RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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Senate Energy Chief Sets His Ground Rules

Manchin: Won't Support End to Filibuster, or Fossil Fuel Blacklist

By Rich Heidorn Jr.

Sen. Joe Manchin (D-W.Va.) on Thursday expressed confidence the U.S. can reach net-zero carbon emissions by 2050 but insisted commercial-scale carbon capture must be part of the solution to ensure a future for fossil fuels.

Sen. Joe Manchin (D-W.V.) | *Bipartisan Policy Center*

Speaking the day after being named chairman of the Senate Energy and Natural Resources Committee, Manchin outlined his ground rules for climate legislation, saying change should result from incentives rather than penalties and reiterating his insistence on technological innovation rather than blacklisting coal and natural gas.

Manchin said he would oppose any policy that threatened U.S. energy independence. "We have to be self-reliant. We saw what happened back in the '70s. I'm old enough to remember waiting in line for gasoline. So, we know what can happen when we put all our eggs in somebody else's basket," he said during an *interview* with Bipartisan Policy Center President Jason Grumet.

"I believe that you cannot move … to a cleaner environment by elimination. I believe you do

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EPA Nominee Regan Receives Bipartisan Support (p.18)

Glick: These 4 FERC Priorities Will Affect Energy Storage

By Jennifer Delony

Recently appointed FERC Chair Richard Glick told members of the energy storage industry Wednesday that the technologies they bring to the power sector will play a "big role" in the clean energy transition.

Glick said during the Energy Storage Association Policy *Forum* that among the priorities he wants FERC to address are four issues that directly affect energy storage expansion in the U.S.:

- eliminating more market barriers;
- revisiting minimum offer price rules (MOPRs);
- increasing long-distance transmission development; and
- overhauling interconnection queue processes.

Glick said he wants to expand on the commission's work to address market barriers for new technologies.

FERC, he said, has addressed some market barriers for energy storage with, for example, Orders 841 and 2222, but there are more opportunities.

Glick said that while the commission's work to date has focused on organized markets, there also are "big parts of the country that aren't served by RTOs and ISOs." He wants to explore some of the challenges those other markets are facing that create barriers for energy storage and clean technologies.

The technologies that support climate-related energy mandates also are being limited in mandatory capacity markets, he said, and he believes FERC can change that.

"Over the last several years, the majority of commissioners at FERC have opted for an approach in these capacity markets that essentially disadvantages technologies that have

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WEIS Market 'First Step' to Full RTO Membership

Members Share Reasons for Joining SPP's Fledgling Market

By Tom Kleckner

Like any utility executive worth his salt, Tri-State Generation and Transmission CEO Duane Highley enjoys looking at LMP contour maps.

"It's just a fascination of mine," he said during a virtual press conference Feb. 2 to discuss SPP's new Western Energy Imbalance Services (WEIS) market.

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Editorial

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

Deputy Editor / Daily
Michael Brooks
301-922-7687

Deputy Editor / Enterprise
Robert Mullin
503-715-6901

Art Director
Mitchell Parizer 718-613-9388

New York/New England Bureau Chief
Jennifer Delony 603-320-7043

MidAtlantic Bureau Chief
K Kaufmann 202-494-4386

Midwest Bureau Chief
John Funk 216-316-5413

Associate Editor
Shawn McFarland 570-856-6738

Copy Editor/Production Editor
Rebecca Santana 770-862-6004

CAISO/West Correspondent
Hudson Sangree 916-747-3595

ISO-NE Correspondent
Jason York 860-977-7830

MISO Correspondent
Amanda Durish Cook 810-288-1847

NYISO Correspondent
Michael Kuser 802-681-5581

PJM Correspondent
Michael Yoder 717-344-4989

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

NERC/ERO Correspondent
Holden Mann 205-370-7844

Subscriptions

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

Account Executive
Kathy Henderson 301-928-1639

Account Manager
Phaedra Welker 773-456-4353

Marketing Director
Margo Thomas 480-694-9341

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

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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 Successors Need 'Holistic Approach'
- McCarthy to NASEO: State Energy Targets Matter
- Calif., NY, DC Top ACEEE EV Scorecard
- States Working out the Details of Getting to 100%
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- NY Munis Forge Way for Building Decarbonization
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- Baker Returns Climate Bill to Mass. Legislature

Net Metering Successors Need 'Holistic Approach'

By Jennifer Delony

Four trends have emerged from the evolution of net energy metering (NEM) rate design taking place across the U.S., an industry expert told state utility commissioners and their staff last week.

The successors to original utility tariffs for distributed energy resources (DER) are focusing on avoided utility costs, value provided to the grid, cost shifting between customers and energy demand, Matthew McDonnell, managing director at Strategen Consulting, told state regulators Thursday during the National Association of Regulatory Utility Commissioners' Winter Policy *Summit*.

Reforming the way utilities compensate behind-the-meter generators for the power they add to the grid "is a process, not a singular event," McDonnell said.

"As technology costs continue to decline and as DER further proliferate, states will need to embrace a comprehensive and holistic approach to DER that will need to be reflected in tariff designs," he said.

Top among the trends in tariff overhauls is a focus on export compensation rates.

At the NARUC Winter Policy Forum, attendees heard about the need for a "comprehensive and holistic approach" to programs that compensate behind-the-meter generators, like the rooftop solar system pictured here. | *SunPower*

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McDonnell said the widely used net billing approach that compensated energy by retail rate is moving to a calculation based on what utilities avoid spending by not building generation equal to what a customer's DER provides.

In addition, how tariffs handle the calculation between what customer systems export and import is changing.

"With netting intervals, while they can vary from annual to instantaneous, we are seeing a trend towards greater granularity in order to better reflect the value provided to the grid on a time-differentiated basis," McDonnell said.

NEM customer bills will also see more base charges in the future.

"With cost shifting a concern, many states have embraced non-bypassable charges as a way to ensure that public benefit programs and services remain adequately and equitably funded," he said.

Some new NEM iterations, McDonnell added, are transitioning customers to billing based on when they consume electricity.

"We are beginning to see a trend whereby DER customers are increasingly asked to take service under an underlying [time-of-use] consumption tariff, with a goal of incenting more supportive grid behavior through better delivery of price signals to customers," McDonnell said.

Integrative DER

According to McDonnell, DER tariff design will need to evolve to integrate DER as an operational resource that can provide core grid services. To achieve that goal, he said, regulators should ensure that non-wires solutions are accounted for and DER are integrated into power system planning for customers to fully realize cost savings.

Further consideration, McDonnell added, must be given to the possibility for DER participation in wholesale markets, as envisioned in FERC Order 2222.

"These activities will need to be harmonized at the distribution system level, and DER tariffs may need to enhance flexibility and ensure that there is no double counting of grid service provision," he said.

In addition, state utility regulators have a complicated set of factors to work with in designing power portfolios that will meet clean energy targets.

Cost-effective resource portfolios must preserve customer choice and integrate DER as a core operational resource, while also acknowledging greenhouse gas reductions from customer-sited generation, McDonnell said.

The changes to states' DER programs will also be underscored by a call to make them equitable and inclusive.

"DER policies ... need to open opportunities for [low- to moderate-income] customers to participate," he said.

State Hot Spots

How state regulators are approaching the evolving NEM landscape varies widely, but a few state examples demonstrate the leading edge of DER rate design, according to McDonnell.

While some states are just starting to address changes to their original NEM tariffs, California is headed into its third iteration.

California in 2017 implemented NEM 2.0 to succeed its original NEM program. Under NEM 2.0, there is no program cap and existing customers were grandfathered for 20 years. While the customers' export compensation is still at the retail rate, NEM customers have to take service under a time-of-use rate, McDonnell said.

Proceedings for NEM 3.0 have begun, with new program design proposals due in mid-March.

McDonnell said that some of the principles guiding the new NEM tariff design include "the need to ensure equal compensation for the same generation, equal collection of unavoidable and non-bypassable charges from both participants and non-participants and the requirement that participants pay a fair share for the grid services they use."

Regulators updated New York state's NEM tariff in 2017 with a value of distributed energy resources (VDER) approach that McDonnell said offers more efficient price signals for mass market customers.

"Export compensation is determined by the DER value stack, stacking the wholesale price of electricity with other grid benefits of DER, including avoided emissions, cost savings to other customers and avoided capital investments," he said.

Currently, VDER applies to non-residential DER customers, with the original NEM tariff extended for residential customers until 2022.

Michigan utility regulators in 2018 adopted a distributed generation program to replace its original net metering program. Of note in the new program, McDonnell said, is an "inflow-outflow" tariff mechanism.

Under the new tariff, DER customers pay for electricity delivered by the utility (inflow) under a regular cost of service-based retail rate, and the electricity they generate behind the meter but do not use (outflow) receives a credit. In the *order* adopting the new tariff design, Public Service Commission staff said inflow-outflow "accommodates a wide array of potential future rate designs, such as those including demand charges, dynamic pricing and dynamic credits." It can also "form the basis for future load-control and demand-response programs that target distributed generation customers." ■

"With cost shifting a concern, many states have embraced non-bypassable charges as a way to ensure that public benefit programs and services remain adequately and equitably funded."

—Matthew McDonnell, managing director at Strategen Consulting

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McCarthy to NASEO: State Energy Targets Matter

National Climate Adviser Says Feds Won't Duplicate State Efforts on the Ground

By Emily Hayes

The Biden administration is aiming to support the work states are already doing to eliminate harmful emissions by filling in funding gaps and strengthening climate policy, according to White House National Climate Adviser Gina McCarthy.

A major focus will be delivering on Biden's promise to create jobs in the clean energy industry, McCarthy said during the National Association of State Energy Officials 2021 Energy Policy Outlook *Conference* on Wednesday.

The federal government can "bring hope again to individual communities, those that have been left behind and those that are worried about this transition" by working with state authorities, McCarthy said.

A lack of leadership at the federal level on addressing climate change during former President Donald Trump's administration left state governments to create their own alliances and initiatives for sweeping change, most notably the U.S. Climate Alliance. McCarthy said the Biden administration is not seeking to duplicate these efforts, but to "make investments of federal dollars" into those ongoing efforts.

Craig Altemose, executive director of environmental advocacy organization Better Future Project, told *RTO Insider* that federal funding to support existing state and regional efforts, such as the Renew New England Alliance, will "employ a bunch of people to help solve the climate crisis."

One of the organization's top priorities in the upcoming Massachusetts legislative session is to promote the Massachusetts Renews Alliance, which will launch later this month with a goal of coordinating the retrofit of 1 million homes in the state within the next decade.

The group has been a couple years in the making, Altemose said, but the state of Massachusetts alone may not have the financial resources to make it a reality, and the COVID-19 pandemic has further slowed progress. But support from the federal level could help the state achieve its energy goals while offering employment opportunities.

"You can't take a house, ship it to China, have them retrofit it and ask them to ship it back," Altemose said. "It needs to be humans from this area."

McCarthy said the climate targets under the Biden administration will be challenging to meet, but the major transitions "are not anything fundamentally to object to if it [means] better jobs — more jobs — and a stable economy."

Working with Unions

Commenting during the conference session, attendee Kerry Campbell, manager of the Energy Policy and Technology Deployment Division within the Pennsylvania Department of Environmental Protection, said the office does not have strong engagement from unions on transitioning to clean energy, though unions are critical in the implementation of new climate initiatives.

McCarthy said the administration has started discussions with unions on how to make the transition to clean energy without leaving communities that rely on carbon-emitting industries behind the curve.

"We cannot think that the shift to clean energy is going to mean that people who are working in the coal mines now happily take $9/hour jobs or $10/hour jobs putting solar on roofs," McCarthy said. Creating high-quality renewable energy jobs at the local level will ensure families who have lived in one place for generations won't need to move to find employment opportunities, she said. ■

Gina McCarthy says the Biden administration is not seeking to duplicate states' efforts on building climate policy over the last four years. | *Gray Watson, CC-BY-SA-3.0 via Wikimedia Commons*

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Calif., NY, DC Top ACEEE EV Scorecard

States Fill Policy Void from Trump Years

By K Kaufmann

California may have the most electric vehicles in the nation (803,816), but Vermont has the most DC fast chargers per 100,000 residents (36.5) and Ohio offers some of the highest incentives ($50,000 to $2 million) to help companies trade in their diesel 18-wheelers for electric trucks.

These facts and figures appear in the American Council for an Energy Efficient Economy's (ACEEE) first-ever State Transportation Electrification *Scorecard*, released Wednesday. Like ACEEE's annual state scorecard on energy efficiency, the new report rates states on their efforts to spur electric vehicle adoption. Predictably, California took the top spot, followed by New York and D.C., while West Virginia, Arkansas and Mississippi were at the bottom of the list.

Rounding out the top 10 were, in descending order, Maryland, Massachusetts, Washington, Vermont, Colorado, Oregon and New Jersey. ACEEE found 27 states offer financial incentives for EVs, 36 states have lower electric rates for EV charging and 48 states are using federal funds to buy electric buses.

In other words, states are providing the momentum for transportation electrification, filling the void in federal leadership created by the last four years, said Bryan Howard, ACEEE's state policy director and lead author of the report. Strong policy coupled with collaboration with utilities and the transportation sector, are moving the market, he said.

Beyond the overall ratings, ACEEE's granular approach to scoring each state shows the wide spectrum of policies and programs that will be necessary to cut the millions of tons of carbon emissions produced each year by autos. The transportation sector now accounts for 28% of the country's greenhouse gas emissions, edging out the electric power system — at 27% — as the nation's top source of GHGs, according to figures from EPA.

Electrifying transportation could cut emissions almost in half by 2050, according to the report, but the nearly 1.8 million EVs currently on the road represent only 2% of the U.S. vehicle market.

Although overall car sales stagnated in 2020 because of the COVID-19 pandemic, EV sales as a percentage of all car sales in California

| *California Energy Commission*

"are higher than they've ever been," said Patty Monahan, a member of the California Energy Commission.

"We're seeing this play out, not just in California, but globally," Monahan said during an ACEEE webinar on the new report. "EV sales in the [European Union] are higher than they've ever been; China is a major market. This is an inevitable movement to electrify transportation. The question is how fast?"

California is setting the pace with Gov. Gavin Newsom's (D) recent executive order requiring all light-duty cars and trucks sold in the state to be zero-emission vehicles (ZEVs) — either electric or hydrogen-fuel cell — by 2035. (See *Calif. to Halt Gas-powered Auto Sales by 2035*.)

State programs to promote EV sales are focused on lowering major barriers to EV adoption — what Monahan called "the three C's" — cost, convenience and customer awareness.

For example, California offers rebates not only for new EVs, but also for used EVs, to support the second-sales market, which often serves as the entry point for low-income consumers, Monahan said. The state is also working with automakers, such as GM, to allow consumers to take advantage of the state's tax credit for EVs at the point of sale, which is "particularly important for folks with the need to accrue that benefit immediately rather than carrying the cost," she said.

Identifying the Gaps

The report and its exhaustive appendices provide a deep dive into state policy, with ACEEE's 100-point scoring system accounting for each state's individual policy and program measures. For example, separate incentives for light-duty electric cars and heavy-duty trucks are worth 4 points each, as are state EV programs targeting low-income or disadvantaged "environmental justice" communities.

The report also tracks which branches of state government are the prime movers in enacting and implementing EV-friendly policies — the governor, legislators or utility regulators. Not surprisingly, in the leading states, all three branches are significantly involved, and in California, New York and Massachusetts, they are equally influential.

The benchmarking provides a clear view of the most impactful policies as well as identifying the gaps where better and more innovative approaches are needed. Howard was surprised that only five states have updated their building codes to require new construction to be "EV-ready."

"Specifically, with multifamily buildings, there are a lot of opportunities to ensure we're getting access and benefits to those parties," he said.

Decarbonizing the electric system was also

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called out as an essential corollary so that EVs are manufactured with and can charge up on clean power. Here the role of utilities comes to the fore, whether they are investing in EV charging infrastructure, decarbonizing their own power supplies or offering lower rates or managed charging programs for EVs.

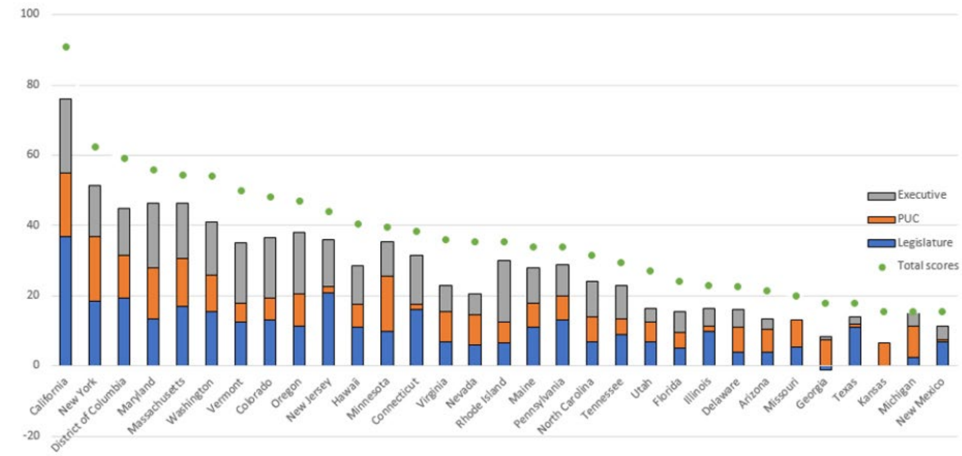
Equity and Electric Trucks

The role of equity and the need for all states to step up their efforts in this area was another major takeaway from the webinar. New York's aggressive EV programs — aimed at putting 850,000 ZEVs on the road by 2025 — include a requirement that 40% of all funds be spent in disadvantaged communities, said Zeryai Hagos, a deputy director at the New York Department of Public Service.

The state is launching an "$85 million prize competition to solicit ideas and implement them to reduce emissions in communities that are impacted by transportation emissions," Hagos said, noting that community engagement will be a core requirement for any proposal.

In Colorado, equity means ensuring chargers are installed between population centers and in small and rural communities, said Shoshana Lew, executive director of the state's Department of Transportation. Initiatives aimed at electrifying medium- and heavy-duty trucking are another priority.

"There's a lot of heavy trucking in low-income communities," she said, so the state wants to "double down on increasing the availability of clean trucking. We're taking a sort of place-based approach about how we do emission reductions in some of those areas."



Who's moving state EV policies forward — the governor, the legislature or regulatory commission | *ACEEE*

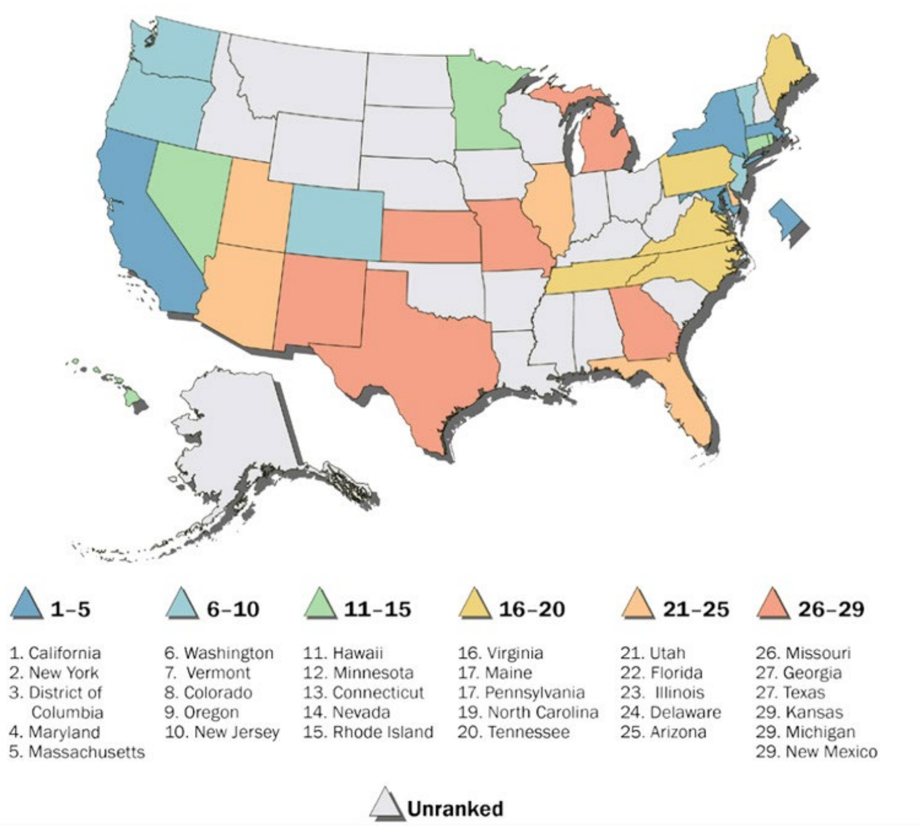
Doing it Right

Another gap includes the things ACEEE says it could not measure, in particular, initiatives addressing customer awareness. While acknowledging their importance, the report notes that reliable and measurable data were not available on such public education programs.

The report also highlights, but does not specifically score, interregional efforts such as the Transportation and Climate Initiative, an effort by Northeast and Mid-Atlantic states to reduce GHG emissions from the transportation sector. Massachusetts, Connecticut, Rhode Island and D.C. are working on a program that would require transportation fuel distributors to buy allowances to offset their emissions, with the money going to support low-carbon transportation. (See *NE States, DC Sign MOU to Cut Transportation Pollution*.)

ACEEE recommends states lagging on EV adoption begin with planning and setting goals for transportation electrification. Step 2 is collecting extensive data, not only on how many electric cars and trucks are being sold, but the demographics of who's buying them and where chargers are being installed. This data should be regularly reported and publicly available to ensure policies and programs are having intended impacts, the report said.

The goal, Monahan said, is to provide a steady stream of incentives and other programs to create a virtuous cycle for EV adoption. "We do it right; consumers buying electric have much lower costs," she said. "We do it right; that money gets recirculated back to our economy and continues to generate benefits for the state. We're seeing this as an opportunity for keeping money in consumers' pockets and the state and not exporting it to other countries." ■



State scores from ACEEE's Transportation Electrification Scorecard | *ACEEE*

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States Working out the Details of Getting to 100%

Big Targets Only the 1st Step, Policymakers Say

By K Kaufmann

As an increasing number of states commit to 100% clean energy standards, policymakers and regulators across the country are being faced with working out the details of how to reach those goals in the next 10, 20 or 30 years.

"Big targets are not enough," said Virginia Sen. Jennifer McClellan (D), one of the sponsors of the Virginia Clean Economy Act, which has put the state on the road to 100% by 2050. "Which is why I and my fellow lawmakers are committed to making sure we have the right permitting process, tax treatments and regulations for energy storage."

McClellan's call to action opened a wide-ranging discussion on state policy during the second day of the Energy Storage Association's annual Policy Forum on Thursday. Leaders from Arizona, Colorado, Michigan and New Jersey spoke about their top priorities for 2021, ranging from developing new rate structures for distributed energy resources to balancing their states' response to COVID-19 with moving forward on clean energy goals.

Capturing the full value storage brings to the grid is challenging, said Dan Scripps, chair of the Michigan Public Service Commission, because "it offers a host of resilience and ancillary benefits, but those benefits are widely dispersed. Our regulatory proceedings often remain siloed; so, a comprehensive approach is needed."

Michigan PSC Chair Dan Scripps | *State of Michigan*

As a first step, Scripps said the MPSC is setting a high bar on integrated resource planning for the state's utilities to "fully consider all available resources, and we've been pretty direct in our orders in terms of what we expect in terms of storage."

In Colorado, Sen. Chris Hansen (D) said his first priority for this year's session will be legislation that would grant energy storage equipment an exemption from property taxes, similar to the exemption for other renewable energy equipment. The state is targeting 100% clean energy by 2050, and the tax exemption would "spur rapid investment in storage," he said. "It's a big opportunity, and we need it."

Arizona recently adopted a new tariff aimed at compensating a range of distributed energy resources for the different services they can bring to the grid, Corporation Commission Chairwoman Lea Márquez Peterson said.

"The focus here is really on third-party aggregators, not the utility company," Márquez Peterson said. "It's technology-agnostic, so the focus in not on a specific device being used, but rather on the characteristics of the device and the value each brings. So, it really does promote a free-market approach to the deployment of distributed assets."

New Jersey has also set aggressive goals for renewables and energy storage, said Joseph Fiordaliso, president of the state's Board of Public Utilities — including 2,000 MW of energy storage by 2030 and 7,500 MW of offshore wind by 2035. But responding to the COVID-19 pandemic has meant balancing priorities, he said.

"We are focused on the clean energy sectors that will bring immediate economic benefits to the state during the crisis, economic benefits through a new, innovative economy," Fiordaliso said.

