

With Crisis Behind it, ERCOT Now Faces the Music

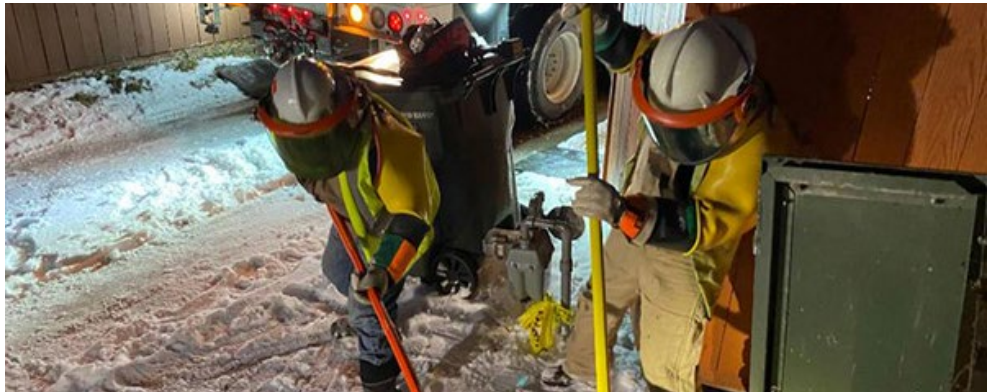
Investigations, Hearings Begin this Week for Texas Grid Operator

By Tom Kleckner

With the ERCOT system back to normal operations after coming within “seconds and minutes” of total collapse last week, Texas politicians and regulators have begun taking initial steps to make sure a similar crisis doesn't happen again.

Texas House Speaker Dade Phelan has called for the State Affairs and Energy Resources committees to hold a joint hearing on ERCOT's response to last week's winter storm, which left more than 4 million customers without power at one point and led to dozens of deaths. The Senate Business and Commerce Committee will also soon hold hearings, Lt. Gov. Dan Patrick said.

That hearing will be preceded by an urgent meeting of the ERCOT Board of Directors on Wednesday. The board will hear from CEO Bill Magness and discuss the long-term outage's



An oncor crew battles winter storm's leftovers to restore power. | *Oncor Electric Delivery*

financial effect on the market. (See “Talberg Calls Urgent Board Meeting,” *ERCOT Focuses on Restoration, not Blame.*)

But those meetings are only the tip of the iceberg. During an emergency *open meeting* Friday

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Glick Eyes New Standards Following Texas Outages (p.31)

Glick Hits ‘Refresh’ at 1st FERC Open Meeting

Commission Issues New Gas Policy NOI, Will Review RTO Capacity Markets

By Michael Brooks

FERC Chairman Richard Glick began cleaning house Thursday during his first open meeting at the agency's helm, refreshing the commission's work on several issues while closing the books on others.

Most notably, the commission issued another Notice of Inquiry seeking comment on revising its 1999 policy statement on natural gas pipeline certificates, a review that began under Chairman Kevin McIntyre in April 2018 (PL18-1).

FERC eventually received more than 3,000 comments in response to the original NOI. (See *FERC Flooded with Comments on Pipeline Permitting.*) But until Thursday, the docket had sat untouched.

Since then, the commission said, there have been numerous changes in U.S. environmental

policy, including the Trump administration's rules intended to speed up the National Environmental Policy Act review process and President Biden's executive orders on climate change. (See *Trump Admin Proposes Streamlining NEPA Reviews* and *Biden Signs Sweeping Climate Orders.*)

“We are providing an opportunity for stakeholders to refresh the record and provide updated information and additional viewpoints to help the commission assess its policy,” FERC said. “We seek comments that reflect additional information developed and insights gained during the interim period.”

The commission stressed that it would consider previously submitted comments in the docket and urged stakeholders not to simply refile them.

The topics on which the commission is seeking

Coming Soon:

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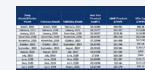
Your Eyes and Ears on Climate Policy and Adaptation
Building & Transportation Electrification ■ Federal & State Policy

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Energy Transfer to Acquire Enable Midstream
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FERC Backtracks on NYISO BSM Exemptions
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FE Shares Jump on Icahn Investment
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RTO Insider

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

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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*:

- Paris GHG Targets not Ambitious Enough, Study Says
- CEOs Seek Scalable Climate Solutions
- Pandemic Drop in GHG Emissions Illusory, Advocates Warn
- House Subcommittee Debates Keeping Grid Clean, Resilient
- Green Hydrogen Earns Industry Buy-in
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- NY Needs ZEV Job Training, Strategy, Officials Say
- NY Considers Rulemaking for Medium to Heavy ZEVs
- NY Considering IRPs for Gas Utilities

Paris GHG Targets not Ambitious Enough, Study Contends

By John Stang

The Paris Agreement on climate change set a goal to keep Earth from warming by more than 2 degrees Celsius by 2050.

But if global warming proceeds at its present pace, the world's temperatures will likely grow 2.8 C by that date, according to a University of Washington study.

The Paris agreement target of cutting carbon emissions by 1% annually should be increased to 1.8%, said the *study*, published Feb. 9 in *Communications Earth & Environment*.

The projected 2.8-degree figure "is very discouraging," said Adrian Raftery, a professor of statistics at the university, who tackled the study with then-doctoral candidate Peiran Liu.

The study concluded that 2100 would likely see a 2.1- to 3.9-degree increase with 2.8 degrees being the median. However, the median could decrease to 2.3 degrees, if nations meet their 2030 carbon-cutting goals. These conclusions are based on complex statistical models involving population growth, gross domestic product growth and carbon intensity,

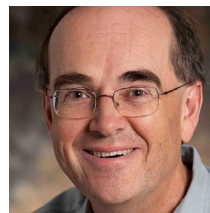
a measure of carbon dioxide produced per dollar of GDP.

The 2021 analysis builds on a 2017 study by Raftery that concluded Earth had only a 5% chance of meeting the 2 degrees-or-less target in 2100.

Raftery's work for the U.N. Intergovernmental Panel on Climate Change led to the 2017 study, and that led to the question of what would be the likely temperature rise between now and 2100.

"Obviously, this is what inquiring minds want to know," Raftery said.

The Paris Agreement included goals for individual nations with deadlines of 2025 to 2030. The study showed the U.S., Brazil, China, Australia and much of Europe being among the least likely to reach their targets in 2025 and 2030, while Russia is among the most likely. But Russia has promised to do very little under the accord, Raftery said.



Adrian Raftery |
University of Washington

Meanwhile, Raftery pointed to France — with high-speed trains and a high number of carbon-free nuclear plants — as a nation to pay close attention to regarding dealing with global warming.

The 2021 study noted that the world's carbon intensity has decreased 2% annually since 1960. But that is offset by global GDP growth of 2% annually, which essentially leads to the two factors canceling each other out.

Work has begun on the next study: looking at the relationship between global warming and specific locations. For example, how big a role does the distance from the equator have on global warming impacts.

"Global warming doesn't affect everywhere equally," Raftery said. Further study would examine the relationship between carbon emissions and agriculture and health, he said.

Raftery would also like to see the nations in the Paris Agreement set annual goals for reducing carbon emissions, instead of aiming for targets such as 2030, 2050 and 2100. That's because far-in-the-future goals "make it harder for people to focus on them," Raftery said. ■

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

CEOs Seek Scalable Climate Solutions

By John Funk

Achieving net-zero carbon emissions by mid-century will require an unprecedented public-private partnership, a transparent carbon offset market and direct air capture, said the founders of a new corporate alliance organized to deal with the causes of climate change.



Southern Co. CEO Tom Fanning | *Bipartisan Policy Center*

“When we think about the challenge of removing carbon from the American way of life, we must re-imagine what our obligations are, how we can work with government,” Southern Co. CEO Tom Fanning said in remarks announcing the creation

of the *Net Zero Business Alliance* on Wednesday. “Think back to the missionary zeal when we approached the first landing on the moon. These [carbon] issues are that important. These are things we have to do hand-in-glove with the government.”

In addition to Fanning, the founding members include United Airlines CEO Scott Kirby; John Tyson, chief sustainability officer of Tyson Foods; Weyerhaeuser CFO Russell Hagen; and Occidental Petroleum CEO Vicki Hollub, who was unable to participate in the kickoff session. The group will be expanded to include additional industry sectors in the coming weeks, according to the D.C.-based Bipartisan Policy Center, which organized it.

Fanning used the session to announce that Southern, which set an intermediate goal of 50% carbon emissions reductions from 2007 levels by 2030, met the target last year.

“So, without a forcing mechanism we’ve beat it by 10 years. Now 2020 was an unusual year,” he said referring to the economic slowdown resulting from the coronavirus pandemic. “We get that. But here’s the important point: The entrepreneurial spirit of America, combined with the public policy needed to accomplish big things has [created] an opportunity to achieve these kinds of results in a comprehensive way. And we have to do this not [only] in the silo of energy but in working with my brothers and

sisters here in broader industries.”

BPC President Jason Grumet underscored the gravity of the carbon issue by noting that “the scale of this challenge is profoundly and dramatically underappreciated.”

“Solving climate change is going to place a tremendous burden on shareholders, on customers and ultimately on taxpayers,” Grumet said. “The scale of this challenge is a profound logistical issue, and the folks that we know have the capacity to make the kind of changes in the extremely narrow time frame available are the companies ... we are working with.”

Though managing significantly different industries, Fanning, Kirby and Hagen believe that to reach the kind of carbon reductions climate scientists are calling for, industry will have to capture carbon dioxide directly from the air and sequester it underground.

Southern has partnered with the U.S. Department of Energy to manage the *National Carbon Capture Center* in Alabama. The center’s research includes *direct air capture*.

United has *partnered* with Occidental on a direct air capture project. Occidental intends to capture the CO₂ at well fields and use it to flush out oil and gas from old wells, leaving the carbon underground. The industry has used CO₂ for years in old well fields that have lost pressure. The difficulty has been to make certain the carbon does not make its way back to the surface.

Without direct carbon capture, significant reductions to achieve net zero are unlikely, Kirby said. “The reality is we emit 4,000 times the amount of carbon emissions than we did in the pre-industrial era. We cannot plant 4,000 times as many trees.”

Weyerhaeuser grows trees on 11 million acres of land in the United States and 14 million acres in Canada. But Hagen agreed that forestation won’t by itself solve the carbon problem.

“We need to combine all of these solutions. It’s an enormous problem. We do need to continue with the technology to capture carbon and to work on emission reductions,” Hagen said.

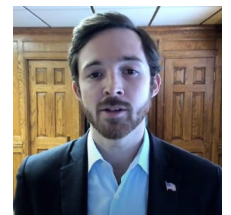
He said the development of mature carbon credit markets for long-term sequestration to deal with climate change is well underway.

“We are seeing the emergence of a lot of different stakeholders. Investors are demanding a response. It is really going to be critical that we as companies have a transparent view of

the actions we are taking to address not only our shareholders but the broader stakeholder group to begin really driving toward a net-zero solution,” he said.

Markets trading carbon credits are demanding credits that lock up carbon in standing timber for up to 100 years, he said. “As we think about how we are going to engage in this ... we have to bring a high standard so our brand, our credibility, stands behind whatever carbon credits we may bring to market.”

Tyson added that his company has been looking at carbon sequestration in farmland. He agreed that carbon credits and carbon markets are beginning to proliferate but said they pose a risk. “We are not yet sure of the science,” he said of carbon sequestration with agriculture. “Demand [for carbon credits] far outstrips the supply of high-quality credits.”



John Tyson, chief sustainability officer, Tyson Foods | *Bipartisan Policy Center*

Kirby said climate change cannot be addressed without being honest about the difficulties. “The reality is that batteries will never have energy density to fly long haul aircraft with a lot of people on board. Even hydrogen, which has higher energy density, requires three times the weight as jet fuel,” he said. “There are going to be parts of the economy where we are still emitting carbon.”

