29, Long's Capital Investment Committee held a joint hearing on Long's bill with the Climate and Energy Committee chaired by fellow Minneapolis Rep. Fue Lee (DFL).

“As one of the fastest warming states in the nation, Minnesota needs strong, resilient infrastructure to withstand the impacts of climate change,” Long said in a press release. “Investing in sustainable infrastructure will create new jobs and help our communities adapt and thrive as the climate continues changing.”



Rep. Jamie Long (DFL) | Minnesota Legislature

Sen. Nick Frentz (DFL), who is sponsoring Long's proposal in the Senate, isn't quite as optimistic at winning support for the measure in the GOP-controlled upper house.

Sen. Dave Senjem (R), chair of the Energy and Utilities Finance and Policy Committee, plans to reintroduce the “Clean Energy First” proposal he authored in 2020. The bill would direct the Minnesota Public Utilities Commission to prioritize use of sources such as nuclear, solar, wind, hydropower, carbon sequestration and municipal solid waste in utility requests for additional generation. The PUC would be required to determine if the energy is adequately reliable and affordable for ratepayers.

The state's two largest utilities, Xcel Energy and Allete's Duluth-based Minnesota Power, have pledged to produce energy without carbon emissions by 2050, focusing on wind and solar options. Minnesota Power also plans to eliminate coal-powered generation by 2035.

In December, Minnesota Power announced it had become the first state utility to provide 50% renewable energy in its system, which serves 145,000 residential and commercial customers across northern Minnesota. Land O' Lakes, through its sustainability affiliate Truterra, *launched* a carbon exchange program Feb. 4 to pay Minnesota farmers for increasing carbon storage in the soil. Companies that want to reduce their GHG emissions could buy credits to help offset the impact of climate change, according to Land O' Lakes, a farmer-owned cooperative.

Microsoft became the program's first customer, announcing it will pay \$20/ton for carbon sequestered in the soil by sustainable farming practices. ■



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## NYISO Proposes ‘Grid in Transition’ Metrics

By Michael Kuser

NYISO on Feb. 9 proposed a three-tier approach to its Grid in Transition initiative and measuring the effects of market changes to make sure they are working as intended.

The ISO in December 2019 issued a [report](#) on reliability and market issues related to integrating a host of clean energy resources into the electric power system over the next few years, a “grid transition” driven primarily by state policy. (See [Public Policy Challenges Top NYISO Grid Plans.](#))

NYISO proposed categorizing projects under the initiative as imminent or underway; medium-term; or long-term.

The first category includes carbon pricing, which went through the NYISO stakeholder process but has yet to receive the state support needed to move beyond the planning stage. James Pigeon, manager of distributed resource integration, [told](#) the Installed Capacity Working Group.

Other projects underway now and expected to be completed this year and next are the ISO’s Comprehensive Mitigation Review, which involves updating its buyer-side mitigation processes. (See [NYISO Explores Improving BSM Processes.](#))

There is also a separate effort to refine NYISO’s participation model for distributed energy resources. The ISO this year will deploy a software-defined wide area network, an enabling technology for telemetry that could potentially be used by market participants, including demand-side ancillary services program resources and energy storage resources (ESR).

### Tracking and Metrics

The new recommendations build on a more detailed [analysis](#) presented to stakeholders in December, with NYISO now proposing tracking and metrics to establish an early warning system to review if the market rules are inconsistent with what is needed for reliability, starting with whether net forecast uncertainty is causing inefficiencies.

The ISO’s strategy is informed by its own Climate Change [Study](#) and Reliability Gap [Assessment](#) of last year. The proposal “addresses that narrow subset of the recommendations ... with the idea being that these tracking and metrics would really address some of the questions that we have based on that gap analysis,” Pigeon said. “Part of it is to see if some of these metrics can give us an early-warning indicator ... on a monthly or quarterly outline basis to keep an eye out for any problems indicative of a changing fleet and grid.”

One stakeholder asked if the ISO is going to have metrics for when the early-warning system is triggered, and how long it would have to be tracked before the need for a change became obvious.

“We don’t know yet because it requires further analysis,” Pigeon said. “The first question concerns net forecast uncertainty and whether or not there are some inefficiencies being born out of that,” which the ISO would answer by starting to track some units’ revenues and other aspects of inflexibility in the system.

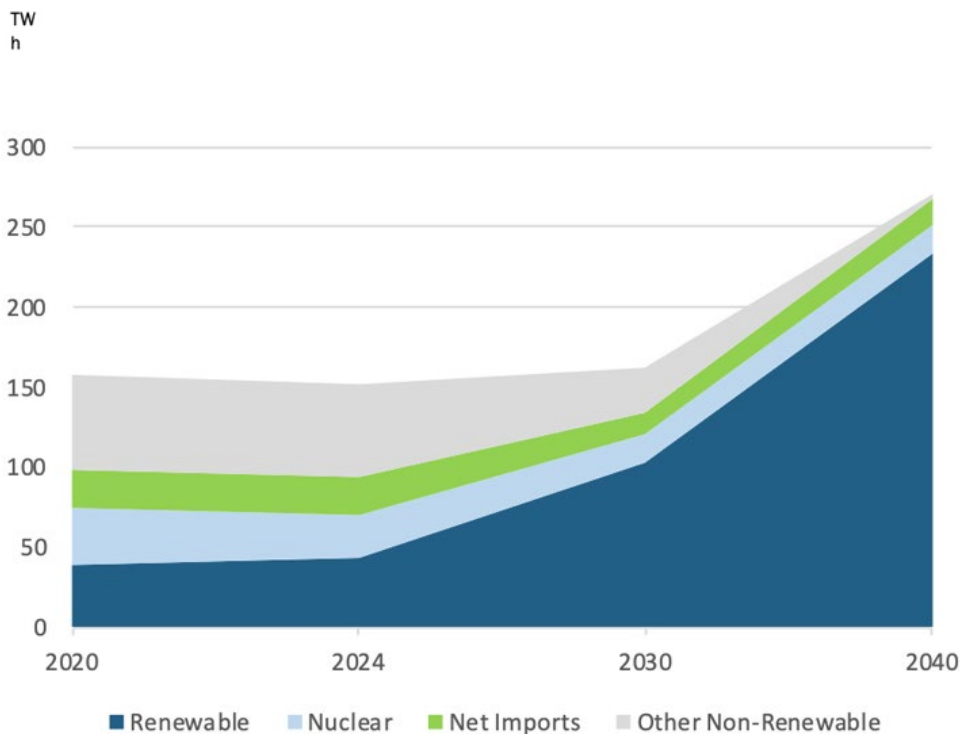
The main point is to provide accurate price signals for the market to run efficiently, said Michael DeSocio, NYISO director of market design. “Given the way the system is evolving and the way the market tools are committing resources that we have access to today, can we come up with more efficient ways to run the grid, given the resources we have in front of us, or are the current market processes best?”

To the extent that there are resources that get day-ahead market awards that then self-schedule in the market and take flexibility away, “we probably need to go back and reconsider the market rules to consider whether that should be allowed,” DeSocio said. “And if it shouldn’t be allowed, what’s the penalty or the market incentive to prevent it? So those are the kind of things we’re trying to get at here.”

The ISO also needs to “get a good grasp” on some of the existing run-limited resources to understand the services they provide and their limitations, Pigeon said.

Run-limited resources include ESRs, demand response, emissions-restricted output and noise-restricted output resources.

NYISO will come back in early March “and talk more in detail but limit the ballooning of hypotheticals that would sidetrack discussion,” Pigeon said. It would then begin discussions in the second quarter on energy market improvements. ■



A possible decarbonization path assuming a capacity addition model with “high electrification” load forecast, New York state policies and current wholesale market rules | NYISO

# NetZero Insider

Your Eyes and Ears on Climate Policy and Adaption  
Building & Transportation Electrification ■ Federal & State Policy

## Wash. EV Bills Spark Concern About Buildout

By John Stang

Infrastructure is the main concern facing two Washington bills that propose to switch the state's auto market to only electric vehicles by 2030.

Will there be enough generation? Who will install and pay for all the charging stations? Can the Northwest power grid transmit enough energy to handle all those vehicles?

"We're going to need hundreds of thousands of charging ports for millions of vehicles," Douglas Warren, a lobbyist for Douglas and Klickitat counties' public utility districts, said at a Washington House Transportation Committee hearing Feb. 1.

State Rep. Nicole Macri (D) and Sen. Marko Liias (D) introduced similar bills this session to require that the Washington State Transportation Commission adopt regulations by 2025 mandating that all model year 2030 and later passenger and light-duty vehicles sold in the state be EVs. The two bills would require the commission to provide the legislature a plan for developing the regulations by Sept. 1, 2023.

"We're trying to phase this in. We're trying to be thoughtful," Liias said.

This is the second year that Macri has submit-

ted the proposal as a bill. It did not make it out of the House Transportation Committee in 2020. This year, Liias introduced a companion bill in the Senate.

"We're presenting this bill because of the urgent needs of dealing with climate change," Macri said.

Macri and Liias both pointed to General Motors' recent announcement that it plans to manufacture mostly electric vehicles by 2035. Macri also cited Volvo and Volkswagen introducing their first electric vehicles in the last few years. The private sector is already beginning a transition to EVs because of pollution concerns, they concluded.

"Transportation is the largest source of emissions in the state. Everyone knows we're headed this way," Liias said.

Pierce County Councilor Ryan Mello, speaking on behalf of himself, told the committee that the marketplace has begun to gradually transition to EVs on its own, and that the state government needs to send a strong signal to manufacturers to encourage that change.

### 'Wishful Thinking'

At the hearing, several questions addressed the infrastructure issue, which both Macri and Liias acknowledged is a major hurdle.

"No one knows what the fiscal impact of this bill will cost. ... There seems to be variables on top of variables on top of variables in this bill," Rep. Jim Walsh (R) said.

"We need a statewide analysis," Warren said. Nick Garcia, policy director for the Washington Public Utility Districts Association, said a massive investment in Washington's power grid will be necessary to sustain EV culture.

Macri contended that having a locked-in date is needed to give the marketplace good information on how to adjust and give the state government a timetable to get infrastructure constructed. "2030 is still a long way off," she said.

Scott Hazelgrove, representing the Washington State Auto Dealers Association, noted that his organization opposed Macri's bill last year but is neutral in this session and hopes to work with the representative on the details. A deadline for making changes could be a useful tool in helping his constituents deal with switchovers to EVs, he said.

"A 100% EV rate in Washington approaches wishful thinking," argued Jessica Spiegel, Northwest regional director for the Western States Petroleum Association.

Rep. Ed Orcutt (R) asked, "What if we get to 2030, and there's not a big enough supply of EVs, will there be exceptions?" ■



Two new Washington bills would require that all cars sold in the state be electric by 2030. | Washington Department of Commerce

# NetZero Insider

Your Eyes and Ears on Climate Policy and Adaptation  
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## Wash. House Tackles Bill to Cut Vehicle Emissions

By John Stang

A bill to trim carbon emissions from motor vehicles appears headed to the full Washington House of Representatives for a floor vote.

"I definitely feel this has a good chance of passing," said state Rep. Joe Fitzgibbon (D), chairman of the House Environment and Energy Committee and the sponsor of [House Bill 1091](#).

Bill opponent Rep. Mary Dye, ranking Republican on that committee, said because the pandemic prevents legislators from eating and mingling together, it is difficult to get a grasp of the bill's chances of passage.

If passed, the bill would mandate that carbon emissions from gasoline and diesel fuel sold in Washington be cut by 10% below 2017 levels by 2028 and by 20% by 2035. It excludes emissions from fuel that is exported out of state or used by water vessels, railroad locomotives and aircraft. The goals apply to overall vehicle emissions in the state and not to individual types of fuels; Northwestern Washington has five oil refineries. It would go into effect Jan. 1, 2023.

On Jan. 21, the House Energy committee recommended passing the bill 7-5, with one abstention, along party lines. Rep. Sharon Shewmake (D), whose swing district holds most of the refineries, abstained. The bill is currently awaiting a vote in the House Appropriations Committee before going to the full House and then the Senate — both controlled by Democrats. Gov. Jay Inslee, who requested



BP's Cherry Point refinery is one of five Washington oil refineries that would be affected by HB 1091. | BP America

the bill be introduced, will likely sign it.

Nearly 1,500 people signed up to testify against the bill at a hearing Feb. 4 before the Appropriations Committee, compared to about 600 people in favor. Only a tiny fraction actually testified.

"It's a costly and ineffectual mandate," Jessica Spiegel, Northwest regional director of the Western States Petroleum Association, said at a hearing before the committee in January. Port of Seattle Commissioner Fred Felleman, countered: "It'll be good for the economy."

The bill builds on a 2008 law that directed the state to reduce its overall CO<sub>2</sub> emissions to 90.5 million metric tons, the level in 1990, by 2020.

A recent Washington Department of Ecology report shows that the state's CO<sub>2</sub> emissions dropped to 91.2 million metric tons by 2012 before growing back to 95.7 million metric tons in 2017 and 99.57 million metric tons in 2018. The 2020 level has not yet been calculated.

In an email, Andrew Wineke, the department's spokesperson, said the state government expects carbon emissions to shrink in 2020 because of the COVID-19 pandemic. In addition, the state stopped consuming power from Montana's Colstrip coal-fired power plant at the beginning of last year. Washington has one coal-fired power plant, operated by TransAlta, in Centralia. Under a carbon-reduction agreement with the state, TransAlta closed one unit at the 1,340-MW plant in December 2020 and plans to close the other in 2025.

The same 2008 law sets carbon-reduction targets of 45% below 1990 levels by 2030, 70% by 2040 and 95% by 2050.

Fitzgibbon said 42% of Washington's carbon emissions comes from motor vehicles.

A major issue for those against the bill is how much decarbonized motor fuel will cost at the pump.

Mike Ennis of the Association of Washington Business argued that decarbonization will add 20 to 60 cents/gallon to gasoline prices. Dan Coyne, representing using Food Northwest, a coalition of food processors and their suppliers, cited a figure of 57 cents.

In contrast, Stu Clark, special assistant in Ecology Department, said California's fuel decarbonization efforts resulted in a 1% increase

in gas prices, while Oregon's efforts resulted in a 2% change. "There will be a cost impact," he argued.

### 'A Tax on Everything We Do'

HB 1091 would require the Ecology Department to hire an independent consultant by Dec. 1 to create a publicly available forecast of costs or savings under the law beginning in 2025.

Opponents of the bill testified that claims of improving air quality are exaggerated, saying it would cost jobs and send business out of the state. They also contended that proposed standards would hit poor people hard and cause the trucking industry to add surcharges to shipments. Some said low-carbon fuels should be included in the legislature's upcoming package of bills and appropriations addressing transportation and not be addressed separately.

Rep. Dye said a gasoline tax increase is likely in the transportation package of bills, and fuel cost increases would be an extra burden on drivers.

"The low-carbon standard is a tax on everything we do," Yakima County farmer Frank Lyall said.

Proponents argued that carbon pollution has harmful health effects and disproportionately affects low-income communities as well. They added that there is great potential in Washington to grow the low-carbon fuels industry and that a clean fuels program should try to include rebates to buyers of electric vehicles.

Jay Manning, representing the environmental organization Puget Sound Partnership, noted that carbon emissions have been linked to the increased acidification of waters in Puget Sound and off the Washington and Oregon coasts, harming the struggling orca population. Reviving three struggling orca pods has been a popular and high-profile effort in Washington.

While the Western States Petroleum Association opposes the bill, BP is more neutral.

Tom Wolf, BP's external affairs director, testified that his company agrees with the state's goal of trying to reach zero emissions by 2050, believing that target will ultimately be beneficial to the company's shareholders. However, he asked for caps on fuel prices if decarbonization increases those costs.

"We'll respond to the market, and I think the other companies will do as well," Wolf said. ■

# NetZero Insider

Your Eyes and Ears on Climate Policy and Adaptation  
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## Inslee Pursues Climate Moonshot in 3rd Term

By John Stang

Washington Gov. Jay Inslee is known nationally as the 2020 Democratic primary candidate almost totally focused on climate change as an existential threat to the world.

During debates and on the campaign trail during his five-month candidacy, Inslee consistently returned to that theme, sometimes even when asked about other topics.

“We are the first generation to feel the sting of climate change and the last generation that can do something about it,” he said in a 2019 [video](#) announcing his campaign.

That message could not save Inslee’s candidacy, although President Biden embraced many of Inslee’s stances in early 2020 — far beyond former President Donald Trump, who had denied the existence of climate change.

In an interview with *RTO Insider*, Inslee said he did not have any major epiphany leading to his intense focus on climate change. He described his interest gradually growing since he was a child. His father was a biology teacher and basketball coach in Seattle. His mother was a sales clerk. He remembers clearing brush and planting trees with his parents around Mount Rainier. As a teen, he would visit a family beach cabin and help Tulalip tribal fishermen haul in nets filled with salmon.

Like his interest in environmental issues, Inslee’s entry into politics was gradual. He was recruited as a successful state legislative candidate in Eastern Washington at the age of 37. He represented that same conservative Washington district in Congress for one term before being unseated. He moved to a more liberal district along Puget Sound where he served seven terms as its congressman.

In 2002, Inslee wrote a [column](#) for the now-defunct *Seattle Post-Intelligencer* arguing that the U.S. needs to tackle global warming and a green economy on the scale of NASA’s Apollo moonshot program. Five years later, he and a collaborator expanded on those thoughts in a book called “Apollo’s Fire.”

### ‘Unromantic Things’

Inslee has just begun his third term as Washington’s governor. He has been pursuing a climate change-oriented agenda for the past eight years but has clashed with a Republican majority in the state Senate. Meanwhile, Inslee always had a slight Democratic majority in the

House of Representatives, a coalition that had to walk a tightrope between urban liberals who embrace most measures to combat climate change and more environmentally cautious suburban and rural Democrats who live in more politically purple districts.

Higher temperatures in the state have harmed its shellfish; rendered inland salmon habitats more inhospitable, affecting Puget Sound orcas; altered snow melts in the Cascade Range, which has complicated irrigation in Eastern Washington; and made forests drier and more susceptible to fires. And increasing temperatures have affected the state’s wine industry, whose grapes grow best within narrow ranges of temperatures. Health officials have also linked carbon emissions in the air to increased asthma and other lung problems.

Starting in 2018, Democrats began winning several previously Republican suburban seats. Today, Democrats hold a 57-41 majority in the House and a 28-21 majority in the Senate — giving Inslee his best chance to pursue his often stalled climate change agenda.

This session, Inslee’s agenda is to:

- cut carbon emissions from gasoline and diesel fuel sold to Washington motor vehicles by 10% below 2017 levels by 2028 and by 20% by 2035.
- push electrification of vehicles and ferries. Bills are in play to accomplish these goals, including encouraging an eventual switch-over from gas to electric vehicles. (See [Wash. EV Bills Spark Concern About Buildout](#).)
- put caps on industrial carbon emissions and encourage investments in green projects, a complicated undertaking for the past few years. The bill tackling the topic this session is currently being rewritten. (See [Cap-and-trade Bill Emerges in Wash. Senate](#).)
- create an Environmental Justice and Equity Advisory Panel to advise him and the legislature on how to allocate money from the proposed cap-and-invest program to communities burdened with pollution troubles.
- require new commercial buildings to use carbon-free space and water heating by 2030 and start decarbonizing all existing buildings by 2050. A bill is in play to begin those efforts.

Inslee has not given detailed thought yet to which measures he should tackle in the second half of his term. “We’ve been focused just on



Gov. Jay Inslee | Office of the Governor, State of Washington

this session so far,” he said.

However, he said many of these future efforts will be “unromantic things,” such as making buildings more energy efficient, boosting public transportation, building charging stations, developing bike trails and tweaking water spillage over dams to prevent killing young salmon by increasing the nitrogen levels in their tissue.

“We need to reduce the per-capita use of electricity. ... Most houses and buildings are not designed for a carbon-free world,” Inslee said.

### Balancing Act

A common criticism of measures dealing with climate change is that they kill jobs. Washington is the home to five oil refineries. Inslee has been a big booster of creating renewable energy jobs. So far, the state has not looked at how renewable energy jobs might rise, while oil and natural gas jobs might shrink in Washington. “We have not done an algorithmic assessment on that,” Inslee said.

He added that renewable energy jobs are growing at a faster pace than average jobs.

The International Renewable Energy Agency last year [reported](#) that the renewable energy sector employed about 756,000 people in

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the U.S. in 2019. Another 2.38 million people hold jobs relating to energy, according to a joint *report* from the National Association of State Energy Officials and the Energy Futures Initiative. At the same time, slightly more than 1 million Americans are employed in the oil, gas and coal industries.

Meanwhile, the U.S. Bureau of Statistics recently noted that wind turbine technicians are the fastest growing occupation in the nation, increasing by 61% from 2019 to 2020. Solar panel installers are the third-fastest growing occupation, increasing 51% in that same period. A U.K. Energy Research Centre *report* said that it will take two to five renewable energy jobs to produce the same power created by one fossil fuel worker.

“We know the fossil fuel industry is going to decline,” Inslee said.

Washington is the home to numerous hydroelectric dams and one nuclear reactor — both carbon-free power sources.

However, reactors nationwide have had trouble competing financially with natural gas as a source of electricity, leading to several being closed. And Puget Sound liberals have strong anti-nuclear sentiments.

In addition, the state’s relationship with its dams is complex. Though these resources provide cheap electricity and irrigation water for crops, they decimate inland Northwest runs of young salmon migrating to the Pacific Ocean.

For at least 30 years, Northwest interests have clashed over whether the four Snake River dams between Lewiston, Idaho, and Pasco, Wash., should be removed.

On Feb. 6, Rep. Mike Simpson (R) proposed legislation that would remove the four dams and require the power, barging and irrigation benefits be replaced. This is the first Republican proposal to remove the four dams.

Consequently, removing dams will affect the bigger decarbonization picture in the Northwest and will provide a complicated balancing act for Washington’s leaders.

“We don’t want to wall off any potential energy source,” Inslee said. ■



One of Inslee’s goals is to decarbonize all Washington buildings by 2050, including those in Seattle (pictured). | Shutterstock

## Stakeholder Soapbox

# Soapbox: An Efficient ‘Energy Markets Cascade’

By Eric Gimon



Eric Gimon | *Energy Innovation Policy & Technology*

President Biden’s goal of 100% clean electricity by 2035 would supercharge America’s clean energy industry, create hundreds of thousands of jobs and help prevent the worst consequences of climate change. Multiple states [have already required](#) 100% clean electricity by midcentury, and many utilities are voluntarily adopting these goals. But realizing these goals requires market designs capable of efficiently integrating a high fraction of renewables, leaving policymakers with important unanswered questions.

Policymakers must determine how wholesale markets built around short-term marginal cost pricing are supposed to work when large fractions of electricity are generated at zero marginal cost? And how can we secure rapid investment in new clean resources and rapidly retire fossil fuel generation if prices paid to these new resources keep falling, even with the most supportive policy?