The BPU has also recently established an Office of Clean Energy Equity "to ensure that every citizen in the state of New Jersey has the opportunity to participate in the clean energy revolution."

Bipartisan Blueprint

Enacting and implementing such a broad range of new policies will likely require broad bipartisan support. McClellan laid out the blueprint she and other stakeholders developed to pass major energy legislation in Virginia in a matter of months.

Virginia Sen. Jennifer McClellan | *Jennifer McClellan*

The first piece was bringing together an alliance of environmental groups, business leaders and public health experts, she said. "Everyone had slightly different goals, but we managed to get around a table and work out a game plan from the beginning," she said.

The bill was also technology-agnostic, with no "silver bullets, but a collection of standards and investments that chart a path to 100%," McClellan said.

And finally, to build bipartisan support, she said, "We focused every day on the economic aspects of our bill. We stood for job growth and a cleaner Virginia." ■

New Jersey BPU President Joseph Fiordaliso | *© RTO Insider*

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Energy Siting Tops Maine Environmental Policy Priorities

By Jennifer Delony

Solar and offshore wind energy siting will be among the environmental priorities the Maine legislature will address this year, according to Hannah Pingree, director of the state's Office of Policy Innovation and the Future.

"The issues of solar siting and offshore wind have really heated up," Pingree said during a Committee on Environment and Natural Resources (ENR) preview *hosted by E2Tech* on Feb. 2. Electric vehicles also will be a top priority, she said.

Policy considerations for siting solar and OSW will focus on balancing technological expansion and the needs of local industry, such as fishing and farming.

"The significant expansion of solar projects in our state is exciting, but needs to be balanced, especially with ensuring that we preserve our best farmland," she said.

The Maine Climate Council, which advises the governor and legislature on climate change, will continue its work from last year on an EV Roadmap, she added.

Maine's climate plan "calls for, by 2030, a couple hundred thousand EVs to be on the road," Pingree said. "That's a tall order for our state, so there's significant work to be done to plan for how to get these cars on the road."

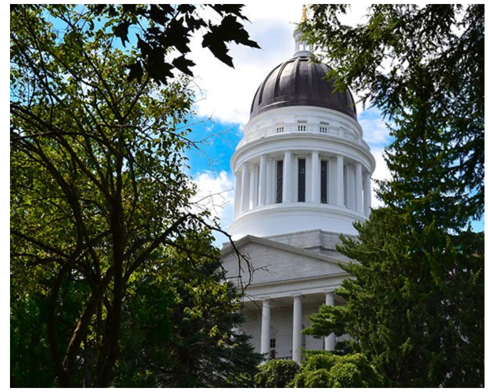
Pingree said the focus for OSW siting will be on ensuring any new development is planned for more than 20 miles offshore in federal waters. Gov. Janet Mills in late January *announced* that she will ask the legislature to approve a 10-year moratorium on new OSW projects in Maine-managed waters.

The governor's administration is also working with the Bureau of Ocean Energy Management and environmental and fishing groups to identify the best place to site a floating OSW research array proposed for the Gulf of Maine, Pingree said.

Speaking during the committee session preview, ENR committee member and House Rep. Will Tuell (R) said he applauds the moratorium, and he is looking forward to supporting the interests of the fishing industry.

"Fishermen are still rather uneasy about offshore wind, where it's going to be located and how effective that could be," he said. "I'm interested in hearing a lot more ... but we have to be mindful of the fishermen, and we have to remember that they were fishing the waters first."

In a *letter* to fishermen announcing the proposed moratorium, Mills said "new commercial-scale offshore wind projects do not belong in state waters that support the majority of the state's lobster fishing activity."



Lawmakers in Maine this year will be considering environmental legislation related to solar and offshore wind siting, electric vehicle adoption and landfills. | Carol Boldt, *CC BY-SA 4.0*, via Wikimedia Commons

Landfill Bills

State Rep. Ralph Tucker (D), who serves as ENR committee chair, said he anticipates the committee will have to handle about 79 different bills this session.

Among them, he said, "are a number of landfill bills."

According to Tucker, there will be a "knock-down, drag-out fight" over out-of-state waste that is going to a state-owned landfill in central Maine.

He also said that recycling in the state is "in crisis." Tucker anticipates a "big fight" over packaging stewardship, with dueling proposals.

One of the proposals, he said, would require packaging producers to contribute to the recycling of materials and reimburse towns. That bill, he added, is backed by the Natural Resources Council of Maine. The packaging stewardship policy approach supported by NRCM, according to its *website*, is called extended producer responsibility. The policy is designed to force manufacturers to take responsibility for recycling programs, which incentivizes them to design greener, safer packaging. ■

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Heard at NASEO: Make Net-zero Grid a Priority

By Emily Hayes

State policymakers and corporate renewable energy buyers need to focus on making electricity grids entirely dependent on clean energy sources as the next step in achieving national climate goals, according to Roger Ballentine, a former chairman of the White House Climate Change Task Force.

"We need a net-zero grid before we can have a net-zero economy," Ballentine, president of Green Strategies, said Wednesday during a panel at the National Association of State Energy Officials' 2021 Energy Policy Outlook Conference *online*.

Deficits in renewable energy availability are still filled by oil and gas, Ballentine said, and that forces policymakers and clean energy advocates who were historically against nuclear energy to consider small modular reactors.

"Whatever you take off [the grid], you have to replace," Ballentine said. With President Biden eyeing net-zero emissions by 2050, nuclear power is a temporary option until more renewable resources are built, he said.

Washington state will rely on hydroelectric and nuclear resources to comply with the Clean Energy Transformation Act, which commits the state to zero-emission electricity by 2045, said Michael Furze, assistant director of the energy division of the Washington State Department of Commerce. "It was a surprise to me to watch that progressive legislative process because it is a divisive issue among environmental justice communities that are active in the energy policy space," he said.

But Ballentine said that for large renewable energy buyers like Google that are committed to using entirely clean energy, nuclear energy is an option to achieve that goal.

Vulnerable Communities

In the run-up to net zero, state policymakers need to ensure that the benefits of clean energy are equally distributed to communities that have been disproportionately vulnerable to the effects of pollution and climate change, Ballentine said.

Secure data collection from electric grids will guide policymakers in understanding where those communities are and what solutions are available, he said.

Patrick Woodcock, commissioner of the Massachusetts Department of Energy Resources, told *RTO Insider* that collecting information about energy use is in the pipeline to help the state target communities that could benefit from the renewable energy programs available but that are not participating.

But a siloed government approach will not be enough.

"It does take a federal-state partnership to create a clean energy agenda," Woodcock said. ■

A former chairman of the White House Climate Change Task Force said power grids need to be entirely dependent on zero-emission resources to achieve U.S. climate goals. | *DOE*

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NY Munis Forging Way for Building Decarbonization

By Jennifer Delony

Some local-level sustainability leaders in New York state are making headway with the legal pathways that they believe will help decarbonize their buildings and meet emission-reduction targets.

The city of Ithaca expects to adopt an energy code supplement this spring that would require net-zero-carbon buildings and no fossil fuel use in buildings by 2030.

Speaking during a *webinar* hosted by *New Yorkers for Clean Power* on Thursday, Nick Goldsmith, sustainability coordinator for Ithaca, said the draft code offers both point-based and performance-based compliance for buildings.

The point-based option offers building developers a certain amount of flexibility by being fuel neutral. Developers must obtain six total points, with each point equating to an upgrade option that achieves up to a 10% emissions reduction. Installation of heat pumps for space heating, for example, would earn two to five points, while electric vehicle parking spaces would earn one to two points.

Ithaca's draft code is open for *public comment* through Feb. 17.

Amy Turner, senior fellow at Columbia Law School's Sabin Center for Climate Change Law, said New York is in the early stages of understanding the legal pathways for municipalities to reach building decarbonization goals.

Changes to building codes are one of two pathways she cited as realistic options. The second option would be for municipalities to use "home rule/police powers," which "allow cities and towns to regulate within their borders to protect the general welfare and manage their own affairs," she said.

Berkeley, Calif., used police powers to become the first city in California to ban natural gas in new buildings. A similar approach in Brookline, Mass., however, was rejected by the attorney general because "he deemed the Brookline ordinance to be pre-empted by Massachusetts state laws," Turner said.

The New York State Energy Conservation Construction Code is one of two building code options that cities and towns can employ, Turner said. Municipalities also can update the New York State Uniform Fire and Building Code, but that option presents a more difficult challenge than energy code updates. If a municipality wants to update a uniform code, she said, it must petition a statewide board and establish that there is a unique local circumstance that warrants the change.

Public Safety

Mark Thielking, director of energy and sustainability for Bedford, N.Y., said his town is looking at using police powers to improve emissions from buildings in its jurisdiction.

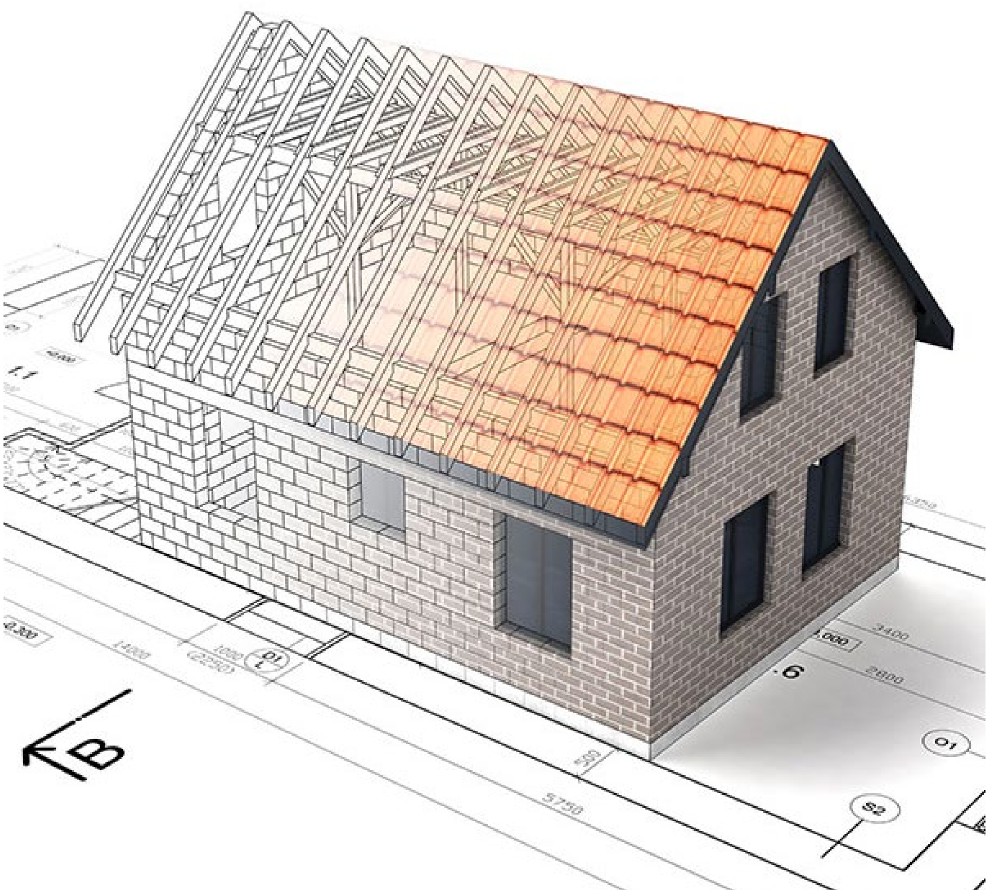
He said that the town has been working on building emissions for more than a decade, but voluntary action on transitioning to cleaner building technologies is "slow, expensive and not equitable." (See *Study: No Silver Bullet for Fossil-Climate Legal Tension*.)

Bedford's municipal leaders believe it's possible to translate the legal foundation behind public benefits, such as safe sidewalks or clean drinking water, to cleaning up existing buildings. In those examples, "there was a harm that was happening in the public citizenry and that's why a law was passed," he said. "Now, we have a list of harms coming from buildings; GHG emissions or air pollution from burning home heating oil."

The town's own experience cleaning up its water supply is illustrative of how it could protect its citizens from building emissions and air pollution. Thielking said the town built a clean water plant to address contamination of its water supply. To do that, Bedford sought financial support from a state authority called the Environmental Facilities Corp. (EFC), which provides assistance to local governments to carry out public health and safety mandates.

EFC has issued $37 billion in water financing over the last 30 years, and Thielking believes such funding can help with clean building mandates.

"Clean drinking water is available to everybody; that is a right by local law," he said. "Similarly, this high-performance building upgrade process would be available to every building as well. It's not about credit quality, being wealthy or even owning your building." ■



New York towns and cities are looking at their local legal pathways for decarbonizing buildings within their jurisdictions. | *Shutterstock*

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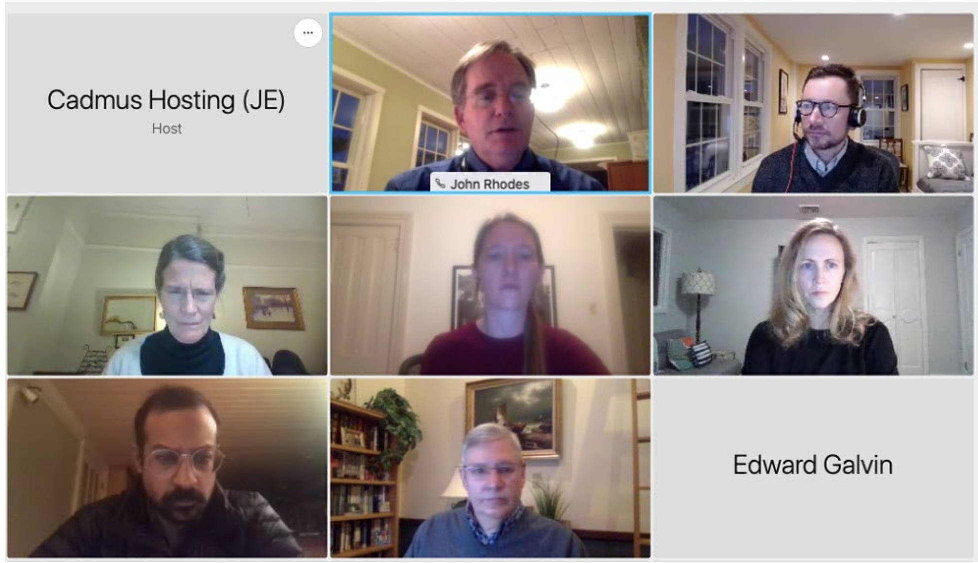
NY Public Speaks on Clean Energy Jobs, Costs, Urgency

By Michael Kuser



The Power Generation Advisory Panel of the New York Climate Action Council met on February 3, 2021. | *NYDPS*

It might come as little surprise that New Yorkers hold a wide variety of strong opinions about their state's efforts to decarbonize its energy system and broader economy.

That was evident from a set of advisory panels recently convened by the New York State Climate Action Council (CAC) to gather feedback from the general public about the monumental effort to reduce carbon emissions.

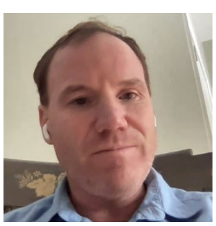
The panels revealed that some residents believe New York officials should focus their greening efforts on employment, creating new clean energy jobs and training people in time for the expected construction boom in solar and wind projects.

Others think it was shortsighted to start shutting down the Indian Point nuclear plant before building the renewable energy capacity to replace it. Still, others say the state is taking too long to chart its transition to a clean-energy economy, while some stakeholders want energy costs kept down for all, including industrial users.

The various advisory panels and working groups will submit their initial recommendations to the CAC in April. The CAC is working toward fall delivery of a scoping plan for achieving New York's ambitious energy and climate goals, even as the state inches toward economic recovery from the pandemic.

New York's Climate Leadership and Community Protection Act (CLCPA) requires the state to consume 70% renewable electricity by 2030, switch to 100% zero-emission electricity by 2040 and reduce greenhouse gas emissions to 85% below 1990 levels by mid-century.

New Jobs Not All New



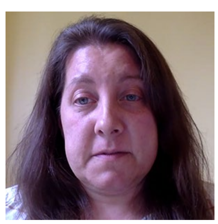
Philip Jordan, BW Research | *NYDPS*

On Wednesday, the Just Transition Working Group took public comments after reviewing the state's newly released Clean Energy Industry *Report*, presented by Philip Jordan, vice president at BW Research Partnership.

Jordan's firm examined industry hiring challenges before the COVID-19 outbreak, noting that the construction industry "has really roared back to life" in New York.

"Which means we think that we're in a position very soon to come to pre-pandemic levels of hiring difficulty, which is going to create some challenges in making sure we have enough workforce," Jordan said.

"We are constantly defining and refining what clean energy is," said Eliot Cresswell, a policy analyst with the Workforce Development Institute (*WDI*). "In the olden days these were brand-new jobs with brand-new skills and brand-new titles ... but so much of this work can be carried out by people in occupations with skillsets that already exist."



Amanda Kogut-Rosenau, NEW | *NYDPS*

Amanda Kogut-Rosenau of Nontraditional Employment for Women (*NEW*) said that women made up 2% of the construction workforce when NEW started in 1978 but now occupy 7% of new hard-hat and "green collar" jobs. Tonya Gayle, executive director of Green City Force (*GCF Corps*), described how her group trains youth and workers from the inner city to either help them develop new career paths or enhance existing skills.

James Barry of *32BJ SEIU*, a labor union representing 125,000 workers across 12 states and D.C., said SEIU started working with the New York State Energy Research and Development Authority (NYSERDA) in 2004 to train "green building supers."

Marjaneh Issapour, director of the Renewable Energy and Sustainability Center at Farmingdale State College, one of two schools helping run the state's $20 million offshore wind training program, said she sees many opportunities for policy regarding OSW, whose thousands of jobs are not all new jobs with new skills.

"Pre-apprenticeship models are fantastic to bring people from disadvantaged communities on board, but a study needs to be undertaken to understand how many of the new OSW jobs can go to more experienced workers," Issapour said.

Compliance Costs

Couch White attorney Michael Mager, who represents Multiple Intervenors, a coalition of about 60 large industrial, commercial and institutional energy customers, said the group's comment focuses on maintaining existing jobs in New York, including manufacturing jobs.

"Our members support the goals of the CLCPA, and many members have taken and continue to take aggressive actions to reduce greenhouse gases through increased energy efficiency efforts, the purchase of renewable power and attributes, and modified operations that incorporate renewable technologies," Mager said. "Although fully supportive of CLCPA goals, many members of Multiple Intervenors are concerned about the unknown impacts of CLCPA compliance on the overall

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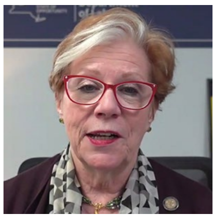
cost and reliability of energy supplies in New York state."

Because of that uncertainty, the coalition would like to ensure that the definition of what is considered an energy-intensive and trade-exposed industry entity should be focused on preventing economic or emissions leakage to the greatest extent possible in order to protect manufacturing jobs, Mager said.



NYS Labor Commissioner Roberta Reardon | *NYDPS*

New York Labor Commissioner Roberta Reardon, co-chair of the Just Transition Working Group, said public engagement is "focused on understanding workforce training and development in a new clean energy economy. This is a topic of particular relevance to me and to the work of the New York State Department of Labor."

Reardon's co-chair, NYSERDA CEO Doreen Harris, said the working group "will be reserving time at a future meeting to debrief and discuss the feedback we hear today."

The CLCPA charges the Just Transition Working Group with a number of workforce-related tasks, including to advise the CAC on issues and opportunities for workforce development and training, with a specific focus on disadvantaged communities and underrepresented people such as veterans, women and formerly incarcerated persons, Harris said.

Cool Hand Nuke

The Power Generation Advisory Panel held its public engagement session on Wednesday and will hold additional public comment meetings Feb. 12 and 22.

New York City resident Miles McManus urged the panel to "move a lot faster" with its mission, citing an *article* in *Carbon Brief* on the "budget" for how much CO_2 human activity can emit and still allow society to stabilize global warming at 1.5 degrees Celsius above pre-industrial levels.

"With that budget, we'd have to cut emissions globally almost as much as COVID did, but every year, until we hit zero by 2040," McManus said. "The situation is urgent, and thus, it is irresponsible to take a year to chart the path forward as the [CAC] is doing."

Richard Berkley, head of the *Public Utility Law Project*, said he was speaking as a private citizen.

"This transition is probably the hardest pivot in New York's economy in our entire history," Berkley said. "The only thing that comes close is the Erie Canal ... and the birth of New York City. We're doing something that we've never tried before but is vitally important. There is no Plan B."

Leonard Rodberg, professor emeritus of urban studies at Queens College, said he wondered why the panel did not discuss the closure of Indian Point, whose last unit is scheduled to go offline April 30. Entergy has agreed to sell the 2,311-MW plant to Holtec International, which will oversee its decommissioning. (See *Entergy Celebrates Sale of Final EWC Nuke*.)

"Closing just one unit of Indian Point last April has cost us annually more clean electricity than is generated by all the solar and wind power in the state today," Rodberg said. "At your last meeting, NYSERDA presented plans for expanding solar and wind for the next four years; even if those plans are successful, they will have replaced barely one-half of Indian Point's steady output with intermittent electricity."

Retired librarian Paul Lindenthal from Brooklyn said he believes nuclear power will be necessary to fight climate change and ocean acidification in New York, the U.S. and the world.

"The composition of this CAC panel seems to be mainly people with preferences for either renewable or the fossil industry; there's no nuclear energy representatives," Lindenthal said.

Gas Troubles

Pramilla Malick, chair of Protect Orange County, said the 300,000 residents of her county "are frontline victims of a failure of public policy to protect the public's interest and health by allowing the development of the [678-MW] CPV Valley fracked gas power plant, that was specifically built to replace carbon-free Indian Point." (See *New Builds to Cover Indian Point Closure, NYISO Finds*.)

Malick said she found it reassuring the nuclear plant has been operating since 1962 without a major incident, though the agricultural area around the CPV Valley plant has 14 environmental justice communities.

"The only metric that should really matter to your commission is carbon ... and methane," Malick said. "We have documented large amounts of fugitive methane emissions, both at the infrastructure to serve the power plant and at the plant itself."

Sarah Wilkinson of Brooklyn asked panel chair John B. Rhodes, chairman of the state Public Service Commission, "How can we let National Grid liquefy natural gas and truck it through my community?"

Rhodes said, "It's an important topic, but that North Brooklyn project is up for a decision before my commission and there are rules that say I can't comment on it, but I do understand your concerns."

Irene Weiser from *Fossil Free Tompkins* [County] in Ithaca said she had concerns about behind-the-meter generation using natural gas, which "becomes a situation of doing an end-run around the CLCPA greenhouse gas emissions goals."

When state officials permitted the 106-MW Greenidge power plant on Seneca Lake to switch from being a gas and wood-burning power plant to running a data center behind the meter, "this allowed them to skirt a lot of the CLCPA's greenhouse gas rules ... and is a loophole that needs to be closed," Weiser said. ■

	Employment			Change, 2018–19		Change, 2019–August 2020	
Technology	2017	2018	2019				
Energy Efficiency	117,339	123,292	126,739	3,447	3%	-12,314	-10%
Renewable Electric Power Generation	22,064	22,023	23,491	1,467	7%	-2,382	-10%
Clean and Alternative Transportation	7,881	8,624	8,579	-45	-1%	-801	-9%
Renewable Fuels	2,590	2,654	2,656	2	0%	-184	-7%
Grid Modernization and Energy Storage	1,590	2,151	2,289	139	7%	-226	-10%

**Renewable Fuels changed by 0.1%*

Clean energy employment growth by technology in New York | *NYSERDA*

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Virginia Grades Dominion IRP Incomplete

By Rich Heidorn Jr.

Virginia regulators have graded Dominion Energy's proposed *integrated resource plan* as incomplete, saying the company must provide more information on how it will comply with the Virginia Clean Economy Act (VCEA) approved by lawmakers last year.

Dominion Energy Virginia filed the 2020 IRP on May 1, little more than two weeks after Gov. Ralph Northam signed the act into law. (See *Va. 1st Southern State with 100% Clean Energy Target*.)

The law requires Dominion to:

- retire all carbon-emitting electric generation plants by the end of 2045;
- participate in a renewable energy portfolio standard (RPS) program; and
- seek commission approval by the end of 2035 to construct or acquire 16.1 GW of solar and onshore wind, 5.2 GW of offshore wind and 2.7 GW of energy storage.

Dominion Energy Virginia, which owns 27,100 MW of generation, has proposed building 2.6 GW of wind generation off the coast of Virginia and is about halfway through a plan to add 3,000 MW of solar generation. Its proposed IRP for 2021-2045 would quadruple the amount of solar and wind generation in its previous 15-year plan. (See *Dominion Undecided on FRR Option*.)