He said United’s “100% green” climate plan does not include traditional carbon offsets. “I’ve talked to enough CEOs who just want to check the box. Write a check once a year and [say] ‘I did my part on carbon.’ We are not going to solve the problem” through such methods, he said.

“I challenge anyone to go up and look at some of these entities that provide carbon offsets to companies to find out what their projects are. It is almost impossible. ... I know Weyerhaeuser is doing great things, and others are doing things that are real. But a lot of [purported carbon offset programs] are simply not real.

“At United, we know we’re still going to be emitting carbon into the atmosphere, and when we say ‘100% green,’ we really mean every molecule of carbon dioxide that comes out the back [of a plane] is a molecule that gets sequestered underground.” ■

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Pandemic Drop in GHG Emissions Illusory, Advocates Warn

2021 Sustainable Energy Factbook Charts Outliers and Long-term Trends

By K Kaufmann

The economic slowdown resulting from the coronavirus pandemic caused U.S. greenhouse gas emissions to drop 9% in 2020, putting the country temporarily on track with the Paris Agreement pledge of at least a 26% cut by 2025, according to the 2021 Sustainable Energy Factbook, released Thursday by the *Business Council for Sustainable Energy* and BloombergNEF.

But no one should be lulled by that seeming progress, Heather Zichal, CEO of the American Clean Power Association, said at a pre-release briefing Wednesday.

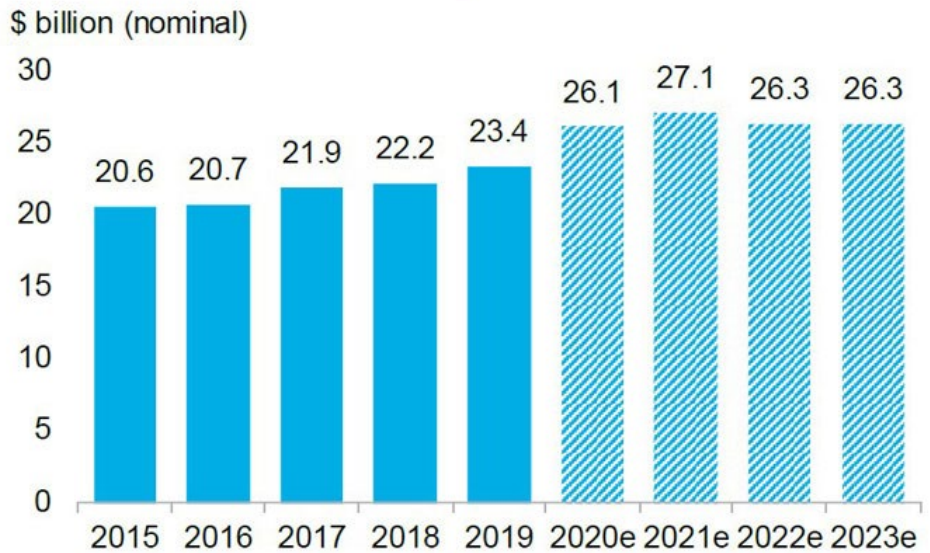
The factbook shows transmission investments in the U.S. peaking at \$27.1 billion this year but edging down to \$26.3 billion in both 2022 and 2023.

“Transmission infrastructure expansion and improvements are critical to enabling the transition to a cleaner electric grid,” Zichal said. “We know we also need new transmission to carry the wind and solar-generated electricity to the towns, cities and manufacturing hubs that are thirsty for clean, affordable power.”

Now in its ninth year, the BCSE Factbook is something of an industry bible, charting the year-by-year U.S. energy transition in detail. For example, the new edition’s top-line figures include 2020’s record-breaking growth in U.S. renewables, with the solar and wind industries adding 16.5 and 17.1 GW, respectively, of new projects to the U.S. grid, despite a midyear slowdown because of the pandemic.

The impact of the pandemic was felt throughout the energy industry in 2020, resulting in a year “of records, but also resilience,” said Ethan Zindler, head of Americas for BNEF.

U.S. electric transmission investment by IOUs and independent developers



2020 saw a record \$27.1 billion invested in transmission. | BNEF

One of the main, but likely short-lived, effects of the pandemic was the 7.8% drop in energy use across the U.S. in 2020 — the largest year-on-year decline in at least three decades — resulting in a 9.2% drop in greenhouse gas emissions. They will likely rebound as the economy recovers, Zindler said, but he noted the U.S. ended the year 20% below 2005 levels, which, at least temporarily, puts the country on target to meet its Paris Agreement pledge of cutting emissions 26 to 28% by 2025.

At the other end of the spectrum, the growth of co-located photovoltaic solar and storage is emerging as a “new asset class of its own,”

according to the factbook. With strong storage mandates, and its “duck curve” of mid-day demand drops and steep early evening ramps, California leads the nation with about 21 MWh of co-located storage planned or online.

Climate Commitments Climb

Abigail Ross Hopper, CEO of the Solar Energy Industries Association, said residential solar markets initially were hit hard by the pandemic, “but they were incredibly innovative, incredibly entrepreneurial, figuring out new workflows, new systems, and really did rebound.”

Going into 2021, renewables were buoyed

GW

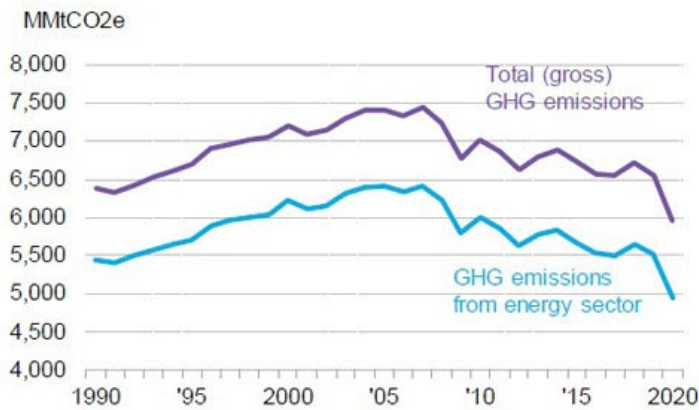


New renewables in 2020 totaled 33.8 GW, with solar and wind both breaking records for new construction. | BNEF

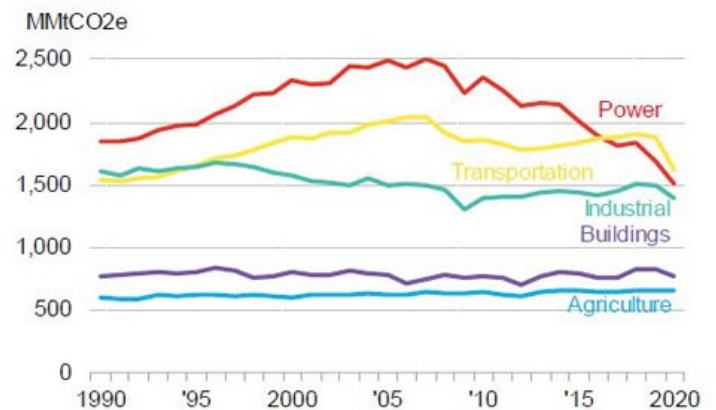
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Economy-wide and energy sector emissions



Emissions by sector



U.S. greenhouse gas emissions plunged 9.2% in 2020, with transportation taking the deepest dive at 14%. | BNEF

by passage of the \$900 billion federal COVID relief package, which included \$34 billion in energy spending, split between tax enhancements — in particular, a two-year extension of the 26% solar investment tax credit — and research and development.

Other key findings from the 2021 Factbook include:

- The 10 states that have net-zero-emission targets make up about 30% of the U.S. population but account for 35% of the country's gross domestic product and only 24% of energy-related carbon emissions.
- Corporate demand for clean energy — another key driver for the U.S. renewable energy market — was also hit by the pandemic, with companies signing power purchase agreements totaling 11.9 GW, down from 14.1 GW in 2019. But the number of major corporations making climate commitments

continued to grow. The industry group RE100 — composed of companies that have pledged to decarbonize their energy supplies — added 65 new members last year, bringing its total to 285.

- Coal-fired generation, 19% of U.S. energy production, continues to decline, while natural gas provides the largest share of U.S. power at 41%. Gas utilities and companies are positioning themselves as essential components of the energy transition, providing the grid support needed to continue ramping up clean energy. "If you love renewables, you have to at least like natural gas for its long-term and seasonal storage capabilities," said Lisa Alexander, senior vice president of corporate affairs and chief sustainability officer at Sempra Energy.

While consumer spending on energy overall ticked down 0.5%, spending on electricity

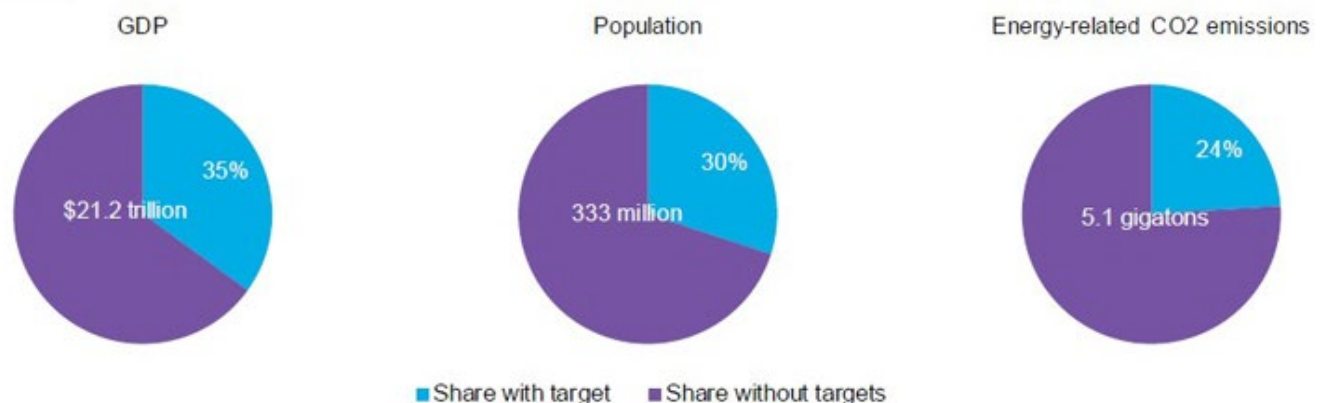
edged up, from 1.53% of household expenditures to 1.73%, reflecting the rise in residential energy use and underlining the critical issue of energy equity, said Paula Glover, president of the Alliance to Save Energy.

With students and their parents working at home — dependent on power for their computers — electricity and energy efficiency have become "a social justice issue."

"It's not just a quality-of-life issue," Glover said, calling for state and federal action.

"Energy productivity really is about how we use less by doing more," she said. "We need more efficient homes, energy-efficient appliances, the proper building codes, proper tax incentives. All these things are tools and mechanisms that allow consumers around the country to have an improved, strong quality of life while at the same time managing their bills." ■

GDP, population and emissions of states and cities with greenhouse gas targets, compared to U.S. totals (2019)



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House Subcommittee Debates Keeping Grid Clean, Resilient *Experts Call for Federal Action on Transmission, Energy Efficiency and Faster Permitting*

By K Kaufmann

Texas and its unprecedented winter weather and power outages loomed large over a U.S. House Energy Subcommittee hearing Thursday, with Democrats and Republicans disagreeing on how to ensure the country's grid is clean, reliable and prepared for the next catastrophic weather event.

Grid reliability should not be a partisan issue, said Rep. Michael Burgess (R) in his opening remarks at the hearing on pathways to a clean energy future.

"When the temperature drops below zero, no one cares which party the electricity comes from. They just want the heat to come on, the lights to go on when they flip the switch," Burgess said.

"We can't allow the Texas crisis to be used as an excuse to discourage movement toward renewables," said Rep. Frank Pallone (D), who chairs the House Committee on Energy and Commerce. "What failed here was an energy sector that didn't consider our changing climate. It was a failure to fully recognize that the 100-year storm of yesterday may now be the 10-year storm of today."