Answering these questions is easier if we expand consideration of wholesale electricity markets to the entire “energy markets cascade,” a concept describing the flow of contractual agreements for electricity from long-term markets, power purchase agreements, and hedges to year-, month-, day- and hour-ahead commitments, to real-time spot markets. This course connects long-term resource investment to the day-to-day running of spot markets. Capital will flow efficiently along this path if the energy markets cascade follows three design principles.

First, the cascade should trade in only one

underlying commodity: delivered megawatt-hours of electricity. Just as a cascade is one current flowing from pool to pool, the markets in our cascade best align if they all trade the same product. Any market in this sequence could experience changing conditions and forecast errors, but if they are all trading in megawatt-hours, the next market down can account for shifting situations by trading or adjusting given commitments.

Consider a wind developer with long-term contracts in place to secure financing. As their electric output delivery approaches, the developer often anticipates real-time market excess or shortfall from what they promised. To minimize the gap between financial commitment and physical delivery, developers can use a market with the most appropriate time frame depending on expectations, always keeping risk at acceptable levels.

Second, participation in the longer-duration markets should be voluntary. In a compulsory long-term market, participants cannot act just on volume and price expectations: A central authority provides targets, fixing demand irrespective of price. Voluntary markets, on the other hand, can balance diverse future outlooks.

For example, an electricity customer that deems current long-term prices too high might not commit to buy what they need until closer to delivery. This behavior lowers demand — and therefore prices — higher up the cascade and raises prices lower down, realigning prices across all markets.

Finally, markets in the cascade should be equal-access, transparent and liquid. Nondiscriminatory access fosters diverse and independent participation in the energy markets cascade, creating more potential buyers and sellers. This drives efficient capital allocation, because participants can more easily trade to adjust their positions according to need, developing a common basis for the current value of electricity contracts.

Efficient capital allocation also requires transparency and liquidity. Transparent public prices and information of trading volumes sharpens common understanding. Liquidity improves with a standard set of energy markets cascade products diverse enough to address different stakeholder needs yet limited in number so that sufficient trading volumes exist to value products at regular intervals.

## Market Reforms for a Safe Climate Future

Today’s markets are failing to meet these three principles each in their own way. PJM, NYISO and ISO-NE have mandatory, not voluntary, capacity markets and stand accused of bias toward legacy resources. In MISO, SPP and CAISO, utilities hold the upper hand on information about what the market and new technology can offer, confidently asserting primacy over the integrated resource plans that shape procurement. This chokehold risks ignoring potential savings from inconvenient (for the utility) retirements, inertia in seeking new solutions (e.g., batteries over peakers), and persistent bias against demand-side resource participation or competition from distributed energy resources.

We must design wholesale markets to support long-term investment in variable renewables and complementary resources through better risk management tools. Legislators, regulators and market operators who want a fully decarbonized grid should look beyond the spot markets to consider the entire energy markets cascade and enact reforms to better align these with core principles. Furthermore, investigating new concepts, like [organized long-term markets](#), that seek to meet investor risk and return expectations would allow policymakers to deliver a least-cost, clean, reliable grid — without a heavy regulatory hand. ■

*Eric Gimon is a senior fellow with Energy Innovation Policy & Technology, a nonpartisan energy policy firm that “works with national and regional decision-makers to develop policies that will manage the grid’s transition to a cleaner, lower-carbon resource mix.” Eric holds a B.S. and M.S. from Stanford University in mathematics and physics, and a Ph.D. in physics from UC Santa Barbara.*

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# NARUC Winter Policy Summit

## Order 2222 Testing Planning, Communications

### OMS: States Can 'Make or Break' DER Aggregation

By Rich Heidom Jr.

FERC's directive to open wholesale markets to aggregations of distributed energy resources is forcing states to consider new communication channels and more holistic system planning, and how they respond will be crucial, industry officials say.

"FERC left a lot of power in the state regulators' hands, and this is really leaving the states in a place to make or break Order 2222," Marcus Hawkins, executive director of the Organization of MISO States (OMS) said during a *panel discussion* at the National Association of Regulatory Utility Commissioners (NARUC) Winter Policy Summit on Feb. 9. Illinois Commerce Commission Chair Carrie Zalewski moderated.

FERC Order 2222, issued last September, ordered RTOs and ISOs to open their markets to DER aggregations now largely limited to providing demand response (*Order 2222, RM18-9*). Although the commission declined to allow local or state regulators to prohibit DERs from participating in the wholesale markets through an opt-out, it said regulators can prevent resources from participating in both retail and wholesale programs. (See *FERC Opens RTO Markets to DER Aggregation*.)

"What a retail regulator does to shape their programs will have a huge influence over the

economics of where DER aggregation can flourish or not," said Hawkins, who predicted retail programs are likely to provide more revenue to DERs than wholesale markets in the near term. "Also, the ability to condition participation in a retail program is huge. So, if a retail program prohibits wholesale activities ... then you really have the final say in where the DER is going to go."

State regulators will also control spending on distribution system investments, which will determine metering technology and the sort of information that will be available on DERs, Hawkins said.

FERC defines DERs as any resource located on the distribution system, a distribution sub-system or behind a customer meter, including energy and thermal storage, intermittent and distributed generation, energy efficiency and electric vehicles. The order requires RTOs to allow DER aggregators to register as market participants under models that accommodate their physical and operational characteristics.

FERC's initiative would be threatened, Hawkins said, by "a system where distribution utilities are constantly fighting battles, being accused of being a barrier to participation in wholesale markets, or a place where inefficient planning is being done because not enough data is being shared between the DERs and the wholesale market."

Hawkins noted that RTOs, which are facing a July 19 deadline for compliance filings, must determine the coordination framework among them, state regulators, distribution utilities and aggregators. "It's important for [state] commissions to consider whether they want that coordination to be direct — where the aggregator or the RTO has some sort of direct communication with the commission — or indirect through a regulated utility," he said.

RTOs must also determine how often to review the coordination. "It's not just set it and forget it," Hawkins said. "Aggregations might change. So, there might need to be some flexibility in the process."

Hawkins said OMS has found it challenging to get utility distribution officials involved with MISO. "There's a lot of what I refer to as MISO watchers, which are the wholesale and transmission planning people at the utilities, but not necessarily the distribution folks," he said. "Getting those experts — both people who work on DER programs from commissions and also distribution utility experts into the conversation at the RTO is important. ... Bringing those voices is the only way we're going to understand where conflicts exist between retail and wholesale tariffs. ... You need to have a lot of eyes on the language to understand what will make those retail programs either work or fail within the larger wholesale context."

### Areas of state engagement at RTOs

#### Soon

##### Coordination Framework

- Direct vs. Indirect
- Expectations for distribution companies
- Frequency

##### State Programs

- Many unknowns for RTOs
- Need to identify conflicts
- Distribution System investments

#### Soonish

- Consider larger changes to wholesale markets that could impact value of DERs down the road
  - Capacity market value
  - Scarcity pricing
  - New ancillary services?
- DER representation in operations and planning models



Marcus Hawkins, executive director of the Organization of MISO States, discusses how states should engage in RTO stakeholder proceedings on FERC Order 2222. | NARUC

# NARUC Winter Policy Summit

## New Lines of Communication



Paul Suskie, SPP | NARUC

Paul Suskie, SPP's executive vice president of regulatory policy and general counsel, said the RTO's territory, which has no capacity market and where all utilities are vertically integrated, is starting to see a bit more interest in DER, "but it's still

very, very small in the aggregate."

"We're looking at operational communication challenges [under Order 2222]," he continued. "This will require us to communicate with entities that we don't historically communicate with. ... Because we're at the wholesale [level] we do not have a lot of communications with even some of our member companies at the retail level. ... So, we have some new communication and operational challenges with existing members, let alone new entities that may participate under Order 2222."

Ted Thomas, chairman of the Arkansas Public Service Commission said the FERC directive "is very challenging. But if we can meet those challenges, I think there's a great upside."

Thomas said FERC "left many of the most

difficult challenges to be dealt with by the RTOs in their stakeholder processes," adding that he hopes the commission will grant RTOs an extension on the compliance deadline. (See [MISO to Seek Extension on Order 2222 Plan.](#))

## System Planning



Kelli Joseph, Power Edison | NARUC

Former NYISO official Kelli Joseph, now an adviser to mobile storage company *Power Edison*, said it was "unfortunate" that FERC did not spell out its system planning requirements "other than saying a coordinated framework could be good."

Although RTOs conduct separate transmission planning processes for reliability, economic and public policy projects, Joseph said it's important to ensure "that there's at least a process within one or more of those transmission planning models that can actually do a comparison between a transmission solution, a generation solution and potentially a DER solution."

Joseph served on a joint task force of NARUC and the National Association of State Energy Officials that explored how aligned planning

could guide the development of the grid in the future. "Thinking about how to use that ... system planning framework could potentially inform some of this market coordination hopefully going forward as well," Joseph added.

Oregon Public Utility Commissioner Megan Decker said although Order 2222 doesn't apply in her state because it is not part of an RTO, it nonetheless demonstrated "leadership."



Oregon Public Utility Commissioner Megan Decker | NARUC

"I have been really impressed with the level of dialogue on DER integration that I've seen as a result of the FERC order," she said. "Unlocking the distribution system is something we will need. It's going to be a pretty long-term transition. Wholesale market access by itself doesn't necessarily mean the kind of DER explosion in states that aren't ready for it. State programs right now largely drive DER uptake because of the economics."

Even in California, which has done much of what is required by the FERC order, Decker said, "the money [to encourage DERs] is not there in the wholesale market." ■

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## NARUC Winter Policy Summit

# Tx Planning Must Be 'Highly Coordinated,' Regulator Says

## Task Force Develops Tools for Aligning Electricity System Planning Processes

By Jennifer Delony

New complexities in the energy sector mean transmission planners must be "highly coordinated and intentional," California Energy Commission member Andrew McAllister said Thursday.

"We are in and increasingly going towards a distributed energy future, and that's why having the distribution system level integrated from the customer ... to the wholesale generation system ... is so key for planning going forward," McAllister said during a press conference at the National Association of Regulatory Utility Commissioners' virtual Winter Policy Summit.

McAllister, who is co-vice chair of the NARUC-National Association of State Energy Officials Task Force on Comprehensive Electricity Planning, joined other task force leaders

in releasing a suite of new planning resources.

Those resources, which include *Roadmaps for Comprehensive Electricity Planning*, a *Blueprint for State Action* and an *online library*, are designed to help state agencies, companies and stakeholders unify their transmission planning processes. Fifteen states participated in developing the resources during the two-year task force.

McAllister said that integrated approaches to transmission planning that bring together regulators and state energy officials are key to informing grid-related investment decisions.

"Distribution system planning requires access to more and different data and an expanding array of analytical tools," McAllister said. "The task force has generated terrific intelligence and insight along those lines."

Some of the states in the task force have com-

mitted to applying the new strategies.

California, Colorado, Hawaii, Michigan, Minnesota, North Carolina, Rhode Island and Virginia intend to explore opportunities to align electricity planning processes to meet priorities, such as decarbonization, through docketed proceedings.

Arkansas, California, Hawaii, Minnesota, Puerto Rico and Rhode Island have agreed to make data, such as voltage studies and hosting capacity analyses, available to improve distribution planning. Hawaii, Maryland, Minnesota and North Carolina also committed to holding technical conferences and briefings on the results of the task force to support states' efforts to reform planning processes.

McAllister said that states also will have access to technical assistance from the U.S. Department of Energy and the National Laboratories. ■



Planning for transmission infrastructure, like Duke Energy's Happy-Jack line seen here, is getting a boost from new resources released by the NARUC-NASEO Task Force on Comprehensive Electricity Planning. | Duke Energy

# FERC/Federal News



## Southeast Seeks FERC OK for Expanded Bilateral Market

*TVA, Southern, Duke Lead Proposed 11-state Market*

*Continued from page 1*

Company Services said in a FERC filing on SEEM's behalf (ER21-1111, et al.). "Trades generally occur on an hourly basis as the shortest increment, and most often occur only with entities in the same or directly interconnected balancing authorities."

The SEEM proposal, which would allow participants to move power over unused transmission capacity at \$0/MWh, "will enhance efficiencies and reduce opportunities to exercise market power by allowing more buyers to transact with more sellers over a much bigger region," SEEM said.

Although the group's name includes "market," participants made clear that they do not see the proposal as a prelude to an RTO. "The Southeast EEM is not — and was never intended to be — a top-to-bottom reimagining of the Southeast energy market; rather, it reflects incremental improvement to the existing bilateral market," the group said.

Among SEEM's "core principles" are that each electric service provider and state will maintain control of generation and transmission in-

vestment decisions and that each transmission provider will remain independent, with its own transmission tariff. There will be no changes to reliability, state jurisdiction or responsibilities for resource adequacy, it said.

SEEM had provided some details of its proposal in an informational filing with the North Carolina Utilities Commission in December. (See *Southeast Utilities Announce Regional Energy Market*.) Friday's filings provided many more details on its governance, cost allocation and measures to address potential market power.

Fourteen utilities and cooperatives have signed the SEEM agreement and five others are "contemplating or in the process of seeking" approvals to do so. Members opened 13 dockets detailing the agreement and changes to their transmission tariffs. (Some of the members are not FERC jurisdictional.)

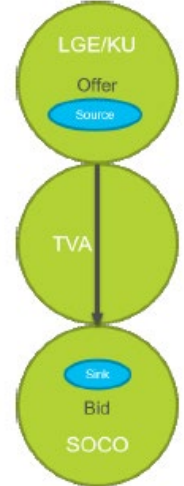
### Members and Participants

TVA; Southern's Alabama Power (ER21-1111, ER21-1125), Georgia Power (ER21-1119) and Mississippi Power (ER21-1125, ER21-1121; and Duke Energy Carolinas (ER21-1116) and Duke Energy Progress (ER21-1115, ER21-

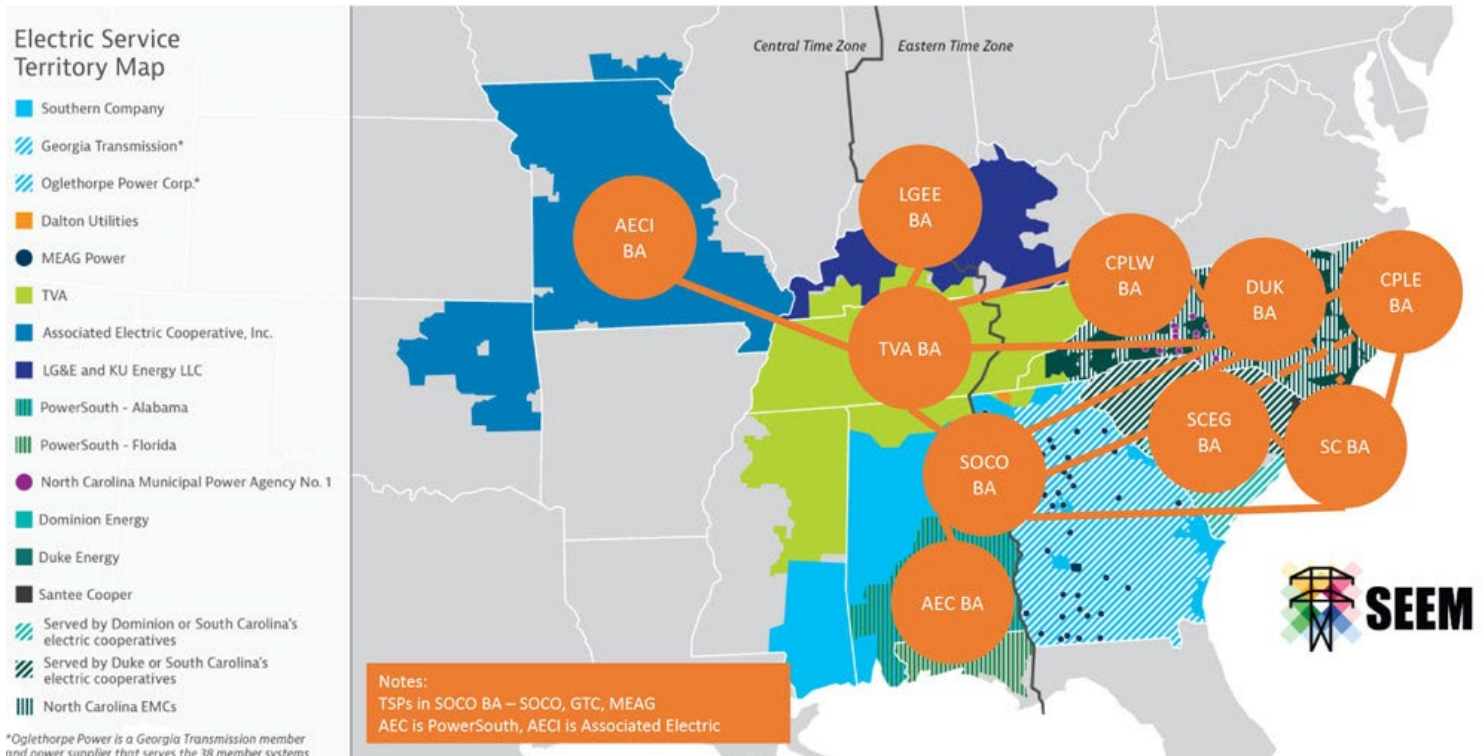
1117) represent nearly three-quarters of SEEM's net energy for load (NEL).

The other initial members are: Associated Electric Cooperative Inc.; Dalton Utilities; Dominion Energy South Carolina (ER21-1112, ER21-1128); Louisville Gas & Electric (ER21-1114, ER21-1118) and Kentucky Utilities (ER21-1120) (LG&E/KU); North Carolina Municipal Power Agency Number 1; PowerSouth Energy Cooperative; and North Carolina Electric Membership Corp.

Those planning to join are Georgia System Operations Corp. (GSOC); Georgia Transmission Corp. (GTC); Municipal Electric Authority of Georgia (MEAG); Oglethorpe Power Corp. (OPC); and South



Sample trade under Southeast Energy Exchange Market | Southeast Energy Exchange Market



The Southeast Energy Exchange Market would include 19 utilities and cooperatives in 11 states. | Southeast Energy Exchange Market

# FERC/Federal News



Carolina Public Service Authority (Santee Cooper).

The 19 expected members have 160 GW of summer generating capacity (180 GW winter) in parts of 11 states across the Eastern and Central time zones and serve more than 32 million retail customers.

New members — which must have a load-serving responsibility or serve an entity with that responsibility — will be allowed to join during an enrollment period from July 1 through Sept. 30 annually. Nonmembers that want to submit bids and offers into SEEM will be called participants.

## Yes or No Decision for FERC

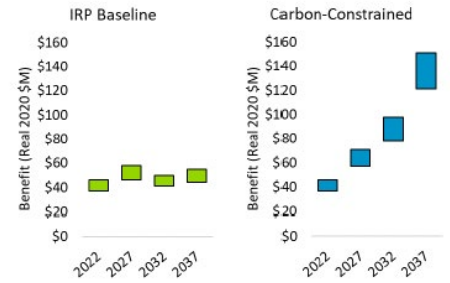
SEEM asked FERC to allow a comment period of 30 days, rather than the usual 21, and sought an effective date in 90 days — May 13. Members hope to select a vendor to build the system in the first quarter of this year with the buildout complete by the third quarter and

trading beginning in the first quarter of 2022.

SEEM said FERC can only opine on whether the rates proposed in the group's Federal Power Act Section 205 filing are just and reasonable, limiting any changes to "minor deviations."

But FERC is likely to hear complaints from intervenors who contend SEEM does not go far enough to modernize the region's electric industry.

When news of SEEM's efforts became public in July, the Solar Energy Industries Association and the Southern Environmental Law Center said they would push regulators to demand more competition. The Southern Alliance for Clean Energy *said* SEEM appeared to be an effort to avoid legislative action to create an RTO in the Carolinas. "We remain concerned that SEEM is being constructed as a way for participating utilities to avoid being pushed to form or join a competitive energy market." (See *Southeast Utilities Talking Regional Market.*)



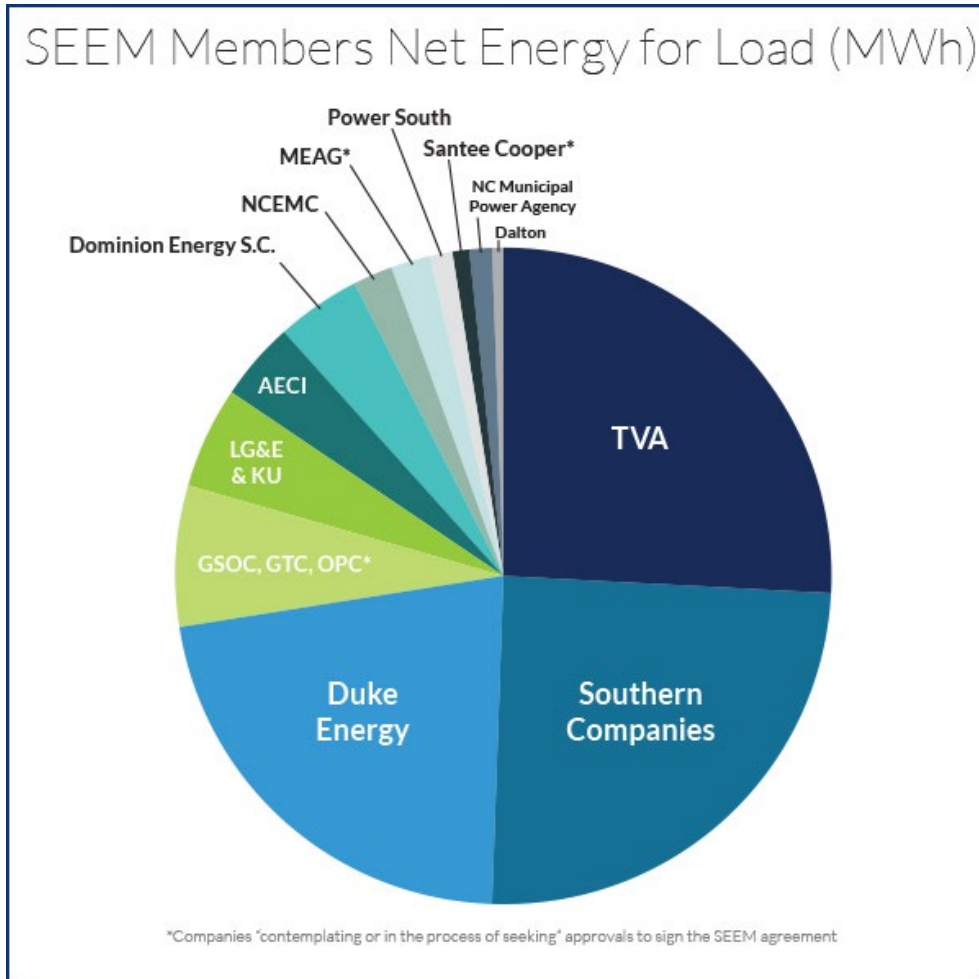
Projected savings for scenario based on most recent integrated resource plans (left) and carbon-constrained scenario (right) | Guidehouse/Charles River Associates

## Stakeholder Outreach

The proposal arose out of a year of discussions among the electric providers and other stakeholders, including "governmental entities and non-governmental entities such as environmental groups, trade associations and individual customers," SEEM said.