But that didn't go far enough, the State Corporation Commission said in an *order* Feb. 1 (*PUR-2020-00035*).

"The commission recognizes that Dominion did not have an extended opportunity to conform its 2020 IRP to address all the interrelated aspects of recent legislation. The commission, however, cannot conclude, based on the record in this proceeding … that Dominion's 2020 IRP, as filed, is reasonable and in the public interest for purposes of a planning document," it said.

More Detail in Updates

The commission said the utility's 2021 and 2022 updates to the plan must improve the modeling of alternative plans for complying with the VCEA and explain how its plan will address environmental justice issues.

The 2020 plan included four alternatives for complying with the act, but commission staff and other commenters challenged the company's modeling and the reasonableness of the results. "With few exceptions, Dominion's VCEA plans are substantially similar and do not model multiple paths to compliance with the VCEA," the commission said.

It said Dominion would "substantially overbuild" the capacity it needs to meet peak load and energy requirements. One of the plans included capacity in excess of projected load of 1,800 MW in 2027, rising to 7,400 MW by 2045.

The VCEA plans also produced more renewable energy credits (RECs) than required by the RPS program. "Dominion's modeling of the VCEA's RPS Program requirements did not consider monetizing or banking excess RECs or model the RPS Program deficiency payments."

Dominion did not update its forecasts of future energy, capacity and fuel prices to reflect the passage of the act, regulators said.

Several commenters, including Appalachian Voices and the Sierra Club, criticized the plan for modeling 970 MW of new natural gas-fired combustion turbines to be added between 2023 and 2024 in all VCEA plans. The company said the resources were "placeholders" to address potential reliability problems from the addition of large amounts of intermittent generation. "In the future, the company should also include one or more plans without such 'placeholder' additions to address reliability concerns for comparison purposes and to improve transparency in the company's planning processes," the commission said.

Appalachian Voices and the Natural Resources Defense Fund also criticized Dominion for not modeling any energy efficiency targets after 2025. The VCEA set EE targets through 2025 and directed the commission to set targets after that date. "The commission has not yet set the post-2025 energy efficiency targets," regulators said. "We agree, however, that assuming those targets would be zero after 2025 was unreasonable and direct the company to continue to model energy efficiency targets after 2025."

Staff, the Attorney General's Division of Consumer Counsel and other commenters also faulted Dominion for not including a least-cost VCEA compliant plan.

Glen Besa, retired director of the Virginia chapter of the Sierra Club, took issue with Dominion's inclusion of a 300-MW pumped storage facility, which he contends is uneconomic, while staff said the company included a second tranche of offshore wind not mandated by the act.

Dominion Energy solar farm in Louisa County, Va. | *Dominion Energy*

Environmental Justice, Bill Impacts

The commission noted that the 2020 plan was the first in which Dominion was expected to address environmental justice in its long-term planning. "In addition to addressing environmental justice in more specific contexts, such as requests for certificates of public convenience and necessity for particular facilities at known locations, the commission finds that the company should address environmental justice in future IRPs and updates, as appropriate," it said. "As one example, the company may consider the impact of unit retirement decisions on environmental justice communities or fenceline communities."

Regulators were also skeptical of Dominion's analysis of its plan on customer bills. The company projected residential bills would increase by $52.40 and $55.02 per month by 2030. Commission staff said the utility understates likely increases because it projects that it will recover a declining percentage of its costs from the residential class over the next decade. Based on current allocation factors, staff estimated bills would rise by $64.27 to $67.32 monthly based on the company's compliance with the act.

Commissioner Angela L. Navarro, who was appointed in December and confirmed last month, did not participate in the order.

Dominion spokesman Rayhan Daudani said the company "will carefully review the commission's order and incorporate its direction in our next IRP filing. We appreciate the commission's acknowledgement of the vital role electric reliability plays and look forward to working with our regulator to make our strong record of reliability even better."

Commenters will have a chance to discuss the IRP this Friday, when the commission will hold a public hearing at 10 a.m. on Dominion's RPS plan (*PUR-2020-00134*). The deadline for *registering* to speak is Wednesday. ■

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Colo. PUC Opens Investigation into Gas Emissions

Stakeholders Present Findings on Methane Production and Mitigation

By Rebecca Santana

Colorado's Public Utilities Commission last week launched an investigation into the methane emissions released from natural gas infrastructure and the near-term actions needed to reduce them in order to meet the state's greenhouse gas reduction targets.

Commissioner Megan Gilman kicked off a virtual information meeting on the issue on Feb. 1, briefly describing the PUC's past efforts to curb GHGs before yielding the floor to hear presentations from stakeholders and experts.

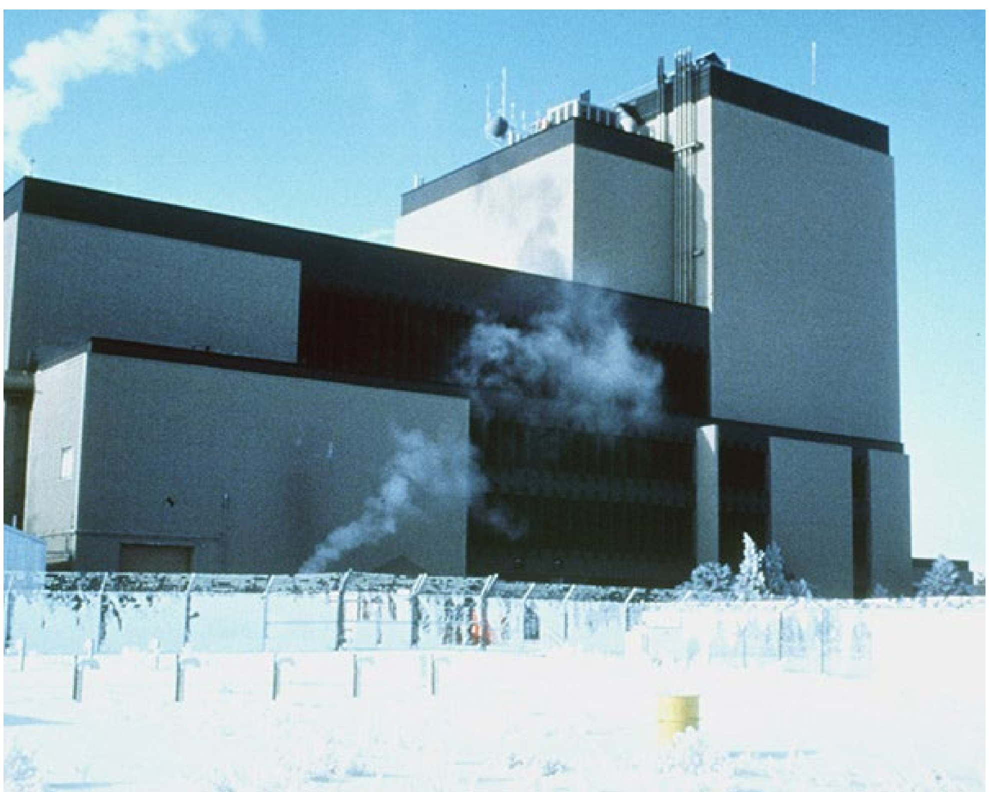
Nationally, natural gas has become an ever growing portion of the *resource mix*, largely because of its net climate benefit, as it produces less CO_2 than coal when burned, Anthony Marchese, associate dean and professor of mechanical engineering at Colorado State University, told commissioners. However, natural gas is almost entirely made up of methane, a far more potent GHG than CO_2, he said.

"The problem is, if only a [small] percent of natural gas leaks out between the wells and the ultimate end use, then natural gas would have no immediate climate benefits compared to coal, gasoline or diesel fuel," Marchese said.

In producing, consuming and transporting natural gas, leaks seem to be inevitable, and they were the biggest topic of conversation among stakeholders and commissioners. Reliable data on methane emissions is lacking, and the standard methods of sensing and repairing leaks currently used throughout the industry are out-of-date, CSU representatives and PUC staff said.

Joe Molloy, head of the PUC's Pipeline Safety Program, told the commission that collecting data on methane emissions is difficult because widely accepted data-collection methods can be incomplete. They don't always account for equipment failure that can cause large leaks, and they're not continuous, he said, so they depend on surveys to collect data intermittently. This could prevent a local distribution company (LDC) from finding and repairing a leak as soon as possible.

Joe von Fischer, associate professor of biology at CSU, spoke about advanced leak detection (ALD) technology and his experience working with LDCs to find and repair leaks that would be missed using standard technology. Using laser spectroscopy in emissions surveys allows for high-sensitivity methane analysis, he said. By using GPS, ALD surveys can detect a leak's location, allowing LDCs to easily find the issue. Because the new technology also detects methane concentration, it can give LDCs information on a leak's magnitude that allows them to prioritize repairs.



The Fort St. Vrain Generating Station is a natural gas-powered plant in Platteville, Colo. | *NRC*

"In the case of the U.S. natural gas distribution system, we estimate that half of emissions in the U.S. are coming from the largest 16% of leaks," von Fischer said. By making ALD surveys the standard, the largest sources of methane emissions can be reduced in the near term, he said.

But because of intermittent leaks, scheduled surveys may miss a large portion of escaped methane, said Caroline Alden, research scientist at University of Colorado Boulder and co-founder and director of operations at LongPath Technologies. LongPath studies and provides continuous monitoring, a method that uses *autonomous long-range laser systems* to constantly monitor methane emissions. She said that without wide implementation of the technology, it will be difficult to reduce emissions to target levels.

Representatives from Xcel Energy echoed Adlen's concerns, saying the advanced technologies are necessary to significantly reduce methane emissions from the supply chain but are not widely available. In the meantime, the utility is trying to mitigate natural gas emissions upstream, verifying that their suppliers are not producing excessive GHGs and considering renewable natural gas options like hydrogen.

Commissioner Eric Blank was most interested in learning about the costs associated with finding and repairing the largest sources of methane emissions, but CSU representatives were wary in providing an estimate.

"Costs are pretty tough," Marchese said. "The reasoning is, we're typically working in coalitions or with combinations of oil and gas partners, and in those meetings, because of anti-trust concerns, they cannot disclose that information."

Jokingly, Blank told Marchese that was not the answer the commission was hoping to hear. ■

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Baker Returns Climate Bill to Mass. Legislature

Seeks Flexibility on 2030 Emissions Goal

By Emily Hayes

Massachusetts Gov. Charlie Baker returned a comprehensive climate bill to the state legislature Sunday, with amendments that would lower the bill's 2030 interim emissions reduction goal of 50% below 1990 levels to as low as 45%.

"Over the past three weeks, our administration has engaged in productive and informative discussion with members of the House and the Senate and various stakeholders, and we have been able to find considerable common ground," Baker wrote in a *letter* to the legislature with his proposed amendments.

The bill maps a plan for Massachusetts to reduce emissions 85% below 1990 levels by 2050, with interim targets of 50% by 2030 and 75% by 2040. It also places emissions limits on state power sectors, allows for an additional 2,400 MW purchase of offshore wind power, establishes appliance energy efficiency standards and codifies public process engagement requirements for environmental justice communities.

Baker vetoed an identical bill in early January, saying he didn't have time to review it at the end of the legislative session. Lawmakers passed the *bill* again on Jan. 28.

Baker expressed support in his letter for increasing Massachusetts's OSW energy procurements.

"We recognize that more work is needed to ramp up offshore wind development in Massachusetts and to provide clean, affordable power to residents," Baker wrote in the letter.

But the governor called for the executive branch to set a range of reduction from 1990 emissions levels between a 45% and 50% as an interim goal for 2030.

Baker similarly proposes that the executive branch be allowed to set the 2040 target between 65% and 75%.

The governor said in a previous letter to the legislature that a state analysis found it would cost $6 billion more to reduce carbon emissions by 50% in such a short timeframe compared to a 45% reduction.

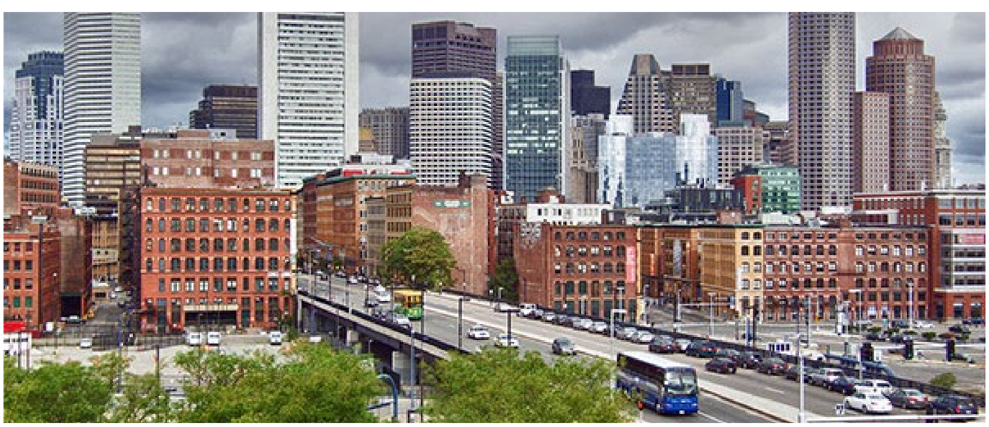
Allowing the executive branch to determine the final target, he said, would ensure it reflects "the best available data and any changed circumstances that may make a more aggressive interim limit feasible and appropriate."

The drop from 50% to 45% in emissions reductions makes "a meaningful difference in how fast we can go" when it comes to the transition to net zero, Craig Altemose, executive director of the Better Future Project, told *RTO Insider*.

Ben Hellerstein, state director for Environment Massachusetts, said in a statement that the governor's message to the legislature "is a mixed bag."

"He supports some of the bill's most important provisions as is, while asking legislators to weaken others," he said. "Legislators should reject any weakening amendments, and, most important, they should act quickly to pass this bill into law."

If the legislature passes the bill with changes, it will be sent to Baker for approval. The governor will not be able to offer further amendments. If he vetoes the bill, the House and Senate both have the votes needed for an override.



In Boston, Gov. Charlie Baker has opened up communications with lawmakers for a climate bill they sent to him on Jan. 28. | *Bert Kaufmann, CC-BY-2.0 via Wikimedia Commons*

Emissions Limits for Industry

The climate bill also establishes emissions sublimits for certain sectors. Baker is asking lawmakers to allow those sublimits to serve as planning tools for Massachusetts businesses and industries instead of legal requirements, "provided we achieve our overall statewide emissions reductions."

In vetoing the climate bill in January, Baker expressed concerns that pieces of the legislation would impede affordable housing construction by creating a new source of construction costs and delays if cities and towns had the authority to ban new natural gas hookups for newly constructed buildings.

Baker suggested amendments to the requirement that the Department of Energy Resources "develop and adopt, as an appendix to the state building code, in consultation with the board of building regulations and standards, a municipal opt-in specialized stretch energy code that includes, but is not limited to, a definition of net-zero building." He said his changes would provide clarity on what the code should focus on to avoid cost pressures on new affordable housing units.

The governor said the amendments would clarify that the existing stretch energy code under his office's own climate plan will be shifted under the control of Department of Energy Resources (DOER) as a "specialized stretch energy code," and that DOER will promulgate an "updated stretch energy code that includes a municipal option for high-performing, energy-efficient new construction that supports our emissions reduction goals" after a regulatory process with "significant" stakeholder input.

"The Interim Clean Energy and Climate Plan for 2030 calls for a high-performance stretch energy code to be available for municipal opt-in by 2022 and allows six years for full adoption statewide by 2028," the governor wrote.

Development lobbyist NAOIP Massachusetts, the Greater Boston Chamber of Commerce and the Home Builders and Remodelers Association of Massachusetts urged Baker to veto the climate bill in January, citing concerns about the cost of the transition for homeowners. ■

Senate Energy Chief Sets His Ground Rules

Manchin: Won't Support End to Filibuster, or Fossil Fuel Blacklist

Continued from page 1

it by innovation. You have to have innovation that creates the technologies — whether it's going to be hydrogen, further advancing wind and solar … and using the fossil fuels (that are going to be used around the world for some time) in the cleanest fashion humanly possible."

Those who insist on keeping fossil fuels in the ground are ignoring the increasing use of coal in places like India and China, Manchin said.

"Do they think that the United States of America is going to suck all the air and recycle it back in the world?" he scoffed. "If you want to clean up the world … you've got to find a way to solidify the carbon because shoving it in the ground is not feasible. … But we have good technology coming on now and we can make it feasible and we should. Yes, we can get there if we're determined to invest."

Policy Through Bipartisanship

Manchin also said he would oppose any effort to eliminate the filibuster to win climate legislation. "I'm not going down that path and destroy this place," he said, referring to the Senate.

Instead, he said he will seek bipartisan solutions, citing his partnership with Sen. Lisa Murkowski (R-Alaska), his predecessor as ENR chair, which helped win passage in December of the first major energy bill in 13 years. (See *Wind, Solar, EE, CO2 Storage Win Tax Breaks*.)

"The secret for what we were able to do in the last Congress … was basically this: We're friends. We like each other. We know each other. We made sure that our staffs met with each other. We didn't let anyone get in a silo, to where this group was working against this group."

Manchin said building trust across the aisle means not seeing the other side as the enemy and seeking to win cheap political points. "I had Lisa's back. Lisa had my back. And man does that help."

With the Democrats in control of the Senate by the narrowest margin possible — a 50-50 split that can be broken by Vice President Kamala Harris — the Biden administration will likely need the support of both Manchin and Murkowski to pass any substantive legislation, particularly on climate.

Manchin said he was optimistic about building a similar relationship with Sen. John Barrasso (R-Wyo.), another coal state senator who will be the ranking Republican on his committee.

FERC, Permitting

Asked if the federal government needed to pre-empt the states to overcome opposition to the siting of transmission lines, Manchin said the solution is to "follow the money."

"If the utility companies would share some of the revenue [resulting from] that project with the states and counties they go through, you'd cure that problem like that," he said.

Manchin said he was optimistic about the new additions to FERC, offering praise for new Commissioner Allison Clements, a Democrat whose appointment was delayed for months by opposition within the Trump administration.

"Alison is just unbelievable, a very, very intelligent person who has the experience level that we need. There were people in the past administration who were a little bit concerned … because she was so accomplished. But we got over that," Manchin said. "We're going to get a really good working FERC."

Willingness to Change

The former West Virginia governor, who famously appeared in a *campaign ad* shooting a copy of the 2010 cap-and-trade bill, said he would not be bound by his past positions.

"I've said, if you can't change your mind, you can't change anything. So, I'm not set in any mindset. People are trying to pigeonhole me or silo me and say, 'Well that's Joe Manchin.' They are absolutely so wrong. You show me the facts. Show me how to do things … you've got a supporter," he said.

"I have had wrong information. I've had an opinion about something. I have voted for something and had to change because I was wrong. There's nothing wrong with that. We grow and we learn every day." ■

Jason Grumet (left) and Sen. Joe Manchin (D-W.V.) | *Bipartisan Policy Center*

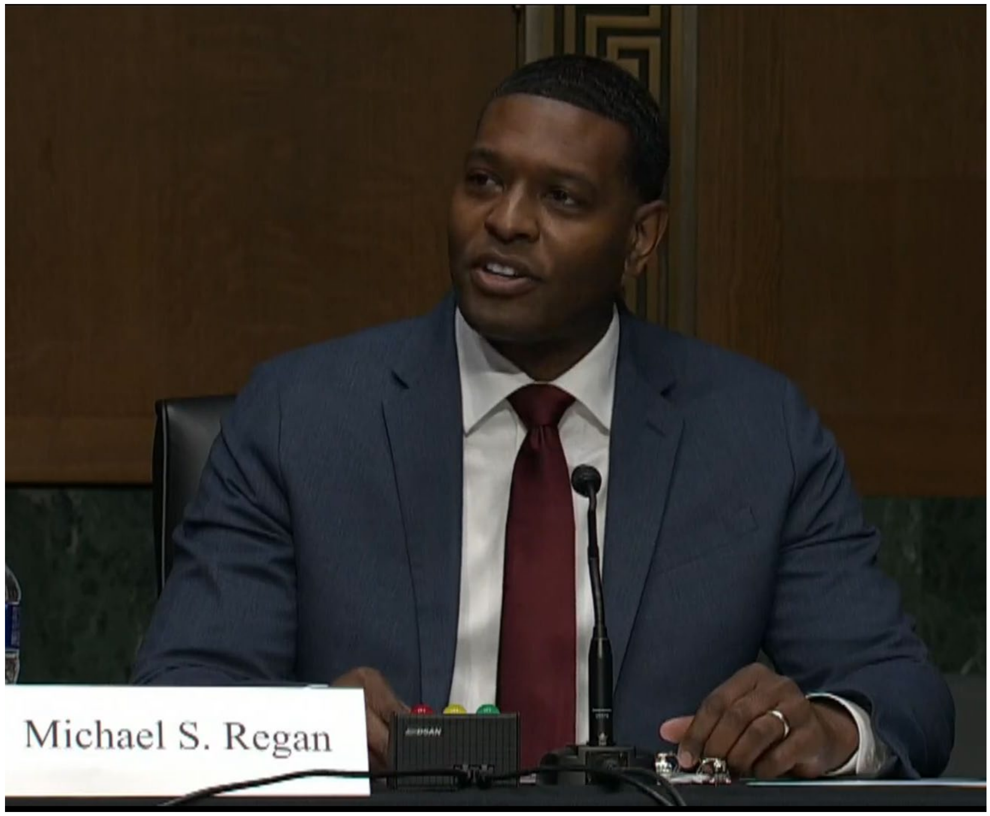
FERC/Federal News

EPA Nominee Regan Receives Bipartisan Support

Granholm Nomination Advances

By Michael Brooks

North Carolina Environmental Secretary Michael Regan, President Biden's nominee for EPA administrator, appeared well on his way to confirmation Wednesday after coasting through an easy Senate Environment and Public Works Committee hearing.



North Carolina Environmental Secretary Michael Regan | *PBS*

Sens. Richard Burr and Thom Tillis, both Republicans and fellow North Carolinians, set the tone for the hearing by introducing Regan, praising him for his work at the state's Department of Environmental Quality. Both said he was a fair, transparent regulator who kept residents in mind when making decisions.

"Secretary Regan was able to find the right balance by reaching out to stakeholders and ensuring that the department's relationship with rural communities, whose lifeblood is agriculture, was constructive and not adversarial," Burr said. Agriculture associations that support Regan's nomination "understand that they're not always going to agree with decisions handed down by the EPA. But they know and trust that they'll receive a fair hearing."

"Michael distinguished himself as someone who listens and someone who tried to take in input from both sides and come up with a fair outcome," Tillis added. "We have to understand that the election produced a different leader down in the White House, and we can't imagine that as Republicans, the president is going to have the same priorities as ours. But what we can hope for are people in the administration who have a track record of listening."

Regan highlighted his previous work as an air quality specialist at EPA, from 1998 to 2008, before he became environmental secretary. When he assumed his current role, the state had elected Democrat Roy Cooper over incumbent Republican Gov. Pat McCrory.

"Throughout my career, I've learned that if you want to solve complex challenges, you must be able to see them from all sides, and you must be willing to put yourself in other people's shoes," Regan said in his opening statement. "I've also learned that we simply can't regulate our way out of every problem we face. This approach has proven to be effective during my tenure as secretary of DEQ. ...

"Our priorities for the environment are clear: We will restore the role of science and transparency at EPA," he continued. "We will support the dedicated and talented career officials. We will move with a sense of urgency on climate change. We will stand up for environmental justice and equity. And we will do that in a collaborative manner."

Republicans did not question his credentials, nor did they challenge him on any statements he made in the past, signaling he will not receive much opposition. They mostly complained about the president's recent executive orders — particularly his ban on new oil and gas drilling leases on federal lands — as hurting jobs in their states. They also used their time to criticize Biden's two "climate czars," John Kerry and Gina McCarthy.

Much like Biden's nominee to head the Energy Department, former Michigan Gov. Jennifer Granholm, did during her confirmation hearing, Regan pledged that the administration would not leave any workers in the fossil fuel industries behind in the transition to a net-zero-emission economy. (See *Granholm Attempts to Placate Coal State Senators*.)

But he also did not get into specifics about Biden's climate agenda. Sen. Shelley Moore Capito (R-W.Va.), asked him several times about the Clean Power Plan, the Obama administration's regulation for meeting the emission-reduction targets under the Paris Agreement on climate change. Regan responded by saying he did not want to "look backward, but to look forward," and that Biden would implement his own strategy for reducing emissions from power plants.

Later, when Capito asked him whether Section 111(d) of the Clean Air Act — the legal foundation for the CPP — allowed EPA to regulate emissions "outside the fence line," Regan said he would have to consult with staff and study recent court rulings on the law. But he did say there was "opportunity for a clean slate" after the rejection of the Trump's administration Affordable Clean Energy Rule. (See *DC Circuit Rejects Trump ACE Rule*.)