Pallone said he and other Democrats in the House would soon re-introduce an updated version of the Clean Futures Act — originally proposed last year — that would include a national clean energy standard and other policies to reduce emissions in the building, transportation and industrial sectors. Both Pallone and subcommittee Chair Bobby L. Rush (D) promised future hearings on the power outages in Texas.

Burgess and other Republicans on the subcommittee countered that legislation like the Clean Futures Act and President Joe Biden's plan to decarbonize the U.S. grid by 2035 represent "top-down, one-size-fits-all mandates" that would cost American jobs and hurt families and communities. In their view, ongoing fossil fuel generation will be critical for grid reliability.

"We cannot afford to rapidly transition our energy system without assurance of its reliability," Burgess said. "We cannot support policies that destroy entire industries."

The rhetoric aside, the subcommittee heard a range of policy recommendations from experts

representing diverse approaches to the clean energy transition. For example, Paula Glover, president of the Alliance to Save Energy, said her organization is working on legislation to improve energy efficiency for small businesses, with an emphasis on minority-owned businesses and those in disadvantaged communities.

"This plan for Main Street efficiency will target federal grants to match existing utility programs to provide low- or no-cost efficiency upgrades to small businesses," Glover said. "Since 80% of energy efficiency contractors are small businesses themselves, this is small business helping small business."

Another proposal would retrofit mission-critical public buildings around the country, leveraging federal funding to draw private capital "and importantly ensure that at least 40% of the projects are in low-income or disadvantaged communities," she said.

Inclusive, Realistic, Pragmatic

Craig Gordon, senior vice president for government affairs at Invenergy, put transmission at the top of his list.

"There's simply no way to achieve the ambitions of this administration and the American people without more of it," Gordon said. "Massive investment in transmission infrastructure connecting diverse regions of the country and different technologies with complementary generation profiles is key to solving this challenge."

To support such investments, he also recommended a transmission investment tax credit that could be monetized at 100% of its value.

Rich Powell, executive director of ClearPath, a conservative clean energy advocacy group, called for federal policies that are "politically inclusive, realistic and pragmatic. Too often, solutions are oversimplified to a set of false choices," he said.

Beyond renewables and battery energy storage, getting to net zero will require technologies that are not yet commercially available, including long-duration storage, carbon and direct-air capture and advanced nuclear, Powell said. While year-end legislation provided funding for 20 new demonstration projects, the challenge ahead is getting them built, which means faster, more streamlined permitting to bring down costs, he said.



| © RTO Insider

He also called for a technology-neutral energy innovation tax credit to encourage more investment in emerging clean energy technologies. "Energy-intensive, trade-exposed industries like steelmaking absolutely require affordable new technologies to help them decarbonize," Powell said. "Without them, we risk not only losing central U.S. jobs, but [ceding] the industrial activity to countries with worse emissions."

Social Disruption Already Occurring

A focus on technology often minimizes the social and economic impacts of the U.S. energy transition, especially for communities that are dependent on fossil fuel jobs. A recent study from the National Academies of Sciences, Engineering and Medicine calls for "a national transition task force to identify workers in communities at risk, and regional centers where state and local leaders can learn about what's coming and how to manage it," said Princeton University Professor Stephen Pacala, who led the study. (See [Report: 'Social Contract' Needed for Decarbonization](#).)

"Some might be tempted to view policies targeting the deployment of net-zero technology as the highest priorities," Pacala said. "This view has it backwards because the technological transition and the social disruption that goes with it are already occurring."

The study acknowledged that the jobs created by clean energy will not completely replace fossil fuel jobs — which would put natural gas communities in Western Pennsylvania at risk, said Daniel Camp, chairman of the Beaver County Board of Commissioners.

While Camp offered no recommendations, he asked subcommittee members to consider that fossil fuel jobs provide \$23 billion in wages for workers across Pennsylvania. For many, the potential loss of those jobs "jeopardizes their ability to put a roof over their families' heads and continue to put food on their tables." ■

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Green Hydrogen Earns Industry Buy-in

Experts See Promise for Hard-to-electrify Industries

By K Kaufmann

The panel discussion on green hydrogen at the National Association of Regulatory Utility Commissioners' Winter Policy Summit earlier this month hit many of the same themes sounded at the organization's summer conference. Speakers at both events touted the potential of the emissions-free technology to provide days or even weeks of power while acknowledging the challenge of scaling the still-expensive process of using renewable energy to produce hydrogen from water. (See [NARUC Panel: 'Green' Hydrogen Could Lower GHGs.](#))

What appears to have changed in the last six months is the level of energy industry buy-in, as evidenced by the Electric Power Research Institute's recently launched [Low-Carbon Resources Initiative](#), which CEO Arshad Mansoor said was able to quickly raise \$100 million from corporate sponsors for research on hydrogen and other low- and no-carbon fuels.

NextEra Energy's Florida Power & Light gener-

ated plenty of industry buzz last July with the announcement that it would build a 20-MW electrolyzer to produce green hydrogen that would be mixed with natural gas to run a 1.75-GW combined cycle plant. (See [NextEra Dips its Toe in Hydrogen Energy.](#))

Despite the positive press, Matt Valle, vice president of development for FPL, cautioned that while green hydrogen "seems like a silver bullet, it may not be."

"Think about the technological advances that are going on in lithium-ion batteries right now," Valle said at the NARUC session on Feb 10. "You have solid state; you have longer-duration and flow batteries. It's certainly not the only thing out there that could help decarbonize the economy. There's a lot of hype right now, and you have to separate it."

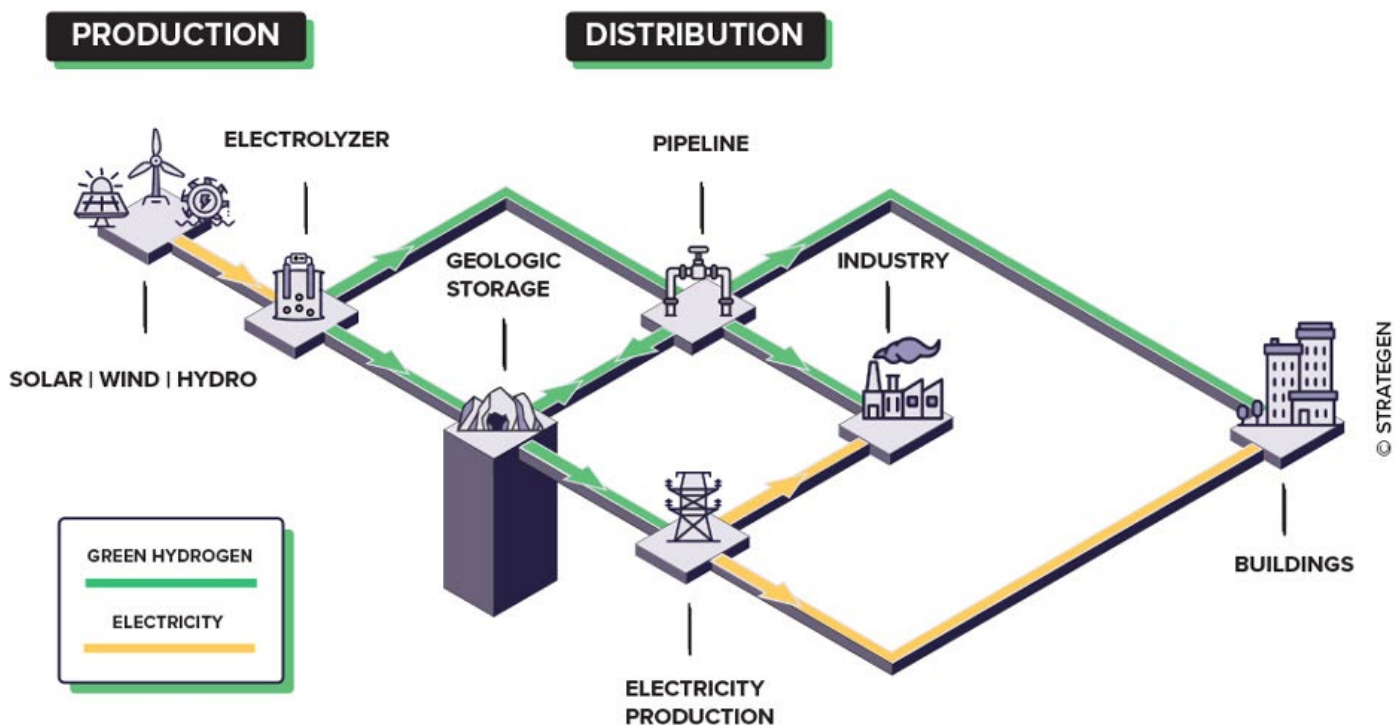
Utilities' excitement about green hydrogen is linked not only to its ability to store energy for long durations, Valle said. It's also about the technology's potential to repurpose fossil fuel plants and natural gas pipelines that might

otherwise become stranded assets.

Another major green hydrogen project in development, the Intermountain project in Utah, aims to recommission a former coal plant to initially burn a mix of hydrogen and natural gas, with the goal of running 100% on green hydrogen by 2045. Hydrogen produced for the plant will be stockpiled nearby in a natural salt cavern capable of keeping 150,000 MWh of power on tap, according to the nonprofit [Green Hydrogen Coalition](#).

For Laura Nelson, executive director of the coalition, the rising interest in green hydrogen signals a critical expansion of the net-zero discussion. "When we talk about this 100% clean energy future, that means different things to different folks," Nelson said. "The carbon neutrality goals are not going to be completely met with renewable energy and battery storage. We have this rapidly transforming energy system, and you're going to need a robust portfolio mix."

Nelson, Valle and Mansoor all pointed to green



Power to gas to power: production and distribution pathways for green hydrogen | [Green Hydrogen Coalition](#)

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hydrogen as a bridge for decarbonizing industries that are hard to electrify.

“In order to get to the net-zero world, the most important opportunity is actually not in the electric sector; it’s in the industrial sector,” Mansoor said. “If you are in the chemical industry, if you are a petroleum company, if you are a plastics manufacturer, you’re not using petroleum; you’re not using natural gas in the future. You could be using hydrogen.”

“I typically don’t talk to chemical plants or steel plants or heavy-duty trucking,” Valle added. “What if I had hydrogen to potentially sell to those customers in the future? Not to necessarily say it has to be utilities, but somebody is going to have to generate a lot of green hydrogen. That is going to play a major role in decarbonizing the U.S. economy over time.”