"Comments have been overwhelmingly supportive, but a common request was that the members take the Southeast EEM construct further, to have more ambitious aims entailing far greater complexity. ... The current proposal is the one that struck a delicate balance among the members, and thereby enables, for the first time, a regionwide market enhancement in the Southeast."

"This is not the first effort to develop a regional market in the Southeast ... but it is the first one to enjoy such broad support from the transmission owners and load-serving entities in the region," Aaron Melda, TVA's senior vice president for transmission and power supply,



TVA, Duke Energy and Southern Co. represent nearly three-quarters of SEEM's net energy for load (NEL). | Southeast Energy Exchange Market

**FERC is likely to hear complaints from intervenors who contend SEEM does not go far enough to modernize the region's electric industry.**

# FERC/Federal News



and Lonnie Bellar, chief operating officer of LG&E/KU, said in an affidavit submitted to FERC, referencing the collapse of a four-year effort following Order 2000 in 1999.

The group said it will post trading data on a public website and that it will hold annual meetings “open to all interested parties.”

Any changes to the market rules will be filed at FERC, providing an opportunity for public comments.

## No Impact on Reliability

SEEM proposes a new zero-cost, non-firm energy exchange transmission service (NFEETS) provided on an as-available basis after all other uses have been considered. It would be available solely for 15-minute energy exchanges, have the lowest curtailment priority, and unable to be reassigned, sold or redirected.

It could only be provided by a transmission provider whose system – when added to the other participating transmission providers – creates a continuous contract path. Because it would be a non-firm, as-available product, no transmission studies would be required.

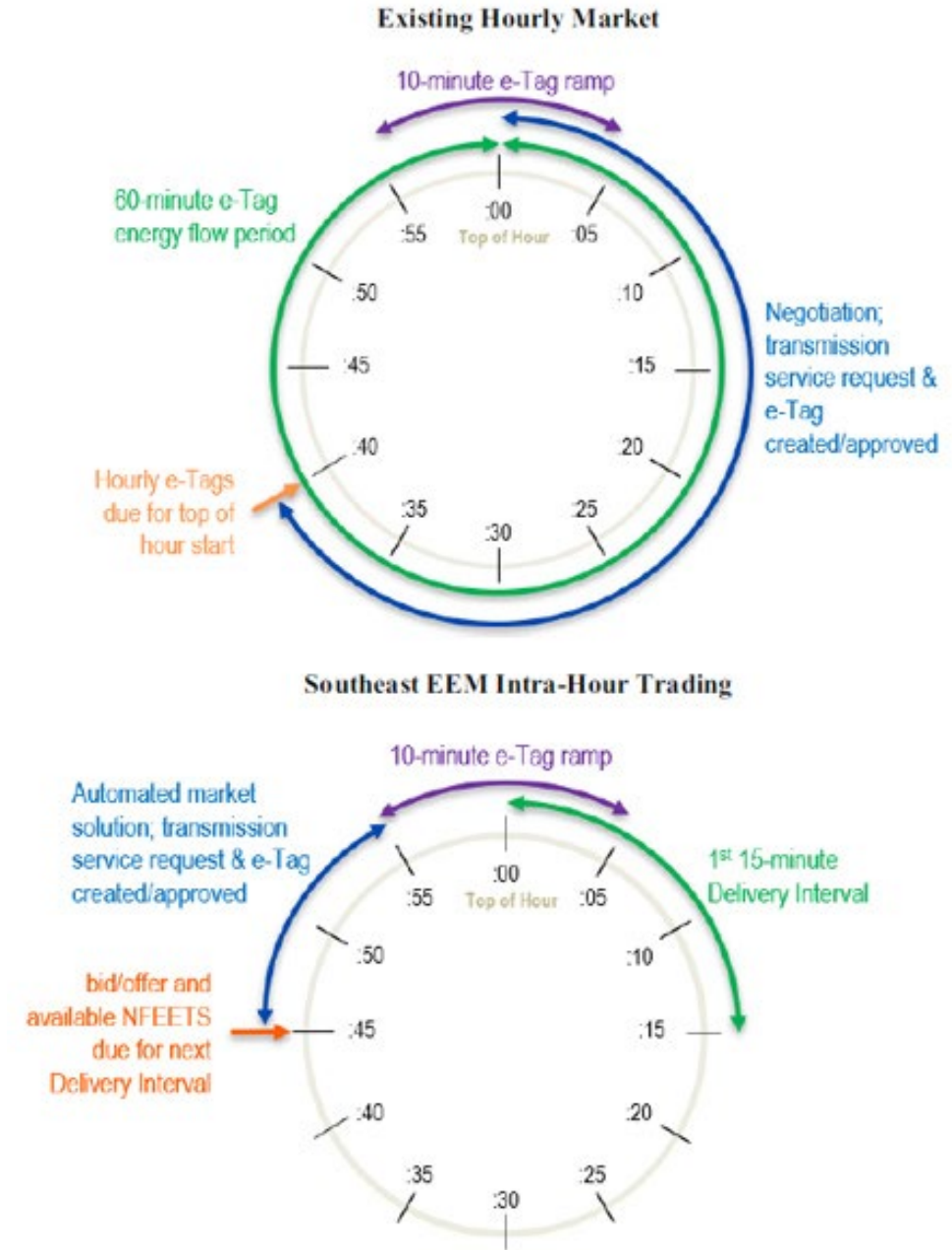
“The Southeast EEM will not have any negative impact on reliability, because it will not change any current reliability roles or responsibilities and will rely on unused transmission given the lowest curtailment priority,” the group said, adding that the market will not offer capacity transactions. “The reliability obligations that BAs and transmission providers have today are unchanged under the Southeast EEM.”

## Split the Savings

SEEM said it will save customers money by allowing more efficient use of unused transmission capacity over a large footprint, increasing the opportunities for win-win trades. It will use a “split-the-savings” approach with the transaction price at the midpoint between the seller’s offer and the buyer’s bid, with an adjustment for transmission losses.

SEEM will be a “low-risk, high-reward venture,” members said, citing a 20-year benefits analysis by Guidehouse and Charles River Associates that projected a minimum of \$40 million in benefits per year (2020\$) in a scenario based on recent integrated resource plans and equivalent data.

Under a “carbon constrained” scenario, benefits will increase to more than \$100 million annually by 2037, according to the analysis. The scenario was based on participants’ IRP carbon-reduction plans and “reasonable assumptions of what a high-renewable-and-stor-



Current bilateral trading schedule compared with proposed SEEM 15-minute market | Southeast Energy Exchange Market

age, low-carbon future may look like in the Southeast.”

Start-up and ongoing costs are estimated at a total of \$3.1 million annually (2020\$) levelized over the 2021-2040 period.

SEEM acknowledged that the new free transmission service could result in a “slight decrease” in point-to-point revenues used to offset network service charges but said the

revenues at stake are “minimal.”

Its benefits will result from bilateral trades unlikely to occur under current rules, the group said. “The automated system will have a substantial advantage in searching for transmission paths with available transmission to complete beneficial trades, overcoming transaction costs and information barriers. Further, the algorithm will exhaustively seek out all possible beneficial trades across the territory.”

## FERC/Federal News



In addition, it “will allow for better integration of diverse generation resources, including rapidly growing renewables, and will reduce renewable curtailments,” Melda and Bellar said in their affidavit.

Because of the lack of sub-hourly market liquidity, transmission providers currently must balance all variation in renewable output across the full hour.

“By creating greater liquidity in sub-hourly wholesale transactions, especially across a broad geographic area encompassing possibly different weather conditions and renewable policies, the Southeast EEM can provide additional opportunities for transmission service providers to either procure additional energy or to dispose of excess energy, rather than having to rely exclusively on increasing or decreasing the output from their own generation resources that provide imbalance service,” they said.

### Governance, Cost Allocation

Each of the members would have a seat on a Membership Board, which “will be responsible for all significant decisions,” while a revolving subset of four members would run the Operating Committee, responsible for overseeing the day-to-day operations and working with an independent entity that would administer the system.

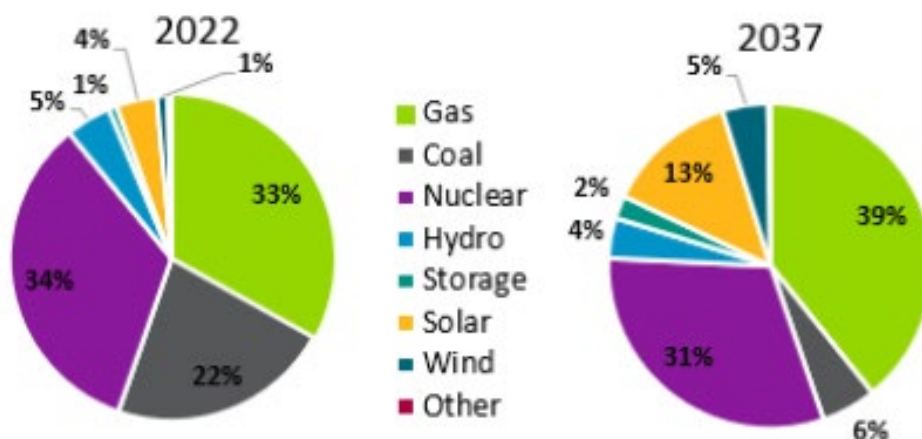
The Operating Committee would have two members from the investor-owned utility sector and one each from the cooperative sector and governmental utility sector, reflecting the sectors’ shares of load. To prevent any subset of members from dominating, votes by the Operating Committee would have to be unanimous, with any issues that cannot be resolved taken to the Membership Board. All members would be permitted to “attend, observe and participate” in Operating Committee meetings.

The group plans a hybrid cost allocation formula, with 25% of costs allocated equally among all members and 75% assigned based on NEL.

### Market Power

The members said they would contract with an auditor to “review and analyze” market data to ensure that the system is functioning properly, but they have no plans to create a market monitor, contending that SEEM does not create new opportunities to exercise market power.

“Any additional market monitoring functions beyond the auditor’s responsibilities would be



The region’s projected capacity mix in 2022 and 2037 (carbon-constrained scenario) | Southeast Energy Exchange Market

superfluous, creating additional administrative costs that are not justified. For these reasons, members are unwilling to fund the costs of a market monitor and believe the traditional means of commission oversight of [market-based rate] transactions will continue to provide adequate opportunities for review and regulatory protection,” SEEM said.

To avoiding potentially anticompetitive price discovery, all reported pricing information would be aggregated and its release delayed until at least the day after the trading day.

The group submitted an affidavit from Susan Pope, a managing director at FTI Consulting, who said no participant could exercise market power in SEEM “unless it already could exercise market power in today’s hourly bilateral market.”

Companies will be able to put constraints into the algorithm to ensure that they continue to obey current mitigation measures, Pope said. “Dominion Energy South Carolina, Duke and LG&E/KU anticipate complying with their mitigation requirements by toggling ‘off’ their home BAAs, thus ensuring that they are not matched with any bidder in their home BAAs and more than meeting the market power mitigation requirement.”

Pope said it would be problematic if a participant could unfairly obtain zero-cost NFEETS or profit from manipulating the average hourly energy exchange prices.

But she said the requirement that all participants have “toggled on” at least three unaffiliated potential counterparties would prevent collusion “to trick the algorithm into moving the schemers to the front of the line for zero-cost transmission.”

“The number of counterparties renders it difficult and risky for parties to coordinate to implement such a scheme, particularly in light of the small benefit to be obtained (i.e., a greater probability of obtaining zero-cost NFEETS),” she said.

### TVA ‘Fence’

In crafting the SEEM agreement, members said they were careful to honor the so-called TVA “fence,” which Congress enacted to prevent the federal utility from selling power outside the areas it was selling to as of July 1, 1957.

Among the current SEEM participants, TVA can sell power to only Duke, LG&E/KU and Southern, although it can purchase from any SEEM participant.

“Given TVA’s central location in the Southeast, if TVA cannot participate in a redesigned market, then others (LG&E/KU and AECI) would not have a contiguous connection to the rest of the market,” Pope noted. “If they cannot connect through TVA, they must connect through one of the neighboring RTOs, thus adding another wheel, and the added transmission expense, to any transaction with a counterparty in the Southeast.” ■

## FERC/Federal News



# FERC's Glick Lays out Priorities in Press Conference

## New Democratic Chair Announces Senior Official Focused on Environmental Justice

By Michael Brooks

FERC Chairman Richard Glick on Thursday told reporters he has five broad priorities in his new role, chief among them ensuring electricity market rules do not discriminate against new technology.

Speaking to the press for the first time since President Biden appointed him chair of the commission Jan. 21, Glick also listed:

- enabling “significant” transmission buildout and speeding up generator interconnection processes to facilitate the surge of renewable resources;
- accommodating state energy programs;
- improving the commission’s approval processes for natural gas infrastructure; and
- working with NERC to strengthen

cybersecurity.

He also committed to building public confidence in FERC decision-making. As part of that, he pledged to be “as transparent as possible” with reporters and announced he would reinstitute post-meeting press conferences, which Commissioner James Danly halted while he was chair.

“I’m going to try my best to avoid saying, ‘The order speaks for itself,’ to avoid your questions,” Glick said.

Still, he declined to go into specifics on the many topics about which he was asked, including RTO minimum offer price rules (MOPRs); offshore transmission planning; and how he would address the commission’s languishing docket to consider how to revise its 1999 natural gas policy statement, instituted by Chair Kevin McIntyre before his death.

While Glick said he would work to gain unanimous support for orders, he also pledged not to “sit on” orders indefinitely if he did not have the full support of his colleagues, anticipating that he and fellow Democratic Commissioner Allison Clements would issue some dissents before the expiration of Republican Neil Chatterjee’s term at the end of June. The Republicans will hold a 3-2 edge until Biden can fill the next vacancy on the commission.

### Details to Come

Glick also announced he would create a new senior position to incorporate environmental justice into the commission’s decision-making.

The chairman did not go into specifics, such as under what office or division the official would work, saying he would have more details at FERC’s next open meeting Feb. 18. But he said the position would ensure decisions across the commission would take into account the concerns of historically marginalized communities.

“This position is not just a title,” Glick said in a *statement*. “I intend to do what it takes to empower this new position to ensure that environmental justice and equity concerns finally get the attention they deserve.”

He also said he would give more details about implementing FERC’s Office of Public Participation, to which Congress gave a budget under the Energy Act of 2020 — 42 years after the Public Utility Regulatory Policies Act directed the commission to establish it.

### On the Agenda

Later on Thursday, FERC released the preliminary *agenda* with a number of high-profile issues for this week’s open meeting. Included are the natural gas policy statement docket (PL18-1); the PJM MOPR docket (EL16-49-006); the NYISO buyer-side mitigation rules docket (EL16-92-004); and the ISO-NE Competitive Auctions with Sponsored Policy Resources docket (ER18-619-002).

It also lists the long stalled grid resilience inquiry docket (AL18-7), opened after the commission rejected the Energy Department’s 2017 proposal to order RTOs and ISOs to compensate the full operating costs of generators with 90 days of on-site fuel, the docket for which is also on the agenda (RM18-1). (See *FERC Rejects DOE Rule, Opens RTO ‘Resilience’ Inquiry.*) ■



FERC Commissioner Richard Glick | © RTO Insider

# FERC/Federal News



## EEl: Net Zero by 2035 ‘Incredibly Difficult’

### Natural Gas, Nuclear Still Needed

By John Funk

The Edison Electric Institute is skeptical about the industry’s ability to meet the Biden administration’s goal of carbon-free electricity by 2035, insisting natural gas generation will be needed for the foreseeable future.

The transition to wind and solar backed by energy storage in just 15 years would be an extremely difficult goal, EEl’s President Tom Kuhn said during its annual Wall Street *briefing* Wednesday. “I think the 2035 date was a campaign initiative and would be an incredibly difficult situation to handle for most of the companies in the industry,” he said.



EEl President Tom Kuhn | EEl

Instead, EEl says its investor-owned utility members are “collectively ... on a path” to cut their carbon emissions by at least 80% by 2050 from 2005 levels.

The association’s top executives said although its members strongly advocate renewable energy, the rollout of electric vehicles and rejoining the Paris climate accords, meeting climate goals will require a massive expansion of the transmission grid, including electronic control systems still being developed and federal investments.

EEl’s *presentation* highlighted changes in the generation mix (“nearly 40% carbon-free”), which it said had resulted in the lowest level of CO<sub>2</sub> emissions in 30 years.

Even if an expanded grid eliminates bottlenecks that impede delivery of renewables to load centers, EEl said gas-fired power plants and nuclear energy must remain in the generation mix. The nation’s 94 nuclear reactors produce nearly 20% of electricity and 50% of carbon-free power it said. The group said it

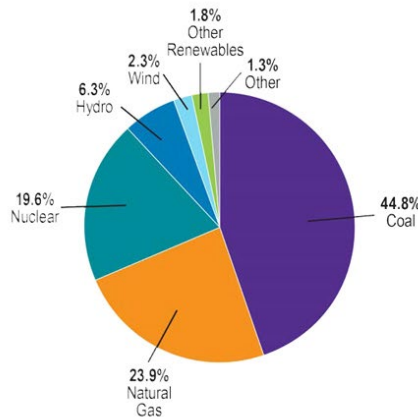
supports “strong and cost-effective” federal regulations to reduce methane emissions throughout the natural gas supply chain.

Brian Wolff, vice president of public policy, noted that EEl has

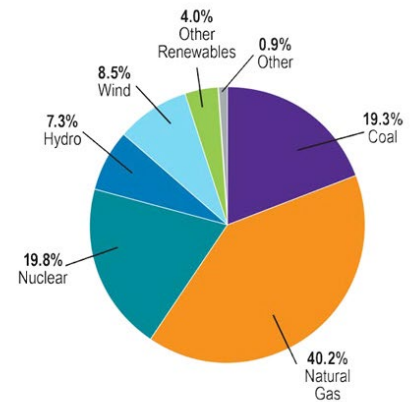


Brian Wolff, EEl | EEl

2010 National Energy Resource Mix



2020 National Energy Resource Mix (preliminary)



Coal’s share of the U.S. generation mix has dropped by more than half since 2010, while wind has quadrupled and natural gas has almost doubled. | *Energy Information Administration*

partnered with environmental groups to figure out the mix of sophisticated technologies that will be necessary to squeeze the last 20% of carbon out of the industry. In 2018, EEl and the NRDC unveiled 21 policy *recommendations* and made it clear that it would be expensive. And funding continues to be an issue.

“While we did a down payment on those technologies in the energy bill that passed in the lame duck session [of Congress] last year, we are really looking now to set the stage for the budget coming up that Congress will be dealing with as well as the administration putting forth their own budget to make sure [there are] appropriate levels of investments in these technologies,” Wolff said. (See *Wind, Solar, EE, CO2 Storage Win Tax Breaks.*)

EEl’s “carbon-free technology initiative” is focusing on five areas:

- advanced, dispatchable renewables (e.g., superhot deep geothermal) and advanced power electronics;
- zero-carbon fuels, such as hydrogen or ammonia, “from a variety of sources”;
- advanced nuclear energy (fission and fusion);
- carbon capture, utilization and sequestration, especially for natural gas facilities; and
- advanced demand efficiency and long-duration storage.

Phil Moeller, vice president for business opera-



Phil Moeller, EEl | @RTO Insider

tions, said the industry has invested more than \$1 trillion since 2010 to build smarter energy infrastructure and to integrate new generation. “These investments continue to be central to our vision of a cleaner, smarter, strong energy future,”

he said, noting 75% of U.S. households now have smart meters.

But the leap to the kind of integrated national grid the industry envisions will need a raft of new public policies, he said. Some of these policies are certain to encounter pushback at the local level.

“We are focused on advocating for public policies that enable us to get critical transmission and grid infrastructure built more quickly,” he said. “The transmission system is key to increasing the integration of clean energy. It enhances the resiliency of the grid, powers electric transportation and facilitates the adoption of a broad array of smart technologies.”

Richard McMahon, vice president for energy supply and finance, warned that the industry’s plans could be hurt by federal tax increases. The Biden administration has signaled it wants to raise the current 21% corporate tax rate to 28%. ■

## FERC/Federal News



# BOEM Hears Public Support for South Fork OSW

By Michael Kuser

Fishermen, environmentalists, labor unions and local residents broadly support the 132-MW South Fork Wind Project being built for the Long Island Power Authority by a joint venture between Ørsted and Eversource Energy.

“We’re anxious to see the South Fork project go forward,” said Roger Clayman, the executive director of the Long Island Federation of Labor, which represents 250,000 workers.

Clayman made his comments Thursday at the second of three hearings being held by the Bureau of Ocean Energy Management. The agency will hold its final virtual public meeting today and accept comments submitted or postmarked no later than Feb. 22 before completing its final environmental impact statement.

“It addresses some major concerns on Long Island, first of all climate change; we’re very sensitive as an island to what the impacts will be,” Clayman said. “Secondly, it brings the South Fork what they voted for, which is wind power; and third is job creation on a very large scale.”

The agency in January released a draft environmental impact statement (DEIS) on the proposed wind farm, finding mostly negligible to moderate adverse impacts from the project, as well as some generally minor beneficial impacts. (See [BOEM Sees Moderate Impacts from South Fork OSW Project](#).)

### Fish Facts

Ørsted and Eversource are proposing to build up to 15 wind turbines, with a capacity of 6 to 12 MW per turbine, located approximately 30 nautical miles east of Montauk Point.

“The fish I catch today as a charter captain are vastly different in type and abundance due to climate change impacts, so the fishing industry needs renewable energy to help them stem the tide,” said Dave Monti, board member of the American Saltwater Guides Association and vice chair of the Rhode Island Marine Fisheries Council.

The developers have acknowledged the importance of private recreational fishing, but private angling is not covered in the DEIS, he said.

“It’s not the developers’ job to report who is fishing in a wind farm area and what they catch, but it is rather the job of [National Oceanic and Atmospheric Administration] and

BOEM to make sure that recreational fishing is covered in surveys,” Monti said. “Recreational anglers are supportive of offshore wind as long as the wind farms are developed responsibly, with research before, during and after construction.”

Europe shows greater fish abundance inside its wind farms, and at the Block Island Wind Farm off Rhode Island, recreational fishing “is good, perhaps even a bit better than before the wind farm, even though fishing pressure in the area has increased,” Monti said.

Rich Hittinger of the Rhode Island Saltwater Anglers Association expressed concern that sound waves from pounding the 31-foot diameter piles into the seabed would damage fin fish within a nearly 6.5-nautical-mile radius.

“I’m just wondering if this is actually true, and if so, I’d like to know what is the anticipated radius of expected fin fish mortality,” Hittinger said. “I’m sure it would be much smaller, but I’d like to know what that is.”

Matt Gove from [Surfrider Foundation](#), a national ocean advocacy group, said that his group hasn’t seen anything in the DEIS to keep it from supporting the project, but that “we’re really hoping to see some leadership from BOEM here on monitoring. ... If we don’t have a standardized monitoring to have standardized data across all these projects, we’ll have no idea if any impacts are happening that we can’t see.”