Republicans were also concerned that Regan would be influenced or even overruled by Kerry and McCarthy. Regan asserted that he would answer only to the president and that he alone would be responsible for what EPA does.

FERC/Federal News

When Capito asked him what he would do if he had a disagreement with the czars, Regan responded, "With any complex issue, we anticipate healthy debates. And I believe the reality is we serve different positions within the administration. So I have no reason to believe that the positions of the EPA and the positions of the White House will not get equal [consideration], and hopefully we will have robust discussions in a manner that will yield the best results for the president to achieve his ambitious climate goals."

Granholm Approved for Senate Floor Vote

Earlier Wednesday, the Senate Energy and Natural Resources Committee voted 13-4 to advance Granholm for a floor vote.

Despite praising her for her confirmation hearing performance, Barrasso and Sen. Mike Lee (R-Utah) joined fellow Republicans Bill Cassidy (La.) and Cindy Hyde-Smith (Miss.) in voting against Granholm. Both cited Biden's recent spate of climate-related executive orders, including his ban on new oil and gas drilling leases on federal lands.

"Gov. Granholm stated multiple times that she didn't want to see anyone lose their job or get left behind," Barrasso said. "But this is precisely what the Biden administration is doing. ... The president will throw thousands of Americans out of work. Their livelihoods are being sacrificed in the name of the Biden agenda."

"She's capable; she's confident; she's sincere," Lee said. "I wish I could vote for her. I would like to be able to vote for her. I so strongly disagree with this administration's energy policies and what it's done already through executive order ... which in my state are already having dire economic consequences."

Sens. Thom Tillis (left) and Richard Burr, both Republicans of North Carolina, delivered the customary introductory remarks at Regan's confirmation hearing. | *PBS*

Musical (Committee) Chairs

Before the vote on Granholm, Sen. Lisa Murkowski (R-Alaska) joked that it was fitting that it was the day after Groundhog Day, as she had said that the Granholm hearing would be her last as chair of the committee, and yet she was still in the position.

That was because Senate leaders had not agreed to an organizing resolution between the parties. Democrats have a narrow majority, with Vice President Kamala Harris holding the tie-breaking vote. The stalemate left committee positions in a state of flux, with each committee conducting business its own way. Though Murkowski opened and closed Wednesday's meeting, she deferred to the incoming chair, Joe Manchin (D-W.Va.), to conduct it. Later, outgoing EPW Committee Chair Barrasso left it to Capito to chair the Regan hearing, though Sen. Tom Carper (D-Del.) would ultimately became chair.

Before the Regan hearing, news *broke* that Majority Leader Chuck Schumer (N.Y.) and Minority Leader Mitch McConnell (Ky.) had come to an agreement. McConnell withdrew his objections once Manchin and Sen. Kyrsten Sinema (D-Ariz.) pledged they would oppose any efforts to end the filibuster, denying Schumer the votes needed to change the rules. The Senate passed the organizing resolution by unanimous consent shortly after the hearing, officially making Manchin and Carper the chairs of their respective committees.

How soon Regan and Granholm will be confirmed is unclear. The Senate will need to halt all other business today when it begins the second impeachment trial of former President Donald Trump. ■

FERC/Federal News

Glick: These 4 FERC Priorities Will Affect Energy Storage

Continued from page 1

been the subject of state ... efforts to subsidize or promote those technologies," he said.

Energy storage and other clean technologies, he added, have been placed at a disadvantage in favor of older, less efficient generation plants that are "propped up" by MOPRs.

"These programs essentially are limiting the ability of cleaner technologies and subsidized technologies to fit into the markets at the price they want to bid in at," he said, adding that the rules result in inefficiencies and higher prices for consumers. Capacity markets can't sustain MOPRs because they create tension over states' clean energy goals, he said.

Transmission and Interconnection

Glick sees transmission having a broad role in the clean energy transition, saying it's important to "substantially build out the grid more than we have been doing."

Long-distance transmission facilities that connect remote clean resources to demand centers must be a priority in that buildout, he said. In order to do that, he added, it will be necessary to "reassess some of the commission's policies ... sooner rather than later."

Non-transmission alternatives — such as storage as transmission — can help offset the high cost of expanding the grid, Glick said. Interest in storage as transmission has been growing in the power sector, but Glick said the industry needs clarity from FERC on how that service will be handled in the future.

"I think it's incumbent upon us to create a set of either rules or an outline of what the majority of the commission thinks might qualify as transmission from the storage facility perspective," he said.

Storage as transmission presents an interesting set of challenges, he added, including, for example, whether a storage facility can compete in energy markets when it is not acting as transmission. Additional clarity is needed to determine who has operational control of a storage facility if it is treated by FERC as transmission.

With respect to needed changes in the transmission sector, Glick said he also wants to address the current challenges with interconnection queues for new resources.

"These projects, which include *hybrid projects* that are both solar and storage or wind and storage, stay in these interconnection queues forever," he said.

Once those projects make it through the interconnection queue, they face costs related to network upgrades for interconnection. Those upgrades, Glick said, have benefits that go beyond the interconnecting generator that is being asked to pay for them.

The inefficiencies of that interconnection process, he said, halt the development of a lot of generation and storage projects and allow older, less efficient generation to stay online longer. ■

Avista's Turner Energy Storage Project in Pullman, Wash.| UniEnergy *Technologies, CC-BY-SA-4.0 via Wikimedia Commons*

FERC/Federal News

Study: Biomass Better for Carbon Capture than Energy

By Michael Kuser

Biomass is more valuable for its carbon-capture ability than for its energy production, according to a new global *roadmap* of strategies to achieve net-zero emissions by 2050.

The study released last month by the Innovation for Cool Earth Forum (*ICEF*), an annual gathering hosted by the government of Japan since 2004, proposes a new term, biomass carbon removal and storage (BiCRS), to supplant bioenergy with carbon capture and storage (BECCS).

"This topic has been part of the global dialogue on climate change in a number of ways for many years, and it sparks some controversy," said David Sandalow, inaugural fellow at Columbia University's Center on Global Energy Policy (CGEP) and chair of the ICEF roadmap project.

Nearly 500 people attended a virtual webinar Feb. 2 hosted by CGEP, moderated by Sandalow and featuring several authors of the report.

New Tech

"BECCS is something that exists in models, but it doesn't exist much in reality," said Roger Aines, energy program chief scientist at Lawrence Livermore National Laboratory. "The number of total operating facilities is small around the world, and most of the ones that are moving a lot of CO_2 are basically ethanol plants that are catching CO_2 from fermentation."

The existing knowledge base of converting biomass to energy is based upon a very small number of facilities, and most of them are actually computer simulations, he said.

"One of the big focuses of this report is that the value [of biomass] is in removing the carbon, and we should look at all the ways you can remove carbon," Aines said.

Biochar — charcoal produced by burning biomass — is an already established method. A brand new concept, bioliquid production, uses pyrolysis to make oil, which is then directly injected underground, Aines said.

"If we're trying to manage carbon on the planet, we need to make ... benefits available to these kinds of technologies so that they can make money doing the jobs they want to do; we just need to add these technologies into the carbon systems that exist in the world today," Aines said.

Julio Friedmann, CGEP senior research scholar, said policy could drive procurement of low-carbon steel.

"In thinking about the value of biomass, one of the things we spent a lot of time talking about was the idea of biocoke, meaning biomass-based substitutes for coking substances in primary steelmaking and ironworks," Friedmann said. "That's something that's very hard to decarbonize, and biomass could be one of the few things that provides that optionality."

Possible Harms

The controversy that Sandalow spoke of comes from concerns that using biomass for carbon sequestration harms food security, biodiversity and forests.

Biochar | *Oregon Department of Forestry*

"That is absolutely the top thing we worried about when we wrote this report," said Colin McCormick, adjunct professor at Georgetown University. "We wanted to say, 'If this is going to happen, what controls are needed, what monitoring is needed, what knowledge is needed to avoid these bad outcomes?' And you'll note that a big part of the report is the policy recommendations."

"The focus is on waste and residue biomass as ones that likely have zero to no impact on food prices or on biodiversity because they are typically byproducts of things that are already happening on the land," said Daniel Sanchez, an environmental scientist at the University of California, Berkeley.

Counting One, Two, Three

A participant asked how composting compares as a way to store carbon.

"Composting doesn't tend to be as long-term a source of carbon storage as something like biochar tends to be, but it also highlights something that we tried to emphasize here: that it has another great benefit in that it encourages other long-term carbon storage in soil," Aines said. "As we think about BiCRS, we want to think about the net carbon for the entire process, and encouraging carbon in soil is a terrific benefit."

"Composting is probably the No. 1 thing that farmers may really be doing in this country to begin to mitigate climate change," said Cynthia Rosenzweig, senior research scientist at the NASA Goddard Institute. "It's really important because it improves the fertility of the fields that it's stored in."

Issues with composting include determining the baseline for a farmer's carbon in the soil, how to assign values to the amount of carbon stored, and to how much credit or monetary value is given to the farm, Rosenzweig said.

In doing carbon accounting, it's important to differentiate among avoided carbon, reduced carbon and removed carbon, Friedmann said.

"Adding compost may allow you to avoid using fertilizers — that would be an avoidance — and it may be that using a bio-hydrogen can substitute for fossil hydrogen and get you a carbon reduction; but we really wanted to focus on the removal part, of the transfer of CO_2 from the air to the lock-up," he said. ■

FERC/Federal News

Congress Balancing Pandemic Recovery, Energy Policy

By Jennifer Delony

Speaking Wednesday during an Energy Storage Association Policy Forum *session*, panel members were cautious to place climate and energy policy issues behind the need to help the American people though the COVID-19 crisis.

Katherine Monge, senior counsel to House Speaker Nancy Pelosi (D-Calif.), said that while Pelosi's staff are thinking about immediate needs stemming from the pandemic, the climate crisis is a conversation that is always present.

"We're looking at how to decarbonize this economy and how to use the levers that are out there, like regulation and tax incentives, to encourage more deployment and reduce emissions," she said during the panel on where storage fits into the 117th Congress' agenda.

This year, Monge said, House will try to build on its passage of the *Moving Forward Act* last July, a $1.5 trillion infrastructure bill that failed to get a vote in the Republican-controlled Senate.

Monge said the bill had significant investment in clean energy, including both spending and tax breaks.

How a new package comes together this year will depend on context and branding, she said. For example, it could be framed as a recovery package, an infrastructure plan or a climate bill.

"This green economy has lost 400,000 jobs to COVID-19, and that's just one sector of the economy," Monge said. "If you look at how we did the Recovery Act in 2009, it was very focused on green energy incentives."

Under any context, however, the policies that will be moved forward in the House must support the Biden administration's plan for carbon neutrality by 2035. Those policies, Monge said, will be far more stable with bipartisan support in Congress. (See *Biden Signs Sweeping Climate Orders*.)

Robert Andres, senior policy adviser to Senate Finance Committee member Ron Wyden (D-Ore.), agreed that bipartisanship will be important to supporting economic recovery, and climate-related issues can be a part of that.

He said that investments in the technologies that address climate change are a key pathway to recovery from the pandemic.

"As we think about infrastructure and climate, our [committee] members, a lot of them, view those two things in conjunction ... but we'll have to see what the scope of any new package will look like," he said.

Brie Van Cleve, a Senate Energy and Natural Resources Committee (ENR) staff member for Chair Joe Manchin (D-W.Va.), said there were many policy areas that did not make it into the Moving Forward Act last year.

"We'll want to revisit some of those policy areas where we had a very good, robust bipartisan package," she said, citing workforce development, electric vehicles and cybersecurity.

"[Manchin] recognizes that the energy mix is transitioning, and he would like to do what we can to make sure that we have the clean technologies that we need in place or coming down the pike," she said.

ENR staffer Jacob McCurdy said revisiting cybersecurity will be important in considering any new energy bill.

"Cybersecurity is not isolated to the bulk power system, and we've seen a lot of movement on the distribution side with FERC Order 2222 aggregating [distributed energy resources] into the wholesale markets," he said. ■

Congress will have to balance support for energy storage with recovering from the COVID-19 pandemic. | *Maxwell Technologies*

RTOs Planning to Ride Energy Storage Wave

By Tom Kleckner

Faced with varying waves of energy storage resources (ESRs), grid operators are taking steps to accommodate the devices that are — for now — mostly sitting in their interconnection queues.

"We can debate the timing and the speed with what change will come, but one thing is for sure, change is coming," Renuka Chatterjee, MISO's executive director of system operations, said during the Energy Storage Association's virtual Policy Forum last week.

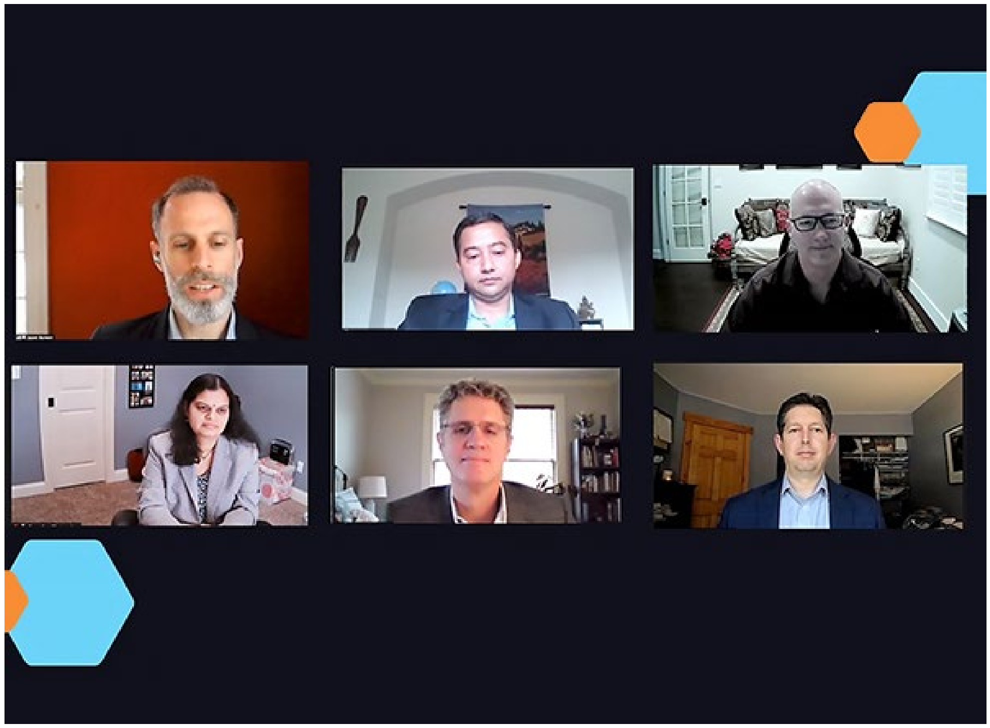
Chatterjee said MISO has 9 GW of energy storage, split between stand-alone resources and hybrids, in its queue. CAISO had more than 69 GW of *ESR projects in its queue* as of last July, topping all other RTOs and ISOs. PJM is second with more than 33 GW of capacity while ERCOT has more than *26 GW of storage resources* that have requested at least a screening study. ISO-NE, NYISO and SPP have between 3 GW and 9 GW in their queues.

All of which belies a *2020 study* by the Lawrence Berkeley National Laboratory and the Electric Power Research Institute that found RTOs and ISOs had, at the time, 69 GW of storage capacity sitting in their queues.

Nearly 500 MW of new ESR projects were installed during the third quarter of 2020 alone, according to a Wood Mackenzie *report*. With technology continually improving and prices dropping, the research firm expects 2021 to be another record-breaking year.

"Almost all of the RTOs are going through an energy portfolio change," Chatterjee said. "If you look at MISO in particular, almost all of our members have some sort of low-carbon goals or commitments they want to achieve. We're seeing an increasing change in renewables, particularly with wind and solar. … We're creating options for energy storage to participate as well."

MISO has already received FERC approval to treat ESRs as transmission assets, but they are limited to transmission-only functions operated by MISO-defined transmission owners and barred from participating in the RTO's energy markets. (See *FERC Greenlights MISO Storage-as-Tx Proposal*.)



Clockwise from top left: Jason Burwen, ESA; Sandip Sharma, ERCOT; Greg Cook, CAISO; Michael DeSocio, NYISO; Bruce Rew, SPP; and Renuka Chatterjee, MISO. | *ESA*

Bruce Rew, SPP | *ESA*

> **"We can debate the timing and the speed with what change will come, but one thing is for sure, change is coming."**
>
> —Renuka Chatterjee, MISO's executive director of system operations

FERC/Federal News

ERCOT has chosen a different approach after finding itself missing the first waves. Sandip Sharma, the ISO's director of forward market operations, said the Texas grid operator was stuck at around 80 MW of energy storage for several years before it started seeing interest from the "battery community" and fragmented stakeholder discussions.

The ISO formed a task force to figure out how best to integrate ESRs. In December, ERCOT's Board of Directors approved the group's recommendations, which included representing storage devices as a single resource in what is called a "single-model" approach. (See *ERCOT Board of Directors Briefs: Dec. 8, 2020*.)

"We're trying to ensure battery operations can have access to the market, as well as maintain their state of charge more flexibly," Sharma said. "For ESRs to maintain their state of charge, they have to continue to be able to update their energy offers, because the energy offers are constantly changing."

The new protocol language allows ESRs to decide whether to supply energy at a certain price point or provide ancillary services, Sharma said.

'The Future That is Coming'

With just one ESR in its 17-state footprint, SPP is playing catch-up as well. The RTO has almost 9 GW of ESRs in its interconnection queue, which is clogged with nearly 78 GW of wind and solar resources under some form of study.

"Our GI queue is backlogged. We're working to clear that but once we do, we will see a lot of ESRs coming online," said Bruce Rew, SPP's senior vice president of operations.

The RTO has tasked an ESR steering committee to coordinate and oversee the various stakeholder groups working on 37 different storage-related initiatives spread over six issue buckets.

Manu Asthana, PJM | *ESA*

"The key thing is we've looked at the load-carrying capability of the [ESRs], how we can increase that into our market and use it effectively from a market operations standpoint," Rew said.

"Getting it right is the key thing for SPP," Rew said. "ESRs continue to add complexity to our market. Let's get some experience using ESRs as transmission first, then as an energy resource. We certainly have a lot ahead of us."

PJM CEO Manu Asthana said PJM is similarly focused on preparing for a future grid where "energy storage is a meaningful part."

He said the RTO is working with its stakeholders to draft rules that create access to distributed generation, a result of FERC Order 2222, and reform its interconnection queue practices. Both initiatives will enable further integration of ESRs, Asthana said.

"We want durable decisions that are supported by a supermajority of our stakeholders. PJM is committed to creating a level playing field for all resources, including storage," he said.

CAISO's storage capacity was approaching 1 GW by the end of 2020, and it has projected 15 GW will eventually be necessary to help reach California's goal of 100% carbon reduction by 2045. Greg Cook, the ISO's executive director of market and infrastructure policy, said he expects 3.3 GW, primarily hybrids, to come online in the next couple of years.

"New storage is being added to existing solar sites," he said.

The ISO is operating under a new resource adequacy provision, Cook said, "as ensuring ESRs are available to be discharged when needed to meet the needs of that next peak load in California can be a challenge."

"We do plan to have a policy catch-up where we can make multiple uses of those [storage] markets and have triggers for when they're allowed to be in the market," he said. "Ultimately, that's the more efficient way to go."

NYISO's Michael DeSocio, director of market design, said his grid operator has embarked on the next phase of accommodating storage — valuing the resources based on their accredited capacity — following FERC's August acceptance of tariff revisions that subject ESRs to transmission charges. (See *NYISO's 2nd Storage Compliance Almost Hits Mark*.)

"There is a huge transition happening," DeSocio said. "We're making sure we're ready for the future that is coming." ■

Sandip Sharma, ERCOT | *ESA*

EIA Predicts Electric Demand Rebound by 2025

Annual Energy Outlook Sees More Gas, Solar, Wind

By Rich Heidorn Jr.

Electricity demand will return to pre-COVID levels by 2025 while total energy consumption will likely lag until at least 2029, the Energy Information Administration said Wednesday.

Energy demand from the residential, commercial, transportation and industrial end-use sectors dropped by 10% from 2019 levels to 2020 — faster than the drop in gross domestic product — because of the coronavirus pandemic. The drop in demand was about 70% larger than that following the 2008 financial crisis and the speed at which it rebounds "remains uncertain," EIA said.

"In a case that assumes low economic growth, energy consumption does not return to 2019 levels until 2050," the agency said in releasing its *Annual Energy Outlook 2021* (AEO), which projects energy trends to 2050.

EIA's reference case, or baseline projection, does not include the effects of proposed legislation or regulations. The report also includes sensitivities assuming high and low levels of economic growth and high and low oil and renewable prices. The high renewables cost case, for example, assumes no cost reduction from learning for any renewable technologies.

The AEO also projects that U.S. energy-related CO_2 emissions will drop through 2035 before increasing.

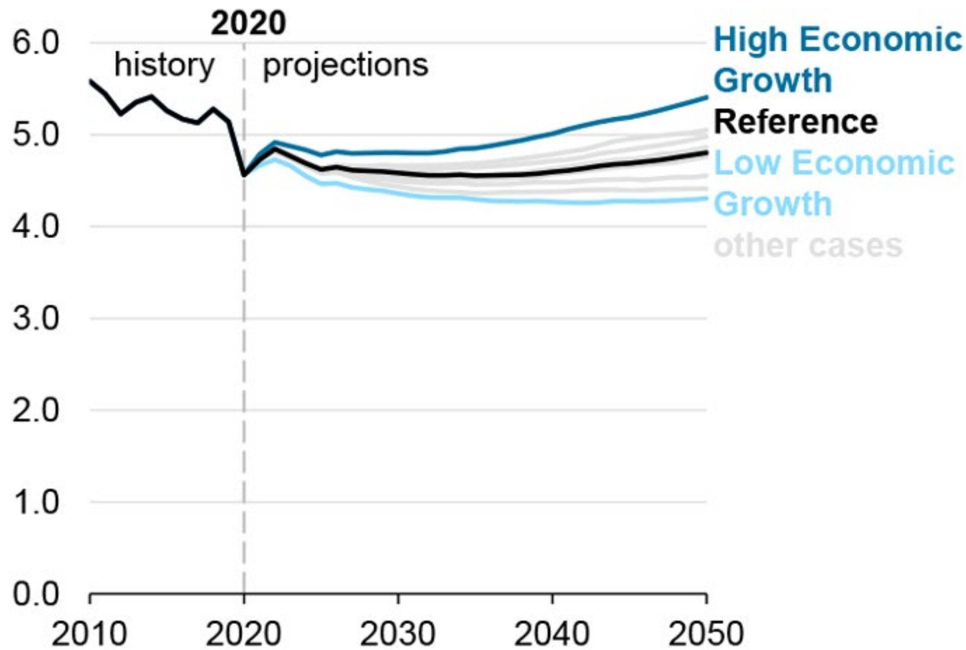
Industrial energy consumption is projected to rebound faster than other sectors, although EIA noted "specific industries will return to 2019 levels at different rates."

Electric Demand and Generation

The AEO's reference case projects an annual average electricity growth rate of less than 1%, as economic growth is partially offset by efficiency improvements.

Generating capacity is projected to increase 52 to 84% through 2050 across the scenarios considered. The reference case foresees renewables accounting for almost 60% of the 1,000 GW of capacity additions.

"Although capital costs for both wind and solar continue to decline throughout the projection period, without additional policy intervention, wind is not as cost-competitive as solar," EIA said. "More than two-thirds of cumulative wind capacity additions from 2020 to 2050 occur before the [production tax credit] expires at the end of 2024. The steadier pace of solar additions in part reflects the continued availability of a 10% investment tax credit, which continues in perpetuity after 2023 when the current 30% phases out."



Projected U.S. energy-related carbon dioxide emissions (billion metric tons) | *EIA*

Natural gas-fired generators account for most of the remaining capacity increase — almost evenly split between combined-cycle plants and combustion turbines — but its share of the generation mix will remain at about one-third. Gas capacity factors for existing combined-cycle units are projected to drop by nearly half from a peak of 60% in 2020.

Most of the coal-fired generating capacity retirements assumed in the reference case occur by 2025, but the report notes that the baseline includes the Trump administration's Affordable Clean Energy (ACE) rule, which was vacated by an appellate court on Jan. 19. (See *DC Circuit Rejects Trump ACE Rule*.)

Rooftop PV systems and combined heat-and-power systems are projected to total more than 7% of total generation by 2050, almost double the current share.

Transportation

Energy consumption for transportation is projected to remain below 2019 levels through 2050 as improvements in fuel economy will offset a resumption in travel growth. The reference case sees air travel demand returning to pre-COVID levels in 2025, with bus travel demand rebounding in 2031 and light-duty vehicles returning by 2024.