New Technology, New Infrastructure

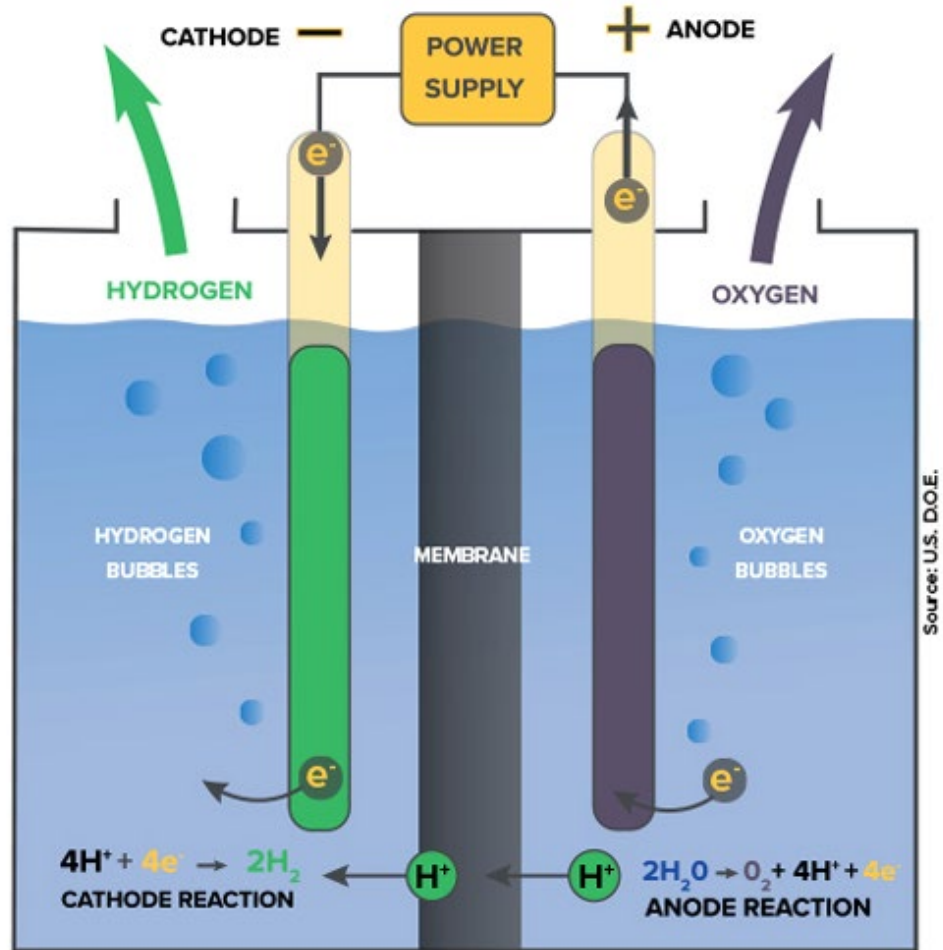
Hydrogen gas, produced from a natural gas feedstock, is already used around the globe for industrial processes such as oil refining, methanol production and ammonia production for fertilizers. But, according to the *Green Hydrogen Guidebook* produced by the GHC, as of 2019, green hydrogen represented 0.1% of global hydrogen production, with \$365 million invested in 94 MW of capacity.

Pilot projects are a first step toward commercialization. But ongoing research and investment — like EPRI’s Low-Carbon Resources Initiative — are needed to whittle down costs and address other key issues about the technology. To produce hydrogen without carbon emissions, excess wind and solar energy are used to power an electrolyzer that splits water molecules into hydrogen and oxygen. The hydrogen gas can then be stored, for example, in a fuel cell or run through a turbine to produce electricity.

The GHC guidebook pegs the current cost of producing hydrogen via clean-energy electrolysis at \$1,200/kWh. But, as the technology scales, prices could drop 90%, to between \$115 and \$135/kWh by 2030, according to the guidebook.

Nelson also stressed the importance of integrating green hydrogen into resource planning and wholesale markets.

“Regulation can be important for creating markets, and that’s what has to happen,” she said. “Market rules really have to allow green hydrogen to be an eligible technology. It is going to be critical to see an evolution of this resource to provide services in the energy storage, resiliency and reliability space.”



What an electrolyzer does: using electricity to split water into hydrogen and oxygen | *Green Hydrogen Coalition*

On the logistics side, storing and transporting hydrogen requires considering its difference from fossil fuels: Specifically, as the second lightest element on Earth, hydrogen takes up a lot more space. It is not “a one-on-one replacement for either petroleum or natural gas,” EPRI’s Mansoor said. “If you have one can of natural gas, you would need three cans of hydrogen.”

Valle points to efficiency as another key issue: Too much energy is lost in the process of making green hydrogen and then converting it back into electricity.

Converting renewable power to hydrogen, “you lose 30% or so of the energy,” he said. “When you take the hydrogen and run it through a combined cycle [plant], which has its own efficiency losses, you’re down to 50%. Hydrogen is not going to win head-to-head against the battery today.”

Still another problem is embrittlement, the weakening of metal infrastructure that may occur because of the hydrogen atom’s small size and ability to interact with metals and plastics. Whether natural gas pipelines could be used for 100% hydrogen remains a question, one that could lead to more regional production and consumption, said panelist Llewellyn King, host of the public affairs series “White House Chronicles.”

“Every new technology, every new material produces its own infrastructure” and generates its own innovation, King said.

“What information we have around testing and pipeline integrity is going to be important,” Nelson agreed. “How we construct and build that new infrastructure is going to be a function of how this particular commodity and the economy for this commodity emerge.” ■

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Green Bonds Must Attract More Investors, Panel Says

By Jennifer Delony

The market for bonds that address climate change and related social issues is booming, according to Sean Kidney, CEO of the Climate Bonds Initiative.

“People are realizing that the capital-with-purpose story is the story of the times,” Kidney said last week during a Bloomberg virtual [panel](#). But green bond issuances that now exceed \$1 trillion are not enough, he said.

Net-zero ambitions from companies and governments will require far greater environmental, social and governance (ESG) investing, of which green bonds are a part. To get there, near-term improvements are needed in emissions metrics and reporting mechanisms to instill long-term investor confidence, he said.

ESG investing requires the creation of standardized definitions for what constitute “the

right kind of investments,” he said. Europe has been a leader in creating a taxonomy of definitions for sustainable investments, and Kidney believes that Europe’s approach must be universally adopted to make green investing much easier. All green sector investment guidance, he added, must be based on the goals of the Paris climate agreement.

Using those goals as the baseline for green commitments allows investors to measure whether the claim of any given environmental benefit is sound, Kidney said.

A solid reporting framework is also necessary to build investor confidence, according to Deborah Ng, head of responsible investing for the Ontario Teachers’ Pension Plan.

A company “can set a 20% [emissions reduction] target or a 50% target, but if we’re not seeing those numbers going down ... we’re going to be more skeptical about their transition plans,” she said.

Jane Ewing, senior vice president of sustainability for Walmart, said that the company estimates direct, indirect and partial supply-chain emissions in accordance with the [Greenhouse Gas Protocol](#). The company has been reporting that information annually since 2006. She said Walmart also reports to the nonprofit [CDP](#), which runs a global emissions disclosure system.

That system, Ewing said, “is a very comprehensive and detailed analysis that requires you to look at all areas of the organization.”

Amy West, global head of sustainable finance at TD Securities, said improving corporate sustainability reporting is critical for advancing ESG investments. She said that reporting standards, like those offered by the Global Reporting Initiative ([GRI](#)), will help investors compare corporate sustainability strategies “on an apples-to-apples basis.”

GRI says its standards for sustainability reporting create a common language for understanding the environmental impacts of organizational activities.

West said that standards like GRI will make it easier to identify benefits beyond the basic metrics for emissions reductions. If a company’s percentage improvement in emissions goes down, for example, it should not be perceived as a failure, she said. The company might, in fact, just be tackling difficult business challenges related to its net-zero commitment.

Investors also need transparency in the methodologies used to calculate emissions reductions, West said.

“How we calculate not just scope one and two, but scope three emissions, is largely undefined right now,” she said. “There is no agreed upon methodology that every company is using.”

Scope 1 emissions come from an organization’s direct activities, while scope two emissions come from electricity used by an organization. Scope three emissions are all other indirect activities of an organization.

“When we look at net zero, how each industry approaches that is a little different,” West said. “With investors, I think asking for transparency, asking for clarity and requests for information are all reasonable.”

Everyone needs to be speaking the same investment language, she said, so “then you can actually have a coherent conversation across investments and within sectors.” ■



The Volt seen here is a success story in one green sector to which investors are flocking, but clearer metrics and reporting are needed to boost environmental, social and governance investing. | [Chevrolet](#)

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Colo. AQCC Approves Compromise on Pneumatic Devices Conservation Groups, Local Governments and Industry Collaborate on Methane Reduction

By Rebecca Santana

Colorado's Air Quality Control Commission last week enacted the nation's strictest rules around methane emissions from the pneumatic controllers used in oil and gas production facilities.

The AQCC unanimously approved revisions to Regulation Number 7 regarding the devices during a virtual hearing on Thursday. The hearing addressed issues bifurcated from the December 2020 rulemaking on Regulations 3 and 7 concerning the state's Ozone State Implementation Plan.

Conservation groups, local governments and industry leaders joined forces to create and present a proposal endorsed by all stakeholders involved.

"We are pleased to be able to say today that after months of negotiations, we have reached a historic compromise proposal. ... We're excited to report that we've resolved all of the outstanding issues related to the rule language," said Earthjustice attorney Robin Cooley, who represented the conservation groups during the hearing.

Pneumatic Devices and Past Policy

David McCabe of the Clean Air Task Force described the role of pneumatic devices in current oil and gas production to the commission. He said the devices monitor process parameters — metrics like temperature, pressure and liquid level — and use pressurized gas to send signals to regulate these parameters.

"Pneumatic controllers have long been identified as a very significant source of methane and VOC [volatile organic compound] emissions because when they use compressed natural gas to operate, they vent that gas and the methane and VOC it contains into the air."

The devices are designed to emit natural gas during normal operations, but equipment malfunctions can cause leaks leading to even higher levels of emissions. In 2017 the AQCC adopted a "find and fix" program that required oil and gas operators to regularly inspect pneumatic controllers using an approved instrument monitoring method to determine if they were operating properly. It then adopted provisions to strengthen this program in 2019.

But "find and fix" was created to reduce excess emissions from these devices rather than



Pneumatic controllers are widely used throughout Colorado and are estimated by EPA to emit 2 million tons of methane nationally every year. | Shutterstock

eliminate them altogether.

"The compromise proposal requires the use of non-emitting controllers at new facilities, and it would make Colorado the first state in the country to require retrofits of existing oil and gas well production facilities and compressor stations with non-emitting controllers," Cooley said.

Non-emitting controllers serve the same function as their emitting counterparts, but they function using pressurized air or electricity, McCabe said. He said that in 2019, more than 100,000 emitting controllers were producing methane in Colorado, but the new rulemaking states that any well production facility or gas compressor station built after May 1 may only use non-emitting devices. It also requires operators to retrofit devices at older facilities if they plan to undertake large projects that would increase their emissions production.

Industry Requirements

Colorado's Joint Industry Working Group presented the proposal's requirements for existing oil and gas facilities. Group representative Jennifer Biever said current operators will have to submit a company-wide plan on how they intend to reduce or phase out emitting controllers.

"The reason for the company-wide plan is that it affords operators compliance flexibility really to identify those facilities where retrofit of emitting controllers is feasible — both economically and technically — and more effective in achieving reductions of emissions," Biever said.

According to the presentation, operators can reduce the use of emitting controllers by converting them to non-emitting controllers or

by "plugging and abandoning an existing well production facility."

Operators should be able to show significant reductions in the use of emitting controllers by May 2023.

Exemptions

Environmental Defense Fund representatives presented on exemptions to the rulemaking.

"These exemptions are designed to minimize the use of emitting controllers while permitting their use for necessary and reasonable purposes," Sarah Judkins said.

The three exemptions are for emitting controllers:

- necessary for "safety or process purposes";
- used in "temporary or portable equipment"; and
- used as "emergency safety devices or for artificial lift" if located on a distant wellhead.

Unanimous Endorsement

After each group presented, the commission commented and asked for further clarification. Commissioners complimented the proposal, acknowledging how rare it is for stakeholders to reach a compromise of this scope.

"It really is a remarkable achievement that I know took a lot of work. ... As a commissioner, it's really nice to have something come forward with no outstanding issues," Commissioner Curtis Rueter said.

To close, Commissioner Elise Jones, hearing officer for the proceeding, entertained a motion to approve the proposed revisions, which the commission unanimously endorsed. ■

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IRP Details Conn.'s Paths to Carbon-free Future

By Jason York

According to Connecticut *law*, the Department of Energy and Environmental Protection (DEEP) must prepare a biennial assessment of future electric needs and plan to meet them. Since 2012, the state's Integrated Resources Plan (IRP) has taken a holistic look at supply and demand to formulate recommendations for its electricity needs.

A draft of the *latest IRP*, released in December and the public comment period for which closed Wednesday, is Connecticut's first evaluation and identification of pathways to achieve a carbon-free electric supply by 2040, as directed through an executive order from Democratic Gov. Ned Lamont.