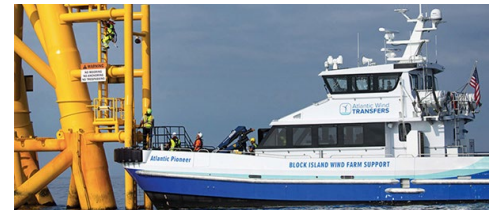
### Extension Cords

The preferred landfall site for the facility’s interconnection line is a parking lot at the southern end of Beach Lane in Wainscott, Long Island.

Mike Mahoney of Wainscott support the project but said that Beach Lane is busy and narrow, while the alternative landing site, Heather Hills, is wider and probably safer.

Site specifics aside, Mahoney said, “The cost for the electricity for ratepayers in Suffolk County will be five times higher than any other location in the state of New York, and that concerns me greatly, especially when the adjacent wind farm, Sunrise, is being paid for by all the ratepayers in the state. ... I know that that’s the agreement that LIPA and our state has signed, but I hope that you have input and can go back and suggest that they really look at that.”

David Posnett, a retired medical doctor in East Hampton who works with [Win with Wind](#), an independent advocacy group on the South Fork,



A crew transfer vessel services the Block Island Wind Farm off Rhode Island. Fishermen at the BOEM hearing on the South Fork Wind Farm noted that fishing around the Block Island facility is just as good as before its construction. | BOEM

said he had a comment for all those who are worried about the “nefarious cable” running under the seabed and coming ashore.

The 660-MW Neptune Cable has been feeding power into Long Island from New Jersey without incident since 2007, and LIPA imports power from New England on the 330-MW Cross Sound Cable. Power also comes in on two older cables owned jointly by the New York Power Authority and Consolidated Edison, the 600-MW Y49 cable and the 400-MW Y50 cable, which also run under the sound to Long Island, he said.

“We already have giant extension cords running to Long Island,” Posnett said, adding that their construction had not harmed local shellfish.

But Mahoney questioned the need to run separate export cables from adjoining wind farms being built by the same developer.

“The developer said they couldn’t because the turbines are producing DC for the South Fork and AC for Sunrise,” Mahoney said. “Wouldn’t it be OK to go back to Ørsted and Eversource and say, ‘Put AC turbines up there instead of DC and just run the one cable and have less environmental impact to our ocean bottom and our sea creatures and mammals?’”

Joe Martens, director of the New York Offshore Wind Alliance, said that although relatively modest in size compared to other projects in BOEM’s queue, the South Fork project is important because electricity demand on the South Fork is growing faster than anywhere else on Long Island.

Adrienne Esposito, executive director of Citizens Campaign for the Environment, a state-wide group with 140,000 members, agreed with Martens.

“Although this wind farm won’t cause a fossil fuel plant to close, it prevents another one from being built,” Esposito said. ■



## CAISO/West News

# CPUC Triples Resource Projections for CAISO Tx Plan

By Hudson Sangree

The California Public Utilities Commission on Thursday approved a massive increase to its resource-needs projections, which CAISO will use in its transmission planning process for 2021/22, now underway.

The 28 GW of generation and storage resources the commission now sees the state needing by 2031 is more than triple the 9 GW it identified in last year's projections for 2030. The latest resource portfolio from the CPUC calls for an additional 16 GW of in-state wind and solar, more than 9 GW of battery storage and 1 GW of wind from other states such as Wyoming and New Mexico.

"This base case goes far beyond what was transmitted to the ISO just a year ago," Commissioner Clifford Rechtschaffen said. "For example, it doubles the generation capacity that's included in the portfolio. Last year it was 9,000 MW, and this portfolio is 18,000 MW. And it adds over 9,000 MW of battery storage capacity, and this battery storage capacity is mapped to specific locations on the electric grid to minimize air pollutants in disadvantaged communities ... to the extent possible."

The additional resources are needed to compensate for the planned retirement of a half-dozen aging natural gas-fired plants and the state's last nuclear generating station, Pacific Gas and Electric's Diablo Canyon Power Plant, Rechtschaffen said. But the nameplate capacity of variable renewable resources must far exceed the capacity of the retiring thermal resources to meet the same load.

"In total, this *decision* ensures our grid can be ready for the procurement and interconnection of 28,000 MW of new resource capacity," he said. "Just for some sense of scale and perspective, that's the equivalent of 12 Diablo Canyon nuclear plants."

The state is transitioning from fossil fuels to renewables as it seeks to meet the requirements of Senate Bill 100, passed in 2018. The bill required load-serving entities to supply retail customers with 60% clean energy by 2030 and 100% by 2045.

The transition led to shortfalls last summer, requiring CAISO to call for rolling blackouts in August, as solar ramped down in the evening but demand remained high during heat waves. Sufficient battery storage was not yet available to meet the evening's net peak hour.

The state also has ambitious greenhouse gas reduction targets that the new resource planning portfolio tries to meet.

At the beginning of Thursday's meeting, numerous public commenters said the state should do more to lower GHGs. The portfolio approved by the CPUC has a target of reducing GHGs to 46 million metric tons by 2031. Environmentalists and some PUC commissioners want to reduce GHGs to 38 MMTs in the same time frame.

That possibility will be studied as part of resource and transmission planning, Rechtschaffen said. In the meantime, generation and transmission upgrades will help meet the lower target, should it be adopted, he said.

"Results from the CAISO's [transmission planning process] study of the base case portfolio will be used to identify future transmission investments," the commission said. "These investments are intended to be 'least regrets' projects necessary to meet not only the base case needs, but also to support transition to subsequent base case portfolios with lower GHG targets, without resulting in stranded investments." ■



CPUC projections call for 1 GW of out-of-state wind from resources in Wyoming, pictured, and New Mexico. | © RTO Insider

## CAISO/West News

# Calif. Governor Fills Seats on CAISO, CPUC, CEC

By Hudson Sangree

Gov. Gavin Newsom on Feb. 9 named new members to the three bodies that govern California energy policy — CAISO, the Public Utilities Commission and the Energy Commission — and reappointed a sitting member of the ISO's Board of Governors.

Newsom appointed former NERC Trustee Jan Schori to fill a seat on the CAISO board left vacant when former Chair David Olsen decided to retire at the end of November.



Former NERC Trustee and SMUD CEO Jan Schori will become a CAISO board member. | © RTO Insider

In a rare move, the governor named an Energy Commission staff member, Deputy Director Siva Gunda, to the panel of five commissioners. Former Commissioner Janea Scott left in January to take a top post at the U.S. Department of the Interior under the Biden Administration.



Darcie Houck, chief counsel to the California Energy Commission, will fill a vacant seat on the California Public Utilities Commission. | California Energy Commission

Newsom selected the Energy Commission's general counsel, Darcie Houck, to fill an open spot on the CPUC dais. In December he picked former Commissioner Liane Randolph to head the California Air Resources Board, leaving a vacancy.

And the governor reappointed Mary Leslie to a seat she has held on the CAISO board since 2019.

During last week's CEC meeting, commissioners welcomed their new colleague, Gunda, and wished Houck well in her next role. Chair David Hochschild noted that the CEC and CPUC must work together to predict energy use and procure resources. The additional connection between the two entities will be helpful, he said.

"The collaboration between the CPUC and the Energy Commission is so fundamental to our success, and so, knowing the strong bond the two of you have with each other is another reason we should all be excited," he told Houck



Gov. Gavin Newsom filled vacancies on the boards of CAISO, the CPUC and the Energy Commission on Feb. 9. | © RTO Insider



Siva Gunda, a deputy director at the Energy Commission, was named a CEC commissioner. | California Energy Commission

entities. (See [New CAISO CEO Vows Urgency on Resource Adequacy](#).)

"It's just clear California will not succeed and will not have an effective resource adequacy framework if the ISO and the CPUC and the CEC do not have that shared sense of tremendous urgency and focus and collaboration," CAISO CEO Elliot Mainzer said in an interview last year. "We have to work well together."

Schori's appointment followed her service as a NERC trustee for 12 years, the maximum allowed. She was termed out earlier this year.

From 1984 to 2008, Schori worked for the Sacramento Municipal Utility District, one of the nation's largest municipal utilities, including as its CEO and general manager, general counsel and staff attorney. She graduated from the University of California Davis School of Law.

Leslie, whom Newsom named to the CAISO board two years ago, was the longtime pres-

and Gunda.

Working with CAISO, the commissions are trying to head off energy shortfalls this summer and in the next few years, as the state transitions from fossil fuels to renewables. Last summer's energy emergencies and rolling blackouts led to calls for better synchronization among the three

ident of the Los Angeles Business Council, a one-time deputy mayor of Los Angeles and a former commissioner at the Los Angeles Department of Water and Power.

Houck, another UC Davis graduate, has been chief counsel at the CEC since 2019. She was an administrative law judge at the CPUC from 2016 to 2019 and staff counsel at the CEC from 2000 to 2005. She worked in a private law firm between her stints of government service.

Gunda served as deputy director of the Energy Assessments Division at the CEC since 2018 and was office manager of the commission's Demand Analysis Office in 2017-2018. He previously worked at the UC Davis Energy and Efficiency Institute, including as director of research for two years and as a program manager for four years prior. Gunda holds a master's degree in mechanical and aeronautical engineering from Utah State University.

After he was sworn in, Gunda — who, commissioners said, is known for giving credit to others — thanked his fellow staff members at the CEC for their "collective success" and hard work pursuing the state's clean energy goals and helping determine the causes of last year's rolling blackouts. (See [CAISO Issues Final Report on August Blackouts](#).) Their joint efforts culminated in his appointment, he said.

"The staff at the Energy Commission are one of the most passionate, committed and intellectually honest group of people that I've ever met," Gunda said. "It's been an absolute honor and pleasure." ■

# CAISO/West News

## COVID Yields \$1B of Unpaid Energy Bills in Calif.

*CPUC Pursues Effort to Help Ratepayers, Utilities Before Bills Come Due*

By Hudson Sangree

The California Public Utilities Commission is seeking ways to help the millions of utility customers who collectively owe more than \$1.15 billion in past-due energy bills, largely because of the COVID-19 pandemic and resulting economic downturn.

The commission continued a moratorium on customers disconnections through June. But without additional action, utility customers eventually will be on the hook for the arrearages, it said in issuing a new order instituting rulemaking (OIR).

“We need to get started preparing our customers through what’s going to be a very, very difficult transition period,” Commissioner Clifford Rechtschaffen said. “Those numbers are extraordinarily frightening: the [amount and] extent of the debt owed – really, really jarring.”

Ed Randolph, head of the CPUC’s Energy Division, said he is fairly certain about the amount owed, but the exact number of customers in arrears is harder to determine because of the different ways utilities report them.

Pacific Gas and Electric, the state’s largest utility, said its customers owe it more than \$531 million. Southern California Edison said its ratepayer debts total close to \$332 million. San Diego Gas & Electric recorded more than \$142 million in past-due bills, while Southern California Gas racked up nearly \$149 million in customer debt.



CPUC commissioners and staff members opened a proceeding Thursday to deal with a huge backlog of unpaid energy bills. | California Public Utilities Commission

Job losses contributed heavily to the debt. Unemployment for low-income households in California topped 30% during part of 2020, the commission noted.

The proposed *decision* adopted Thursday starts a process of trying to find “relief mechanisms” for customers and utilities alike.

“When the disconnection moratorium ends, some customers will be faced with outstanding utility bills,” the commission said. “When disconnections for nonpayment resume, some households will still be contending with loss of life and livelihood, and we do not intend

for these customers to face their outstanding utility bill arrearages alone.”

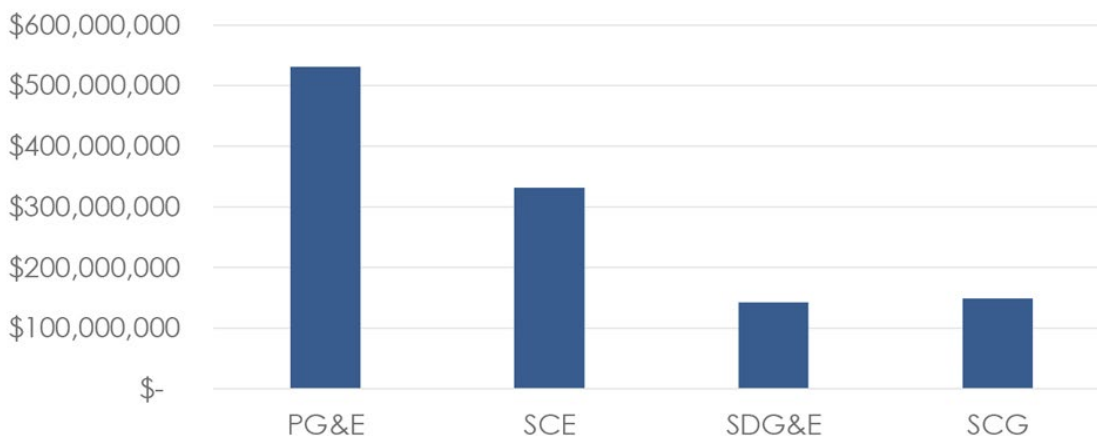
Another concern is the financial stability of the investor-owned utilities, the CPUC said.

“The pandemic has persisted longer than could have been imagined,” it said. “Increases in unpaid customer bills may also impact the financial health of the very utilities that must continue to provide the essential services.”

The commission said it does not want to spread the backlogged debts among all IOU customers, as normally might be done. Instead, it is considering programs to provide payment

assistance to vulnerable customers, including medical baseline customers, and to introduce longer and more flexible payment options for customers who cannot pay on time.

“Our new proceeding will put in place debt management programs tailored to these extremely challenging times, with special consideration for the most vulnerable in our communities who may be having trouble paying their energy bills,” Rechtschaffen said in a statement following the vote. ■



Commission staff presented a breakdown of past-due bill amounts for each of the state’s large investor-owned utilities. | California Public Utilities Commission

## ERCOT News



# Former Mich. Regulator Talberg to Chair ERCOT Board

By Tom Kleckner

ERCOT's Board of Directors on Feb. 9 elected newcomer Sally Talberg to a three-year term as its chair and six-year veteran Peter Cramton as its vice chair.

Talberg, a former regulator with the Michigan Public Service Commission who only joined the board as an unaffiliated director on Jan. 1, wasted no time in exerting her influence. She gently chided ERCOT CEO Bill Magness when he referred to her as "Chairman Talberg," urging him to use her first name instead.

"Since I'm calling everyone else by their first name, it keeps us on a level playing field," Talberg said.



Sally Talberg | © RTO Insider

The board meeting was her first since her election was approved by the Texas Public Utility Commission in November. The PUC also approved retired ISO-NE General Counsel Raymond Hepper's election at the same time. (See [Texas PUC Approves ERCOT Board Members.](#))

"ERCOT is a world-class electric grid operator, and it is exciting to be part of this organization as it continues to evolve its markets, planning and operations in response to unprecedented change in the electric industry," Talberg said in a [statement](#). "From my observation, the board is successful in large part because of ERCOT's stakeholder process and the role and leadership of the [PUC] and the Texas Legislature."

Talberg has 25 years of experience in energy and environmental regulatory policy. She served on the Michigan commission from 2013 until last year, including four years as chair, and was president of the Organization of MISO States in 2016.

As a senior consultant at Public Sector Consultants, Talberg helped lead the development of Michigan Saves, a nonprofit green bank that has financed more than \$200 million in energy efficiency projects.

But Talberg has Texas ties too. She has a master's degree in public affairs from the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin and has advised the PUC's commissioners on retail and wholesale



Peter Cramton | ERCOT

market issues. She worked at Lower Colorado River Authority while pursuing her master's.

Cramton is an economics professor at the University of Cologne and the University of Maryland College Park (emeritus since 2018). He has conducted research on market design and auctions, introduced market designs in many industries, and advises startups on finance, insurance and communications.

Following a special Nominating Committee meeting, the board approved Cramton's appointment to a third and final three-year term as an unaffiliated director. His current term expires Aug. 15.

Cramton's nomination must also be approved by ERCOT members and the PUC. ■

## ERO Insider

The latest stories on the Electric Reliability Organization



**More Opportunities than Challenges in Drones, NARUC Hears**

**NERC Touts Progress During 'Extraordinary' 2020**

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## ERCOT News



# ERCOT, MISO, SPP Cut Loads in Wintry Blast

Continued from page 1

blackouts was in 2011, just days before Super Bowl XLV was played in Dallas. In its annual seasonal assessment of resource adequacy for the winter, released in November, ERCOT had said it expected to have enough installed capacity to meet a forecasted 57.7 GW of demand, in part because of a record amount of new wind resources. (See *ERCOT: Record 5 GW of Installed Wind Capacity*.)

"We are doing everything in our power, not just ERCOT, but the generation owners and the transmission owners, trying to keep the situation reliable," Woodfin said. "We're trying to reduce the length of these outages as much as we can to make sure the system as a whole

can operate."

"Every grid operator and every electric company is fighting to restore power right now," ERCOT CEO Bill Magness said in a statement.

ERCOT gave notice over the weekend that service interruptions were a real possibility. (See *Grid Operators Face Historic Arctic Blast*.)

### MISO South Jettisons Load Again

The sustained deep freeze also brought MISO South its second load-shedding event in less than six months.

MISO said the frigid temperatures contributed to generation and transmission outages, leaving it no choice but to direct rotating

power outages. The blackouts began Monday morning for some customers in Southeast Texas, MISO said.

"We fully committed every available operating asset before the event to lessen the impact on our system, but conditions eventually deteriorated to a point where demand exceeded supply," Executive Director of System Operations Renuka Chatterjee said. "The accelerated change in conditions led us to our last resort in order to maintain grid reliability, and we are in direct communication with our members to support their restoration efforts in the affected areas."

MISO said it consulted with members before the load-shed to identify "the worst-case scenarios to limit the effects of temporary power supply interruptions to those areas that will provide the most relief." The grid operator said their plan was informed by weather forecasts, predicted demand and worst-case reliability risks. Load-shedding is the last-ditch effort in a MISO maximum emergency event.

MISO issued its first-ever load-shedding orders in MISO South in late August, after Hurricane Laura tore through the heel of Louisiana. (See *MISO Keeps Advisories in Effect a Week After Laura*.)

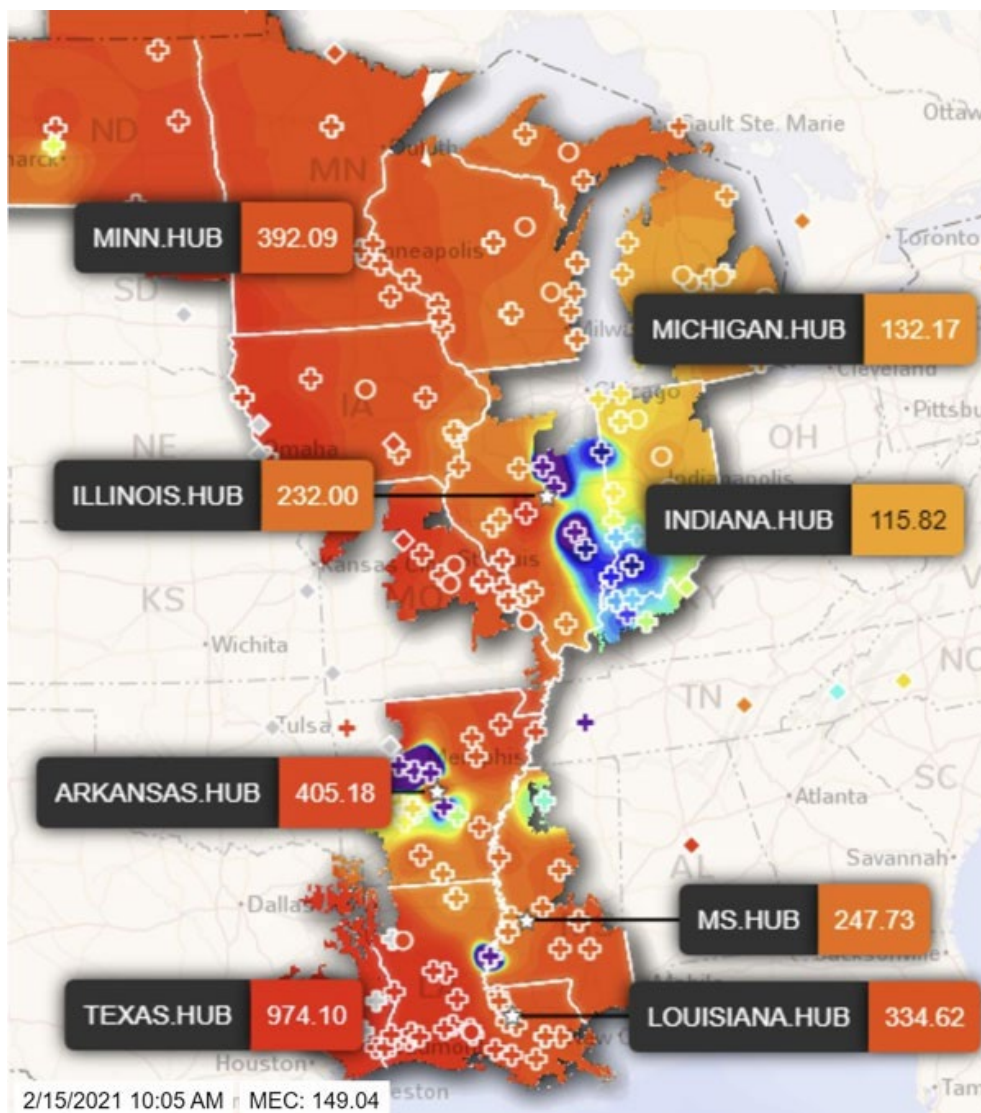
"This was truly a coordinated effort with all of our members to avoid a potentially larger grid outage," MISO South Executive Director Daryl Brown said.

Entergy agreed in a press release that the outages were carried out to "prevent a more extensive, prolonged power outage that could severely affect the reliability of the power grid." It said its demand had hit an all-time high and that outages could continue throughout the day.

"We apologize for the inconvenience these outages may cause, but we have an unusual situation right now driven by extreme weather conditions. We are working to respond and restore power as soon as it is safely possible," Entergy Vice President of Customer Service Stuart Barrett said. "While our crews worked to prepare for this storm, a loss of generation combined with the peak load has caused a strain on the system. As a result, we are short of the power needed to meet our customers' demands across southeast Texas."

Pricing at MISO's Texas hub flirted with \$1,000/MWh at 10 a.m. ET.

Southern Renewable Energy Association



MISO pricing heat map the morning of Feb. 15 | MISO

# ERCOT News



Executive Director Simon Mahan took to Twitter on Sunday to criticize the \$37 to \$39/MWh real-time pricing across MISO South the morning before the emergency, when temperatures near MISO's Little Rock, Ark., offices were around 18 degrees Fahrenheit. By 9 p.m., pricing in MISO's Texas territory hit about \$284/MWh, though other parts of MISO South hovered around \$45/MWh.