While aviation's energy consumption (excluding military use) will hit 2019 levels by 2030, energy consumption by light-duty and heavy-duty vehicles is forecast to be lower than 2019 levels through 2050.

While transportation has the greatest potential for increased use of electricity, demand from the sector is expected to remain below 3% of economy-wide electricity demand. "Current laws and regulations are not projected to induce much market growth, despite continuing improvements in electric vehicles through evolutionary market developments," EIA said. "Both vehicle sales and utilization (miles driven) would need to increase substantially for EVs to raise electric power demand growth rates by more than a fraction of a percentage point per year."

However, motor gasoline consumption will peak before the middle of this decade, EIA said, because fuel economy improvements will partially offset travel growth. ■

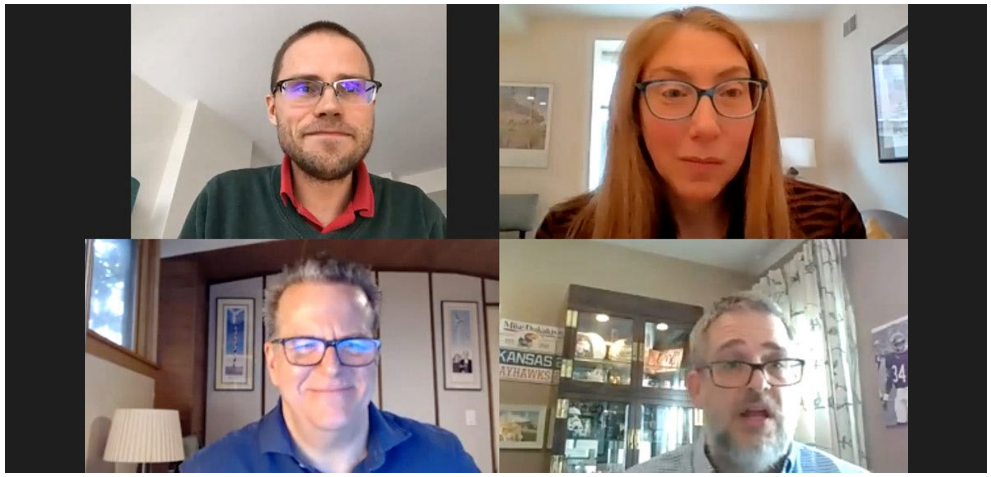
FERC/Federal News

ACORE: COVID Relief, Impeachment Could Delay Infrastructure Bill

Biden Call for Union Jobs Raises Concern

By John Funk

Congressional wrangling over the size and scope of the COVID-19 relief bill and the impeachment trial of former President Donald Trump could easily push an infrastructure financing bill into the second quarter, imperiling the legislative goals of clean energy industries, the American Council on Renewable Energy warned last week.



Clockwise from top left: Johannes Urpelainen, Johns Hopkins School of Advanced International Studies; Ladeene Freimuth, Securing America's Future Energy; Josh Zive, Bracewell; and Tom Starrs, EDP Renewables | *ACORE*

"There are only so many times when Congress is going to pass legislation measured in the trillions of dollars, or even hundreds of billions," ACORE COO Bill Parsons said at the group's quarterly industry update, which featured a panel discussion about what the Biden administration ought to do to promote renewable energy generation, the grid and electric vehicles.

"This is an administration that understands the pieces of the puzzle," Parsons said, noting that the president has already announced a goal to decarbonize the nation's power sector by 2035, increase offshore wind development and make massive investments in the nation's transmission system.

Yet, the political distance between the administration's goals and congressional approval is difficult to measure at this point, Parsons said.

He warned that the wrangling over the pandemic relief bill and Trump's impeachment could "poison the well" and leave the administration with little "gas in the tank" when Congress takes up infrastructure spending, probably in the spring.

Although there does appear to be bipartisan support for clean energy tax incentives, he said the window for passage could be narrow, noting that both Sen. Raphael Warnock (D-Ga.) and Sen. Mark Kelly (D-Ariz.) face re-election next year. A loss by either could change the balance of power in the Senate, where Republicans and Democrats each have 50 seats.

"We have an almost once-in-a-generation opportunity to enact a stable, predictable, long-term clean energy tax platform this year. That is going to be a priority for us, on top of the infrastructure and transmission" issues, he said.

Despite the split Congress and the pandemic that caused the layoff of more than 400,000 clean energy workers, clean energy begins 2021 in better shape than predicted, BloombergNEF analyst Ethan Zindler said.

"The industry really demonstrated a high degree of resiliency last year. Given that the U.S. GDP contracted by about 3.5% in 2020, I think the performance of the industry is pretty remarkable," he said, explaining that renewable developers spent about $50 billion on U.S. projects in 2020. $50 billion million building wind and solar projects.

Ladeene Freimuth, president of the Freimuth Group and a senior adviser to the think tank Securing America's Future Energy, said the nation's energy situation is "urgent."

"We are proposing a comprehensive approach that we are calling a 'Minerals to Markets' approach. We must act now if we are going to achieve both a clean energy future and a secure energy future and maintain our economic competitiveness," she said.

China currently controls nearly 70% of global electric vehicle battery manufacturing capacity, including direct or indirect control of the world's lithium supply as well as nickel, cobalt, graphite and other minerals that are critical to these supply chains, she said.

China is building or planning to build over 100 lithium-ion battery factories, she added. The United States, in contrast, has just nine planned battery factories.

"That is a huge discrepancy. We are dragging behind and we need to catch up from an economic and national security perspective," she said.

Tom Starrs, vice president for government affairs at EDP Renewables, agreed that the industry is thriving but wondered whether renewable energy developers would embrace Biden's emphasis on union labor and domestic manufacturing, calling it a "quid pro quo" policy by the administration.

"There is no question that Biden's plan is very strongly in favor of additional clean energy investment across the board," he added. "But there is going to be strong pressure on renewable energy in the broader clean energy sector to step up."

As for boosting U.S. manufacturing of batteries, solar panels and electronic controls, Starrs said the challenge "is essentially overhauling the entire supply chain to bring manufacturing back to the U.S. the way it was 30 years ago.

"We have just lost the material supply chain associated with the raw materials that are needed for industrial manufacturing processes," he said. "That's going to take a much more fundamental and targeted effort."

Johannes Urpelainen, director of the Johns Hopkins School of Advanced International Studies, said there is broad agreement by energy analysts in the United States and globally that the transition to renewable energy is inevitable.

"There is still a question of how fast it will go and exactly how we get there. I don't think anybody is saying we will be burning coal 30 years from now. This is new." ■

Report: 'Social Contract' Needed for Decarbonization

Government Urged to Address Groups Affected by Transition

By K Kaufmann

The focus on technology in many roadmaps for the transition to a carbon-free economy ignores the inevitable social impacts of the changes, the National Academies of Science, Engineering and Medicine (NASEM) said in a report last week.

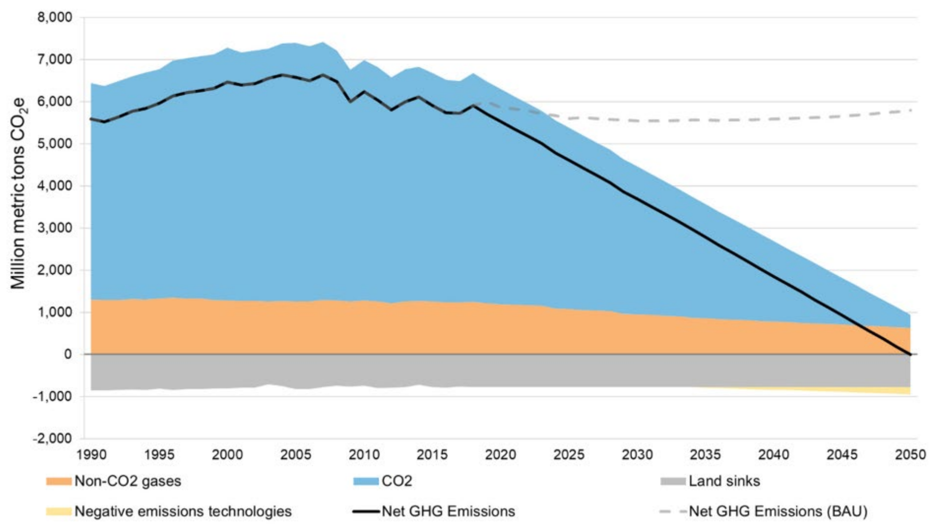
To succeed, the *report* argues, the U.S. transition must incorporate "the development and maintenance of a strong social contract."

That focus on social impacts is what differentiates "Accelerating Decarbonization of the U.S. Energy System" from other reports issued after the 2020 election, said Princeton University's Stephen W. Pacala, who led the committee of experts who wrote the report.

"Because even if we have cheap technologies, even if we succeed in innovation, we won't be able to sustain the pace of the transition and the longevity of the marathon all the way to 2050 without delivering concrete benefits to people in the near term and mitigating the kinds of impacts that could derail the transition in the long term," Pacala said during a Feb. 2 *webinar* on the report.

Pacala said that while the report was compatible with President Biden's aggressive climate action plan, it was developed independently. In particular, Pacala and his co-authors called for the creation of several federal entities that would tackle both the benefits and mitigation needed for a nationwide commitment to decarbonization:

- a national transition task force to provide a comprehensive view of communities and industrial sectors at risk and the kind of help they will need;
- a White House Office of Equitable Energy Transitions to establish targets and monitor progress of federal programs working for a just transition and provide yearly evaluations and progress reports;
- an independent national transition corporation to mitigate the impacts of the transition, for example, by supporting communities that have lost a critical employer; and
- a federal green bank, initially financed at $30 billion, to invest in the development of zero-carbon technologies and infrastructure that are currently being tested and piloted but are not yet cost-competitive.



NASEM's path to deep decarbonization: The chart shows the U.S. carbon land sink (the gray area) offsetting non-CO_2 emissions (orange). | *NASEM*

On Wednesday, Democrats *reintroduced* legislation that would create a $100 billion green bank, which the sponsors say would spur nearly $400 billion in private co-investments.

Last month, Biden issued an executive order establishing an Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization, to be co-chaired by National Climate Adviser Gina McCarthy and Brian Deese, director of the National Economic Council. The working group will direct federal agencies to coordinate investments and other efforts to assist coal, oil and natural gas, and power plant communities.

The order also includes a "Justice40 Initiative," requiring the chair of the Council on Environmental Quality, the director of the Office of Management and Budget and the national climate adviser to publish within 120 days "recommendations on how certain federal investments might be made toward a goal that 40% of the overall benefits flow to disadvantaged communities." (See *Biden Signs Sweeping Climate Orders*.)

The National Academies' report also recommends increased funding for research initiatives aimed at "modeling, data collection and data analysis that would support regional, state and local decision-making," said Clark Miller, a professor at Arizona State University.

"It includes funding for the development of regional coordination centers that would help mayors and governors and other regional actors work together to plan aspects of the transition that cut across state lines and urban-rural lines," Miller said.

No Single Answer

At the same time, local decision-making must also move beyond telling under-represented communities to come to meetings and provide input, the report says.

"The current state of public participation is woefully inadequate to the task," said Danielle Deane-Ryan, senior adviser to the nonprofit *Libra Foundation*. She sees a major role for the White House Office of Equitable Energy Transitions in identifying best practices for improving community involvement in decision-making.

Similarly, "equity indicators" need to be built into funding initiatives both at the federal green bank and the Department of Energy, Deane-Ryan said. Another role for green banks should be providing low-income communities with ways to access renewable energy, as well as creating more options for displaced fossil fuel workers, said Julia Haggerty of Montana State University.

"Many people are curious about what individual fossil fuel workers are going be doing in the future, and there is no one single answer," Haggerty said. Not all will be able to retrain for jobs in renewable energy or start new

FERC/Federal News

businesses and may need direct assistance for housing and lost income, she said.

Acknowledging Uncertainty

While integrating equity and social impacts into all its recommendations, the NASEM report does not skimp on technology and policy issues. For example, it calls for a national carbon tax starting at $40/ton of carbon dioxide and rising by 5% a year, with the goal of doubling the tax over 14 years.

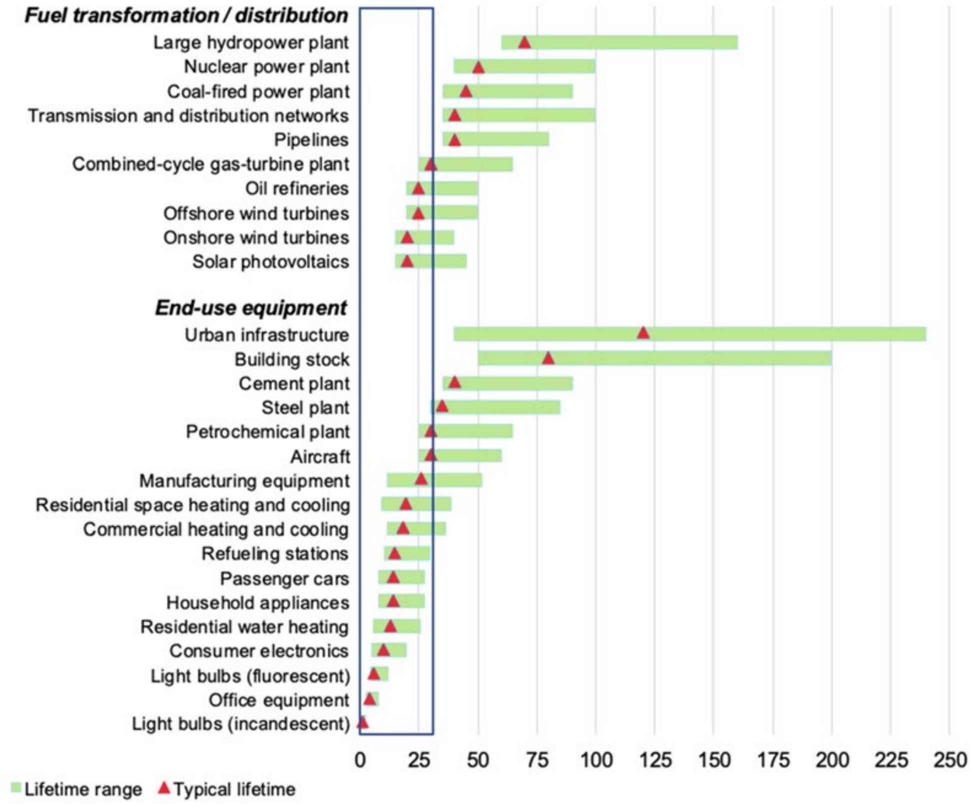
If implemented, Pacala estimated the tax could raise $2 trillion in revenue by 2030 to help fund the transition. He also emphasized that because of the ever decreasing costs of wind and solar, the transition to net-zero emissions will — after initial upfront investments — cost less than the country has spent on energy in the past 30 years.

The report also argues that while the next decade requires accelerated ramping up of renewables, the path forward must acknowledge the "uncertainty about the final makeup of the energy system," Pacala said.

"We need the same actions whether or not we're shooting for a 100% renewable system in the end, or a system that retains strong elements of decarbonized fossil fuel use and nuclear electricity," he said.

Such uncertainty may be a constant. The report notes that major parts of the U.S. energy infrastructure have life cycles longer than the 30-year horizon to 2050. The report calls for a tripling of R&D funding to ensure that as long-lived infrastructure is replaced, low- or no-carbon technologies will be commercialized and competitive, especially for hard-to-decarbonize sectors such as aviation and chemical manufacturing.

The goal, Pacala said, is to make sure that when infrastructure is replaced, "the no-brainer, economic self-interested decision is to invest in technology that is consistent with a net-zero transition." ■



The U.S. energy transition conundrum: how and when to replace existing energy infrastructure with projected life cycles far beyond the 30-year horizon for decarbonization (the blue outlined box) | *NASEM*

CAISO/West News

PG&E Files Wildfire Plan Under Intense Scrutiny

Federal Judge Calls Utility a 'Terror' to Californians

By Hudson Sangree

Pacific Gas and Electric submitted its latest wildfire prevention plan to the California Public Utilities Commission on Friday as it faces threats of more intensive oversight from the CPUC and a federal judge prior to this year's fire season.

PG&E said the key to its $3 billion 2021 *Wildfire Mitigation Plan* is an improved computer system to predict risk more precisely.

"This new technology will allow us to more accurately prioritize our efforts within the highest fire-threat areas," Debbie Powell, interim head of electric operations, said in a statement.

The updated risk modeling uses historical data on weather patterns, fire ignitions and outages, PG&E said in its plan. It also employs "fire-spread technology that shows the locations where specific infrastructure failures can lead to ignitions that have the highest consequences for our communities."

That will allow the utility to focus its vegetation management and grid hardening efforts on the top 20% of high-risk circuit segments, the plan said.

The utility's 2021 targets include installing 300 weather stations to complete its long-term goal of deploying a total of 1,300 weather stations, performing enhanced vegetation management on 1,800 miles of high-risk lines and hardening 180 miles of at-risk lines with covered conductor and stronger poles, among other measures.

Whether the utility's plans will appease some of its staunchest critics remains in doubt.

'Maybe Criminally Reckless'

Those critics include U.S. District Court Judge William Alsup, who oversees PG&E's criminal probation related to the San Bruno gas pipeline explosion in 2010. In a hearing Wednesday, Alsup said he would likely impose new probation terms requiring PG&E to improve its vegetation management and public safety power shutoff (PSPS) practices.

Alsup said he believes the Zogg Fire, which killed four people in September, was likely started by a leaning pine tree that PG&E should have cut down. The line it hit remained energized during a PSPS event to prevent wildfires, even though PG&E had shut down other lines nearby, the judge said. (See *PG&E Line Was Active when Zogg Fire Started*.)

"I think it was reckless, maybe criminally reckless, for PG&E to have left that tree, that gray pine looming," Alsup said. "It was leaning at a 60-degree angle over that line. Gray pines … have a shallow root system. That tree had also been burned earlier. That tree was a clear and present danger to the line, and whoever made the decision to leave that tree up should be looked at very carefully. And PG&E did leave it up."

One new probation condition proposed by

Searchers indentified four sets of human remains in the Zogg Fire, including a mother and her young daughter. | *Shasta County Sheriff's Office*

CAISO/West News

Alsup would require PG&E to consider whether lines had been cleared of dangerous trees when it decides which circuits to de-energize in PSPS events.

"Here is a fundamental problem I have with the way PG&E is doing this, the judge said. "When you decide on a PSPS and which lines to cut off, just hypothetically take two otherwise similar distribution lines. One is one that has been fully worked and is in full compliance with state law and [CPUC requirements]. The other is one that has not been worked at all. Your approach does not distinguish between those two."

PG&E's risk assessment and PSPS decisions consider weather patterns and historical wildfire data, the judge said. It stands to reason, however, that a line that has not been fully worked presents more of a danger than a line that has been cleared of problem trees, he said.

"The conditions that I'm requiring, or at least that I would propose to require, I believe would have saved those four people's lives" in the Zogg Fire, Alsup said. Among the victims were a mother and her 8-year-old daughter who died fleeing the flames.

PG&E lawyer Kevin Orsini acknowledged the judge's point but said the utility's current approach "indirectly" factors tree trimming into its PSPS decisions. The utility wants the judge to soften his proposed conditions.

If "you take into account whether or not the line has been worked, that wouldn't have had a different result with respect to the Zogg Fire," Orsini said. About 1,000 trees in the area had been removed based on the recommendations of three foresters, but not the tree that may have started the fire, he said.

Alsup said he would entertain arguments to amend the probation conditions. The next hearing on the matter is scheduled for March. 9. But he ended Wednesday's hearing by saying that since the San Bruno explosion, "PG&E has been a terror … to the people of the state of California." With one more year left to oversee PG&E's criminal probation, Alsup said he intends do all he can to change the utility's safety culture.

"In this last season, I want you to do this right," Alsup told Orsini.

CPUC to Weigh in

The California Department of Forestry and Fire Protection (Cal Fire) has yet to determine the cause of the Zogg Fire. Last year Cal Fire investigators seized PG&E equipment and a section of a gray pine in its investigation.

A gray pine leaning toward a PG&E distribution line is suspected of starting the Zogg Fire in September. | *U.S. District Court*

PG&E has told the U.S. Securities and Exchange Commission it expects to pay victims at least $275 million in damages for the fire, which destroyed more than 200 structures and burned over 56,000 acres.

Shasta and Tehama counties, where the Zogg Fire occurred, have sued PG&E in state court, and the Shasta County District Attorney's office is investigating whether criminal charges are warranted.

If PG&E is found to have caused the fire, it would be the fourth year in a row that the utility's equipment started a catastrophic blaze. The company was blamed for the wine country fires of 2017, the Camp Fire of 2018 — the deadliest in state history — and the Kincade Fire in 2019. The fires killed at least 111 people, destroyed 22,627 homes and other structures and burned approximately 500,000 acres.

In addition to Alsup, the CPUC has been trying to get PG&E to end its streak of death and destruction.

In November, CPUC President Marybel Batjer told PG&E that it could face a stricter regimen of oversight and enforcement because of concerns about its line maintenance. (See *PG&E Faces 'Enhanced Oversight' by CPUC*.)

"My concerns arose from what appears to be a pattern of vegetation and asset management deficiencies that implicate PG&E's ability to provide safe, reliable service to customers," Batjer wrote to the then acting CEO Bill Smith, citing Alsup's findings.

A bill signed by Gov. Gavin Newsom in July requires PG&E to submit to greater scrutiny by the CPUC and potential state control for repeated and uncorrected safety problems. Under the terms of the law, the CPUC can appoint a third-party monitor, followed by a receiver, and eventually rescind PG&E's license to operate as the monopoly utility for most of Northern and Central California.

The CPUC has three months to approve PG&E's wildfire mitigation plan, which is set to take effect in June, shortly before the state's summer-and-fall fire season typically starts. ■

CAISO/West News

PG&E Cuts $1B Deal for Cell Sites on Tx Towers

By Hudson Sangree

Pacific Gas and Electric on Feb. 2 said it had agreed to sell rights to install wireless communications equipment on 700 transmission towers and other infrastructure for $973 million, plus future licensing revenues on 28,000 other towers and equipment that could bring in millions more per year.

The deal with a wholly owned subsidiary of SBA Communications will help PG&E recover from years of wildfires sparked by its equipment and its ensuing bankruptcy, which ended in June, the utility said in a statement.

"When we emerged from Chapter 11, we made a commitment to achieve financial stability and bolster our overall financial health and we're delivering on that objective," PG&E interim CFO Chris Foster said. "Strategically selling non-core assets like these is one way we're continuing to follow through on that commitment, reduce our financing needs and strengthen our balance sheet."

California's largest utility paid fire victims and insurance companies tens of billions of dollars as part of its plan to exit bankruptcy, including giving fire victims a 22% stake in the company. (See *PG&E Trying to Move Forward from Bankruptcy*.)

The utility said the deal will help ratepayers and fire victims.

"PG&E estimates that approximately half of the net sale proceeds will be returned to electric transmission and distribution customers in the form of lower monthly bills," it said. "Furthermore, the net transaction proceeds are expected to help partially offset future equity issuances and dilution of PG&E shares, a substantial portion of which are held by the fire victim trust established to compensate victims of 2015, 2017 and 2018 fires."

The license agreement with SBA will be for 100 years, though PG&E will retain the right to terminate it for individual cell sites for regulatory or operational reasons, the company said. It also allows SBA to enter sublicensing agreements with wireless providers that attach equipment to transmission towers and other utility structures, giving PG&E a portion of those future revenues, the utility said.