Connecticut has made significant investments in clean energy and efficiency programs to put the state on a zero-carbon path. Through competitively bid long-term contracts, state ratepayers currently support more than 600,000 MWh/year of grid-scale renewables and more than 9 million MWh/year of nuclear resources. That is equivalent to nearly 65% of the electric consumption by ratepayers of Eversource Energy and Avangrid, Connecticut's two principal distribution utilities. By 2025, that percentage is expected to increase to 91%, or 24.5 million MWh/year, as newly contracted but not yet constructed, offshore wind and grid-scale solar projects come online.

"The bottom line is that our modeling and our analysis show that a 100% zero-carbon electric supply by 2040 is feasible; it's achievable," Dykes said in a recent interview with *RTO Insider*. "Because of the [resource] investments

that we've already made, we are already well on our way to meeting that target."

She added that upgrades in the transmission system and more proactive planning are "critical" for Connecticut and the entire region "to unlock the potential for additional renewable resources, particularly offshore wind," in the pursuit of decarbonization efforts.

"We're facing a climate crisis; we're running out of time; and we know that urgent action is necessary to reduce emissions and prevent the worst impacts of climate change from occurring," Dykes said.

While the transmission system can support wind and solar, Dykes said the IRP's modeling demonstrates that intermittent resources will be curtailed in each of the pathways. Thus, "we need to act urgently on upgrading our transmission system to unlock the potential for additional renewable resources," Dykes said.

Upgrading the transmission system over the next two decades can reduce the amount of clean energy that will be wasted. Dykes said a scenario-based proactive planning process is needed. "We're going to be plugging in resources in places that the grid has never built out to serve, and at the same time, New England has a terrible track record in terms of paying some of the highest prices per mile for transmission."

Dykes said that Connecticut has been "very successful" with competitive procurements over the last few years. The capital cost of renewables has been falling, a subject of debate during a NEPOOL Markets Committee meeting in October between a stakeholder and a

consultant hired by ISO-NE. (See "Face-off on Offshore Wind," *NEPOOL Debates Parameters for 2025/26*.)

"It tells you a lot about the contrast between competitive markets that states have developed around the procurement for long-term contracts of renewable resources and the administratively determined rules in the ISO's capacity market constructs," said Dykes, a long-time proponent of reforming ISO-NE wholesale markets. "Essentially, in our competitive procurements ... you don't set those kinds of administratively determined rules around bid reviews where we have to get into the business of determining in advance what the cost of solar is or what the cost of offshore wind should be."

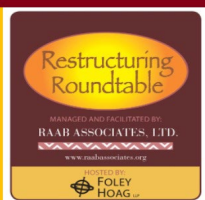
Dykes said that "every single time" Connecticut has run a request for proposals for renewables, "it's been a surprise and a shock sometimes to see the pricing that comes in. ... The technology costs are coming down in shocking ways. ..."

"The competitive designs that states have been using toward these renewables procurements ensure that ratepayers are getting the benefits of seeing those prices coming down," Dykes said. "By contrast ... some of the challenges that we've had with the capacity market construct is that it relies on administratively determined preconditions and rules that in my view have some discriminatory impacts on the ability for different types of resources to clear that market and be counted towards our capacity requirements."

DEEP expects to release the final IRP on March 12. ■

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Zero-carbon Power, TCI-P at Top of Lamont's Priorities

By Jason York

Connecticut Gov. Ned Lamont outlined *three legislative proposals* to address the threat posed by climate change at a virtual press conference Wednesday. They include codifying the state's goal of a zero-carbon electric supply by 2040 and joining the Transportation and Climate Initiative Program (TCI-P) to reduce greenhouse gas emissions from vehicles.

Lamont, joined by Department of Energy and Environmental Protection Commissioner Katie Dykes, state Sen. Christine Cohen, state Rep. Joe Gresko and Connecticut Green Bank CEO Bryan Garcia, said Superstorm Sandy in 2012 was a "wake-up call" for him on the damaging effects of climate change.

"I saw what coastal flooding could do to our communities, what it could do to our homes, what it does to our electric grid," Lamont said.

Dykes said that "the science is clear: Climate change is real; it's human-caused; and it has already altered Connecticut's climate." She said the sea level in Long Island Sound could rise 20 inches by 2050, increasing the frequency of coastal flooding and creating storm surges "on the level of what we saw from Superstorm Sandy" without a significant reduction in carbon emissions. Average temperatures in Connecticut could increase by 5 degrees Fahrenheit by 2050, including a five-fold increase in the number of days above 90 F and a decrease in frost days from 124 to 85 days per year.

Cohen, who represents an area that includes the shoreline communities of Branford, Guil-

ford and Madison, said that if lawmakers "don't provide real solutions for curbing global warming and sea-level rise ... whole neighborhoods will cease to exist because of flooding."

In December, Lamont joined Massachusetts, Rhode Island and D.C. in committing to TCI-P, which aims to cut greenhouse gas emissions from vehicles by 26% from 2022 to 2032 and invest \$300 million per year in cleaner transportation choices and public health improvements. (See *NE States, DC Sign MOU to Cut Transportation Pollution*.)

"We cannot address climate change if we do not put in place a program that can help us invest in clean transportation options," Dykes said.

TCI-P projects to increase retail gas prices in participating jurisdictions by 5 cents/gallon beginning in 2023, assuming fuel suppliers choose to pass down 100% of allowance costs to consumers. Multiple consumer protection safeguards, including a cost-containment reserve, are designed to limit the program's impact on prices at the pump and would kick in at 9 cents/gallon.

"There are folks that have been cherry-picking studies that were done quite a while ago with very skewed assumptions to suggest that the price of gas for consumers would be higher than this," Dykes said. "I don't know what else to say except that those are inaccurate projections."

"We can issue more credits that keep [an increase] at 5 cents and not more than 5 cents,"



Connecticut Gov. Ned Lamont | State of Connecticut

Lamont said. "Maybe it trends up to 9 cents over a period of time; again, we can control that and set those limits, so I think that's worth noting."

Dykes was also asked about the power outages experienced last week in ERCOT, MISO and SPP because of extreme winter weather. She called it "a catastrophic situation," with several million people without electricity in "dangerously cold temperatures."

She added that she is glad that FERC and NERC will be investigating the situation, which is something that Connecticut officials will be following "closely" to ensure that ISO-NE "is appropriately planning" for potentially similar weather events. "Protecting the grid has to be the first priority." ■

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Maine Regulators Open Distribution Grid Investigation

The Maine Public Utilities Commission on Thursday opened an investigation into the design and operation of the state's electric distribution system.

"To address climate change in the years ahead, we will be placing new demands on our electric distribution system, and we must assess how to modernize the grid at the lowest cost for Maine people," PUC Chairman Philip Bartlett said in a statement. "Recent issues related to interconnection of distributed resources highlight both the challenges we face and the urgency of the need for effective planning."

On Feb. 11, the PUC opened a separate investigation into the interconnection practices of Central Maine Power (CMP).

Maine Gov. Janet Mills on Feb. 8 sent a letter to Bartlett asking for the investigation into CMP, saying she was dismayed by reports that the utility would need to upgrade more than 100 substations in order to complete existing interconnection agreements. Mills also asked the PUC to conduct a broader review of the grid to ensure it can handle growth of renewables and distributed energy resources. (See [Lawmakers Chase Affordability in Energy Transition in Maine.](#))



An investigation of Maine's power grid is underway to ensure that renewable energy projects like this solar farm in Rockland can connect to the grid in a timely and cost-effective way in the future. | *Crispian C. Crispian, CC BY-SA 4.0, via Wikimedia Commons*

The PUC gave CMP until last Friday regarding concerns that its recent notices to customers about changes to interconnection costs jeopardizes "hundreds of millions of dollars in investment ... for Maine homeowners and businesses," according to the PUC's notice of filing.

a report about the current design and operation of Maine's distribution grid. It will follow up with a formal investigation so stakeholders can comment on the report's findings. The commission did not provide a timeline for when the report will be released. ■

The commission will retain experts to prepare

— *Jennifer Delony*

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National Grid Explores Hydrogen for Home Heating

Utility Researching Use of Existing Gas Infrastructure

By Emily Hayes

National Grid is participating in research to determine how to convert existing gas networks to support hydrogen that could be used for home heating, Kristin Munsch, the utility's director for regulatory and consumer strategy, said Wednesday.

Hydrogen is a versatile source of energy that presents the opportunity to use existing infrastructure to meet climate goals, Munsch said during a virtual panel event hosted by the Northeast Energy and Commerce Association.

Space and water heating is the second largest source of emissions in Massachusetts, according to data from the Massachusetts Clean Energy Center, and most New England buildings are currently heated by fossil fuels.

Large wind projects, such as those in the U.K. and Europe, are producing an oversupply of energy that can be used for hydrogen production, independent energy market researcher Brad Bradshaw said during the panel discussion. The stranded electrons can be monetized by powering water electrolysis to produce hydrogen, which can then be put in pipelines

for things like steel manufacturing or blending with natural gas.

"It seems to meet a lot of challenges" related to Massachusetts' climate goals, Munsch said.

Because hydrogen is not a new industry, it already has an extensive supply chain, Bradshaw said. Handling the storage and transportation of hydrogen is "done in a well-experienced industry and a safe, economical manner."

Research is now focused on how to "pipe the hydrogen within homes safely and test [hydrogen] with different appliances," he said.

"Several boilers are already manufactured around the world that take in 100% hydrogen to produce heat for homes, so it's not really challenging," Bradshaw said. "It's just new."

Excess solar and wind from grids in New York and Maine can be converted to hydrogen and transported cost effectively in high-capacity compressed tube trailers to places like Boston to help decarbonize the gas system, he said.

In the U.K., where the utility is headquartered, National Grid is researching different "flood rates" of hydrogen to a network of more than

100 residential buildings and commercial office spaces, Munsch said. The utility is learning from colleagues in the U.K. about what kind of pipes to use to transport hydrogen.

"The question now is how does it behave differently in our distribution systems," Munsch said, as New England has "a lot of old pipes."

National Grid has also partnered with the New York State Energy Research and Development Authority and Stony Brook University's Institute for Gas Innovation and Technology to assess the impact of introducing hydrogen to infrastructure in New England.

In New York, National Grid has a proposal pending for a multi use hydrogen production and utilization facility in collaboration with Standard Hydrogen Corp. The renewable natural gas produced will be injected into National Grid's gas distribution system. The facility would also incorporate carbon capture, utilization and sequestration.

Research into hydrogen as a source of thermal energy is a "question of keeping all of our options open" for the anticipated increase in electrification of sectors such as heating and transportation, Munsch said. ■



National Grid is exploring supply chain options for hydrogen that could include using facilities like the one in this rendering to make hydrogen from excess wind power. | Shutterstock

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Consumer Advocates Question Nev. Solar Program

By Elaine Goodman

A plan to build small community solar projects and reduce electric bills for some low-income residents in Nevada is facing pushback from consumer advocates, who object to passing program costs to nonparticipating ratepayers.

The proposed Expanded Solar Access Program is the result of Assembly Bill 465, passed by the Nevada legislature in 2019. The Public Utilities Commission of Nevada has been conducting a rulemaking since mid-2019 to spell out details of the program, which would be run by the state's monopoly electric provider, NV Energy.

AB465 specifies that the cost of the discount for low-income customers must be spread across all of the utility's ratepayers.

But the bill does not contain a similar provision for other costs of the program, according to the Bureau of Consumer Protection (BCP), which is part of the Nevada Attorney General's Office. Yet PUCN's proposed regulation states that "all costs related to the Expanded Solar Access Program are public policy costs that must be charged to all customer classes of an electric utility."

"The only subsidy allowed under Assembly Bill 465 to be charged to nonparticipating customers is that of the low-income discount," Senior Deputy Attorney General Michael Saunders said in a Feb. 16 letter to PUCN. "The Expanded Solar Access Program was intended to be a stand-alone program with its costs covered by participating customers."