It's unclear how MISO will price load lost to the winter storm, as it is currently investigating how to better price *force majeure* events. Stakeholders have told the RTO that it made inappropriate after-the-fact price corrections to the \$3,500/MWh value of lost load during and after Hurricane Laura. (See [MISO to Outline New Pricing Plan for Hurricanes](#).)

## SPP's 1st Rolling Blackouts in History

SPP was spared from a load-shedding event until just after noon, when it said regionwide demand had exceeded available generation across its 14-state Eastern Interconnection footprint and its available reserve energy had been "exhausted."

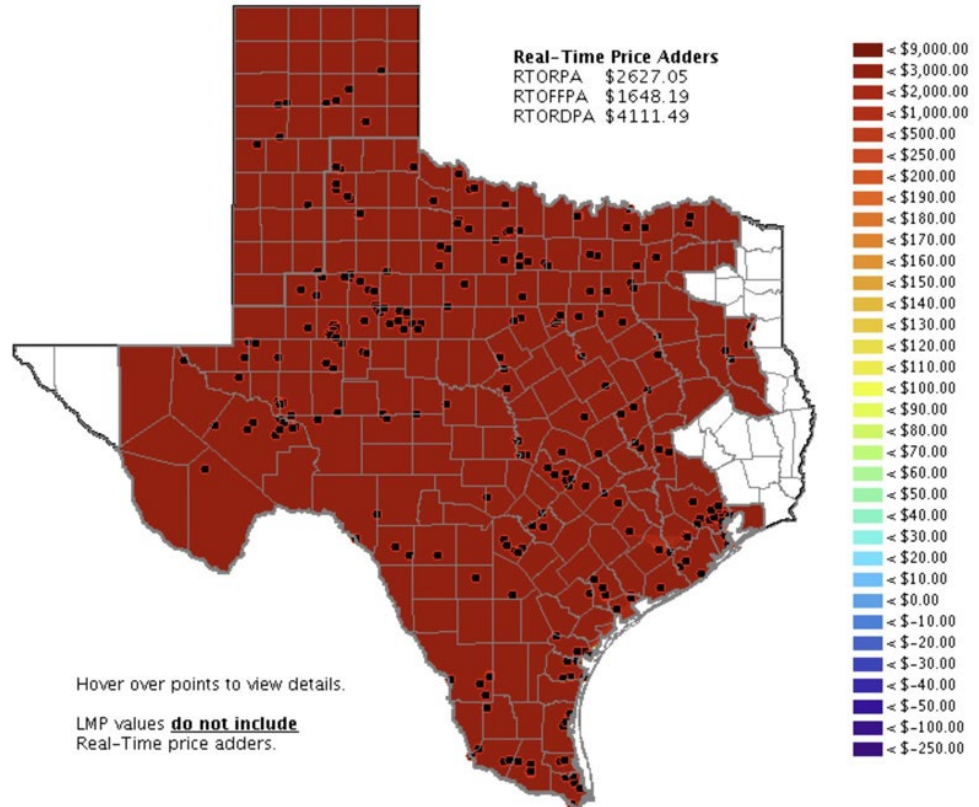
It is the first time SPP has ever resorted to rolling blackouts.

"In our history as a grid operator, this is an unprecedented event and marks the first time SPP has ever had to call for controlled interruptions of service," COO Lanny Nickell said. "It's a last resort that we understand puts a burden on our member utilities and the customers they serve, but it's a step we're consciously taking to prevent circumstances from getting worse, which could result in uncontrolled outages of even greater magnitude."

SPP said it had to interrupt service given the decline in imports from its neighbors. It said it has directed its members' transmission system operators to reduce electricity demand by an amount needed to prevent further uncontrolled outages.

Speaking in a Monday afternoon press conference, senior Vice President of Governmental Affairs Mike Ross said SPP planned for the weather and projected a new winter peak a week in advance. Ross said he was "pleased" to announce that the RTO only had to direct rolling blackouts for a little under an hour until about 2 p.m. CT.

"It doesn't mean we'll stay there," he warned of SPP's ability to serve load, citing record-high demand and record-low temperatures. "We've been coordinating power since 1941; this is the first time in the history of SPP that we've found ourselves in this position."



ERCOT pricing on Monday morning | ERCOT

SPP said that overall, it was just 641 MW shy of its load obligations.

"I don't want to trivialize any load shedding," Nickell said. "It's unprecedented for us. It's unprecedented for a lot of the country. ... Thankfully it didn't turn out as bad as we expected, and we're not out of the woods yet."

Nickell said SPP members already have plans in place to strategically withdraw load when necessary. "We could very well be in and out of this situation until Thursday," he added. That proved to be the case, as just this morning, SPP was forced to declare another EEA.

The executives said talk about more stringent reserve requirements will be imminent.

"There's no doubt there will be a lot of policy discussions forthcoming," Nickell said.

SPP has canceled several stakeholder meetings over the next few days.

"FERC is closely monitoring the extreme weather conditions occurring in much of the country and the impact they are having on electric reliability," Chairman Richard Glick said in a [press release](#) issued Monday afternoon. "The commission is in contact with ERCOT, SPP and MISO, as the regions served by these grid operators have been particularly hard hit by record cold and wintry precipitation. Safeguarding the reliability of the bulk power system is paramount, and I have directed FERC staff to coordinate closely with the RTOs/ISOs, utilities, NERC and regional reliability entities to do what we can to help."

"In the days ahead, we will be examining the root causes of these reliability events, but, for now, the focus must remain on restoring power as quickly as possible and keeping people safe during this incredibly challenging situation." ■

## ERCOT News



# ERCOT Board of Directors Briefs

## Grid Operator's Work on Reserve Margins Attracts NERC's Interest

ERCOT staff's work on summer reserve margins has drawn the attention of NERC executives, CEO Bill Magness told the Board of Directors last week.

"We've been talking to NERC about how they want to see a summer assessment identified," Magness said during the Feb. 9 meeting. "[NERC executives] are looking at whether they want to have people try different ways to measure reserve margins, as we are doing."

The Texas grid operator's planning reserve margin for this summer is 15.5%, thanks to large amounts of utility-scale solar resources. That figure, which comes out of the December capacity, demand and reserves (CDR) *report*, is almost 2 percentage points lower than the May 2020 CDR report, which indicated a planning reserve margin of 17.28%. (See [Solar Power Boosts ERCOT's Reserve Margins](#).)

Magness attributed much of the decrease to planned project delays in solar development.

"Utility-scale solar can move much faster and be built much faster than conventional units. They're able to be much more nimble and make decisions later in the planning cycle," he explained.

The key in ERCOT's energy-only market is net load, a measure of demand minus expected generation from intermittent resources, Magness said. The grid operator's Supply Analysis Working Group (SAWG) has begun to study net-load-capacity risks to the CDR. That includes improving CDR methodologies for wind and solar capacity that more closely aligns with their reliability contributions and developing a capacity-contribution methodology for battery energy storage systems.

Staff developed a probabilistic risk assessment model for last summer using ERCOT's seasonal assessment of resource adequacy as a starting point. The model determines the probability of energy emergency alert events for each hour on peak load days (hours ending 1 to 8 p.m.). Staff and the SAWG will determine the model's next steps when it is used to support a new requirement to provide resource adequacy risk metrics for the NERC 2021 summer reliability assessment.

"There's a lot of work to assess the quality of the various reporting mechanisms that assess changes on the grid," Magness said.



ERCOT's new headquarters facility is being built close to its current location in Austin. | ERCOT

Two additional metrics are ERCOT's market equilibrium reserve margin (MERM) and the economically optimal reserve margin (EORM), both of which the grid operator reports every two years to the Texas Public Utility Commission. The reserve margin studies analyze scarcity conditions for every hour of the year through 2024, while the CDR measures available resources and demand in the current year's peak hour.

Astrapé Consulting recently filed a *report* that indicates a MERM of 12.25% in 2024, up from 10.25% in its 2018 study, and an EORM of 11%.

### ERCOT Finishes 2020 with \$27.6M Loss

Magness reviewed the 2020 budget and the preliminary 2021 financials during his president's report, saying ERCOT expects another negative variance this year on top of 2020's.

According to the final unaudited numbers for 2020, ERCOT took a \$27.6 million loss last year, with interest income \$15.7 million below budget and a \$10.5 million shortfall in the system administrative fee, due mostly to the economic downturn. Interconnection revenues also were under budget, by \$900,000. Expenditures were \$2.3 million over budget.

ERCOT budgeted an interest rate of more than 2%, which fell to zero under the weight of the COVID-19 pandemic. It projected a 2.25% interest rate this year, which it expects will result in a \$19.9 million loss. Overall, the grid operator expects to come in \$23.9 million short of its 2021 budget.

The interest rate "seemed like it was low at the time," Magness said.

Stakeholders will get their first look at the 2022-2023 budget during the April board meeting. Magness reminded those on the phone that ERCOT won't be asking for a change in its administrative fee, which has remained at 55.5 cents/MWh since 2019.

Magness said 95% of staff continue to work remotely and have had "good luck with health." ERCOT has requested 210 "essential worker vaccines" for some staff from the Texas Department of State Health Services but has yet to hear back. In the meantime, Magness said it is working with public and private entities to get essential workers vaccinated as soon as possible.

ERCOT will wait until mid-March to next assess when to return staff to the workplace. Any decision will be dependent on the vaccinations' progress and case counts.

When staff do return to the office, it won't be long before they move into a new facility. Magness said construction will be complete by year-end on a new, single-story building near its current headquarters. ERCOT will be the only tenant and will have more meeting space than it currently does.

"We're excited about what we're going to be able to offer, not only for ourselves, but for the board and stakeholders," Magness said. "I do hope we have some meetings in the old Met Center."

# ERCOT News



## ERCOT Projects 'Just Keep Swimming'

Mandy Bauld, senior director of ERCOT's Project Management Office (PMO), said her group completed 29 projects during 2020 despite most of the staff working from home with limited personal interaction. The PMO typically runs about 40 active projects each year, worth \$60 million, but ran 80 unique projects last year.

"It reminds me of the quote from 'Finding Nemo,' which is kind of corny: 'Just keep swimming,'" Bauld said. "Amid the organization's shift to working fully remote in March, the organization continues to meet project objectives."

Topping the PMO's objectives for 2021 is the *Passport Program*, which combines the implementation of real-time co-optimization, energy storage resources, and distributed energy resources with ERCOT's energy management system upgrade. (See "Passport Program Picking up RTC, Energy Storage Work," *ERCOT Technical Advisory Committee Briefs: Jan. 27, 2021.*)

The Passport Program faces a 2024 implementation deadline.

## Talberg Chairs 1st Meeting

Chairing her first board meeting, former Michigan Public Service Commissioner Sally Talberg shared her two priorities for the coming year. (See *Former Mich. Regulator Talberg to Chair ERCOT Board.*)

She told directors and stakeholders that the first item on her plate is "building connections with all of you," in addition to ERCOT staff and the PUC.

"Second, I want to prioritize the successful implementation of the key initiatives in the Passport Program," Talberg said. "So much work went into this last year ... I feel fortunate ERCOT is in such a position of strength. This is truly a world-class grid operator, recognized around the world for that."

Talberg thanked her predecessor, nine-year chairman Craven Crowell, for his mentorship and said she was "drinking by the firehose" as she gets up to speed on ERCOT's issues.

"I'm fortunate to learn from the founding fathers and mothers of ERCOT," she said.

Talberg is joined on the board by fellow rookies Raymond Hepper, who retired from ISO-NE as its general counsel, and Just Energy's Vanessa Anesetti-Parra, who replaces Ned Ross in representing the independent retail electric provider segment.

The directors also confirmed South Texas Elec-

tric Cooperative's Clif Lange as the Technical Advisory Committee's chair and Just Energy's Eric Blakey as the vice chair.

## Board Approves 17 Protocol Changes

The board unanimously approved 17 revision requests, all but one of which appeared on the consent agenda. Directors unanimously passed the lone Nodal Protocol revision request (*NPRR994*) that received an opposing vote at the TAC.

The NPRR clarifies which transmission improvement projects associated with the interconnecting new generation resources should be classified as "neutral" projects, including new substations, and delineates which interconnection facilities are considered before ERCOT performs an economic analysis.

The consent agenda included 11 other NPRRs, three revisions to the Planning Guide (PGRRs), and single changes to the Resource Registration Glossary (RRGRR) and the Settlement Metering Operating Guide (SMOGR):

- *NPRR1024*: authorizes staff to consider significance in determining whether to perform a price correction for the day-ahead or real-time markets, introducing metrics for determining when to perform a price correction or request the board's approval.
- *NPRR1034*: creates a new protocol section (Frequency-Based Limits on DC Tie Imports or Exports) that enables ERCOT to establish import or export limits on DC ties and avoid the risk of unacceptable frequency deviation during an unexpected loss of one or more DC ties during the import/export. Staff will be able to curtail DC tie schedules on a last-in-first-out basis.
- *NPRR1040*: establishes compliance metrics for ancillary service supply responsibility.
- *NPRR1044*: requires generation resources and ESRs to develop and implement sub-synchronous resonance mitigation plans to address vulnerabilities in the event of six or fewer concurrent transmission outages, an increase from the current threshold of four or fewer.
- *NPRR1048*: changes certain required system adequacy reports to being aggregated by forecast zone instead of by load zone. Forecast zones have the same boundaries as the 2003 congestion management zones: North, South, West and Houston.
- *NPRR1049*: removes the requirement to obtain board approval to add, delete or change a DC tie load zone and also removes the

48-month waiting period before such actions can go into effect.

- *NPRR1050*: changes the summer projected commercial operations date deadline to July 1 from the start of the summer peak load season, June 1.
- *NPRR1051*: removes the administrative price floor of -\$251/MWh from all day-ahead settlement point prices.
- *NPRR1052*: ensures that energy storage systems registered as settlement-only generators will continue to have their injections and withdrawals settled at load zone pricing until nodal pricing for injections and withdrawals is approved and implemented.
- *NPRR1053*: establishes an exemption from ancillary service supply compliance requirements for any qualified scheduling entity (QSE) representing an ESR whose ability to charge is restricted during a Level 3 energy emergency alert event. The change also clarifies that the compliance exemption does not impact the QSE's financial responsibility because of the AS insufficiency.
- *NPRR1054*: removes all references to the Oklaunion Exemption from the protocols and adjusts the affected sections' remaining language accordingly. The coal-fired Oklaunion plant was retired in October.
- *PGRR085*: requires resource entities, interconnecting entities (IEs) and TOs to provide reports benchmarking the power system computer-aided design (PSCAD) model against actual hardware testing. Also requires them to provide parameter verification documentation confirming that model settings match those implemented in the field.
- *PGRR086*: clarifies that resource entities and IEs must provide dynamic model data and model-quality tests to complete a full interconnection study application.
- *PGRR087*: clarifies that remedial action schemes should not be relied upon to resolve planning criteria violations.
- *RRGRR027*: clarifies that resource entities and IEs must provide dynamic model data and model-quality tests to complete a full interconnection study application. PSCAD models should be required before the applicable quarterly stability assessment deadline.
- *SMOGR024*: makes modifications to accommodate telemetered auxiliary load, allowing sites to comply with *NPRR1020*. ■

— Tom Kleckner



# ISO-NE News



## Overheard at NE Energy Vision Tx Planning Tech Forum

Energy officials in New England are concerned that ISO-NE’s transmission planning process cannot adapt to the evolving resource mix, the growing investments in clean energy and the decarbonization of the grid. Without more robust transmission planning, they said, ratepayers in the region likely face higher costs and lower reliability, plus potential curtailment of the renewable resources needed to meet state policy goals and mandates.

Here is some of what we heard during a public online technical forum on Feb. 2, organized by New England states, to discuss reforms to the RTO’s transmission planning process.

### Long-term Tx Planning ‘Key’

New Hampshire Public Utility Commissioner Kate Bailey said the region’s clean-energy transition requires “significant new investments” in renewable resources that are unlikely located close to load centers.

Bailey said changes resulting from an expansion of distributed energy resources, energy efficiency, electrification of the transportation and heating sectors and, “retirement of a good portion of the fossil-fired fleet” would likely produce “very different power flows across the grid of the future compared to today’s grid.”

“Two-way flows of power are likely to be much more common than they are today, which will make the transition even more complicated,” Bailey said. “All of this will require substantial additional spending on new transmission lines and upgrades to existing lines to accommodate the new, remotely located clean resources.”

According to Bailey, the region must complete the transition within a relatively short time,

and “our goal should be to accomplish the transition at least cost for ratepayers.”

New England states have decarbonization targets of 30 to 45% by 2030 and 80% or net-zero by 2050.

Bailey said that “long-term transmission planning, which factors in the state’s collective requirements, is key.” One way to limit higher costs for ratepayers, she said, is to require competitive solicitation for all transmission construction, not just those projects that address reliability, and she hopes that “changes made to the process will require that.”

Judy Chang, undersecretary of energy for the Massachusetts Executive Office of Energy and Environmental Affairs, said the region could not afford to continue the traditional way of developing transmission by reacting to inter-connection requests or conducting reliability upgrades.

### ISO-NE, Eversource Weigh in

Robert Ethier, ISO-NE’s vice president of system planning, said the grid is “undergoing as big a change as it’s experienced in the last several decades.”

Ethier said the RTO’s transmission planning process has been driven by addressing reliability needs and the interconnection of new resources. The integration of renewables and storage to meet state public policy initiatives “in a timely and efficient way” will require new planning, approval and funding approaches, he said, along with greater engagement with both states and NEPOOL stakeholders.

Bill Quinlan, president of transmission for

Eversource Energy, said that an effective long-term transmission planning process is essential — especially when examining the timeline to execute major upgrades — to achieve decarbonization goals.

“It’s clear to us that to deliver the clean energy future that we’re all seeking ... we need to take a hard look at the long-term planning process,” Quinlan said. And “that planning process needs to begin now. We need to then look for alignment with key policies, whether it’s at the federal level ... or the state level. With good involvement by the stakeholders, I think we will be able to deliver that grid of the future that will enable the clean energy future we are all seeking.”

### ‘The Benefit of Consumers’

Rebecca Tepper, chief of the Energy and Telecommunications Division in the Massachusetts Attorney General’s Office, said she “wanted to remind everyone” that the transmission system “was built for the benefit of consumers, and every penny of it was paid for by consumers, either directly or indirectly.”

“Over the last 10 years, New England ratepayers have spent \$11 billion to develop and upgrade our transmission system,” Tepper said.

There are planned transmission upgrades “that will cost billions more,” so she said it is vital that the region makes “the best use of the transmission systems that customers have already paid for.”

“Right now, the overall utilization of our transmission system is actually low,” Tepper said. “Think about your car ... you probably only use 10% capacity of your car, but it’s still really valuable when you want to drive it somewhere.

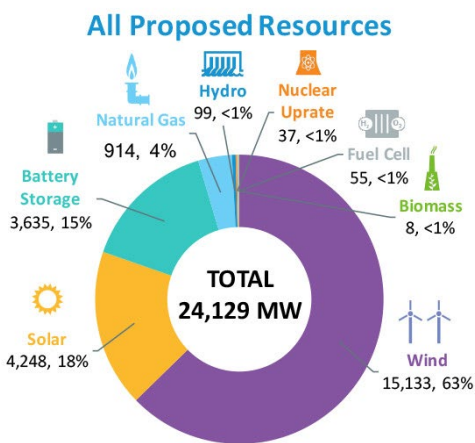
“More efficient use of transmission lines can help save money by avoiding congestion, but it also can help integrate new kinds of uses like electric vehicles at lower costs,” she said.

### Next Steps

Chang requested written comments on the forum’s topics and discussions. Those comments will be accepted through March 1 and posted publicly on the New England Energy Vision [website](#). Additionally, she said the states would issue a joint summary of the issues identified and explain the potential solutions.

State officials have scheduled additional technical forums on [governance reform](#) (Feb. 25) and environmental justice (TBD). ■

— Jason York



| State         | Megawatts (MW) |
|---------------|----------------|
| Massachusetts | 12,565         |
| Connecticut   | 7,457          |
| Maine         | 2,142          |
| Rhode Island  | 1,287          |
| New Hampshire | 572            |
| Vermont       | 105            |
| <b>Total</b>  | <b>24,129</b>  |

## ISO-NE News

# FCA 15 Closes with Big Jumps in Clearing Prices

By Jason York

ISO-NE's 15th annual Forward Capacity Auction (FCA 15) cleared with prices ranging from \$2.48/kW-month to \$3.98/kW-month — the high in Southeast New England (SENE) nearly doubling last year's record-low figure, the RTO announced Thursday.

Outside of SENE, prices cleared at \$2.48/kW-month in Northern New England (NNE) and Maine and \$2.61/kW-month in the rest of pool (ROP), with a total cost of approximately \$1.36 billion. In FCA 14, prices for all the RTO cleared at only \$2.01/kW-month.

"The clearing prices in FCA 15 reveal the different values across the region based on the individual capacity needs for each zone," said Robert Ethier, ISO-NE vice president for system planning. "In addition, new this year is a large amount of energy storage — almost 600 MW — that has cleared the market."

Before FCA 15 took place, 199 MW of resources submitted retirement bids. An additional 43 MW of resources submitted permanent delist bids to leave the capacity market; delist bids of 101 MW cleared prior to the auction and 141 MW additionally during it.

ISO-NE said the FCA 15 results will be submitted to FERC by the end of the month.

The auction, conducted in up to five rounds of bidding Feb. 8 for capacity commitment period 2024/25, cleared 34,621 MW, a 1,351-MW surplus over the net installed capacity requirement of 33,270 MW. These comprised 29,243 MW of generation, with 950 MW of new resources and 630 MW battery storage

resources; 3,891 MW of demand resources (170 MW new); and 1,487 MW of imports from New York, Québec and New Brunswick.

ISO-NE did not break down the storage figure, only saying that it included both new and existing resources, but it did report that more than 2,525 MW of new resources cleared. Approximately 19 MW of new renewables cleared under the renewable technology resource exemption in its final year. The exemption allowed a certain amount of new renewable capacity to clear without being subject to the minimum offer price rule, with nearly 600 MW clearing since FCA 9.

FCA 15's capacity zones were identical to those for FCA 14: NNE, which includes Vermont, portions of Maine and New Hampshire; the rest of Maine; SENE, comprising eastern Massachusetts and Rhode Island; and ROP, composed of Connecticut and western and central Massachusetts.

### Reaction

Dan Dolan, president of the New England Power Generators Association, said FCA 15 represents "a diverse set of technologies to meet capacity requirements in the years 2024 and 2025."

"This capacity auction delivered strategic investments at power plants to increase capabilities and provide robust, cost-effective reliability services for consumers," Dolan said. "Those investments will help facilitate and enable a transforming electricity grid to meet the demands of electrification and integrate large-scale renewables."

He added, however, that "the electricity market must evolve."

"State decarbonization policies are not today adequately accounted for, and it is past time that a solution is put in place," Dolan said. "Whether through meaningfully pricing carbon dioxide emissions, or other proposals, market solutions exist."

Theodore Paradise, senior vice president of transmission strategy and counsel at Anbaric, said the price separation in FCA 15 shows how important it is to look at total consumer benefits when considering competitive transmission, "rather than just upfront capital costs."