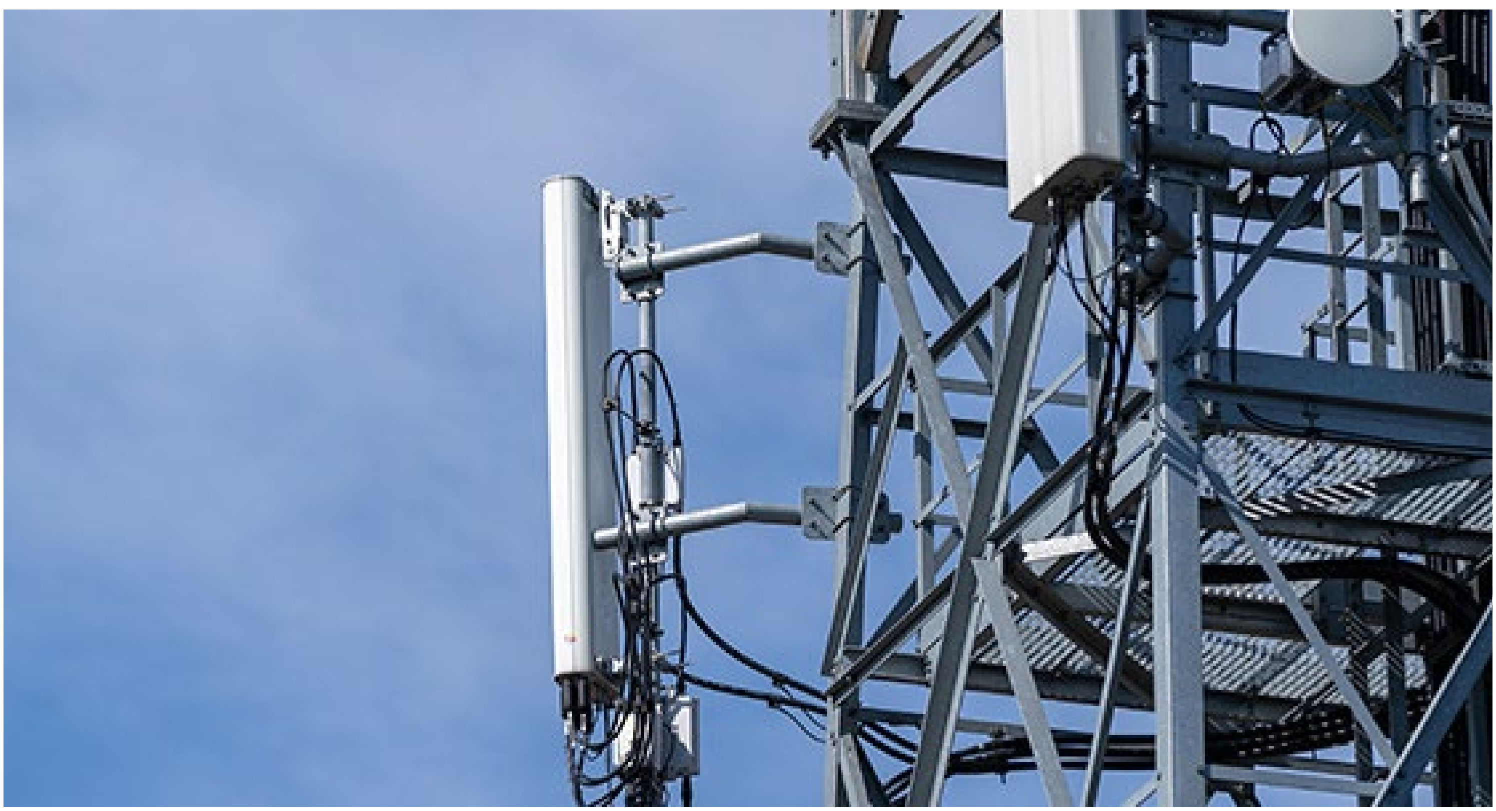
"SBA will have the exclusive rights to sublicense and market potential additional attachment locations on approximately 28,000 of the utility's other electric transmission towers to carriers for attachment of wireless communications equipment," with licensing fees split between PG&E and SBA, the utility told the U.S. Securities and Exchange Commission in a *filing* Feb. 2.

"PG&E is not selling any transmission towers as part of this transaction," it said in its statement.

FERC and the California Public Utilities Commission have both approved the installation of wireless antennas on transmission towers as a secondary use, PG&E said.

SBA CEO Jeff Stoops said that with 5G networks expanding, the "transaction adds a significant portfolio of high-quality, exclusive locations to our outstanding existing U.S. macro tower portfolio, and SBA expects these assets to generate approximately $39.5 million in tower cash flow in their first full year in our portfolio."

"We are also particularly pleased about the opportunity to work closely with PG&E over the coming years to maximize wireless deployments across their extensive network of transmission towers." ■



| *Shutterstock*

CAISO/West News

CAISO OKs Tribe as Transmission Owner

Morongo Band and Southern California Edison Partner on Tx Line

By Hudson Sangree

The CAISO Board of Governors approved a tribal entity as a participating transmission owner for the first time Wednesday, welcoming the Morongo Band of Mission Indians to a small group that includes Pacific Gas and Electric and San Diego Gas & Electric.

The tribe, through its company Morongo Transmission, sought status as a PTO for the West of Devers upgrade project managed by Southern California Edison. An 8-mile portion of the project crosses the Morongo Indian Reservation in a high desert pass between greater Los Angeles and the Palm Springs area.

"This will be the first federally recognized American Indian tribe to become a participating transmission owner," CAISO CEO Elliot Mainzer said at Wednesday's meeting. He called the move "very important and a milestone development" on a critical transmission project.

The deal allows Edison to remove and replace existing lines and substations and build new infrastructure on reservation land in exchange for the tribe participating with SCE in financing the project and reaping a share of the proceeds.

The upgrades are intended to bring abundant solar power from the Mojave Desert and Imperial Valley to greater Los Angeles.

"The project increases the transfer capability of the West of Devers transmission facilities by approximately 3,200 MW … as part of meeting California's renewable goals," Neil Millar, vice president of transmission planning and infrastructure development, told the governors.

By installing higher capacity conductors, the project will increase capacity from 1,600 MW to 4,800 MW, CAISO said. It involves rebuilding 48 corridor miles, or 184 circuit miles, of 220-kV line originally installed half a century ago. The project's projected completion date is May 15.

Riddhi Ray, CAISO senior contracts negotiator, said Morongo Transmission has filed a transmission owner tariff and revenue requirement for FERC approval, which CAISO staff expect to happen before the end of February.

"FERC's acceptance of the filings is an express condition of accepting Morongo as a participating transmission owner," Millar said in his memo to the board.

The exact financial terms of the plan were not discussed in Wednesday's meeting or in supporting materials.

In an August 2016 decision, the California Public Utilities Commission approved a "proposed transaction providing Morongo Transmission with an option to invest up to $400 million [in prepaid rent] or half the estimated cost of the proposed project's transmission facilities at the time of commercial operation in exchange for 30-year lease rights in the transfer capability."

The Morongo Band of Mission Indians operates a resort and casino along Interstate 10 in Southern California. | *Morongo Band*

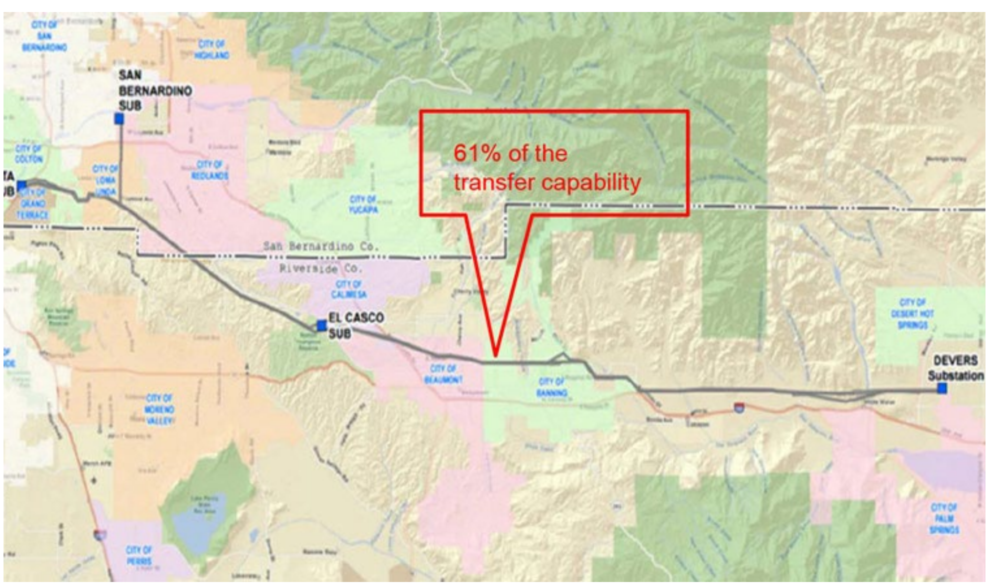
CAISO staff said the agreement between Edison and Morongo gives the tribe 61% of transfer capability on the line.

Tom Tureen, vice chair of Morongo Transmission, said the agreement would finally treat the tribe fairly.

"Eminent domain is not available in Indian country, and the history of tribal-utility interaction has all too often not been a happy one for the tribes," Tureen said. "For example, the most the Morongo Band received in any year during the prior 50 years for the original right of way for the West of Devers transmission line was $31.

"That the band and Edison were able to reach a ratepayer-neutral solution that avoided the added cost and delay of having to go around the reservation is really a testament to all involved and proof that it's possible for tribes and utilities to find creative win-win solutions to seemingly intractable problems," he said.

CAISO Board Chair Angelina Galiteva said, "It's good to open opportunities like that to entities that haven't traditionally been part of this process. … I think this is a welcome addition to the transmission owners and participants." ■



Southern California Edison's West of Devers project crosses the Morongo Reservation for eight miles. | *CAISO*

ISO-NE News

NEPOOL Participants Committee Briefs

Studying Compensation for NEPOOL Officers

The representative of several NEPOOL End User sector members circulated a *memo* Thursday floating the idea of compensating the group's officers for their time and non-reimbursed expenses.

William P. Short III said he wasn't yet prepared to offer a proposal but wants to study the issue during the next few months.

Short proposed the effort because the End User sector has historically had difficulty getting its members to participate as NEPOOL officers because of the time commitment and expenses.

End User representatives may be self-employed individuals who cannot afford to donate the time necessary to act as vice chair, the memo noted. A similar situation could exist for consultants whose clients will not pay for the additional time necessary to act as NEPOOL officers and for employees whose employer will not agree to compensate them for filling the role. Short said the issue also exists in the Alternative Resources sector and other sectors with "small" participants.

Short said he does not yet have a specific compensation framework in mind but did offer concepts that range from a cash stipend to simple and capped reimbursement of any reasonable time and/or verifiable out-of-pocket expenses. Payments could be made to an individual or their organization or just turned down, and the funds returned to NEPOOL. Compensation would not be intended as a financial windfall but to make the participating officer economically whole for their work.

He added that he is seeking opinions from current and former NEPOOL officers to prepare a reasonable compensation proposal for consideration at a future PC meeting. Short wants to know how much time they spent on NEPOOL-related activities, what incidental expenses they incurred and whether the current system discourages potentially serving as an officer. He said anyone interested in talking to him could send written comments until May 1, and that he will treat answers as confidential if asked to do so.

Currently, all NEPOOL stakeholder meetings are held virtually because of the COVID-19 pandemic. There was no mention in Short's memo about whether virtual meetings would factor into a future compensation proposal.

Energy Market Value Drops

ISO-NE's energy market value for January was $354 million (through Jan. 27), down $96 million from the updated December evaluation, but up $57 million from the same month last year, according to the monthly *report* from COO Vamsi Chadalavada.

Natural gas prices were 5.4% lower than December's average values, which dropped the average real-time hub LMPs to $37.16/MWh, down 11% from the prior month. Average natural gas prices and real-time hub LMPs were up 41% and 42%, respectively, from the same period last year.

Average day-ahead cleared physical energy during peak hours as a percentage of the forecasted load was 98.4% during January, down from 98.5% during November, with the minimum value for the month of 92.6% posted Jan. 18.

Daily uplift, or net commitment period compensation (NCPC) payments totaled $3.1 million over the period, down $500,000 from the adjusted December value and up $1.3 million from January 2020. NCPC payments were 0.9% of the energy market value.

Chadalavada said three new projects totaling 364 MW applied for an interconnection study, including two new battery storage projects and one PV project, with in-service dates in 2022 and 2023. There are 258 generation projects currently being tracked by the RTO, totaling approximately 24,200 MW, he said.

FERC Extends Filing Deadlines, In-person Meeting Waivers

The wavier of FERC regulations requiring that filings with the commission be notarized or supported by sworn declarations was further extended through July 30, according to the litigation report presented to the PC.

Entities may also seek waiver of FERC orders, regulations, tariffs and rate schedules, including motions for waiver of regulations that govern the form of filings, as appropriate, to address needs resulting from steps they have taken in response to the COVID-19 pandemic. FERC also extended the blanket waivers of RTO tariff in-person meeting and notarization requirements through July 30 as well. ■

— Jason York

ISO-NE News

Energy Sector Inclusion Efforts Vital, Panelists Say

By Jason York

The energy sector's efforts to improve diversity, equity and inclusion (DEI) vary in depth and scope, but such initiatives are critical amid the COVID-19 pandemic and systemic racism, according to panelists at a Northeast Energy and Commerce Association webinar last week.

Panel moderator David Fixler, an energy practice attorney with Greenberg Traurig, said the events of the past year had moved DEI "into the cultural, health and sociopolitical forefront."

"While diversity is often used in reference to race, ethnicity and gender, the reality is that the term is much broader than that and includes age, national origin, religion, disability, sexual orientation, socioeconomic status, education, marital status, language and physical appearance," Fixler said. "Equity is the guarantee of fair treatment, access, opportunity and advancement for all while striving to identify and eliminate barriers that have prevented the full participation of some groups. Tackling equity issues requires an understanding of the root causes of outcome disparities within our society. "

Diversity, however, is not necessarily synonymous with inclusion, Fixler added. He quoted diversity advocate and Netflix executive Verna Myers, who said that "diversity is being invited to the party. Inclusion is being asked to dance."

Doreen Nichols, vice president of talent, culture and organizational development at Eversource Energy, said diversity and inclusion strategy is "a core value" for the utility. She added that Eversource pivoted to a "virtual world" to deal with the coronavirus and simultaneously meet diversity and inclusion metrics. The deaths of George Floyd, Ahamud Aubery and Breonna Taylor last year prompted a call for action on racial justice.

"It's close to home for me," said Nichols, who is Black and has a biracial son. "I continue to be reminded of the threats he could, and will face, as he goes through life. I didn't want him to be faced with these injustices and have them stand in his way."

He said that systemic racism "is not new."

"We're clearly at an inflection point," Nichols said. "We knew we had to focus on how to accelerate progress on meaningful positive change in our workplace and our communities by addressing racism and inequality."

Clockwise from top left: Doreen Nichols, Eversource Energy; Tina Bennett, CMC Energy Services; David Fixler, Greenberg Traurig; and Rekha Chiruvolu, Nixon Peabody | *NECA*

The three areas of focus for Eversource were building a more inclusive workplace, increasing leadership commitment and supporting diverse communities. In the workplace, fostering candid discussions about racism, bias and inequity drives personal learning and awareness and develops resources for employees to support each other. Company leaders need resources, tools and training to be inclusive, support employees and respond to difficult conversations. Finally, they must identify opportunities to support communities and organizations dedicated to justice and equality and continue to seek out business with diverse suppliers.

"We know that we're not perfect, but we're up for the task in making this a marathon and not a sprint," Nichols said.

'It Takes Education'

Attorney Rekha Chiruvolu, diversity and inclusion director at the Nixon Peabody law firm, said at least 20% of candidates interviewed for associate positions at her firm must be from "underrepresented backgrounds." That number rises to 30% for senior associates and partners in addition to committee leadership roles.

Chiruvolu said the firm has also put increased emphasis on collaborating on DEI issues with clients and the legal community "because we are not navigating this alone" in terms of addressing racial inequality and inequity.

"The legal profession is one of the least diverse professions in the country, and other firms are struggling with this in meaningful ways," she said. "It's important for us to exchange ideas, to exchange best practices and to talk about what's worked and what hasn't worked."

Tina Bennett, CEO of CMC Energy Services, said following last year's protests, the company shared educational and training resources with employees on topics such as the impact of racism, overcoming bias and encouraging uncomfortable conversations. Bennett added that CMC created an online forum for employees to discuss racial and social justice issues in addition to an employee-led ideas council, which is intended to be "the voice of our employees to seek input on what action CMC can take" on racism and other biases.

Bennett concluded that "getting buy-in on the concept of diversity and inclusion is the easy part" but continuing the effort on an institutional change is "much harder."

"It takes education. Not everyone has the historical context and the understanding of the issues to take time to educate your organization," Bennett said. "It also requires vulnerability and a willingness to consider that our actions, policies and practices … and our own unconscious biases, may be unintentionally contributing to the problem. Remember, there is no quick or easy solution. You don't need to try to do everything at once, but you do need to get started and stay committed to making real change, and employee involvement is critical." ■

MISO News

MISO Sets Sights on 4-season Capacity Market

By Amanda Durish Cook

MISO said Wednesday it is close to completing a proposal to create a four-season capacity market after floating a rudimentary plan with stakeholders, who remain skeptical over stricter accreditations.

While the RTO expects to file the plan with FERC by the end of the second quarter, seasonal auctions won't become a reality until the 2023/24 planning year at the earliest. MISO is currently leaning toward the idea of simultaneously conducting four seasonal auctions with separate zonal clearing requirements.

"MISO's inclination is to go forward with one auction but monitor it closely and have further discussion about modifying that," Director of Research and Development Jessica Harrison said during a Resource Adequacy Subcommittee teleconference.

Independent Market Monitor Michael Chiasson said monitoring staff continues to feel "quite strongly" that the design should include a spot auction prior to each season to complement the annual auction.

The RTO said it is "monitoring the pace of changes and evaluating needs for additional spot or true-up auctions."

As part of the seasonal approach, the grid operator will likely require resources to demonstrate their minimum capacity capabilities. MISO will also likely use a three-year average of historical data to define "resource adequacy hours," or the system's tightest hours of the year for reserve margins when resources should make sure to be available. (See *MISO Intends to Add Seasonal Capacity Auction*.)

"If we're going to have reduced capacity credits throughout the year, we have to make sure they're available," Harrison said.

She added that MISO must still determine how to treat capacity resources that take long-term outages. The RTO's draft plan stands to reduce capacity accreditation for resources on long-term outages during the predefined tight hours, even if MISO has already approved the planned outages.

Stakeholders seemed most preoccupied with the potential for capacity resources to be penalized through accreditation reduction for planning extended outages during RA hours. Stakeholders said those hours would probably be difficult to predict and avoid when planning generation outages months in advance.

"Why would anyone bother to get permission for outages if they're going to be penalized by MISO?" Customized Energy Solutions' Ted Kuhn asked. "There is no benefit to providing this information. You're basically going forward with an accreditation process that says, 'I don't care if you're approved; you're going to be penalized anyways.'"

Kuhn said the move might disincentivize resources from providing the data that MISO relies on for system reliability and to define tight margin hours.

"There is room for outages to be planned effectively and avoid these hours," Harrison countered.

Harrison said the proposal focuses on individual unit behavior instead of socializing the risk across several capacity resources.

"I think we're moving away from a process that penalizes everyone by focusing on individual units'… ability to meet capacity requirements," she said.

"It seems incongruous of MISO to say, 'Sure, you can take an outage, but the risk is on you,'" MidAmerican Energy's Greg Schaefer said. He said the proposal seems to rely on resources' "sheer luck" of not scheduling outages during RA hours.

"We all agree to pay a small premium to avoid people getting hammered," he said, likening resources' shared risk to a health insurance pool.

Kuhn asked MISO to consider implementing less severe repercussions for resources that aren't available in light-risk seasons, when the RTO can only identify a few RA hours. Harrison said MISO would consider the idea.

Senior Manager of Resource Adequacy Coordination Lynn Hecker argued the availability-based accreditation proposal that takes the riskiest hours into account is "outage agnostic" by taking a true measure of resources' availability.

MISO Executive Director of Market Operations Shawn McFarlane said it rewards the "more available portfolios" and reduces the accreditation of "less available portfolios." ■

MISO's Carmel, Ind., headquarters | © *RTO Insider*

MISO News

MISO Clarifies LMR Performance Rules

By Amanda Durish Cook

MISO control room | *MISO*

FERC on Wednesday allowed MISO to edit its tariff to clear up performance rules for load-modifying resources (LMRs).

MISO's ruleset now more clearly states that LMR performance is evaluated on an individual basis, not on the aggregate performance of a market participant's entire portfolio (ER21-693). Market participants can operate several LMRs across multiple local balancing authorities.

The tariff revisions, which the commission approved without comment, don't change existing MISO policy. The new language is considered effective July 1.

The RTO said it discovered a need for the clarification following a maximum generation emergency in early 2019, when an extreme cold snap forced MISO's first LMR use in its North and Central regions. (See *Cold Snap Halts DER Talk as MISO Calls Max Gen Event*.)

MISO said while market participants were able to supply 93% of the megawatts it requested to manage the emergency, only 21% of the deployed LMRs met the grid operator's performance measurement and verification throughout the emergency. MISO penalized and even disqualified some LMRs after the event, leading their owners to seek alternative dispute resolution with staff.

"Ultimately, the information gathered through these disputes highlighted the need for the clarifications to the tariff," MISO said.

Market participants were confused by the process, the grid operator said, and some were unaware that they needed to update their LMRs' individual availability in the RTO's communication system from default summer values to a daily offering.

The revised tariff language states that market participants are responsible for communicating to MISO "when the status or availability of an LMR changes." When MISO calls up LMRs, scheduling instructions are sent to the owning market participants, not to individual resources.

The RTO also wrote that LMRs that "fail to perform in accordance with its market participant's response to MISO's scheduling instructions will be subject to a penalty and will not receive credit for its deployment." ■

MISO News

FERC Orders Hearing on MISO Payment Pact for Midwest-South Tx

By Amanda Durish Cook

MISO's seemingly simple plan to extend payment arrangements for market participants that use the Midwest-to-South transmission path is destined for settlement proceedings.

While FERC in late January accepted the plan to extend the existing rate structure through Jan. 31, 2022, it also established hearing and settlement procedures, saying that the arrangement could be unjust or unreasonable (*ER21-530*).

FERC cited Alliant Energy's and MidAmerican Energy's complaints that market participants in an Iowa local resource zone bore a disproportionate one-third of rate schedule costs in 2020. The companies raised the issue in stakeholder meetings leading up to MISO's filing. (See *MISO Prolongs Terms on Midwest-South Tx Limit*.)

Without the extension, the rate schedule was set to expire this month. The schedule lays out the cost allocation for market participants that use the subregional transfer limit beyond the 1,000-MW contract path linking MISO Midwest and MISO South.

Currently, MISO's payments to SPP and other parties for flows across the transfer limit are recovered from market participants through a combination of load-ratio calculations and flow-based beneficiary allocations.

The load-based share has declined every year since 2016, while the flow-based portion has increased. From Feb. 1, 2016, to Jan. 31, 2017, the allocation was 45% load-based and 55% flow-based. From Feb. 1, 2020, to Jan. 31, 2021, the mix was 10% load-based and 90% flow-based.

Alliant said MISO "ignored stakeholders' requests to share production cost modeling information necessary to determine why the share of costs allocated to Local Resource Zone 3 [in Iowa] continues to increase while the identified benefits (and thus costs allocated) to other zones remain zero." The utility said either MISO's production cost modeling or the allocation itself is "distorting the identification of the real economic beneficiaries."

Alliant and MidAmerican said an extension of the rate schedule could affect MISO's annual transmission planning because the grid operator performs a benefit analysis of potential projects that stand to reduce dependence on the Midwest-to-South transfer and thus reduce settlement payments to SPP and other parties. If MISO's current cost allocation process identifies market participants in Zone 3 as being particularly helped by a transmission project that could offer an alternative to the transfer, Zone 3 could unfairly foot the bill on the project, Alliant and MidAmerican argued.

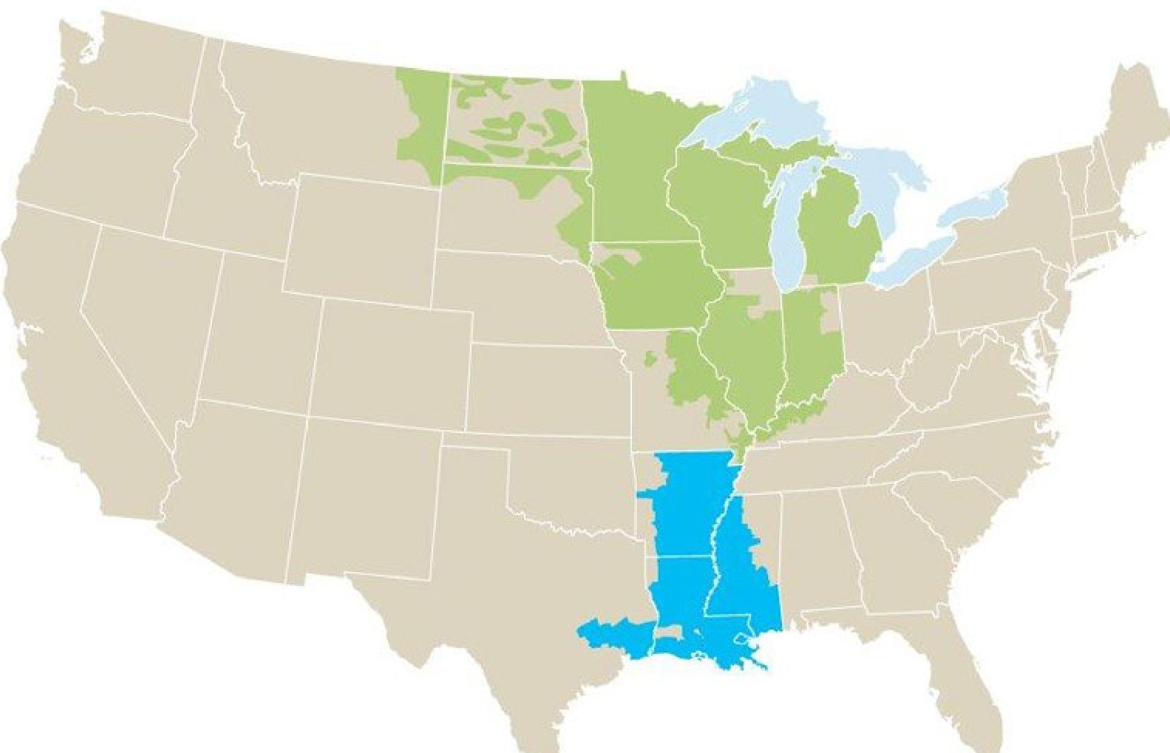
MISO doesn't have any transmission projects lined up to secure more transfer capability between its subregions. (See "No Midwest-South Tx Solution this Year," *Price Tag Rising for MTEP 20*.)