The letter reiterated concerns that BCP expressed in written comments last year. And PUCN's regulatory operations staff, which is separate from the agency's decision-making side, have also expressed concerns about spreading program costs other than the low-income discount to all ratepayers.

"This outcome does not seem just and reasonable since remaining ratepayers will receive no direct benefit from this program," Assistant Staff Counsel Shelly Cassity said in a May 29 letter to the commission.

NV Energy did not respond to requests for comment on the Expanded Solar Access Program. A spokesperson for the attorney general's office said BCP could not comment on issues related to rulemaking.

PUCN held a workshop and a hearing last week on its draft regulation for the program.

The commission now plans to release a revised draft, to be followed by another written comment period and hearing.

As outlined in AB465, which was sponsored by Assemblywoman Daniele Monroe-Moreno (D) of North Las Vegas, the Expanded Solar Access Program would include three to 10 community-based solar projects in areas with a concentration of low-income residents. NV Energy would own and operate the solar facilities, which would be connected to the company's distribution system.



Assemblywoman Daniele Monroe-Moreno | State of Nevada

NV Energy would also include at least one utility-scale solar resource in the program. The utility-scale facility is necessary to make the program affordable to residents, NV Energy officials said during hearings on the bill.

Program participants would fall into three categories:

- nonprofits and disadvantaged businesses, including those owned by minorities or low-income residents,
- residents whose income falls below 80% of the area median, and
- residential customers who show that they cannot install their own solar projects because of rental agreements or site constraints.

The program would establish its own electric rates. Low-income residents in the program would be guaranteed a reduced rate. Other participants would have "stability and predictability" in their electric rates, although reduced rates are not guaranteed.

In another provision, the Nevada Department of Employment, Training and Rehabilitation would work with employers and the International Brotherhood of Electrical Workers to create solar job opportunities and a training program.

Break from Tradition

Monroe-Moreno has noted that AB465 is not a traditional community solar program.

In general, community solar programs allow participants to buy or lease part of an off-site solar photovoltaic system. The programs are also known as shared solar or solar gardens. As

of June, community solar projects were found in 39 states and Washington, D.C., according to the National Renewable Energy Laboratory within the U.S. Department of Energy.

Nevada came close to enacting a community solar bill during the 2017 legislative session.

Senate Bill 392, by Sen. Mo Denis (D) of Las Vegas, would have allowed community solar gardens run by subscriber organizations, with individual subscribers receiving a credit on their electric bill for their share of electricity generated by the solar garden.

The legislature passed SB392, but then-Gov. Brian Sandoval vetoed it, saying he was concerned that community solar gardens would operate as small utilities, only without the same level of regulation.

Sandoval was also concerned about the bill's timing. Nevada residents were preparing to vote in November 2018 on the Energy Choice Initiative, which would have moved the state from an electric monopoly to a competitive market. The initiative failed.

AB465 garnered support from organizations including the Sierra Club Toiyabe Chapter, Western Resource Advocates, IBEW and the Nevada State AFL-CIO. Supporters pointed to the bill's environmental and workforce benefits.

Nevada Conservation League representative Kyle Davis said during a Senate committee hearing that although the bill wouldn't create a traditional community solar program, it would be "a step forward, especially for low-income ratepayers."

But some groups opposed AB465.

The Solar Energy Industry Association, a national trade group, objected to the fact that the bill would allow solar projects approved as long ago as 2018 to be included in the program. SEIA said it would prefer that the program add new solar projects.

The Coalition for Community Solar Access shared SEIA's concern. The group also said it wasn't clear how much program participants would save on their electric bills.

Those issues and others "make this bill ... an unnecessary and deeply flawed experiment for the state, especially with tried-and-true best practices to be leveraged from over a dozen other states," CCSA Executive Director Jeff Cramer said in a May 2019 letter to the Senate Committee on Growth and Infrastructure. ■

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Mass. Puts \$10M into EV Rebates for Trucks

By Emily Hayes

The Massachusetts Department of Energy Resources (DOER) last week designated \$10 million in rebates for purchases of medium- and heavy-duty electric trucks.

Purchases of private, commercial and government fleet vehicles made on or after Feb. 16 will be eligible for rebates ranging from \$7,500 for pickup trucks to \$90,000 for tractor trailer trucks. The rebate values will decrease over time based on expected declines in prices of electric vehicles as major manufacturers such as General Motors, Daimler, Peterbilt, Kenworth and Volvo bring electric trucks to the market later this year.

“The expansion of the successful MOR-EV program to include trucks continues the progress we have made in the Commonwealth to reduce harmful greenhouse gas emissions and make clean transportation more financially viable for residents and businesses,” Gov. Charlie Baker said in a news release.

The new subsidies for trucks build on the state’s MOR-EV program, which has offered rebates for EVs since 2014, doling out \$37 million in rebates and incentivizing the purchase of 18,000 EVs.

The Baker administration allocated \$54 million to the program for 2020 and 2021.

“Reducing emissions from medium- and heavy-duty vehicles will help to improve air quality and act as a catalyst as we continue to transition from carbon-intensive transportation options toward cleaner and more environmentally friendly vehicles,” Energy and Environmental Affairs Secretary Kathleen Theoharides said in a statement.

In December, Baker joined a pact with Connecticut, Rhode Island and D.C. to reduce motor vehicle pollution by at least 26%.

DOER Commissioner Patrick Woodcock said the proposal to expand the rebate program to trucks was initially proposed to a group of manufacturers and dealers last fall and amended with feedback.

The department is relying on the manufacturers to make the rebate program, as well as the incremental drop in rebate value, known to buyers, Woodcock said.

The rebate values were based on numbers provided to the state by a local transportation company. The cost of a smaller diesel box truck



Massachusetts is set to see more fleets of service-related electric vehicles like those pictured here following the infusion of \$10 million for the state’s electric vehicle rebate program. | Shutterstock

on the market is about \$55,000, and the electric version is about \$165,000.

Even with the rebate, purchasing a new electric truck is still more expensive. But Woodcock said companies should shoulder the upfront cost for the lower maintenance and fuel costs of EVs.

The trucking and transportation industry is “looking to be part of the Commonwealth’s climate solutions,” Woodcock said.

“Electrification is the future,” and trucking and transportation companies would be “naïve if they didn’t see it,” Kevin Weeks, executive director of the Trucking Association of Massachusetts told *RTO Insider*.

However, a \$90,000 rebate is only doable for “the biggest of the big,” such as the U.S. Postal Service, FedEx and Amazon, Weeks said.

Large tractor trailer trucks cost between \$100,000 and \$150,000, but an electric tractor trailer costs close to \$300,000. Even with the rebate, buyers are still facing \$75,000 or \$85,000 more in costs.

And most electric tractor trailers can only travel up to 300 miles before they need to recharge, which is not sustainable for long-haul trucks that go about 600 miles/day.

The rebate program is “awesome for smaller trucks,” such as those used by USPS, since they only go up and down neighborhood streets, Weeks said.

The specific charging infrastructure large tractor trailers need is not available in the state, he added.

The fast-charging stations in Massachusetts built by companies like Eversource cannot charge semi-trucks, Megha Lakhchaura, director of policy and utility programs for EVBox North America, told *RTO Insider*.

“Trucks charge in a very specific way, and it requires a lot of planning,” Lakhchaura said.

Massachusetts will need to work with utilities to build up the capacity to charge trucks on a large scale and propose a program for companies and site hosts to install charging components, she said.

Programs for incentivizing electric trucks in places like California are effective because the southern part of the state has developed the heavy-duty charging infrastructure needed to support trucks.

Some members of the Trucking Association of Massachusetts purchase about 20 new vehicles per year. In a couple of years, they will purchase two or three EVs in one year, but at the current prices, it is not feasible for them to do so, Weeks said.

“The barriers to entry are still there, but things will change,” he said. “We’re appreciative of the rebate, but I don’t think you’ll see many people jumping at a \$90,000 rebate for tractor trailers in Massachusetts.” ■

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Mass. Transportation Bill Advances Electric Bus Efforts

By Emily Hayes

Massachusetts Gov. Charlie Baker on Wednesday held a ceremonial signing of a \$16 billion transportation bond bill that allocates funding for modernizing the state's transportation system, including the electrification of buses.

"The Transportation Bond Bill builds upon our administration's ongoing commitment to create a 21st-century mobility infrastructure that will prepare the commonwealth to capitalize on emerging changes in transportation technology and behavior," Baker said.

The legislation includes roughly \$5.1 billion to continue modernizing the Massachusetts Bay Transportation Authority (MBTA) and \$50 million for the Complete Streets program to build streets that encourage more walking and biking.

"The MBTA is pleased that the legislature and the governor included funds within the



A model of the new bus facility the Massachusetts Bay Transportation Authority is building in Quincy, which will accommodate 120 battery-electric buses. Construction is set to finish in 2024, but the MBTA is planning to acquire the BEBs in winter 2022. | Massachusetts Bay Transportation Authority

recently enacted transportation bond bill for vehicle electrification," a spokesperson for the

agency said in an email statement. At a January board meeting, the authority presented a bus transformation program that calls for funding to provide battery-electric buses (BEBs) in North Cambridge and Quincy by 2024, if the infrastructure can support it.

Currently, there is a BEB pilot project active on Silver Lane in Boston. A new \$370 million bus maintenance facility in Quincy is designed to accommodate 120 BEBs when it opens in 2024, with room to grow to accommodate future demand.

MBTA estimates it will cost about \$4.5 million to build new bus maintenance facilities needed to electrify the bus system. It will cost about \$100 million to \$130 million to purchase 80 to 100 BEBs to replace diesel buses.

To achieve climate goals, MBTA said a new electrified maintenance facility will be needed every two to three years. The agency also predicts that it will need to budget and plan for the purchase of solely electric buses, instead of the hybrid ones currently in use, at least 14 years before complete electrification.

Systemwide charging infrastructure will also be needed to support the BEB operations, but MBTA did not give a cost estimate for those facilities.

The MBTA plans to purchase the BEBs for North Cambridge and Quincy next winter. Two new grant programs allow construction of designated bus lanes so that buses are not caught idling in traffic in places where homes are only a few feet from the thoroughfares. ■



The Massachusetts Bay Transportation Authority will use funding from a recently signed transportation bill to expand its program to put more battery electric buses, like the Flyer Xcelior seen here, into service. | MTATransitFan, CC BY-SA 4.0, via Wikimedia Commons

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NJ Gov. Unveils Green Transportation Plan

\$100 Million Plan Will Target Disadvantaged Communities

By Jonathan Berr

New Jersey Gov. Phil Murphy, who has made fighting climate change a focal point of his administration, announced last week that the state would invest \$100 million in green transportation projects, many of which target disadvantaged or social justice communities.

The money will come from New Jersey's participation in the Regional Greenhouse Gas Initiative and the state's share of the legal settlement Volkswagen paid after being caught systematically cheating on air quality tests.

Murphy's office provided a breakdown of how the funds will be *allocated*:

- \$9 million in grants for local governments to improve air quality in disadvantaged com-

munities through the deployment of electric garbage and delivery trucks;

- \$13 million in grants for low- and moderate-income towns to reduce emissions through the deployment of electric school buses and shuttle buses;
- \$5 million in grants for equitable mobility projects that will bring electric vehicle ride-hailing and charging stations to Gloucester City, Newark, Trenton and Woodbridge;
- \$5 million in grants for the deployment of fast charging infrastructure at 27 locations;
- \$36 million to reduce diesel and black carbon emissions in social justice communities by electrifying cargo handling and other medium- and heavy-duty equipment in port and



Jane Cohen, New Jersey Office of Climate Action and the Green Economy | New Jersey Governor's Office

industrial areas;

- \$15 million toward New Jersey Transit bus electrification; and
- \$15 million in "flex funding" to further the initiatives.

Murphy, who is up for re-election this year, also signed an *executive order* establishing the Office of Climate Action and the Green Economy. The department will address the impacts of climate change and transition the state to a green economy while making environmental justice and equity a priority. Jane Cohen, currently Murphy's senior policy adviser on environment and energy, will be the office's first executive director.