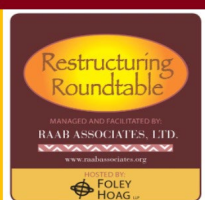
"The capacity market is long, and what raised prices in this auction were transmission transfer limitations," Paradise said. "Anbaric took those transmission system limitations into account when it designed the Mystic Reliability Wind Link. It was clear there would be transfer limitations into the Boston area that would very likely raise prices with the loss of 1,400 MW and in the absence of energy supply being injected via new transfer capability."

Brandon Keefe, general manager at Plus Power, said his company was "excited to open New England to large, standalone energy storage" after it won two bids for battery plants in Massachusetts and Maine that "will help decarbonize the grid while improving regional reliability."

"If Congress were to pass a federal investment tax credit for standalone storage, it could level the playing field and bring these kinds of projects, investment and jobs benefits across the country," Keefe said. ■

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## MISO News

# MISO Fostering Alternatives to MTEP Projects

By Amanda Durish Cook

MISO is seeking ways to modify its annual transmission plan and make it easier for stakeholders to suggest alternatives to transmission owners' project proposals.

During a Planning Subcommittee meeting Feb. 9, the RTO tested a draft plan that would increase the amount of time stakeholders have to assess projects and draw up alternatives during the annual Transmission Expansion Plan (MTEP).

Expansion Planning Senior Manager Thompson Adu said stakeholders have complained that MISO only allows a few weeks in the MTEP planning cycle to "review models, evaluate mitigations and propose alternatives" to submitted projects.

The RTO currently accepts both MTEP project proposals and alternatives on Sept. 15. It is proposing to move the alternative projects' deadline to May 31 of the following year, giving stakeholders an extra eight and a half months to develop alternative solutions. Staff would

then analyze the alternative proposals June through September.

However, multiple stakeholders said that unless MISO standardizes the project information that TOs release, the expanded timeline won't help. They said TOs don't post the same datasets on projects, making it difficult to assess proposals and draw up alternatives.

"What we're looking at here is not just a timeline issue, but also an information issue," Alliant Energy's Mitch Myhre said.

Adu said the proposal was only a "conversation starter" and that MISO is accepting more ideas to encourage more meaningful transmission alternatives.

The grid operator has [reported](#) it's overseeing 1,255 active MTEP projects totaling \$13.6 billion. Of those, 118 projects, worth \$2.3 billion, are under construction. Eleven projects were withdrawn during 2020's final quarter.

Since the first MTEP package in 2003, approximately \$26.5 billion worth of approved transmission projects have gone into service, according to MISO.



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Meanwhile, the RTO has developed its cost-estimation [guide](#) for 2021 MTEP economic projects. Substation engineer Alex Monn said the fourth iteration of the annual guide includes both upfront project costs and costs over time. He said that as new technologies are sized up as project alternatives, MISO should provide maintenance cost predictions. He said energy storage projects generally have larger costs over the first 20 years versus traditional wires projects.

MISO will collect stakeholder opinions on its cost-estimation guide through April. ■

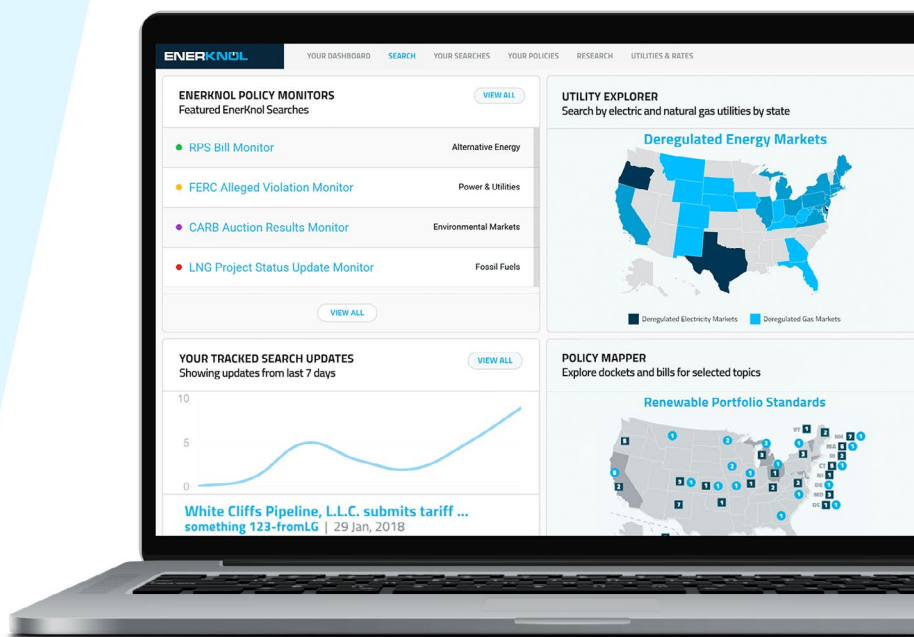
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## MISO News

# MISO TOs' Self-funding Option Tested Again

By Amanda Durish Cook

Two FERC commissioners still have heartburn over a 2018 commission order reinstating MISO transmission owners' rights to self-fund network upgrades.

Chairman Richard Glick and Commissioner Allison Clements expressed their concerns in a Feb. 8 order following MISO's submittal of an unexecuted facilities service agreement (FSA) between itself, interconnection customer Walleye Wind and transmission owner Northern States Power Co. While FERC approved the unexecuted FSA for a 111-MW Minnesota wind farm, it opened old wounds over the appropriateness of TOs' unilateral right to self-fund network upgrades ([ER21-615](#)).

Walleye Wind, a NextEra Energy Resources subsidiary, said it refused to execute the FSA and requested MISO file an unexecuted document because of "continued legal uncertainty regarding" TOs' right to provide initial funding for the network upgrade that would accommodate the project.

Walleye said FERC could reverse its decision in the future, placing initial funding responsibility back on interconnection customers.

The company asked FERC to direct MISO to amend the FSA by including a provision for the possible reversal of TOs' self-funding option. It asked that the FSA state that "changes will be undone if the legal premise for [transmission

owner initial funding] is later eliminated."

FERC declined to amend the FSA to incorporate such language, saying the document correctly reflects the state of MISO's rules at the time.

Glick concurred with the FSA decision but wrote separately that giving TOs the option to "unilaterally choose whether to self-fund network upgrades constructed on behalf of affiliated and nonaffiliated interconnection customers" could be unfair. He said the commission "failed to meaningfully wrestle with these concerns in its orders allowing transmission owners the unilateral right to choose up-front funding."

Clements said that while she concurred with the decision, she is worried that FERC didn't "adequately address the justifiable concern that those rules create an opportunity for generation-owning transmission owners to unduly discriminate" between assets they have an ownership interest in and those they don't have an interest in.

She said that when interconnection customers have control of initial funding, they can finance at more favorable rates instead of reimbursing TOs for construction and a predetermined rate of return. She also said TOs' unilateral right to self-fund ignores that the "vast majority of transmission owners do in fact still own generation."

The commission should conduct a "more

searching inquiry" of the issue, she said.

"While this topic has been the subject of litigation before this commission and the courts for several years, I believe we have more work to do," Clements wrote. "A foundational principle of the commission's work to open up access to the nation's transmission grid over the past 25 years has been that when monopoly utilities are permitted to discriminate among affiliated and nonaffiliated customers, competition suffers and customers pay."

She said that while the reasonableness of MISO interconnection rules was not the item in question, "they may well merit additional scrutiny in the near future."

MISO in 2018 acted on FERC's direction and reinstated TOs' right to self-fund network upgrades necessary for new generation. FERC originally issued a 2015 order barring TOs from electing to provide initial funding for network upgrades, but that decision was remanded by the D.C. Circuit Court of Appeals. (See [MISO Gauging Aftershocks of TO Self-fund Order](#).)

The move was unpopular with some MISO generation developers, who said it could pave the way for discrimination by TOs of some interconnection customers and increase the cost of new generation. But TOs' ability to self-fund network upgrades survived a challenge last year from the American Wind Energy Association. (See [FERC Upholds MISO Self-fund Order, Glick Dissents](#).) ■



| NextEra Energy

## MISO News

# Long-term Tx Plan Edges Out MISO GI Coordination

By Amanda Durish Cook

MISO last week said it bit off more than it could chew by simultaneously mounting a long-term transmission package while trying to merge interconnection upgrades with annual transmission planning.

Staff announced Wednesday during a Planning Advisory Committee (PAC) teleconference that it will table the effort to analyze network upgrades stemming from interconnection requests for economic benefits and possible cost-sharing. They said MISO would wait until the end of the year and see how the long-term transmission plan develops.

“We received feedback from stakeholders last month that it’s probably better to wait until more information of the long-range transmission plan comes at the end of the year,” Senior Manager of Economic Planning Neil Shah said. “Let’s put this issue on hold, and we will

continue to monitor the progress of the long-range plan.”

Stakeholders, particularly those belonging to the environmental sector, seemed fine with the breather.

“It did seem like it was appropriate to pause work on this since there are so many moving parts that could affect [it],” Clean Grid Alliance’s Natalie McIntire said. “I don’t want to lose this issue. It may be that it gets addressed somehow with long-range transmission and its allocation.”

Shah agreed that some long-term projects may ease network upgrade costs for interconnecting generators.

Stakeholders have warned MISO that system upgrade costs for interconnection hopefuls have been snowballing in recent years because of scant transmission planning, threatening a clean energy transition. (See “Coordinated

Planning Effort Continues,” *MISO Planning Advisory Comm. Briefs: Sept. 23, 2020.*)

Before hitting pause on the network upgrade analysis, the RTO had proposed to conduct economic evaluations of interconnection upgrades with signed interconnection agreements rated at 230 kV or above and costing at least \$50,000/MW. If the upgrades demonstrated the same 1.25:1 benefit-to-cost ratio required of market efficiency projects, they would have been included as economic projects in MISO’s annual Transmission Expansion Plan (MTEP).

### The Long View

While interconnection upgrade coordination took a back seat, stakeholders at the PAC were left wondering how often they’ll be apprised of MISO’s long-term transmission planning.

They asked for monthly updates on the progress of MISO’s burgeoning long-term trans-



| MISO

# MISO News



mission plan, the first in a decade. (See [MISO Begins Longterm Tx Modeling](#).) The February PAC meeting did not have an agenda item on the long-term plan.

Director of Planning Jeff Webb said MISO will begin delivering regular reports to stakeholders when it has “substantive materials.” He said so far, there is little to report.

“We can give updates, but they’ll probably be brief status updates,” Webb said, adding that the RTO plans to hold a discussion on long-term planning at the March PAC.

The grid operator is currently relying on the 20-year futures scenarios developed for MTEP 21.

Todd Hillman, MISO’s senior vice president and chief customer officer, said the RTO is first focusing on Future I, which most closely resembles member utilities’ collective plans. The future assumes an 85% likelihood that utilities meet their current decarbonization plans and full certainty that their stated generation retirements and additions come to pass. The scenario will likely translate into a 60% carbon reduction in MISO from 2005 levels.

“Future I was largely developed in talking with our members and stakeholders,” Hillman said during an informational forum in January.

MISO expects to have preliminary project solutions from its Future I modeling within the next few months. Staff is also beginning long-term modeling for the more aggressive Futures II and III. Webb said he thought that any transmission projects coming out of Future I would most likely be “baseline” and serve as a foundation for other needs found using the second and third futures.

WEC Energy Group’s Chris Plante said he

wasn’t sure that MISO was predicting enough storage technology in its futures. He noted utilities are increasingly turning toward storage.

The Natural Resources Defense Council said late last month that the RTO has failed to prepare for a clean-energy future through sufficient transmission planning. The nonprofit said MISO’s recent transmission planning ignored the rapid pivot to clean resources and only anticipated “incremental clean energy development over the coming decade, rather than transformational clean energy development that is anticipated by 2035 and beyond.”

“In 2020, [MISO] ignored the demand for the regional transmission necessary to transition the Midwest into a clean energy hub. This year [it] can and should do better by building regional transmission,” the NRDC’s Toba Pearlman wrote in a [blog post](#). She said the RTO’s inaction intensified its interconnection queue backlog.

NRDC reported that 278 storage, hybrid, wind and solar projects were withdrawn at “advanced stages” in the grid operator’s interconnection queue between 2016 and October 2020.

Senior Transmission Planning Engineer Andy Witmeier said the grid operator’s current transmission planning would be inefficient without a long-term package, and without it, “the resource shift contemplated by MISO stakeholders’ goals will be difficult to achieve.”

Speaking during a cost allocation working group teleconference on Thursday, Witmeier pointed to MISO’s newest instantaneous wind peak on Dec. 23, when 20.2 GW of wind generation served almost 27% of system load. He said even more wind power was available

that day but was “trapped behind transmission congestion.”

“We have to make sure we enable the delivery of that extra generation,” he said. “With an additional 4,500 MW expected to come online in the next 12 months, it is increasingly important to see how the system is currently handling production of renewable resources and [preparing] for future growth.”

## Cost Allocation Decisions Loom

MISO’s cost allocation group will eventually consider a benefit measurement and cost-sharing design for the long-range transmission plan.

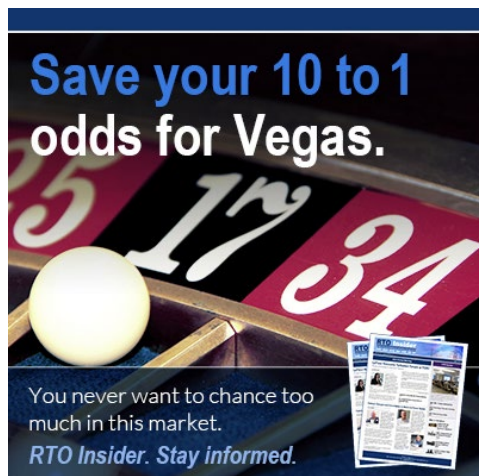
Witmeier said the RTO’s current market efficiency project cost allocation won’t likely capture all long-term transmission benefits.

The Organization of MISO States convened a special cost-allocation committee late last year to draw up principles on how staff should approach long-term projects’ cost sharing. The resulting [principles](#) are broad, driving home that costs should be portioned out as precisely as possible to beneficiaries and cost-causers. OMS said generation and load — including regions with decarbonization goals — can be considered beneficiaries. It also suggested MISO use subregional allocations and bundle certain transmission projects’ costs when it makes sense.

MISO Executive Director of System Planning Aubrey Johnson acknowledged there’s not much appetite among stakeholders for a footprint-wide postage stamp rate for long-term transmission.

“That camp is very small. There’s not a high likelihood of success,” he said during an OMS meeting in January. ■

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## MISO News

# MISO Recaps 4 Years of Renewable Study

By Amanda Durish Cook

A MISO study on renewables integration has found the grid operator can reliably operate its system with a fuel mix heavy on wind and solar energy, but only if its members engage in dramatic transmission expansion.

The 216-page report concluded that reliable system operations “beyond the 30% system-wide renewable level is not insurmountable and will require transformational change in planning, markets and operations.” It said a market redefinition and grid expansion is imminent to accommodate an “unprecedented pace of change.”

Speaking Wednesday during a Planning Advisory Committee teleconference, MISO Manager of Policy Studies Jordan Bakke said the four-year Renewable Integration Impact

Assessment (RIIA) showed that transmission — not energy storage — remains most effective at delivering power when renewable energy accounts for a majority share of the resource mix. (See [MISO: Tx Beats Storage in Integrating Renewables](#).)

MISO is optimistic it “can achieve renewable penetration of at least 50% with transformational change and coordinated action amongst all participants.” The RTO hovered around 12 to 13% renewable penetration in 2020.

The study predicts a steeper, shorter and later-in-the-evening loss-of-load risk as wind and solar resources meet more of the footprint’s demands. (See [MISO Renewable Study Predicts Later Peak, Narrower LOLE Risk](#).) MISO also expects to be more dependent on the system’s remaining conventional generators and warns of shortage risks when the resources take unexpected outages.

Bakke said that, taken as a whole, the study underpins MISO’s need for more transmission planning, new market tools “to incentivize availability of grid services,” innovative transmission technologies and fresh resource adequacy mechanisms and unit-commitment tools.

“MISO, our members and the entire industry are poised on the precipice of great change as we are being asked to rapidly integrate far more renewable resources,” MISO President Clair Moeller wrote in a summary. “Given our regional reliability imperative, MISO must act quickly, deliberately and collaboratively to ensure that the planning, markets, operations and systems keep pace with these changes. We can achieve this great change, if we work together.”

The RTO will host a March 3 [workshop](#) to review with stakeholders the study’s conclusions in more detail. ■



| DTE Energy

# NYISO News



## NYISO Business Issues Committee Briefs

### T&D Operations Manual Revisions

NYISO’s Business Issues Committee on Wednesday approved *revisions* to the Transmission and Dispatch Operations Manual that relate to generator fuel and emissions reporting (GFER).

“Based on stakeholder feedback, we have developed the functionality within the GFER application to issue surveys both weekly and as requested survey by fuel type,” said John Stevenson, senior gas and electric analyst at the ISO. “Before we were surveying all generators just like we currently do and will continue to do in the annual survey, and this functionality allows us to hone that in on fuel types we may be interested in, such as fossil fuel generators, and allows us not to overwhelm stakeholders for whom these questions may not be applicable.”

The revisions say that NYISO may only solicit responses from generators that use fossil fuels to produce electricity, and all installed capacity

suppliers must submit fuel and environmental restriction data at weekly and yearly intervals and as requested by the ISO. Yearly fuel surveys must be completed within 30 days of NYISO notification of their availability; weekly surveys by 1 p.m. of the first business day of each week; and as-requested surveys by 1 p.m. the day prior to the operating day the survey covers.

Stevenson agreed with one stakeholder that the rationale for the manual and GFER changes is to make the reporting requirements more practical, recognizing, for example, that wind turbines cannot predict how much wind is available for generation in future periods. “We’ve been getting feedback for a couple years now and ... implemented that change,” he said.

### ICAP Manual Revisions

The BIC also approved Installed Capacity Manual *revisions* to update the External Import Rights Limits for the 2021/22 capability year

and reflect the maximum amount of import capacity allowed from neighboring control areas.

The proposed revisions affect Section 4.9.6 of the manual.

GE Multi-Area Reliability Simulation (MARS) simulations were performed on the locational minimum installed capacity requirements MARS database to determine capacity imports allowed without violating the loss of load expectation criterion.

The import capability for each control area will be subjected to a deliverability test, with any megawatts not deemed deliverable deducted from final values.

Deliverability results for import rights limits are scheduled for completion in mid-February, with final numbers to be released along with other summer capability period auction information on Feb. 26. That auction opens at the end of March. ■

— Michael Kuser

| Four-Control-Area-Participation             | 2021/2022 Capability Year |        |        |         |        | 2020/2021 Capability Year |        |        |         |        |
|---|---------------------------|--------|--------|---------|--------|---------------------------|--------|--------|---------|--------|
|   | PJM                       | ISO-NE | Quebec | Ontario | Totals | PJM                       | ISO-NE | Quebec | Ontario | Totals |
| <b>Initial Values (TTC Summer Ratings)</b>  | 1450                      | 1400   | 1690   | 1850    | 6390   | 1450                      | 1400   | 1690   | 1850    | 6390   |
| <b>Grandfathered Rights*</b>                | 1080                      | 0      | 1110   | 0       | 2190   | 1080                      | 0      | 1110   | 0       | 2190   |
| <b>Individual Limits (above GF)</b>         | 285                       | 459    | 18     | 80      | 842    | 285                       | 620    | 12     | 28      | 945    |
| <i>Individual Limits (above GF) Delta</i>   | 0                         | -161   | 6      | 52      | -103   |                           |        |        |         |        |
| <b>Simultaneous Limits (above GF)</b>       | 149                       | 241    | 9      | 42      | 441    | 152                       | 332    | 6      | 15      | 505    |
| <i>Simultaneous Limits (above GF) Delta</i> | -3                        | -91    | 3      | 27      | -64    |                           |        |        |         |        |
| <b>Final Values **</b>                      | 1229                      | 241    | 1119   | 42      | 2631   | 1232                      | 332    | 1116   | 15      | 2695   |
| <i>Final Values** Delta</i>                 | -3                        | -91    | 3      | 27      | -64    |                           |        |        |         |        |

\*Includes ETCNL for these purposes

\*\*2021/2022 Capability Year Subject to Deliverability Study



## NYISO News

# FERC Fines NY Generator on Fuel Data

By Michael Kuser

FERC on Feb. 8 approved a settlement agreement requiring Alliance NYGT to pay nearly \$900,000 for running two small power plants on natural gas for more than three years while being reimbursed for more expensive kerosene (IN21-4).

Under the terms of the agreement with the commission's Office of Enforcement, the company will pay NYISO \$463,984 for restitution and compensating market participants and remit a \$420,000 civil penalty to the U.S. Treasury.

The agreement also requires that Alliance submit two annual compliance monitoring reports, with a third annual report at the office's option, and to conduct at least one training program relating to compliance with the commission's regulations and the NYISO tariff.

Alliance bought the Hillburn and Shoemaker generators in 2007. The units are located in Orange County, and each has a 40-MW nameplate capacity. Between January 2009 and January 2012, Alliance operated the generators exclusively on kerosene while making repairs to remedy operational issues that were most pronounced when burning gas.

Alliance completed the generators' gas equip-



Alliance's 40-MW Hillburn plant in Hillburn, N.Y. | Alliance Energy Group

ment upgrades in 2012 and contacted NYISO to request information about updating the reference prices in advance of the repairs being completed. Alliance failed to start on gas in response to a January 2013 dispatch request, but thereafter "the generators began operating primarily on gas to fulfill their awards." However, the units' reference prices remained indexed to the more expensive liquid fuel, the commission said.

NYISO in September 2013 began communi-

cating with Alliance about the type of fuel used to operate the generators, but the company's responses were "untimely, inaccurate or incomplete," according to FERC, and it wasn't until March 2016 that the firm began updating its reference prices to reflect gas capabilities for both generators.

During the period that it failed to notify NYISO of the generators' ability to operate on gas, Alliance received inflated make-whole payments. ■

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# PJM News



## PJM MIC Briefs

### RPM Capacity Transfer Rights

PJM delayed an endorsement vote on an issue charge regarding the allocation of capacity transfer rights (CTRs) for a month after stakeholders raised questions over the initiative's scope and potential impact.

Kevin Zemanek, director of system operations for Buckeye Power, reviewed the *problem statement* and *issue charge* by the Ohio-based company during last week's Market Implementation Committee meeting, saying current rules are exposing his cooperative to price separation.

Under the Reliability Pricing Model (RPM), CTRs return to load-serving entities (LSEs) capacity market congestion revenues that occur when there is a difference between capacity prices paid by load and market revenue received by cleared capacity resources. CTRs permit LSEs with load inside a constrained locational delivery area (LDA) to receive a credit for the import of capacity from a lower-priced region.