During a Market Subcommittee teleconference Thursday, MISO senior adviser Jack Dannis said the settlement process will begin soon.

In the meantime, Dannis said the RTO will use the extension to discuss a new settlement agreement and cost allocation with stakeholders.

"We want to initiate a more permanent cost-allocation mechanism for settlement payments after Feb. 1, 2022," he said.

Dannis said MISO hopes to file a fresh allocation with FERC by Nov. 1. He said the grid operator will use "a lot of stakeholder feedback and interaction" to inform the rate schedule. ■



MISO Midwest and South | *MISO*

MISO News

MISO to Outline New Pricing Plan for Hurricanes

By Amanda Durish Cook

MISO hopes to have a more nuanced pricing plan before the next hurricane contorts transmission towers.

Stakeholders have told the RTO that it was unacceptable for it to make after-the-fact price corrections to the $3,500/MWh value of lost load (VoLL) when Hurricane Laura tore through the grid in late August. (See *MISO Questions VOLL Pricing During Abnormal Events*.) They said the RTO's use of VoLL is clunky because it doesn't consider when load and generation are powerless to respond to real-time price signals during hurricanes and other force majeure events.

"Those prices were not shown in the marketplace for participants to respond to," MISO Director of Market Design Kevin Vannoy told stakeholders during a Market Subcommittee teleconference Thursday.

Vannoy said MISO will pursue alternative plans for pricing during force majeure events. He added that the grid operator would discuss a direction with stakeholders through April, finalize a plan in May and file with FERC by June 1, when the next hurricane season begins.

"This is urgent given the looming hurricane season," Vannoy said.

MISO used VoLL pricing last August in Louisiana's Lake Charles area, where Hurricane Laura destroyed enough distribution and transmission lines to effectively create a dead zone. Five months after the storm, the RTO's Independent Market Monitor continues to call for a retroactive pricing change for the dead buses priced at VoLL in Laura's wake. (See "Laura Pricing in Question," *MISO Monitor Reviews Blustery Fall*.)

"Force majeure events render generation and load physically unable to respond through no fault of their own," staff said in summing up stakeholder sentiment.

Vannoy said to better price anomalies, they should be published in real-time, recognize the reliability value of the energy provided during a transmission emergency, recognize assets that are physically unable to respond, respect operational constraints and "assign the resulting costs exclusively to cost causers/beneficiaries."

Monitor David Patton asked for a "permanent solution," not simply a correction for Hurricane Laura.

The RTO is still in nonpublic discussions about settlement disputes stemming from Hurricane Laura. Market participants impacted by the storm had until December to initiate a settlement dispute process. ■

Restoration crews in the wake of Hurricane Laura | *Entergy*

MISO News

MISO Focusing on Forward Info for Long-lead Units

By Amanda Durish Cook

MISO said last week that it is seeking ways to help slow-starting units make more informed commitment decisions but won't plunge into developing a financially binding forward market anytime soon.

Senior Market Engineer Chuck Hansen said the RTO is using the umbrella title "enhancements for long-lead units and self-commitments" instead of forward market mechanisms.

"There's really no acronym for this," he said. "We can think of this as understanding information ahead of the day-ahead market."

The effort may include new price forecasts and allow longer run times.

MISO is exploring the market system and settlement impacts of allowing unit owners to increase their minimum run times from the current 24-hour limit, Hansen said.

The grid operator is also investigating using a vendor to produce multiday price forecasts on future locational marginal prices.

"There's no ISO that does this," Hansen said. "The question is, if MISO works with vendors, could it produce a better price forecast than what vendors can do with publicly available information?"

He said this year MISO will issue requests for more information from vendors to see what would be involved in generating such a forecast.

The grid operator is also considering publishing the additional 12 hours of its commitment engine results as a heads-up for operators. The RTO currently publishes only the first 24 of the 36 hours of data computed by the commitment engine. The additional 12 hours would be considered strictly advisory in nature.

Hansen said MISO will devote time to improving its existing multiday operating margin forecast. The RTO late last year began *publishing* a first edition of its multiday operating margins, which predicts supply conditions six days in advance. The multiday forecast is intended for informational purposes only and is not a multiday financial market.

Hansen said MISO could incorporate seven days of renewable forecast information at the subregional level into the multiday forecast. In the future, it could break renewable predictions down to local resource zones or local balancing authorities, provided the forecasts don't reveal market participants' private information.

The multiday forecast could also include color-coded reliability targets, emergency resource availability and amounts of must-run committed capacity, Hansen said.

MISO is also considering putting more of the onus on its members and may require them to make a "reasonable effort" to give the grid operator more notice on offers, schedules and when units can return from derates or outages.

Hansen said none of the ideas are final, and MISO is doing more research to discern which ones are the most helpful and feasible. He said he would return to a future Market Subcommittee meeting to discuss the RTO's inclination. ■

NY Builds OSW Ports in Brooklyn, Albany, Long Island

By Michael Kuser

New York offshore wind developers have begun constructing the port facilities needed to build and operate their projects after the state completed the nation's largest wind procurement last month.

With the state's 2.5-GW award to Equinor in January, New York has contracted nearly half of the 9 GW targeted for construction by 2035. Equinor and its partner, BP, will develop an additional 1,260 MW for their Empire Wind project in the New York Bight in addition to 1,230 MW for Beacon Wind, to be situated 60 miles east of Montauk.

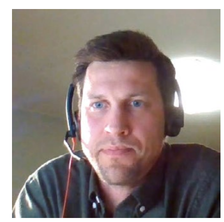
The contract commits Equinor to develop the Port of Albany for tower manufacturing, including using the nearby Port of Coeymans for turbine foundation manufacturing, and to transform the South Brooklyn Marine Terminal (SBMT) into an assembly and operations and maintenance hub. (See *NY Awards 2.5-GW Offshore Deal to Equinor*.)

Partners Ørsted and Eversource Energy are building an operations and maintenance base at Montauk Harbor for the 132-MW South Fork Wind project. The companies are also developing a similar O&M base at Port Jefferson for their 816-MW Sunrise Wind project, as well as a facility in nearby East Setauket to serve both projects. (See *BOEM Sees Moderate Impacts from South Fork OSW Project*.)

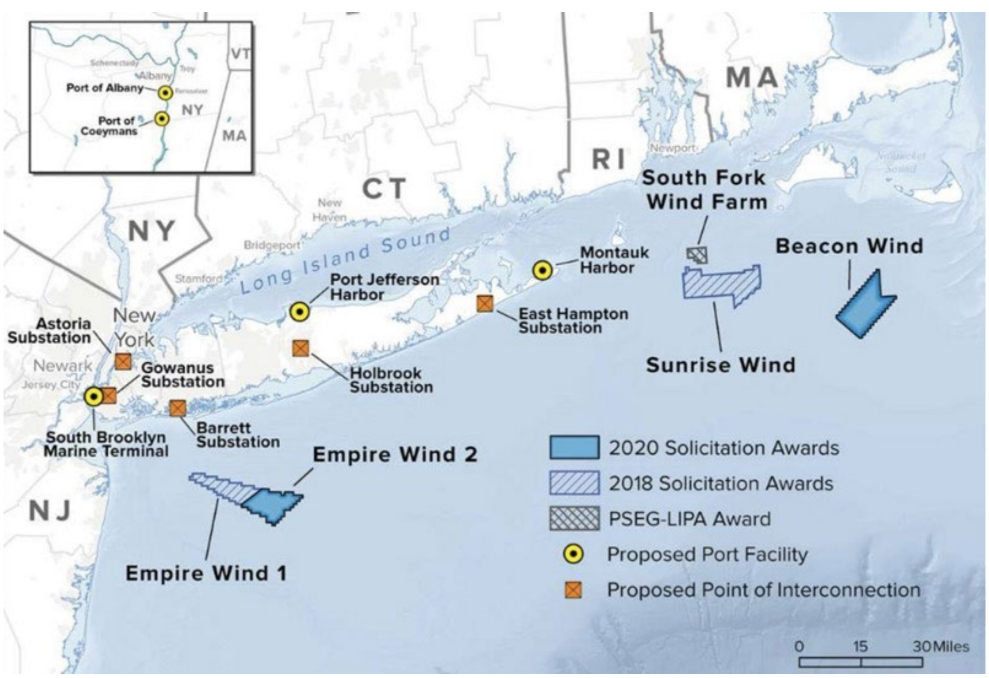
The illustration shows a building near Port Jefferson, Long Island that will house the staff of Sunrise Wind and South Fork Wind and also be the base for Ørsted Offshore North America's head of operations, Mikkel Maehlisen. | *Sunrise Wind*

For the Port of Albany, the developer has contracted with *Marmen*, a Quebec-based onshore wind turbine manufacturer, and *Welcon*, a Denmark-based manufacturer of OSW towers.

"That's the premise of the Port of Albany, to combine one large manufacturer from Europe and another one from Quebec, who's done more onshore than offshore, with the port itself in developing the site and the fabrication for towers and transition bases," Anders Hangeland, Equinor head of East Coast development, told *RTO Insider*. "That's bringing the best of prior experience in North America with the offshore experience from Europe in those two suppliers."



Anders Hangeland, Equinor | © *RTO Insider*



New York is developing five ports to serve the offshore wind industry. | *NYSERDA*

"The offshore wind projects will furthermore leverage almost $3 of private funding for every $1 of public funding for a combined $644 million investment in resilient port facilities in the Capital Region and Brooklyn," NYSERDA CEO Doreen Harris said on Wednesday as she announced the release of the agency's *2021 Strategic Outlook*.

A Fluid Process

Ports like SBMT and Albany had long been on the state's radar as potential ports, Michael Lee, president of environmental planning and engineering firm AKRF, told *RTO Insider*. Lee's firm spearheaded a *project* to make Port Cortlandt an OSW hub to use some of the industrial waterfront property near the imminently closing Indian Point nuclear power plant.

AKRF President Michael Lee | *AKRF*

NYISO News

"The procurement process had the ports independent of the wind bids, then New York officials merged them last summer and made ports part of the total wind energy bids," Lee said. "In a COVID world, it was very tough, so those who had an existing relationship were able to pull it together."

NYSERDA originally said it would provide $200 million in grants toward ports development but changed it to $100 million in grants and $100 million in loans, with the private sector to come up with $444 million.

"All of this stuff is building blocks," Lee said. "Step one is a port, and ... you need to build the towers; you need to build the foundations, and COVID really restricted a lot of the abilities to get people to decide to do things."

Equinor has not yet selected a turbine supplier, for which the contract doesn't specify a certain date, but it is a normal part of the development process and the company will make the decision "when it makes sense," Hangeland said.

"Bringing offshore wind from Europe, where it's already a well-developed industry, to the U.S., which is an undeveloped area for offshore wind, is a question of how much can you build and manufacture on the East Coast itself, and how much would you need to transport from Europe," he said.

Do European OSW contracts include similar development clauses?

"Obviously, as you see an industry developing, all the important pieces that make that industry viable develop, so in the beginning you have a bigger need for establishing such incentives," Hangeland said. "As Europe has become more mature on this, all the different pieces needed to establish an OSW farm are in place, so incentives, whether on local content or on price, have gradually gone down as the industry has matured."

Location, Location

Lee was impressed that the South Brooklyn Marine Terminal building, a staging facility, is behind a bridge — the Verrazzano-Narrows.

"To date, you'll see all of the facilities on the Northeast coast or even what they've done in Europe, they like to build these things beyond any bridges," Lee said. "I've heard there are videos to show how they can put this stuff on vessels and get it out underneath a bridge."

Hangeland, however, said the height of barged material had already been considered in the planning, logistics and due diligence.

"If you look at how New York is central to all these markets, the SBMT is important because these are very big pieces of equipment and you can't transport this stuff hundreds of miles," Lee said.

Interstate cooperation around New York hasn't happened like it has in the Mid-Atlantic, where some of the states are coming together, so most of the discussions have been state-by-state, but it was hard to discuss anything last year when "New York was slammed," he said.

The governors of Maryland, North Carolina and Virginia in October agreed to collaborate to promote their states as a hub for the OSW industry. (See *Md., NC, Va. to Team up on Offshore Wind*.)

Another positive for the Brooklyn facility is that it's an open port, so "it can be used for multiple contractors. Towers can be used for multiple contractors. They're all independent of a particular technology, so I think it's pretty strategic," Lee said. ■

Map of the South Brooklyn Marine Terminal being developed by Equinor | *NYSERDA*

PJM News

PJM to Kick off Capacity Market Workshops

By Michael Yoder

PJM is hosting a set of workshops beginning this week aimed at discussing potential enhancements to its capacity market.

RTO officials announced the workshops at the end of January, saying they intend to share their thoughts on the current state of the capacity market while accepting stakeholder feedback to determine the best path forward to improve market design.

The workshops are not part of the formal PJM stakeholder process, the RTO said, but are meant to begin a discussion on whether members want to pursue any changes to the market.

The first workshop will take place Friday and is designed to frame the issue. PJM plans to discuss the historical elements of the market and provide its perspective on the scope of enhancements stakeholders should consider and the principles by which potential enhancements can be evaluated.

In the second workshop, scheduled for March 4, PJM will seek stakeholder feedback and discuss the appropriate framing of market enhancements. The RTO is particularly interested in feedback on three questions:

- What problem are we trying to solve through this effort?
- Do you agree with PJM that we should be attempting to advance this discussion at this time?
- What are the principles that possible enhancement should be built upon?

The third workshop, set for March 12, will feature stakeholders discussing specific market design proposals for consideration.

At a final March 26 workshop, PJM will provide feedback on the discussions from the second and third workshops and an analysis on the next steps to take for any changes.

Stakeholders have been debating changes to the capacity market since 2019 when the Base Residual Auction was first delayed over FERC's expansion of the minimum offer price rule (MOPR).

According to the Independent Market Monitor's third-quarter *State of the Market Report for PJM* released in November, stakeholder fears of the impacts of the expanded MOPR have driven discussions about overhauling the capacity market without first seeing the true impact of the MOPR on the BRA. The report did acknowledge "clear issues" with the market's design, including an "overstated" market seller offer cap, the shape of the demand curve and the application of penalties for nonperformance. (See *PJM IMM Warns Against Another Capacity Market Overhaul*.)

The RTO reiterated the importance of continuing with its auction schedule approved by FERC in recent MOPR opinions. The long-delayed capacity auction for the 2022/2023 delivery year is set to start on May 19. (See *PJM Sets BRA for May 2021* and *FERC Partially Accepts PJM MOPR Offer Floor Filing*.)

At least one key stakeholder applauded PJM's decision to hold the workshops.

The American Clean Power Association (ACP) commended the RTO on the "important initiative" to examine long-term reforms to utilize the economic and environmental possibilities of renewable resources throughout the region.

"While the current capacity market construct and MOPR present challenges to renewable energy development and growth, these workshops will enable PJM and its stakeholders to examine options and facilitate making changes to allow states to meet their customer-inspired renewable energy goals," said Amy Farrell, ACP's senior vice president for government and public affairs. "The clean power industry looks forward to engaging with PJM and other stakeholders as this process moves forward and we collectively work to build a better, more efficient, more affordable and cleaner electric grid." ■

Delivery Year	Original BRA schedule		Revised BRA Schedule	IAs cancelled
2022/2023	May	2019	May 2021	1^{rst} and 2^{nd}
2023/2024		2020	December 2021	1^{rst} and 2^{nd}
2024/2025		2021	June 2022	1^{rst}
2025/2026		2022	January 2023	
2026/2027		2023	July 2023	
2027/2028		2024	✱ May 2024	

✱ Indicates auction is back on schedule

Auction schedule | *PJM*

SPP News

FERC Rejects GridLiance Local Tx Planning Proposal

Transco Proposed Process for Tx-dependent Nonpublic Utilities

By Tom Kleckner

FERC last week rejected GridLiance High Plains' proposal to conduct local transmission planning for nonpublic SPP utilities outside of the company's service territory (*ER20-3025*).

The commission found in its Feb. 2 order that GridLiance's proposal to perform the service for "transmission-dependent nonpublic utilities (TDNPUs)" would contradict its rules on local transmission planning, "which obligate the transmission provider to plan for the needs of transmission customers in its individual retail distribution service territory or footprint."

GridLiance's proposal would have allowed a transmission customer to conduct its own competing local transmission planning, FERC said, contrary to Order 890's transmission-planning obligations. The commission disagreed with the company's contention that its proposal would not give TDNPUs more rights to plan and develop local transmission facilities than they already have.

FERC said that while Order 890 requires that transmission customers "be allowed timely and meaningful input and participation into local transmission planning, it did not provide that transmission customers could establish their own transmission-planning processes and did not require that transmission customers be allowed to plan on a coequal basis with transmission providers."

The commission said GridLiance's proposal could not constitute a "local transmission-planning process" as defined by Order 1000 because the company would be performing planning outside of its own retail distribution service territory or footprint. Local transmission facilities resulting from the proposal would not meet the order's definition of a "local transmission facility" because the facility would be located outside of GridLiance's service territory or footprint.

FERC also found SPP's tariff "does not contemplate third parties conducting competing local transmission-planning processes for customers within another transmission provider's service territory or footprint," noting the RTO does not have processes "designed to resolve different outcomes arising from the competing processes."

"Without a clear system in place to resolve different outcomes arising from competing local transmission-planning processes, GridLiance's proposal could increase conflicts and litigation … in SPP," the commission said.

GridLiance, which collaborates with municipal utilities, joint action agencies and electric cooperatives to address transmission needs, disagreed.

"We are obviously disappointed," GridLiance High Plains President Brett Hooton said in an email to *RTO Insider*.

He pointed to Commissioner Allison Clements' concurrence with the order, saying, "Inadequate transmission planning is at the root of many of the problems leading to less reliable service for TDNPUs. As Commissioner Clements noted, reform is needed for more effective local transmission planning, including 'mechanisms to address barriers to participation' in local transmission-planning processes."

In her concurring statement, Clements noted the grid has undergone "significant transformation" since Order 890 was issued almost 15 years ago.

"Consideration of reform to local planning processes is appropriate as part of broader transmission planning reform, to ensure that TDNPUs are given fair and adequate service," she wrote, "and more broadly to ensure that all transmission system plans — local, regional and interregional — succeed in identifying cost-effective solutions to established system needs and thereby ensure that any new infrastructure is money well spent by customers."

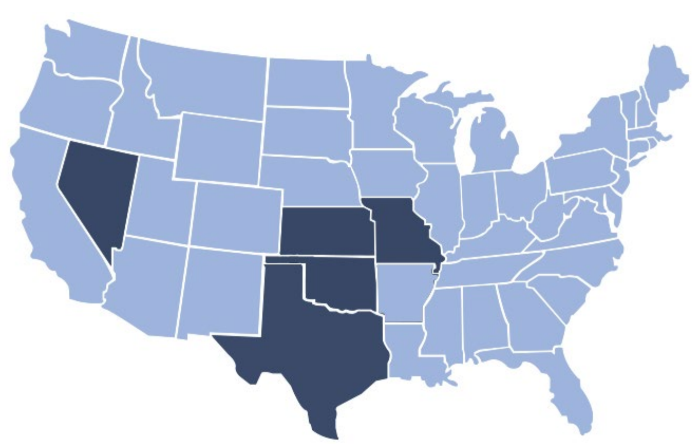
Clements said mechanisms similar to GridLiance's proposal "may be appropriately considered as part of a broader discussion on transmission planning reform."

"We perform transmission planning for our utility partners and believe our local planning process expansion would benefit other TDNPUs," Hooton said. "While FERC didn't accept our proposed solution in this case, we will continue our efforts to address inequities in transmission service to, as described by Commissioner Clements, 'ensure TDNPUs are given fair and adequate service.'"

FERC offered a potential alternative, saying TDNPUs could always contract with GridLiance and other entities to study their local transmission needs and potential projects to address those needs, using that information to "inform their participation in the existing local and regional transmission planning processes."

GridLiance said it had already executed planning agreements with four TDNPUs: Kansas Power Pool, Missouri Joint Municipal Electric Utility Commission, Oklahoma Municipal Power Authority and Tri-County Electric Cooperative. It said that while it currently can conduct transmission planning outside of its local planning process, there is not a clear process for including identified transmission projects in the SPP process.

Western Farmers Electric Cooperative and Xcel Energy Services, on behalf of Southwestern Public Service Co., protested in the docket, arguing the proposal lacked sufficient detail regarding coordination with the incumbent transmission owner's local planning process; that it would result in duplicative planning efforts; and that it did not explain how inconsistent planning results would be resolved. ■

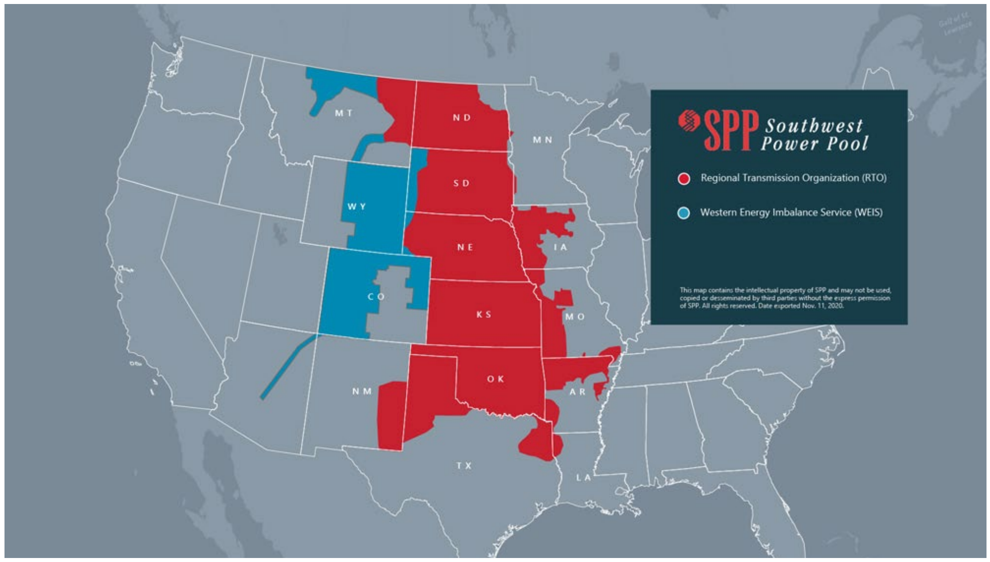


GridLiance operates in five states: Nevada, Texas, Oklahoma, Kansas and Missouri | *GridLiance*

SPP News

WEIS Market 'First Step' to Full RTO Membership

Members Share Reasons for Joining SPP's Fledgling Market



SPP's RTO footprints in the Western and Eastern Interconnections | *SPP*

Continued from page 1

The only drawback for Highley these days is that WEIS's *contour map* is staying a cool blue, an indicator of low prices. No swatches of orange or red, signs of congestion and high prices.

"It's been non-exciting," he said. "Every time I've looked at it, it's all been blue. That tells me the market is working right now."

Bruce Rew, SPP's senior vice president of operations, interjected to say the infant market's prices have been averaging around \$24/MWh since the Feb. 1 launch of the five-minute, real-time balancing exchange. (See *SPP Successfully Launches Western Market*.)

"Price transparency. We didn't have that before," Highley said. "We'll be able to develop financial tools that help us manage that price. Just lots of benefits like that coming this way."

In addition to lower wholesale prices, those benefits include greater access to renewable energy, reduced congestion, elimination of rate pancaking and better reserve margins.