The Climate Office will also oversee the creation of the New Jersey Council on the Green Economy, which Murphy announced last month in his State of the State Address.

Under the governor's executive order, the council will compile an initial report on its recommendations for developing a green economy strategy, to be delivered within a year. Ed Potosnak, executive director of the New Jersey League of Conservation Voters called the council's creation a "*terrific idea*" that will create "good union jobs that cannot be outsourced."

"Gov. Murphy's announcement today gets us one step closer to realizing the 21st-century sustainable green jobs economy that most New Jerseyans say they want — and the future that we and our partners have been calling for," Potosnak said in a press release. ■



New Jersey is offering \$9 million in grants for deployment of electric delivery and garbage trucks, like this Mack Truck with a Heil body. | Heil

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Study: Long Island has 19.5 GW of Low-impact Solar Potential

By Jennifer Delony

Long Island can support 19.5 GW of new, low-impact solar development, according to a three-year study led by the Nature Conservancy and Defenders of Wildlife.

The potential solar capacity would produce more electricity than Long Island needs, Jessica Price, landscape conservation ecologist for the Nature Conservancy, said Friday in a webinar on the study's findings. "We are not advocating that all that solar needs to be built," she said. "But it illustrates that there are ample low-impact sites available."

The findings are part of the Long Island Solar Roadmap, an effort to advance mid- to large-scale solar power on the island. Low-impact sites, as identified in the study, are rooftops, parking lots and ground-mounted solar on disturbed lands.

The study found that 80% of the viable low-impact sites are on private property. That finding points "to the importance of private

property owners as part of the solution" to building more renewable energy, Price said. "It can't be a government-only solution."

The full report will be released at solarroadmap.org in early March.

Market Barriers

Grid upgrades needed to increase hosting capacity for distributed generation and enable high levels of interconnection will drive up solar project costs, Price said.

The study recommends addressing high project costs by lowering soft costs, such as permitting, Price said data provided in the study also can be used to target grid upgrades to areas with high potential for solar development.

An additional barrier to solar development is limited access to incentives, according to the study. "There is an absence of resources available to those 80% of private property owners that would actually be the host or owners of

these systems," Price said.

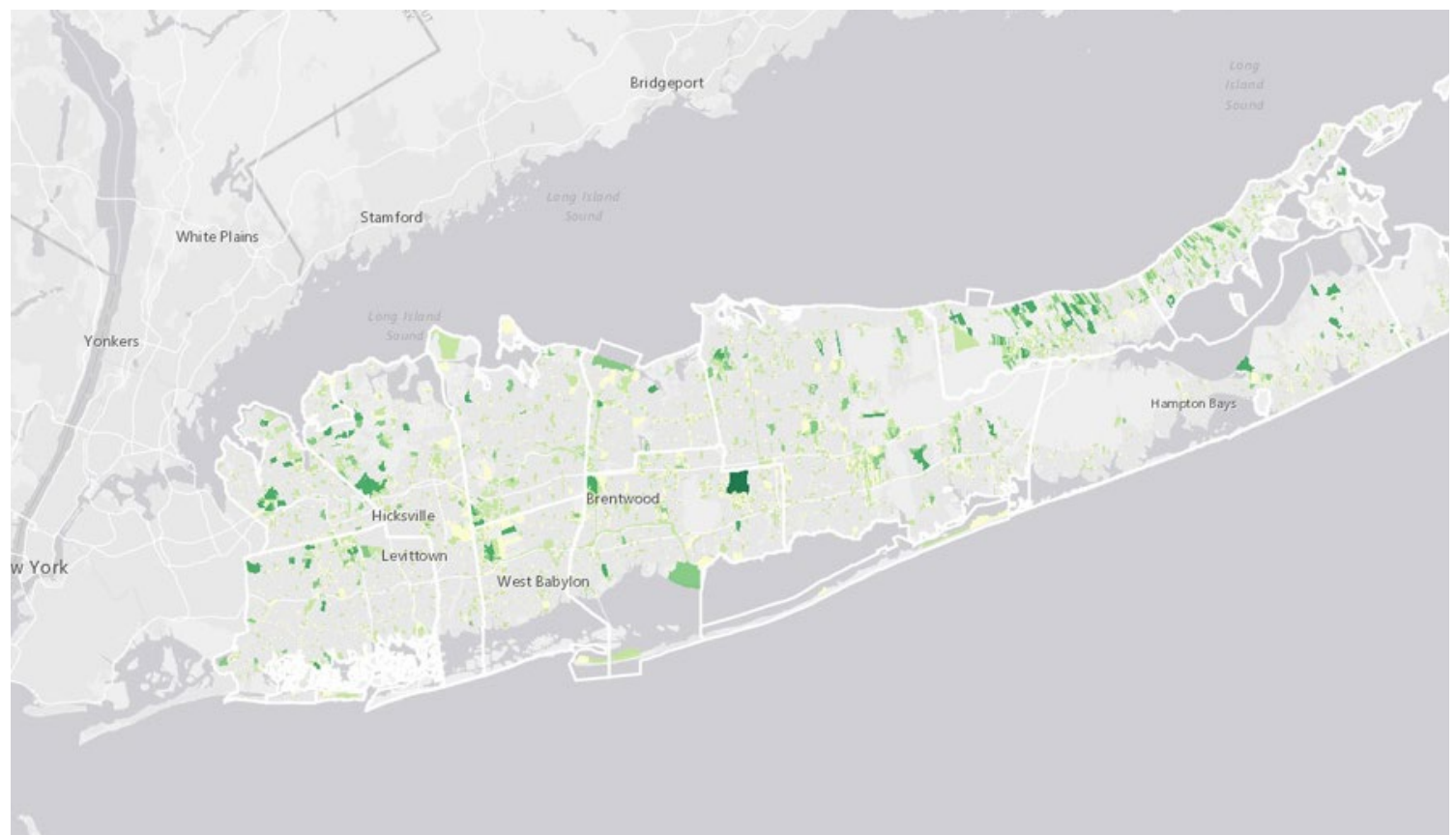
The study suggests that new incentives be created to encourage low-impact siting.

"Rather than being location agnostic, we have some recommendations for how different players can encourage low-impact versus high-impact siting," Price said.

Interactive Map

The Roadmap project included the development of an interactive web-based map that identifies low-impact solar sites on Long Island. The interactive map is available at solarroadmap.org/maps.

The map allows users to click on parcels and see the solar potential by technology type. One parcel along the southern coast in Islip, for example, has the potential to host about 10.3 MW of solar, consisting of 1 to 1.3 MW on rooftops and 9 MW on parking lots. Another parcel at Long Island MacArthur Airport could host 223.5 MW of ground-mounted solar. ■



The Long Island Solar Roadmap project developed an interactive map that identifies areas of opportunity for mid- to large-scale, low-impact solar on Long Island. | [Long Island Solar Roadmap](https://solarroadmap.org)

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NY Needs ZEV Job Training, Strategy, Officials Say

By Michael Kuser

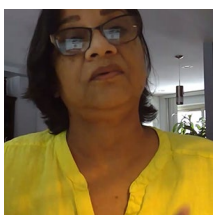
New York’s push to electrify its transportation system will require a “massive” job training effort and public policies sharply focused on putting more electric vehicles on the road, experts said last week.

Rather than adopting a business-as-usual approach to the phase-in of EVs, the state should accelerate the goals expressed in the Climate Leadership and Community Protection Act (CLCPA), said Jared Snyder, deputy commissioner of New York’s Department of Environmental Conservation.

The CLCPA mandates that the state consume 70% renewable electricity by 2030, 100% carbon-free electricity by 2040, and reduce emissions 85% by midcentury from 1990 levels.

“We’re going to be talking about policies that accelerate the transition so that by 2035 we’re seeing 100% electric vehicle sales, with a goal that by 2050 practically all cars are going to be electrified,” Snyder said Thursday at a meeting of the New York Climate Action Council’s transportation advisory panel, which met to discuss zero-emission vehicle (ZEV) job training requirements and adoption strategies that it might recommend to the Council.

A similar transition will be necessary for trucking, he said, “so we need to think about how do we accelerate that workforce transition at the same time,” he said.



Porie Saikia-Eapen, MTA | NYDPS

Electrification of the transportation sector is helping attract young talent into the industry in New York, according to Porie Saikia-Eapen, director of environmental sustainability and compliance for the Metropolitan Transportation Authority, the

agency managing public transportation in the New York City area.

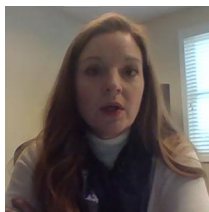
“We are getting a lot of young people interested in coming to work for public transit — environmental scientists coming straight out of college,” Saikia-Eapen said.

Back to Basics

The coming wave of EVs will require “a massive training component” for both technicians and



NYSERDA EV chargers: An employee’s vehicle charging at a GE facility in Schenectady, New York | NYSERDA



Kendra Hems, NY Trucking Association | NYDPS

drivers, said Kendra Hems, president of the Trucking Association of New York.

New York aims to have 850,000 EVs on the road by 2025, up from about 100,000 now, and two million by 2030. The New York State Energy Research

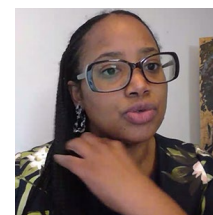
and Development Authority (NYSERDA) runs ChargeNY, a program to support the adoption of EVs with incentives such as rebates, as well as utility and geographic data on vehicle sales and the installation of charging stations.

The state’s Public Service Commission last July approved over \$700 million to install more than 50,000 light-duty EV charging stations throughout the state through 2025. (See [NYP-SC Approves \\$700 Million for EV Chargers.](#))

Internal combustion engine technology has changed so dramatically over the years that the number of computers onboard a vehicle to measure timing and atmospheric conditions and adjust the engine all became a real training issue for technicians, said Steve Finch, senior vice president of the American Automobile Association in western and central New York.

“All those were ‘additive’ technologies, whereas what we’re talking about now with electrification is a total disruption to that industry,” Finch said. He recounted that AAA recently got a call for a Tesla vehicle that had run out of charge on the side of the road, but the tow truck driver didn’t know how to hook up the vehicle to move it.

“We’re not talking about repairs to the engine — he didn’t know how to pick up the vehicle and put it on the flatbed truck to move it,” Finch said.



Kerene Tayloe, WE ACT | NYDPS

Kerene Tayloe, director of federal legislative affairs at WE ACT for Environmental Justice, said the evolution to ZEVs will happen in cycles, so the workforce training strategy for a midcareer worker should be different from how schools

prepare a 10-year-old student for transportation-related work.

“We have to reach children now, because they are going to be the workforce of the future,” said Paul Allen, senior vice president with M. J. Bradley & Associates consultancy.



Paul Allen, M. J. Bradley & Associates | NYDPS

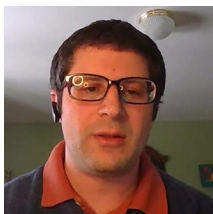
Allen also wrote in the chat area of the webinar that the power industry has an ongoing program with the U.S. military services to bring qualified, highly skilled workers into complex technical jobs — helmets to hardhats — which could be a good source of well-trained midcareer workers for green transportation.

Forward Strategies

Adam Ruder, NYSERDA project manager for

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Adam Ruder,
 NYISERDA | NYDPS

transportation R&D and market development, presented on two strategies to encourage development of the EV market: one for transitioning to 100% zero-emission light-duty vehicles and the other for switching to medium- and heavy-

duty EVs. (See related story, *NY Considers Rulemaking for Medium to Heavy ZEVs.*)

“These are two of the strategies we think will have a great impact on overall transportation emissions, but these alone are not going to achieve our 2030 and 2050 goals,” Ruder said. “We will need contributions from the other policies under consideration, as well as the ones focused on system efficiency and other alternative tools.”