Zemanek said PJM does not have a way to allocate CTRs to an LSE that corresponds to the network load identified in its network integration transmission service agreement. Instead, PJM allocates CTRs pro-rata to each LSE serving load in the LDA or zone based on the LSE's share of the zonal unforced capacity obligation.

Although an LSE may have resources that are deliverable to load inside the constrained LDA, current rules do not allocate an equivalent number of megawatts, Zemanek said.

Buckeye Power has been harmed because the existing RPM rules disregard the "historic structure" of Buckeye and Ohio TO's, Zemanek said, leading to "millions of dollars" in excess charges.

He added that Buckeye seeks to explore market rule changes that would account for resources within PJM's footprint that existed prior to the implementation of RPM.

"We're asking the committee to consider a rule change that would account for historic resources internal to PJM's footprint and have the deliverability to designated load," Zemanek said.

He said he anticipates two months of education followed by discussions on potential rule changes.

Paul Sotkiewicz of E-Cubed Policy Associates said he's inclined to support the problem

| Age of Unit         | Remaining Life of Plant | 2022/23 Delivery Year | 2023/24 Delivery Year | 2024/25 Delivery Year | 2025/26 Delivery Year |
|---------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1 to 5              | 30                      | 0.077                 | 0.081                 | 0.086                 | 0.091                 |
| 6 to 10             | 25                      | 0.082                 | 0.087                 | 0.092                 | 0.096                 |
| 11 to 15            | 20                      | 0.091                 | 0.096                 | 0.101                 | 0.106                 |
| 16 to 20            | 15                      | 0.107                 | 0.112                 | 0.118                 | 0.123                 |
| 21 to 25            | 10                      | 0.140                 | 0.147                 | 0.154                 | 0.162                 |
| 25 Plus             | 5                       | 0.242                 | 0.256                 | 0.270                 | 0.284                 |
| Mandatory CapEx     | 4                       | 0.293                 | 0.311                 | 0.329                 | 0.346                 |
| 40 Plus Alternative | 1                       | 1.1                   | 1.1                   | 1.1                   | 1.1                   |

Proposed table in Attachment DD of the tariff of CRF values for resources to calculate the market seller offer cap or the MOPR floor offer price | PJM

statement to start the discussion, but one of his concerns would be adding to the key work activities on how incremental capacity transfer rights (ICTRs) would be impacted by any changes.

Zemanek said Buckeye didn't intend to have ICTRs impacted by the issue charge and was not looking to impact any existing contractual rights.

Sotkiewicz asked if Buckeye would be open to a friendly amendment to look at the potential impact to ICTRs, but Zemanek said he wasn't sure if the issue charge needs to be changed.

Sotkiewicz said he doesn't see a way to address CTRs without also addressing ICTRs.

"Some of us have felt like we've gotten burned on issue charges where we think topics are in scope and then we're being told they're out of scope," Sotkiewicz said.

Jeff Bastian, PJM senior consultant in market operations, said the CTRs that Buckeye is considering allocating are those remaining after ICTR megawatts are determined. Bastian said there would be no impact on the ICTR calculation from the issue charge.



Jeff Bastian, PJM | © RTO Insider

One stakeholder questioned language in the issue charge, saying it seemed to find a way to allocate CTRs to entities like Buckeye while leaving other issues "undisturbed." He said he's

not sure there's a way to allocate the CTRs without disturbing the existing system.

Independent Market Monitor Joe Bowring said the Monitor is "skeptical" about introducing a contract path as the basis for the rights to CTRs.



PJM Monitor Joe Bowring | © RTO Insider

Lisa Morelli of PJM suggested deferring the endorsement vote until the March MIC meeting to allow for refinements to the issue charge and problem statement from the stakeholder feedback about what is in scope and out of scope.

### Capital Recovery Factors Discussion

Bastian provided a second first read of the *problem statement* and *issue charge* to regularly update the value of capital recovery factors (CRFs) based on current federal tax rates. CRFs are a component of the net avoidable cost rate (ACR) of a resource, which determines a resource's market seller offer cap or minimum offer price rule (MOPR) floor price, depending on which is applicable.

The Monitor notified PJM in a *letter* Dec. 4 that the CRF values, which were set in 2007, do not reflect the 2017 reduction in federal corporate tax rates.

The RTO has proposed to address the CRF issue as part of a quick fix process in which the MIC would simultaneously approve the issue charge and the proposed tariff revisions at the March 10 meeting.

# PJM News



The Monitor said the tables should have been updated in 2018 and must be changed before the next capacity market auction, for the 2022/23 delivery year, takes place in May. The RTO said it was concerned that seeking an earlier effective date would further delay the auction, which was originally scheduled for 2019. (See [PJM Sets BRA for May 2021.](#))

The RTO said it agrees with the Monitor that offers including the avoidable project investment rate in net ACR values are unlikely to impact the May auction results.

PJM proposed that after the upcoming auction, the table of CRF values be posted on the PJM website no later than 150 days before the beginning of the offer period of each auction. The values would reflect federal income tax laws in effect for the relevant delivery year at the time of the determination.

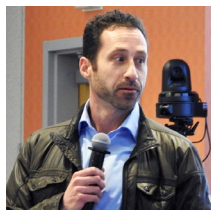
Bastian said PJM revised its initial proposal to reflect feedback at the January MIC meeting, when stakeholders requested more transparency in the key input assumptions. (See "Challenge on CRF Quick Fix," [PJM MIC Briefs: Jan. 12, 2021.](#))

Sotkiewicz thanked PJM for listening to the stakeholder feedback and said the changes reflected much of the discussions. He said the only potential concern he had was making the

formulas used to calculate the CRFs accessible on PJM's website rather than stated as a "generic financial model."

Erik Heinle of the D.C. Office of the People's Counsel said PJM was able to come up with a "reasonable solution" that addresses concerns of not falling behind in tax laws and constantly trying to catch up with changes.

## Long-term Five-minute Dispatch



Aaron Baizman, PJM | © RTO Insider

Aaron Baizman, senior engineer for PJM, reviewed the solution package [matrix](#) for the long-term [five-minute dispatch and pricing](#) issue worked on in the MIC special session meetings and said an endorsement vote on the PJM/IMM pack-

age would be delayed until the March MIC meeting.

Baizman said PJM wants to take a "measured approach" for the implementation of the long-term evaluation of five-minute dispatch and pricing, especially with the number of changes affecting dispatch.

Stakeholders approved the short-term propos-

al to resolve five-minute dispatch and pricing at the July MRC meeting. The RTO had said it expects to continue evaluating long-term solutions late into this year, with a quantitative analysis of the pros and cons of different approaches. (See [PJM Stakeholders OK 5-Minute Dispatch Proposal.](#))

Baizman said highlights of the long-term package include real-time security-constrained economic dispatch utilizing previous generator dispatch instructions to create guidelines. PJM dispatchers will also be provided flexibility for exceptions for case approval caused by unanticipated conditions or application issues.

A first read of the proposed tariff language was also moved to the March 24 Markets and Reliability Committee meeting. Baizman said PJM and the Monitor are still reviewing the tariff changes, and a review of the draft tariff language will be held at the five-minute dispatch and pricing special session on Wednesday.

Baizman said the current long-term timeline calls for software development until April, testing of the software from May to June, parallel operations and evaluation from July to September and a pilot evaluation and implementation by Nov. 1. ■

— Michael Yoder

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## PJM News



# PJM Operating Committee Briefs

## Synchronized Reserve Event

PJM is looking to improve the deployment of synchronized reserves during a spin event, but some stakeholders are questioning whether the timing of the issue is appropriate given major changes in the reserve market next year.

Mike Zhang, PJM senior engineer of markets coordination, *provided* a first read of a *problem statement* and *issue charge* during last week's Operating Committee meeting.

Synchronized reserve events are emergency procedures triggered by PJM to maintain grid reliability in accordance with NERC's Resource and Demand Balancing (BAL) standards. Such procedures are caused by a variety of conditions, including loss of generation by multiple units going offline at the same time or a sudden influx of load.

Zhang said real-time security-constrained economic dispatch (RT SCED) cases are generally not used by PJM during an emergency event, which can lead to problems like unpredictable levels of unit response and a mixture of over- and under-response across various units.

Zhang said PJM dispatchers have been seeing a pattern of a slow initial recovery period followed by extended over response after the emergency event is over. Because tools like RT SCED are not utilized during an event, Zhang said, pricing and dispatch signals are still from a pre-event RT SCED case and often conflict with all-call instructions because the signals don't go away immediately.

PJM is looking for controlled deployment of synchronized reserves throughout emergency events by utilizing tools like RT SCED to have consistent pricing and dispatch signals. The goal is to also ensure BAL compliance during recovery and a reliable transition in and out of emergency events.

Key work activities include review and education on existing actions and expectations for synchronized reserve events, and analysis of metrics and data on previous emergency events. PJM also wants to develop solutions and timelines for the overall synchronized reserve deployment process, including the deployment method, the expectations of resources and the evaluation of performance.

The existing performance penalty structure is not in scope for the issue, Zhang said, as PJM views it is adequate.

"We have a variety of metrics and historical data to draw from, and hopefully we can utilize

that to get us started," Zhang said.

PJM's proposed approach to the issue calls for convening a task force within the OC to recommend potential changes to resource expectations during events. The estimated work schedule is between six to 12 months after endorsement.

One stakeholder said the timing of the work by the task force may be complicated by PJM's revised operating reserve demand curve (ORDC), set to go into place by the middle of 2022. The stakeholder said he's hoping the price signals from the ORDC will change whether the events PJM are worried about will even need to be called. (See *FERC Approves PJM Reserve Market Overhaul*.)

"I'm not sure that you need to still do all-calls, or at least the need would be different," he said. "And I don't see that anywhere in the issue charge."

Zhang said PJM still believes the effort is beneficial even with the ORDC changes. He said those "hit at different areas" of the synchronized reserve market. This proposal revolves around the deployment of reserves, while the ORDC involves how those reserves are procured and priced, he said.

The stakeholder said he believes PJM's analysis of the ORDC only impacting procurement and pricing is "strongly incorrect" and that all the issues are intertwined more closely. He said the key work activities should at least include an educational piece on how all-calls would work in an environment of the ORDC coming into play next year.

Adrien Ford of Old Dominion Electric Cooperative said she understood the stakeholder's concerns and thought having education on the impact of the ORDC was important. Ford said the reserve price formation changes set to go into effect next year are "pretty sweeping," and education should be included in the issue charge.

"Issue charges are to explore what we need to do and not a foregone conclusion that the change would occur," Ford said.

Stakeholders will vote on endorsement of the problem statement at the March 11 OC meeting.

## Manual 40 Changes Endorsed

Stakeholders unanimously endorsed a minor change to Manual 40 as part of the periodic review.

Michael Hoke of PJM *reviewed* the *update* Manual 40: Training and Certification Requirements. In section 3.2.1: Transmission Owner Operators, a reference was added to the annual training requirements referenced in NERC standards. A second reference was added regarding using the PJM Learning Management System to track the annual task training requirement.

Hoke said the change was based on feedback from ReliabilityFirst, which expressed a desire to "see a more explicit connection" between Manual 40 and standard requirements in the matrix for transmission owners.

## Resource Tracker Quick Fix

Chris Franks of PJM *reviewed* a "quick fix" *problem statement* and *issue charge* to update language in Manual 14D regarding the Resource Tracker application's ownership confirmation requirement.

Franks said PJM members are responsible for maintaining complete and accurate records as stipulated in section 11.3.1(a) of the Operating Agreement. The Resource Tracker application was created in 2013 to provide a single-point location for generation owner information, Franks said, and stakeholders endorsed changes in 2018 to move the confirmation period to an annual basis with a four-week duration to enter correct information in the application. (See "Resource Tracker," *PJM Operating Committee Briefs: Nov. 6, 2018*.)

The 2020 annual confirmation period opened on Oct. 1 and closed on Nov. 1, Franks said, with a total of 1,503 resources requested to confirm information. Of those resources, 60 did not confirm by Nov. 1. As of Feb. 1, four have yet to confirm information.

Franks said PJM is looking to refresh the user interface of the application to reflect similar tools used by the RTO and to add additional fields to provide contacts associated with the resources.

The proposed manual language includes changing "market participants are requested" to the "generation owner, or designated agent, is required" to confirm the resource ownership by Nov. 1.

The OC will be asked to approve the issue charge and endorse the proposed revisions as part of the "quick fix" process at the March meeting. ■

— Michael Yoder

# PJM News



## PJM PC/TEAC Briefs

### Planning Committee

#### Critical Tx Infrastructure Proposals Endorsed

Stakeholders last week endorsed PJM’s packages of proposals for mitigating and avoiding designating projects as critical infrastructure under NERC reliability standards after more than a year of work on the issues.

The Planning Committee endorsed the avoidance package, including associated manual language, with 77% support at its meeting last week. In a separate vote, the package won 61% support over maintaining the status quo.

The committee also endorsed PJM’s mitigation package with 61% support and 60% preferring it over the status quo.

Dave Souder of PJM thanked members for their work on the proposals and for the endorsements. He said PJM will take at least a month to finalize Operating Agreement language to be included with the mitigation portion, with a first read at the Markets and Reliability Committee’s meeting March 24.



Dave Souder, PJM | © RTO Insider

“We’re not done yet, but we’re on the right path,” Souder said.

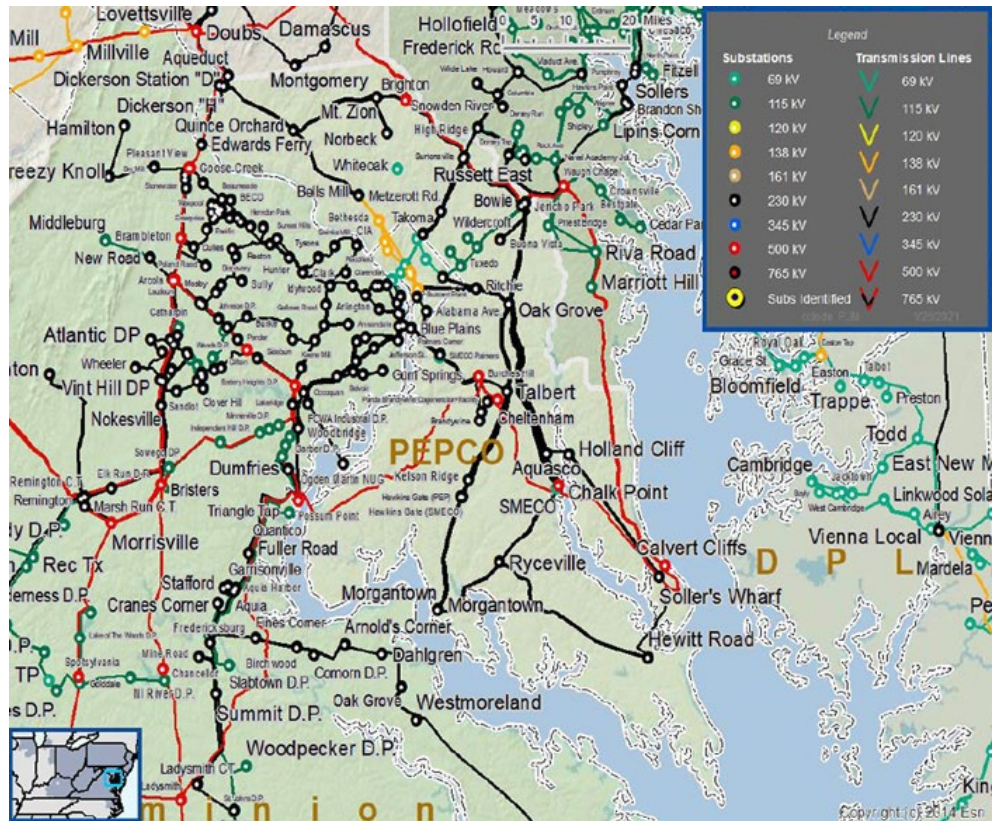
Mike Herman of PJM presented the proposals to the committee. The changes to Manual 14B include the addition of a new subsection describing the process related to maintaining reliability and added “avoidance” to the list of transmission planning activities.



Mike Herman, PJM | © RTO Insider

PJM also added text to Manual 14F detailing the process by which it may modify a proposal submitted through the competitive planning process. Herman said PJM removed the term “resilience” from all the manual language edits in favor of the term “critical substation planning analysis” in response to stakeholder feedback at the January PC meeting. (See “CIP-014 Update,” *PJM PC Briefs: Jan. 11, 2021*.)

Other changes included new text detailing the



Map of PEPCO region where Exelon is examining the installation of an experimental coated conductor | Exelon

process by which PJM may modify a proposal submitted through the competitive planning process and includes examples of proposal modifications that would and would not be deemed “limited in scope.”



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

Paul Sotkiewicz of E-Cubed Policy Associates pointed out that the term “resilience” was still included in at least one section in Manual 14F and should be corrected by PJM before endorsement.

“I think consistency is really important in the language, especially when it comes to the transmission planning between the different manuals,” Sotkiewicz said.

PJM’s Aaron Berner said it appeared the existence of the “resilience” terms in the manual language was an oversight and would be corrected.

The RTO will hold a special PC meeting on Feb. 19 to go over the proposed *OA language* for the

mitigation portion of the package. Herman said the major language change was the addition of a definition for substation contingency resilience planning criteria: “analyses performed to ensure system resilience based on a study of select substation contingencies, which are based upon *TPL-001-4 Extreme Contingency Analysis*. The analysis evaluates the loss of load and potential cascade events which may result from power flow analysis. Due to the sensitive nature of the analysis, identified substations and results require confidentiality consistent with established processes and good utility practice.”

Robert Taylor of Exelon said he appreciated the work that went into the packages and that it was “a long road to get here.”

“I personally believe we’ve landed in a good place that balances a lot of competing interests in how to address this,” Taylor said.

#### Capacity Interconnection Rights

Jonathan Kern of PJM provided a first read of the *problem statement* and *issue charge* to address the capacity interconnection rights (CIRs) of

# PJM News



variable resources.

Kern said the recent adoption of effective load-carrying capability (ELCC) highlighted the need to investigate the topic. Stakeholders endorsed a revised joint stakeholder proposal at the September MRC and Members Committee meetings to use the ELCC method to calculate the capacity value of limited-duration, intermittent and combination (limited-duration plus intermittent) resources. (See [ELCC Method Endorsed by PJM Stakeholders](#).)

ELCC, which is already used by MISO, NYISO and CAISO, evaluates reliability in each hour of a simulated year and compares a resource mix with limited resources against one with unlimited resources.

Kern said CIRs for new wind and solar resources are administratively set for several years at the average expected outputs for the summer period unless developers can supply weather data to support higher outputs. CIRs for new limited-duration resources such as storage are administratively set based on the amount of energy that can be supplied over a 10-hour period, he said.

CIRs are not included in ELCC calculations or in determining accredited unforced capacity (UCAP). Kern said sizing the grid for CIRs based on outputs below maximum summer values may result in curtailments because of insufficient transmission, and resource adequacy performance and accredited UCAP may be overstated unless CIRs are considered.

Kern said PJM's goal is to hold a series of monthly discussions with the PC and to develop and propose changes to the applicable manuals and governing documents by the end of the year. He said PJM will hold educational sessions and discuss and develop proposals from April to October and ideally present a proposal to the MRC in November.

Gary Greiner, director of market policy for Public Service Enterprise Group, said PJM's presentation seemed "a little bit off" from what he expected to be discussed and that it's not good to have stakeholder discussions "start on second base." Greiner



Gary Greiner, PSEG |  
© RTO Insider

said there needed to be more foundational education pieces on the CIR issue, focusing on CIRs and what their rights and purposes are in traditional and intermittent resources, not diving into specifics from the beginning.

Greiner said the only point he's comfortable with in the key work activities and scope on the issue charge is education on the status quo policies for CIRs.

Kern said PJM's intention is to give a "good foundation" on the status quo policies of CIRs during the educational sessions.

Sharon Midgley of Exelon said she had additional questions on the issue charge. She pointed to subject areas deemed to be out of scope in the issue, including provisions for unlimited resources.

Midgley said Exelon realizes the CIR effort is to look at variable resources, but it wants to make sure there is "equity" in the rules between variable and unlimited resources. She asked PJM to strike the unlimited resources subject area from the out-of-scope section.

Kern said PJM wants to achieve the objectives in the allotted time, so a topic like unlimited resource CIRs would be considered out of scope. He said there may be other issues identified during the discussion that warrant a separate problem statement and issue charge.

"In the end, we want to find an equitable solution that works for all resources," Kern said.

Midgley said she doesn't want to have to bring forward another problem statement and issue charge "to fix something that might be inequitable" that emerges from the process. She said she would rather change the current problem statement and issue charge to leave the opportunity to examine unlimited resources if it's needed.

Sotkiewicz said he agreed with the concerns raised by Greiner and Midgley. He said there are already issues he anticipates that will be brought up in the way CIRs and dispatch are done that will create inequitable outcomes among different resources.

He said there are too many issues that are "left to the imagination" that need to be spelled out more clearly in the problem statement and issue charge and that too many of the issues are "open ended."

"I think the issue charge as it stands today is not ready for prime time," Sotkiewicz said.

PJM encouraged stakeholders to provide redline language before the next PC meeting to address concerns in the problem statement and issue charge.

## TO/TOP Matrix v15

Stakeholders unanimously endorsed a draft

version 15 of the *TO/TOP Matrix* to be provided to the Transmission Owners Agreement-Administrative Committee (TOA-AC). Mark Kuras, chairman of the Transmission Owners/Transmission Operator (TO/TOP) Matrix Subcommittee, [presented](#) the proposed changes.

The matrix is an index between the PJM manuals and governing documents and NERC reliability standards that are applicable to the RTO as the TOP. It includes a column of "tasks" required by PJM under the documents. Kuras said version 15 of the matrix adds references for reliability standards, including TOP-001-5.

The endorsed changes will head back to the TOA-AC for final approval at its April 22 meeting.

## Transmission Expansion Advisory Committee

### Technological Pilot Project

Exelon is looking to test an experimental coating for overhead conductors to improve capacity. Koushy Nareshkumar of Exelon [presented](#) a need for supplemental projects in the Potomac Electric Power Co. (PEPCO) region.

Nareshkumar said Exelon is testing the "innovative technology" of E3X Technology, a coated conductor, to increase circuit rating. Conductors with the coating have shown to have increased emissivity and lower absorptivity. The technology allows for operation with a cooler conductor at higher ampacity, the maximum current a conductor can carry continuously without exceeding its temperature rating.



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

Erik Heinle of the D.C. Office of the People's Counsel asked if Exelon's project was being introduced through a state initiative or if it was just looking to test the technology. He also asked if the technology had been used anywhere else by Exelon.

Nareshkumar said Exelon was taking the initiative to test the technology themselves and that it was the first time E3X was being utilized. She said Exelon is still in the process of determining what line will be used for the project, but it will be on one of its 230-kV lines in PEPCO. ■

— Michael Yoder

## SPP News



# SPP Board to Consider Controversial Kansas Project

## Evergy Says Competitive Upgrade Collides with Regional Needs

By Tom Kleckner

SPP said Wednesday it will schedule a special Board of Directors meeting to consider Evergy's request to restudy a competitive project in southeastern Kansas that the utility said collides with its regional planning efforts.