For Tri-State, the WEIS market's most attractive attribute is the access it offers to more renewable resources. Under the cooperative's 20-year, \$21.3 billion *Responsible Energy Plan*, it will reduce its CO_2 emissions by 80% from 2005 levels by 2030 by adding more than 1.8 GW of renewable capacity, more than double its currently contracted solar and wind resources.

"We don't believe it's possible to get there without integrating these massive amounts of renewables across our footprint," said Highley, who led a group of Arkansas cooperatives before taking over the reins at Tri-State.

"I'm very familiar with SPP's governance model. … It's very similar to the cooperative model. It's member-driven with member input," he said. "Sometimes it's been described as painfully collaborative, but it gets results."

Highley was joined by Mark Gabriel, the Western Area Power Authority's (WAPA) CEO, and Tom Christensen, Basin Electric Power Cooperative's senior vice president of transmission, engineering and construction, in extolling the benefits of the WEIS market. WAPA and Basin Electric's Eastern systems are both full members of SPP's Integrated Marketplace.

"We've certainly seen benefits as well. Those savings and economics have benefited us and our membership," Christensen said. "There are better economics with day-ahead congestion management [and] coordinated [transmission] planning processes. But some of SPP's best work is what they've done with resource adequacy. They've got a method, with increasing levels of wind at 32% [of the fuel mix], yet they run a reliable system."

All three men referred to the WEIS market as just a preliminary step to full RTO membership. Highley said Tri-State is projecting \$2 million in benefits, net of cost, in the market's first year of operation. A *Brattle Group study* says an expanded SPP RTO under a single tariff would result in \$49 million in annual savings for current and new members. (See *SPP Stakeholders Dig into WEIS Market Study*.)

The WEIS market is offered on a contract basis, as is the RC service SPP also provides in the Western Interconnection. Most of the market's members *have indicated to the grid operator* that they are interested in pursuing full RTO membership.

"We think [this WEIS market] is the first step," Christensen said. "We would like to, and we believe we need to, advance to a full RTO in the West. The governance model, the stakeholder process all leads to a logical choice for us. It's a realistic path forward."

"The fact we're talking about markets in the West is a major change," Gabriel said. "Markets are coming to the West hard and fast. It's necessary for reliability, resilience and the ability for power to flow back and forth much more freely. The WEIS market is really just the first step in what we're going to see over the next two to three years."

SPP is currently working with the prospective members in evaluating potential changes to the RTO's governing documents. Assuming board approval of the changes, it would be another two years from the entities' commitment to becoming full members, Rew said.

"This is just the beginning of these partnerships in the West," SPP CEO Barbara Sugg said. "We have an opportunity to partner with these entities to help them, and help their customers, to meet their financial and renewable goals. I know things are a little different in the West, but we're highly confident the benefits we provide the entities in the East are available in the West."

CAISO's Western Energy Imbalance Market continues to add members, with El Paso Electric announcing on Feb. 1 that it would join in 2023. (See *Texas Utility Plans to Join CAISO EIM*)

But Sugg expressed confidence in SPP's ability to compete in the West.

"The key to more entities having an interest in SPP is seeing the success their neighbors have," she said. "They say if you build it, they will come. Well, we've built several things for smaller groups. The more people that come, the more everyone benefits from it." ■

SPP News

Weather Drove Fall Load Decline, SPP Monitor Finds

SPP's average hourly load was off 7% last fall from the previous two years, the RTO's Marketing Monitoring Unit said in its latest quarterly State of the Market *report* last week.

The Monitor attributed half the drop-off to cooler weather in September and warmer weather in November. The fall report covers September through November.

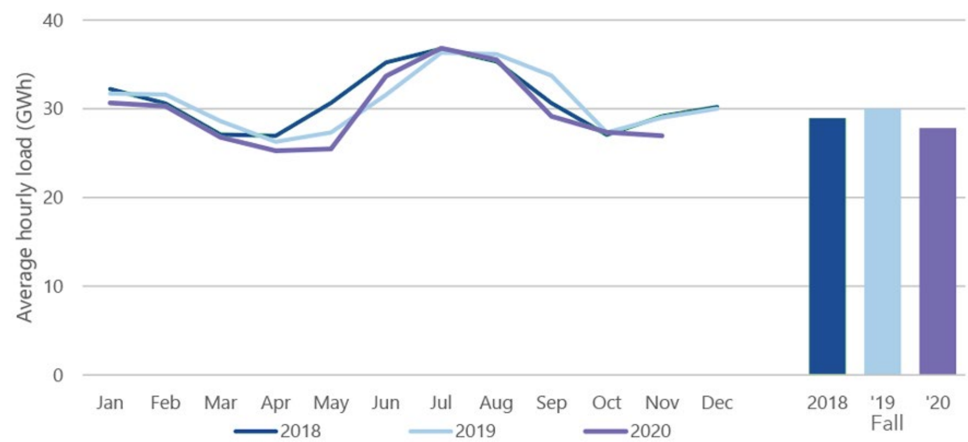
Average monthly profit from virtual transactions was just over $6.6 million in the fall, up from nearly $4.9 million the year before. Profits from virtual transactions were at their highest since the Integrated Marketplace began operations in 2014.

Virtual transactions scheduled in the day-ahead market are settled in the real-time market. Virtual demand bids are profitable when the real-time energy price is higher than the day-ahead price; virtual supply offers are profitable when the day-ahead energy price is higher than the real-time price.

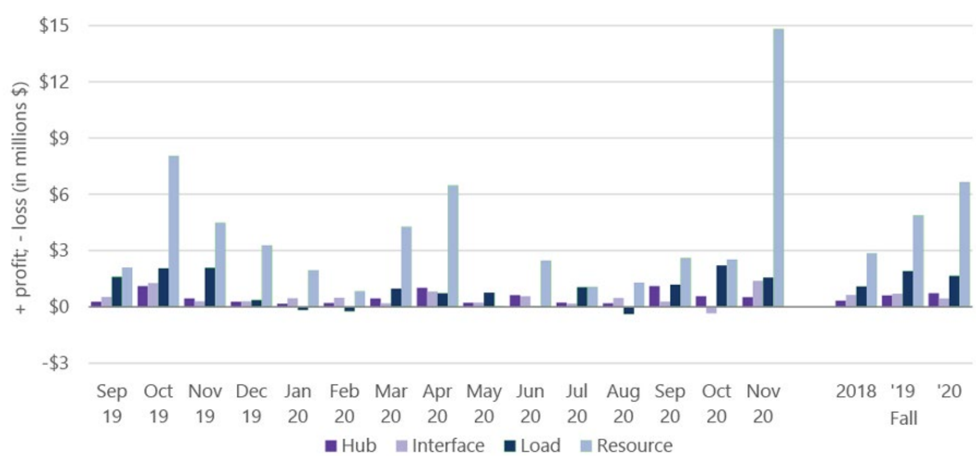
The report's special issues section reviewed the potential benefits a new coordinated transaction scheduling (CTS) process could provide SPP and MISO through improved economic transactions on their seam. CTS is a real-time only process in which both RTOs forecast the future price at their interchange locations. Participants place price-sensitive interchange offers that clear when the offered price is within the price spread of the RTOs' forecasted prices.

The Monitor conducted the CTS study at the request of SPP's Regional State Committee and the Organization of MISO States. It is one of several suggestions regulators have made to improve the RTOs' cross-border operations. (See *MISO, SPP Regulators Call for Pancaking Fix, Smaller Projects*.) ■

— Tom Kleckner



SPP's average hourly load this past fall was down 7% from the year before. | *SPP*



In November, SPP saw the highest profits from virtual transactions since the Integrated Marketplace began operations in 2014. | *SPP*

Company Briefs

American Clean Power Association Officially Launches

The American Clean Power Association on Monday unveiled its new *website* and first advertising campaign.

The group was formed Jan. 1 from the American Wind Energy Association, which wanted to broaden its advocacy efforts to include "solar, transmission and storage companies, along with manufacturers and construction companies, project developers and owners/operators, utilities, financial firms, and corporate purchasers of clean power," it said in a press release.

"I'm so excited to be able to draw attention to the innovators, investors and industries making renewables a reality across the country," ACP CEO Heather Zichal said. "The renewable industry is ready to solve two of the nation's biggest challenges — rebuilding our economy and addressing climate change."

More: *ACP*

SPP Cracks 20 GW in Wind Production

SPP surpassed the 20-GW barrier in setting a new record for wind peak demand when the resource produced 20.1 GW of energy Thursday.

The record came at 7:45 a.m., breaking the previous mark of 19.8 GW set on Jan. 14. The RTO also established a new mark for renewable energy at that same time, with wind, solar and hydro combining to produce 21.4 GW of energy.

The grid operator last year became the first with wind as its No. 1 fuel source when it accounted for 32% of its fuel mix in 2020. SPP began 2021 with 27 GW of wind capacity. It expects to add another 4.1 GW of capacity this year.

Emerging from Bankruptcy, Chesapeake Energy to Cut Workers

Chesapeake Energy last week said it plans to cut 15% of its workforce as it closes on new financing that will allow it to emerge from bankruptcy court protection this week. Most of the 220 layoffs will happen at its Oklahoma City headquarters.

The company filed for protection in June after overspending on assets and seeing a sudden decline in demand and prices during the COVID-19 pandemic. Its bankruptcy plan was approved by a judge last month.

More: *Reuters*

Ford Boosts Investment Plan for EVs

Ford last week said it will more than double the amount of money it plans to invest on electric and autonomous vehicles, to $29 billion, even as it posted a fourth-quarter net loss of $2.8 billion.

The automaker said it was "doubling down" on connected EVs and will invest $22 billion in electrification through 2025 — nearly twice what it had previously committed. Ford also said it would invest $7 billion in self-driving technology development over 10 years.

More: *Reuters*

Total Adds 3 GW of Texas Solar

Oil and gas company Total last week announced a deal in which it bought four large-scale PV projects (2.2 GW) and 600 MW worth of battery storage developments near Houston from SunChase Power. Financials of the deal were not disclosed.

Total said it will sign a 1 GW corporate power purchase agreement with the plants that will cover power consumption for all its U.S. industrial sites. The deal takes the company's U.S. solar portfolio to almost 4 GW.

The solar plants are due to become operational in 2023 and 2024.

More: *Recharge*

Leeward Energy Agrees to Buy 10 GW of Solar Projects

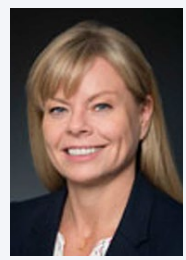
Leeward Renewable Energy last week said it has agreed to buy about 10 GW of projects being developed by First Solar for about $261 million.

Many of the projects are slated for California, with construction expected to begin within two years. The Barilla solar farm, which is near the Texas town of Fort Stockton, is included in the deal and is already operational.

Leeward operates about 2 GW of wind generation in the U.S. and expects to more than double its renewable operating capacity to 5 GW by 2025 with the deal.

More: *The Dallas Morning News*

MidAmerican Energy Names New CEO



MidAmerican Energy last week announced that it has named **Kelcey Brown** its new president and CEO. Brown will take over for Adam Wright, who became CEO of Pacific Gas and Electric.

Brown came to MidAmerican in late January from PacifiCorp, where she was vice president of energy supply management. She had previously held other regulatory, commercial and operational roles at PacifiCorp as well.

More: *Des Moines Register*

Siemens to Cut 7,800 Jobs from Gas, Power Division

Siemens Energy last week announced it will cut 7,800 jobs from its gas and power division by 2025. The company said it is doing so to be more competitive in a market that is moving away from fossil fuels and toward renewable energy.

Siemens said the cuts, which represent about 8.5% of its entire workforce, will include about 3,000 jobs in Germany and about 1,700 in the U.S.

More: *POWER Magazine*

Federal Briefs

Biden Admin Puts Vineyard Wind Project Back on Track

Bureau of Ocean Energy Management Director Amanda Lefton last week pledged to conduct a "robust and timely" review of the Vineyard Wind project and resume the permitting process where it left off in December.

Project developers had withdrawn their proposal for the wind farm in December, but they rescinded their withdrawal and requested BOEM resume its review soon after Joe Biden was elected president.

A Vineyard Wind spokesman said the project is still on track to obtain financing this year, with a goal of getting built in time to generate power by the end of 2023.

More: *The Boston Globe*

Morgan Stanley: Coal to Disappear from US Grid by 2033

Coal is on track to disappear from the U.S. power grid by 2033 as the push for a carbon-free electricity system gains strength, Morgan Stanley claimed last week. The fossil fuel will be replaced largely by renewables, which will supply 39% of U.S. electricity in 2030 and 55% in 2035, according to a report released by the investment bank.

Coal supplied about 20% of the country's electricity last year and may rebound to as much as 22% in 2021 because of an increase in natural gas prices, according to Energy Department forecasts. However, Morgan Stanley believes the short-term rebound will not overcome the global shift toward cleaner electricity.

More: *Bloomberg Green*

Court Rejects Montana Coal Mine Expansion

U.S. District Judge Susan Watters last week ruled that the Interior Department ignored climate-related scientific evidence when it approved an 85 million ton expansion at the Spring Creek coal mine in Montana.

In doing so, Watters affirmed an earlier ruling that the Office of Surface Mining Reclamation and Enforcement "failed to take a hard look at the costs of greenhouse gas emissions and failed to reasonably justify its reasoning for not quantifying the costs of the mining plan when the social cost of carbon protocol was available to do just that."

Watters gave the federal government 240 days to complete a corrective environmental analysis and update its assessment of the mine, during which Spring Creek can continue mining.

More: *Billings Gazette*

Senate Confirms Buttigieg as Transportation Secretary

The Senate last week voted 86-13 to confirm Pete Buttigieg as the head of the Transportation Department.

Buttigieg is the former mayor of South Bend, Ind., and a Navy veteran. He ran against President Biden in the 2020 Democratic presidential primary before dropping out of the race.

More: *The Hill*

TVA Proposes New Gas Plants at Shuttered Coal Sites

In a draft environmental assessment of its energy options released last week, the Tennessee Valley Authority proposed to build six natural gas combustion turbines with a combined capacity of 1,500 MW at its former Paradise coal plant in Kentucky and its shuttered Colbert coal plant in Alabama within the next three years.

Both plants already have natural gas-fired generators, and the gas-fired peaking plants, which are designed to help meet demand peaks, will replace aging combustion turbines TVA is shutting down at its Allen plant in Memphis and its New Johnsonville plant west of Nashville. The old plants have a combined capacity of 1,400 MW, but studies indicate they are less efficient and emit more carbon dioxide than the new units would.

TVA spokesman Jim Hopson said the company is inviting comments about its plans and must still assess the financial costs of its options.

More: *Chattanooga Times Free Press*

US Wind Generation Sets Daily, Hourly Records at End of 2020

In late December last year, electricity generation from wind turbines in the U.S. set daily and hourly records, according to data collected in the Energy Information Administration's Hourly Electric Grid Monitor.

On Dec. 22, in the hour ending at 10 p.m. ET, 82 GW of electricity sourced from wind was dispatched across the U.S., much more than the previous hourly record of 73.4 GW set on the evening of Nov. 18, 2020.

The next day, wind generation reached 1.76 million MWh, or about 17% of the total generation on that day. It topped the record of 1.42 million MWh set on April 10, 2019.

More: *EIA*

State Briefs

CALIFORNIA

Investigation Reveals PG&E Made Shutoff Decisions on 'Junk Science'

An analysis by Sacramento-based KXTV of data Pacific Gas and Electric submitted to a judge on the Zogg Fire and the company's methods for making public safety power shutoff decisions revealed that PG&E ran an algorithm designed to gauge the risk of a wind-sparked wildfires without knowing the actual wind conditions.

In each of the 1.24-mile squares on its map, PG&E runs hourly calculations to estimate the risk of a fire being sparked by its lines. To do that, the company relied on a complicated algorithm of its own making, which combines data that include its history of outages, past wildfires and fuel moisture. A major shortcoming of the plan is that wind speed, which is only one of the many data points used, is not actually measured in each of the squares. In the case of the Zogg Fire, the nearest wind measurements to the origin of the fire were 3.5 miles away and about 600 feet lower in elevation. Mike Aguirre, who represents PG&E customers in the company's criminal probation, called the algorithm "junk science."

The investigation also found that PG&E could have purchased at least 1,000 more wind monitors to improve its data but instead donated $1.2 million to state politicians and campaigns.

More: *KXTV*

Utilities Propose Spending Billions to Cut Wildfire Risk

Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric last week said they would spend about $13 billion to reduce wildfire risk following the worst fire season in modern history and a string of blazes that were blamed on their equipment.

The state's three largest utilities, along with some smaller ones, filed state-required annual wildfire mitigation plans with the Public Utilities Commission, which must approve them. PG&E proposed a plan covering 2021 and 2022, while SCE and SDG&E submitted plans with an estimated cost of nearly $5 billion for 2021 and 2022.

PG&E's plan includes a new computerized risk model that would help it pinpoint areas most prone to wildfires. It said it would continue to expand those measures, which include installing more fire-resistant poles and moving overhead power lines underground.

More: *The Associated Press*

IOWA

MidAmerican Sues Madison County over Wind Restrictions

MidAmerican Energy filed a lawsuit last week against Madison County Supervisors after they voted 2-1 last December to cap the number of turbines in the county at 51 — the current figure.

The company said the ordinance would prevent construction of its 52-turbine Arbor Hill wind project and potentially shut down a $200 million wind farm that has been operational since 2014. The company is seeking to invalidate the new ordinance, saying the rules are unreasonable and threaten the investor-owned utility's investment, including $700,000 spent so far to develop the Arbor Hill project.

"This is a *de facto* ban on wind in Madison County," said Kerri Johannsen, the Environmental Council's energy program director.

More: *Aberdeen News*

LOUISIANA

New Orleans City Council Directs Entergy to Suspend Shutoffs

The New Orleans City Council last week directed Entergy New Orleans to extend its moratorium on service shutoffs for customers with past-due payments until at least May 15 to give residents a few more months of relief while complaints mount about a recent spike in electricity and gas bills.

The ruling comes after residents complained to the council about bills being two to three times higher than expected. Utility representatives said the extra charges stemmed from increased power use during an exceptionally cold holiday season.

After pausing disconnects for nearly a year because the COVID-19 pandemic, Entergy had planned to resume them this month for residential customers. The utility started to cut service for delinquent commercial customers in January.

More: *The New Orleans Advocate*

NEW MEXICO

PRC Approves Disconnection Moratorium

The Public Regulation Commission last week approved an order that will continue temporary moratoriums on residential disconnections. The order also has different provisions for large utilities compared to small ones.

Large investor-owned electric utilities, as well as large gas utilities, will have a 100-day moratorium on residential disconnections followed by a 90-day transition period under the new order. Meanwhile, water and small gas utilities and rural electric cooperatives will have a 45-day moratorium followed by a 45-day transition period.

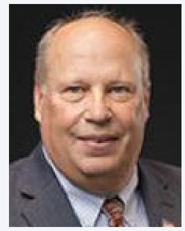
If the governor's emergency orders continue to be in effect past the point of the transition period, the moratoriums will likely be extended.

More: *Farmington Daily Times*

NORTH DAKOTA

Proposal Would Give Money to Coal Plants by Taxing Wind Power

Rep. **Dave Nehring** (R) last week presented a bill to the House Finance and Taxation Committee that would impose a new tax



on wind farms and give the money to coal-fired power plants in the form of grants.

House Bill 1458 takes aim at the federal production tax credit, which offers a credit for electricity generated from wind farms. It would levy a tax on the farms that is equal to half the PTC and would apply only to farms that begin operating in 2021 or beyond. Tax officials estimated the measure would generate $5 million per year in revenue from a new farm.

The money would go then into a "grid reliability and resiliency fund" from which the Public Service Commission would provide grants to qualifying power plants. Power plants in the state run on coal, natural gas or water and would be eligible only if they meet several criteria, including having a 30-day supply of on-site fuel, as is the case at coal-fired facilities.

More: *The Bismarck Tribune*

OHIO

'Dark Money' Group Admits Involvement in Bribery Scandal

Representatives of the dark-money political action committee Generation Now signed a guilty plea last week admitting involvement in the massive bribery scheme to protect a $1 billion nuclear plant bailout.

Prosecutors say the political group received tens of millions of dollars that then-House Speaker Larry Householder and others used to pay bribes, fund political activities and run a public campaign supporting the bailout. Generation Now was set up as a social welfare nonprofit, which allowed it to avoid disclosing donors. Federal authorities have said its real purpose was to protect the bailout while enriching Householder and others.

As part of the agreement, the PAC will forfeit potentially millions of dollars in assets.

More: *Cincinnati Enquirer*

FirstEnergy Agrees not to Seek Subsidy in Agreement with AG

Attorney General Dave Yost announced early last week that his office has reached an agreement with FirstEnergy to stop the collection of a guaranteed profit subsidy that would have allowed the company to collect $102 million from customers this year.

As part of the settlement, FirstEnergy filed a request with the Public Utilities Commission to say it will forgo collection of the conservation support rider or decoupling charge.

FirstEnergy spokesperson Jennifer Young said the application to PUCO is "the first step toward a partial resolution" with Yost's office and others.

More: *The Associated Press*

VIRGINIA

House Passes Bill Ending Coal Tax Credits

The House of Representatives last week voted 54-45 to pass a bill that would phase out two coal tax credits that a state investigation recently found generate economic losses for the state.

The incentives are designed to encourage coal production and aid the regional economy. However, a report last year from a legislative watchdog agency found that between fiscal years 2010 and 2018, the economy lost 35 jobs, $21 million in gross domestic product and $5 million in personal income because of the credits.

More: *The Associated Press*

WASHINGTON

Bill Would Require All New Cars be Electric by 2030

A bill sponsored by more than two dozen Democrats would require all new cars sold in the state to be electric by 2030.

Legislators who support the bill said it would speed up the transition from gas-powered vehicles and the construction of electric vehicle infrastructure. Coltura, an environmental nonprofit that helped draft the bill, said 99% of vehicles in the state are gas-powered and the bill would affect more than 10 million vehicles in the following 30 years.

The House Transportation Committee held its first hearing on the bill last week.

More: *The Hill*

Seattle City Council Passes Measure to End Most Natural Gas Use

The Seattle City Council last week unanimously approved banning natural gas for space heating in new buildings or for use in replacement heating systems in older buildings. The ordinance will also prohibit the use of natural gas to heat water in new hotels and large apartment buildings.

The amendments will continue to allow commercial buildings and apartments to be constructed with natural gas for cooking, but electrical outlets would be required so that electric stoves can be installed later. The new codes also do not cover new construction of houses and townhouses, which have energy codes set by the state that continue to allow natural gas heating.

The changes are part of a broader effort to find ways to reduce the city's greenhouse gas pollution. Without the changes, officials project that building emissions would be 12% higher by 2050, when the city government has set a target of being carbon neutral.

More: *The Seattle Times*

WEST VIRGINIA

Mountain Valley Pipeline Cited for Erosion, Sedimentation Violations

A proposed consent order from the state Department of Environmental Protection would require Mountain Valley Pipeline to pay a $303,000 fine for repeated violations of erosion and sediment control regulations. Included in the order are 29 notices of violation from February 2019 to September 2020.

The state previously fined Mountain Valley $266,000 for similar violations along the first 198 miles of the natural gas pipeline. In Southwest Virginia, where the pipeline continues for another 105 miles, regulators have imposed more than $2 million in penalties on three separate occasions.

The most recent enforcement action was signed Jan. 11 by Robert Cooper, who is heading construction of Mountain Valley.

The DEP said it will accept written comments through March 13 before taking final action.

More: *The Roanoke Times*

WISCONSIN

Columbia Power Plant to Close by 2025

Alliant Energy, the majority owner and operator of the 1,100-MW Columbia Energy Center, announced last week that it will close the coal-fired plant by 2025 as it shifts away from fossil fuels.

Alliant President David de Leon said that closing the 45-year-old plant will allow the company to avoid some $250 million in maintenance and upgrade costs while also speeding up its transition to clean energy. He also said Alliant is still on track to meet its goal of cutting its carbon emissions in half by 2030.

More: *Wisconsin State Journal*

WYOMING

Gordon Appoints Petrie to PSC

Gov. **Mark Gordon** last week appointed Chris Petrie to serve on the Public Service Commission. Petrie will replace Kara Fornstrom, who resigned in December.

Petrie has served as secretary and chief legal counsel for the PSC since 2007.

More: *Casper Star-Tribune*

Lawmakers Reject Moratorium on Coal Plant Closures

The House of Representatives last week voted 38-22 to reject an amendment to House Bill 30 that would have required the Public Service Commission to impose a 15-year moratorium on retiring coal-fired power plants in the state.

Despite the disapproval, several representatives expressed tentative support for the idea of a moratorium in a standalone bill yet to be drafted. The current bill moved on without the amendment, and a similar amendment could reappear when it is considered in the Senate.

More: *WyoFile*