The board approved the 138-kV project last month despite protests from Evergy, the incumbent transmission owner. The Kansas City utility requested staff instead re-examine the project and said it would request an immediate restudy should the project be approved. (See "Board Approves Tx Project Soon to be Re-evaluated," *SPP Board of Directors/MC Briefs*: Jan. 27, 2021.)

SPP issued a request for proposals on Feb. 2 for the competitive upgrade, which would replace an aging Evergy line between the Butler and Tioga substations. Three days later, Evergy Kansas Central asked that the project be re-evaluated, saying it had originally been identified through the RTO's planning process as a "substantial" rebuild of the existing 99-year-old facility, not a 100% greenfield project that qualified as a competitive project.

"As a result, all analysis conducted to-date was based on assumptions and cost estimates which are no longer applicable to the current project scope," Evergy wrote in its re-evaluation request.

The utility said the restudy was necessary because the scope change in the RFP is "significant and substantive" and no longer aligns with the original assessment.

Evergy has begun work on a 35-mile rebuild of the Butler-Altoona line, which it said has been identified as a need in three SPP planning assessments since 2017. The utility expects to complete the work by the end of next year.

The competitive upgrade "is definitely a collision of local and regional planning," said Denise Buffington, Evergy's director of federal regulatory affairs. "We think the facilities we are putting in the area should be considered as SPP determines whether or not to move forward with the project. SPP should not be building redundant infrastructure."

Buffington said that, based on her understanding of competitive project restudies, the upgrade could not be modified to pick up where Evergy's work leaves off, resulting in the redundancy.

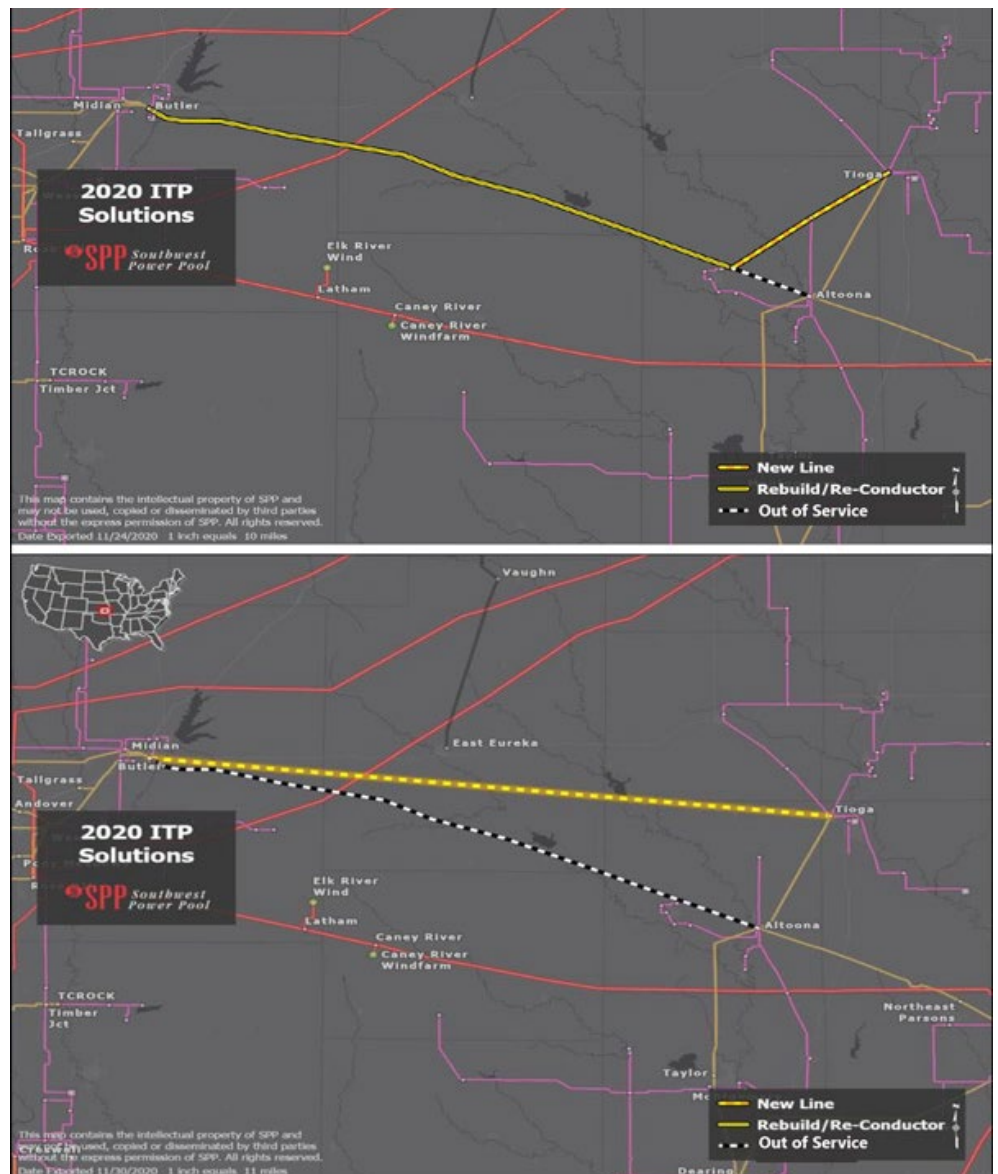
"We have been trying since 2017 to get in line with SPP on needs of this area," she said. "We need to do what is right for our customers. It isn't all about economics for us."

During the board meeting, staff will recommend whether the competitive restudy should be performed. Under the tariff, SPP can also recommend whether it is necessary to suspend the project's transmission owner selection process.

Should the board direct a restudy, staff will

conduct the re-evaluation and provide a recommendation as to whether the competitive upgrade should be withdrawn. If it is, the applicable RFP would be withdrawn and the selection process terminated.

If the competitive project survives the challenge, the selection process will continue or be reinstated. The RFP response window will close on the original close date or 60 days after the selection process is reinstated, whichever is later. ■



SPP originally identified the Butler-Altoona-Tioga project (below) in its transmission planning process, but has since recommended a greenfield project (top). | SPP

# Company News

## Duke Plans for \$59 Billion in Capital Investment

*With 2020 Losses Behind It, Utility Focuses on Net Zero by 2050*

By K Kaufmann

Duke Energy executives said Thursday they have put the challenges of 2020 behind them, predicting a 5 to 7% annualized increase in earnings per share through 2025.

“2020 was the year for agility and transformation,” Executive Vice President and CFO Steve Young said during the company’s fourth quarter 2020 earnings call. He said the company plans \$59 billion in capital spending over the five-year planning period ending in 2024, about 70% of which will be for clean energy and “green infrastructure.” Capital investments from 2025 to 2030 are expected to grow to \$65 billion to \$75 billion, Young said.

The company’s reported earnings were hurt by charges from the cancellation of the Atlantic Coast Pipeline and a \$1 billion coal ash settlement in North Carolina for Duke Energy Carolinas and Duke Energy Progress.

CEO Lynn Good framed Duke’s coal ash settlement as an achievement, despite the \$77 million loss (-\$0.12/share) the utility reported for the quarter. Adjusted fourth quarter earnings were \$1.03/share. A year earlier, the company posted fourth quarter net income of \$660 million (\$0.88/share) and adjusted earnings of 91 cents/share.

For all of 2020, Duke reported net income of \$3.77 billion (\$1.72/share) and adjusted earnings of \$5.12/share.

Good was upbeat throughout the call, expressing optimism about the utility’s 2020 integrated resource plans for North and South Carolina and its goal of reducing its carbon emissions 50%

by 2030 and achieving net-zero emissions by 2050. She said the IRPs were developed with broad stakeholder involvement and illustrate “the trade-offs between the pace of transition and the cost implications.”

The IRPs offer six different pathways to net zero, from a base case that still includes substantial new natural gas generation, to a no-gas option that would accelerate emissions reductions to 70% by 2030.

The North Carolina IRP is now before the state’s utility commission, with public comments due in April and the commission’s own comments due possibly in the fall, Good said.

Questions from analysts on the call focused on regulatory and legislative initiatives underway in North Carolina. Following a series of stakeholder meetings throughout 2020, a recent report by the Rocky Mountain Institute and the Regulatory Assistance Project included recommendations for new laws to transition the state to performance-based regulation (PBR) and help accelerate the retirement of fossil fuel generation.

PBR links utility compensation not to traditional capital investment in infrastructure, but to the achievement of specific performance metrics. Other recommendations in the report included changes to wholesale power markets and more competitive procurement processes.

Good said Duke worked with stakeholders around common objectives including “moving away from coal, carbon reduction, regulatory mechanisms that incent that move and then, of course, increase investment in renewables, all with the construct of maintaining reliability

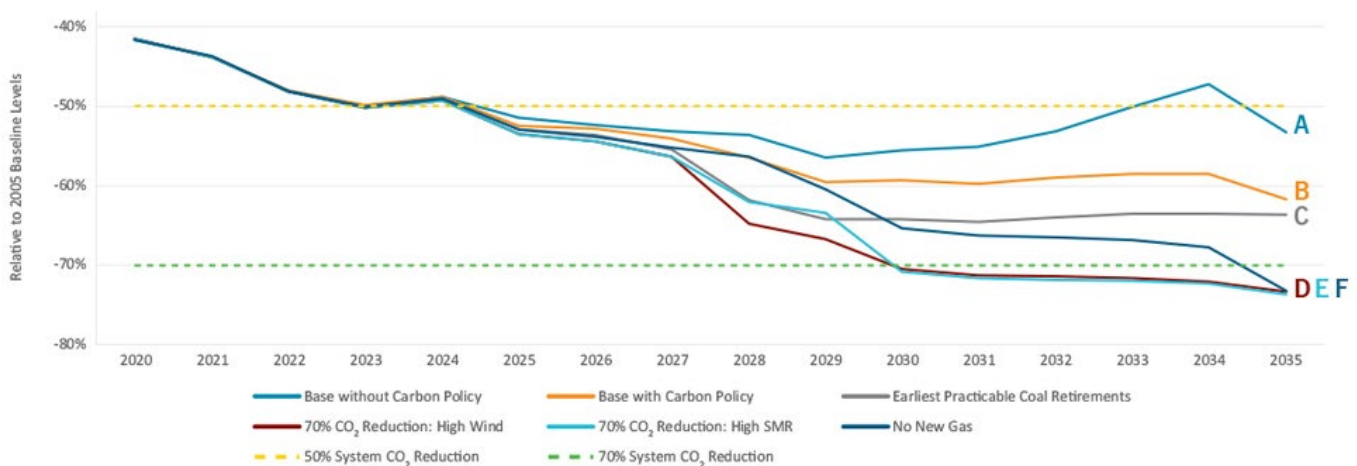
and affordability.”

But some solar and environmental groups have been strongly critical of both the North and South Carolina IRPs, in particular for the utility’s plans to continue building new natural gas plants. A recent report from the Sierra Club gave Duke’s North Carolina IRP 5 points out of a possible 100. The South Carolina Solar Business Alliance filed extensive comments on Duke’s South Carolina IRP, calling the utility’s ongoing reliance on natural gas generation risky and inconsistent with its 2050 net-zero goal.

### Positive Population Migration

Other takeaways from the call included:

- While the COVID-19 pandemic reduced commercial and industrial demand, Duke saw a significant increase in residential customers and demand. The customer growth was caused by “positive population migration” in Duke’s service territory, Young said.
- Duke Energy Florida reached a settlement with consumer groups, committing the utility to scrapping a planned nuclear project and investing instead in solar energy, smart meters and grid modernization projects. Deployment of electric vehicle charging stations and development of an energy storage pilot project are also included in the settlement.
- Duke recently announced that GIC, a Singapore-based infrastructure investor, had acquired a 19.9% interest in Duke Energy Indiana for \$2.05 billion. The investment “displaces all common equity needs” in its five-year plan. ■



Duke Energy’s IRPs for North and South Carolina include six possible pathways to get the utility to net zero by 2050. | Duke Energy



## Company Briefs

### AEP to Sell Racine Hydro Plant



American Electric Power last week announced it has reached an agreement to sell its 48-MW hydroelectric Racine Plant in Ohio to Eagle Creek Renewable Energy. The sale price was not disclosed.

AEP Chairman, President and CEO Nicholas Akins said the sale is part of the company's ongoing evaluation of its assets as it focuses on its business operations.

The sale, subject to FERC approval, is expected to close in the second quarter of 2021.

More: [AEP](#)

### Arch Resources Reports \$78.5M Fourth Quarter Loss

Arch Resources last week reported a net

loss of \$78.5 million in the fourth quarter of 2020, compared to a loss of \$8.6 million in the prior-year period.

The loss included a \$45 million charge primarily related to the closure of the Coal Creek mine.

The company estimates it incurred additional costs of \$6 million during the fourth quarter due to COVID-19-related quarantines and lost shifts, along with intensive hygiene-driven protocols and associated output and shipment level reductions.

More: [Arch Resources](#)

### Daimler Chief Says Clean Trucks Will Be Ready Before Clean Fuels

Daimler AG Chairman Martin Daum last week said the company could have a full line of zero-emission commercial vehicles ready by 2027, but deploying them will depend on infrastructure investments that have not yet



been made.

Shifting commercial trucks to fuel cells or batteries will require mass production of hydrogen and significant investments in electric charging infrastructure, Daum said. However, he said Daimler isn't interested in competing with BP, Shell or Exxon and doesn't plan to invest in hydrogen refueling infrastructure.

More: [Reuters](#)

## Federal Briefs

### EPA: Won't Return to Obama Clean Power Plan



EPA officials said last week they will not attempt to reinstate the Obama administration's Clean Power Plan even after an appellate court rejected the Trump administration's repeal of it and vacated its replacement, the Affordable Clean Energy (ACE) Rule. (See [DC Circuit Rejects Trump ACE Rule](#).)

Instead, the Biden administration said it is seeking court permission to propose a new rule limiting greenhouse gas emissions from the power sector. "As a practical matter, the reinstatement of the [Clean Power Plan] would not make sense," Joseph Goffman, the acting assistant administrator for EPA's Office of Air and Radiation, wrote in a memo to the agency's regional offices.

The agency did not say what type of oversight it might pursue instead of the CPP, which would have required power plants to

reduce emissions by 32% below 2005 levels by 2030. Biden has pledged to make the electricity sector carbon-neutral by 2035.

More: [The Washington Post](#)

### Biden's Climate Task Force Has First Meeting

The National Climate Task Force focused on job creation in its inaugural meeting last week.

President Joe Biden, who often links the battle against climate change to investing in a clean energy infrastructure and new jobs, announced the task force in his first week in office.

The task force also started a working group that will focus on challenges, such as creating energy storage at a cheaper cost and developing sustainable fuels for aircraft and ships.

The group will meet regularly to chart progress on a series of goals including eliminating fossil fuel emissions from the electricity sector by 2035; transitioning federal, state and local government fleets to zero-emissions vehicles; and increasing conservation and renewable energy production on public land and waters.

More: [The New York Times](#)

### Study Says Countries Must Up Climate Pledges by 80% to Hit Paris Target

A study published in *Communications Earth & Environment* by a University of Washington statistics professor and others found that even if countries were to meet their existing emission reduction pledges, the world has only about a 5% chance to limit the Earth's warming to "well below" 2 degrees Celsius (3.6 Fahrenheit) over preindustrial levels.

Professor Adrian Raftery and a colleague calculated that global emissions would need to fall steadily — about 1.8% each year — to put the world on a more sustainable trajectory. While no two countries are alike, it amounts to overall reductions roughly 80% more ambitious than those pledged under the Paris agreement. Meanwhile, emissions have risen about 1.4% annually over the past decade, not including the abnormal plunge in 2020 driven by the COVID-19 pandemic.

Raftery noted that the U.S. would need to increase its existing goal by 38% to do its part toward achieving the 2-degree Celsius target.

More: [The Washington Post](#)

# State Briefs

## COLORADO

### GE Gas Turbines to Replace Coal at Martin Drake Plant



Colorado Springs Utilities last week announced it has selected General Electric gas turbines to use at its 208-MW Martin Drake plant to keep the plant operating, at least temporarily, as a gas-fired facility.

The utility's board voted in June 2020 to end coal-fired generation at Martin Drake and replace its remaining two units with natural gas-fired generators, saying they were looking for technology that could later be moved offsite. The units are scheduled to be retired by the end of 2022.

More: [POWER Magazine](#)

## IDAHO

### Bellevue Passes Resolution for 100% Clean Energy by 2045

The Bellevue City Council last week unanimously approved a resolution to transition to 100% clean electricity by 2035 and 100% clean energy by 2045.

The vote followed a presentation by Idaho Power in which it outlined its goal to transition to 100% carbon neutral energy sources by 2045.

More: [Idaho Mountain Express](#)

## ILLINOIS

### Democrats Introduce Clean Energy Jobs Act

House and Senate Democrats last week introduced the latest version of the Clean Energy Jobs Act, sending the message that the state must transition to clean energy sources.

The bill's goal is to get the state to net-zero emissions by 2050 and dependence on clean energy sources. It would also move the state away from coal by 2030 and removes language that affirms coal as the best resource for generating electricity in Illinois.

More: [The State Journal-Register](#)

## NEW JERSEY

### Municipalities Must Make Climate Change Part of Master-plan Updates



Gov. **Phil Murphy** signed a law on Feb. 4 that will require municipalities to include climate change effects like flooding and higher seas in updates to their master plans.

The law puts new demands on local governments to plan for coastal storms, shoreline erosion, flooding and their effects on infrastructure. Municipalities must also identify critical facilities such as roads and utilities that might be affected by hurricanes or sea-level rise, make plans to sustain normal life in the face of anticipated natural hazards, and integrate climate vulnerability with existing plans such as emergency management or flood-hazard strategies.

More: [NJ Spotlight News](#)

## NEW MEXICO

### 'Clean Energy' Bill Would Block New Natural Gas Burning Facilities

Senate Bill 67 could block the construction of any new electricity generating facilities that burn natural gas and would only allow developments that generate clean energy. The recently introduced bill defined clean energy to include solar, wind, geothermal, carbon gas capture, biomass or hydropower, while excluding nuclear energy, coal- or gas-fired generation.

The bill passed the Senate Conservation Committee on Feb. 2 by a 6-3 vote. If signed, it would apply to any new or replacement energy capacity constructed on or after July 1 and restrict the Public Regulation Commission from approving facilities that generate coal or natural gas power.

More: [Carlsbad Current Argus](#)

### Committee Rejects Changes to Energy Transition Act

The Senate Conservation Committee last week voted 5-4 to table a bill that would have made several changes to the state's Energy Transition Act, which is designed to move electric utilities away from coal and toward renewables and zero-carbon

resources by 2045.

The proposal called for restoring the Public Regulation Commission's full oversight of plant closures and eliminating the automatic guarantee for full cost recovery afforded to utilities. Under the current version of the ETA, utilities receive 100% of the costs from ratepayers when they close a plant or abandon a portion of ownership of a plant.

The Public Service Company of New Mexico and the Rio Grande chapter of the Sierra Club opposed the bill.

More: [Santa Fe New Mexican](#)

## NEW YORK

### Cuomo Announces PSC Approval of Major Tx Projects



Gov. **Andrew Cuomo** last week announced that the Public Service Commission had approved the New York Energy Solution Project – a 54.5-mile, 345-kV transmission line valued

at \$530 million – starting in Rensselaer County and extending to Dutchess County.

The PSC also gave NextEra Energy Transmission New York approvals to construct the Empire State Line – a 20-mile, 345-kV transmission line – located in Niagara and Erie counties and valued at an estimated \$180 million.

Lastly, the PSC approved the environmental management and construction plan filed by LS Power Grid New York, LS Power Grid New York Corporation I, and the New York Power Authority, to construct and operate Segment II of the 93-mile Marcy to New Scotland Transmission Upgrade Project.

More: [New York State](#)

## OHIO

### Lawmaker Reintroduces Bill to Repeal Nuke Bailout

Rep. Laura Lanese (R) last week reintroduced a bill in the House that would repeal a bailout of two aging nuclear power plants at the heart of a federal \$60 million bribery probe.

Lanese introduced a similar bill last year, but it died after some fellow Republicans

in the GOP-controlled House disagreed on whether a repeal was necessary.

More: [The Associated Press](#)

## TEXAS

### House Democrats Launch Climate, Environment Caucus

Seventeen Democrats in the House of Representatives last week launched a climate, environment and energy caucus with the goal of starting climate change talks at the Capitol, where conversations on reducing greenhouse emissions have been absent for years.

Led by Rep. Erin Zwiener, the caucus includes Democrats from major cities across the state, who want “the Legislature to be led by science on the issue.” Zwiener said some Republicans were invited to join the caucus but declined.

The Legislature did not hold a single hearing on any bill related to climate change during the last session. The new caucus won't formally endorse any legislation this session but aims to hold at least one hearing on climate change this year.

More: [The Texas Tribune](#)

### Lt. Gov. Says Bill Would Defend Energy Sector from Boycotts

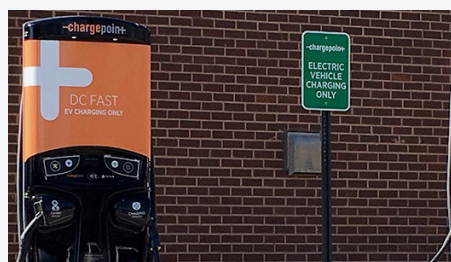
Lt. Gov. Dan Patrick said legislation will be

unveiled this week that will aim to prohibit the state from doing business with any investment firms that boycott oil and gas companies.

Patrick said the legislation will be modeled after a state law that prohibits agencies from contracting with companies that support a boycott of Israel, as well as certain state investment funds from investing in them. However, the ban on doing business with companies that support a boycott of Israel is being challenged in court as unconstitutional.

More: [Austin American-Statesman](#)

### San Antonio City Council Approves EV Charger Deal



San Antonio City Council members last week unanimously approved a contract with Blink Charging that will see more than 140 chargers installed at 32 sites on city property. The contract is for one year, with options to extend it up to four additional one-year terms.

The deal comes as cities consider installing stations before EVs catch on with large numbers of drivers. CPS Energy has estimated that 50,000 EVs will be in the city by 2030. As of July, only 4,400 EVs were registered.

More: [San Antonio Express-News](#)

## WASHINGTON

### Seattle Mayor Signs Gas Heating Ban in New Apartments, Buildings

Seattle Mayor Jenny Durkan last week signed a bill into law that effectively bans natural gas space and water heating in new apartments, hotels and commercial buildings. The citywide ban will take effect, in part, for qualifying new buildings on June 1; the gas water heating ban will wait until 2022.

City councilmembers unanimously approved the measure two weeks ago as part of a larger vote to bring the city into alignment with state building codes.

Proponents of the bill estimate that more than a third of Seattle's greenhouse gas emissions are generated by buildings, 86% of which is directly linked to natural gas. It's estimated that the ban could reduce the emissions by 10% to 12% by 2050.

More: [MyNorthwest](#)

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