The role of utilities elicited differing opinions on the proper parameters for utility engagement.

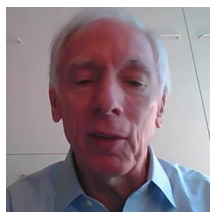
New York’s six local distribution companies

split over whether to adopt “passive” or “active” approaches to managing EV charging in proposals submitted to the PSC in December. (See *NY Utilities Diverge on Managed EV Charging.*)

As a general rule, Allen said, increased electric revenues actually depress electric rates for all ratepayers, so the net-net economic impact of moving to electricity as a fuel for transportation is going to tend to lower electric rates across the state for all ratepayers, “especially given the way the PSC is likely to look at the issue.”

Some of the debate about the role of utilities is policy-related, said Elgie Holstein, senior director for strategic planning at the Environmental Defense Fund.

“We’ve been approached by national organizations representing service stations, dealers, and also that rather large group that represents convenience store operators, and



Elgie Holstein, EDF | NYDPS

they don’t want electric utilities involved in this business at all,” Holstein said. “They don’t want electric utilities investing in charging stations, and they want federal prohibitions that prevent it. I don’t know where that’s headed, and I don’t think we’re going to support that, but they’re trotting out all kinds of claims that costs to consumers and ratepayers will go up if electric utilities are allowed into this space.”

The role of the utilities is not necessarily owning charging stations, but in New York, that role is already being defined through the make-ready order that was passed in May 2020 by the PSC, Ruder said. (See *NYPSC Launches Grid Study, Extends Solar Funding.*)

He said the upgrades are necessary for reliability purposes “and for ensuring that there is a managed charging capability.”

“If someone wants to use electricity, the utilities in this country have an obligation to serve them. I’m aware of what these national organizations are saying, and I just think they have their facts wrong in many instances,” he said. ■

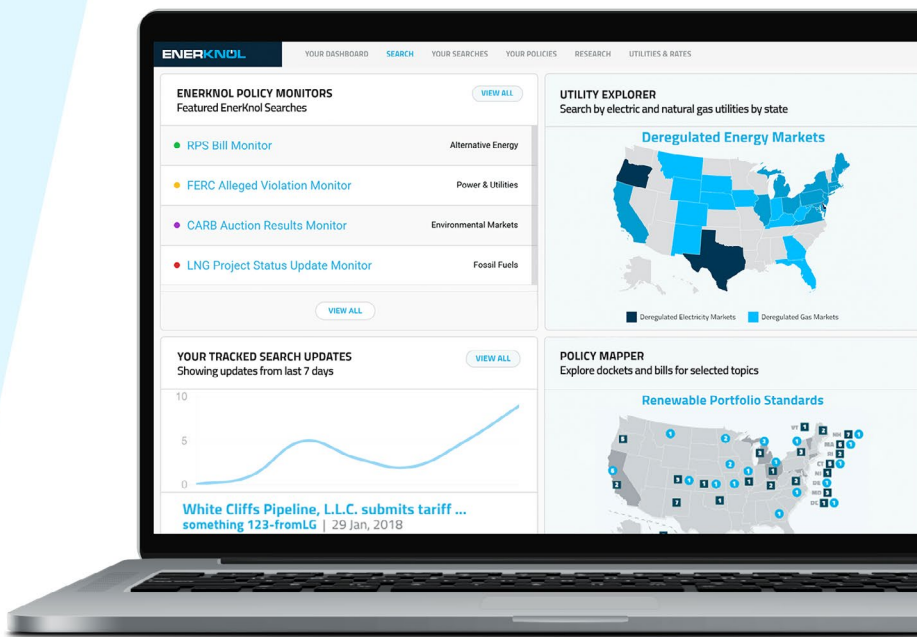
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NY Considers Rulemaking for Medium to Heavy ZEVs

By Jennifer Delony

New York state hopes to adopt medium- and heavy-duty zero-emission vehicle (M-HD ZEV) standards by the end of this year.

The New York State Department of Environmental Conservation (DEC) on Wednesday presented its plan for a rulemaking on the standards in a session with stakeholders. The rulemaking would build on the state's *commitment* last year to address M-HD emissions through coordinated action with 14 other states.

Jeff Marshall of the DEC's Air Resources Board said the department anticipates publishing a proposed rulemaking by June and adopting a final rule by December. Under that timeline, he said, the rule would be effective for the 2025 vehicle model year, which can start as early as January 2024.

New York would adopt California's M-HD ZEV standards, also known as advanced clean truck (ACT) standards, under existing New York regulations on emission standards for motor vehicles. The M-HD ZEV standards are similar to a light-duty ZEV program already in effect in New York.

The Clean Air Act allows states to adopt California's more stringent standards instead of federal standards. Marshall said that New York first adopted the California motor vehicle emissions program starting with the 1992 model year for light-duty vehicles. The new rulemaking would expand on several iterations of standards New York has adopted since then.

Last year, New York signed a multi state M-HD ZEV memorandum of understanding that suggested states consider adopting California's ACT standards. The DEC also plans to add to the rulemaking California's omnibus heavy-duty low oxides of nitrogen (NO_x) standards and Phase 2 greenhouse gas standards, which advance the M-HD emissions reductions originally set by the federal heavy-duty national program, or Phase 1 GHG standards.

ACT

The ACT standards have an original equipment manufacturer annual sales requirement that ensures car makers are placing a target number of vehicles for sale in New York each year. Marshall said that the sales requirement increases annually, with a goal of having 100% ZEV in the applicable vehicle classes by 2045. Manufacturers can earn credits for vehicles

that comply with the regulations and use those credits for flexibility on future requirements.

In addition, the standards have a one-time, large entity reporting requirement for organizations that meet specific M-HD ownership criteria. Those entities include businesses with more than \$50 million in annual revenue and at least one M-HD vehicle as well as state and local governments with at least one M-HD vehicle. The one-time report submitted by the covered entities would provide the DEC with information on existing use cases and gaps in EV infrastructure to inform future rulemakings, Marshall said.

Omnibus Standards

The omnibus heavy-duty low NO_x standards that the DEC is considering apply to exhaust emissions for vehicles over 10,000 pounds with heavy-duty diesel engines. They would set heavy-truck NO_x emissions at 0.05 grams per brake horsepower-hour (g/bhp-hr) through model year 2026 and 0.02 g/bhp-hr in model year 2027. The standards also set heavy-truck particulate matter emissions at 0.005 g/bhp-hr starting in model year 2024.

Useful life and warranty requirements are included in the omnibus standards.

"Diesel engines last a long time, and you want the emission control portion of the engine to last a long time as well," James Symon of

the DEC Air Resources Board said during the stakeholder presentation. "A warranty would ensure that the engine emission control system is free from defects and make sure that the equipment is durable and lasts throughout the useful life of the vehicles."

Phase 2 Standards

The Phase 2 GHG standards that the DEC also plans to add to the rulemaking are based on California's version of the federal Phase 2 standards. The increased M-HD emissions reductions under the federal Phase 2 GHG standards apply through model year 2027 and vary by vehicle type.

Symon said that while California's standards are aligned with the federal standards, they include a group of additional stipulations. California's standards include, for example, a credit adjustment to incentivize use of low-global-warming-potential refrigerants and advancements in minimum ranges for plug-in-hybrid electric vehicles.

Comment Period

Although the DEC is not in a formal comment period for the planned rulemaking, Marshall said it is seeking input from stakeholders on the potential regulations. He encouraged interested parties to *submit* comments by March 10. ■



A potential rulemaking from New York environmental regulators would address emissions from medium- and heavy-duty vehicles like the one seen here. | Shutterstock

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NY Considering IRPs for Gas Utilities

Regulators Seek to Balance Infrastructure Needs with Climate Goals

By Jennifer Delony

New York regulators have proposed long-term natural gas planning procedures that could begin to address how utilities balance infrastructure needs with the state's greenhouse gas reduction goals.

The New York State Department of Public Service (DPS) on Feb. 12 released a proposal to require that the state's 11 local distribution companies (LDCs) file integrated resource plans every three years to supplement annual winter readiness reviews (20-00652/20-G-0131).

The IRPs would be a continuously updated model that considers load, peak demand and costs and investment opportunities for traditional natural gas solutions and for alternatives. Central to the proposal are requirements that the LDCs include "no-infrastructure" options and nonpipeline alternatives to address market demands and system needs.

According to the proposal, no-infrastructure options would include a mix of utility-sponsored demand reduction measures and contingency solutions, such as compressed natural gas or peaking services. In addition, utilities would need to improve infrastructure alternatives, such as energy efficiency, demand response and electrification.

"A comprehensive gas planning process is essential for protecting New Yorkers and ensuring they have the natural gas infrastructure they need and minimizing what they don't," said John B. Rhodes, chair of the state Public Service Commission, which will rule on the proposal. "It's critical to ensuring reliability, keeping costs down and advancing State clean energy policies while combating climate change."

A coalition of clean energy advocates criticized the proposal, saying in a press [statement](#) that it does not provide clear metrics for gas reductions or address the needs of environmental justice communities, as required by New York's Climate Leadership and Community Protection Act (CLCPA).

Some gas utilities in the state have placed a hold on new service connections, citing supply constraints. Those constraints, however, are not going to get any easier under CLCPA targets, and they are leading to customer hardships, according to DPS. (See [Study: No Silver Bullet for Fossil-Climate Legal Tension](#).)

In a March 2020 order initiating a *proceeding* on gas planning procedures, DPS said that gas planning has not "kept pace with recent developments and demands on energy systems." The gas planning proposal, released as part of that DPS proceeding, seeks to address multiple, conflicting priorities.

DPS said that utilities need to maintain reliability while adopting improved planning practices to meet current customer needs and minimize infrastructure investments to avoid stranded costs under the goals of the CLCPA.

Michaela Ciovacco, an organizer with New Yorkers for Clean Power, applauded a requirement in the proposal for modeling gas infrastructure investment costs based on fully depreciating them by 2050. Ciovacco said the next step would be to specify when gas infrastructure should be eliminated altogether.

"Without bolder signals that New York is phasing out gas, energy efficiency and clean heating solutions like heat pumps will not be scalable to reach our state's energy and environmental goals," Ciovacco said.

New Service Moratoria

DPS on Friday also released a proposal on how utilities impose moratoria on new service connections. The *proposal* would require LDCs to attempt to offset gas demand through energy efficiency and demand response.

"Moratoria impose significant hardship on customers, and for that reason are a last resort, to be avoided and mitigated to the maximum extent practical," staff wrote in the proposal, which would ensure consumers have notice of the need for such measures and when they would be implemented.

National Grid's Brooklyn Union Gas found itself at odds with Gov. Andrew Cuomo in 2019 when the company issued a moratorium on new gas hook-ups that it attributed to supply concerns. The company resumed hook-ups under a settlement with the PSC. (See [Online Protesters Reject NY Gas Supply Plans](#).)

Filing Requirements

The gas IRP process would include stakeholder engagement through technical conferences, comment periods and public meetings.

Each utility's plan would include a demand forecast with a 20-year horizon, with peak day, peak hour and annual load projections. A supply forecast covering the same 20-year



A proposal for modernizing natural gas planning in New York state could shift some gas investments to renewable heating, such as the heat pump seen here. | Shutterstock

horizon would identify the supply portfolio for everything from pipeline contracts to contingency solutions such as compressed natural gas and demand-side resources such as electrification.

Proposals for new gas pipelines would be allowed within the long-term planning process, but DPS said they should be screened against non-pipeline alternatives. New pipelines that address immediate threats to reliability would be exempt from that screening process.

The proposal calls for "novel approaches" to building the supply portfolio, for example, peak pricing or payments for electric options that reduce gas demand. DPS said utilities should look for market examples of "imaginative solutions to demand-supply gaps," and identify available renewable natural gas from landfills, wastewater treatment and anaerobic digestion.

DPS acknowledged that while utilities have expressed interest in renewable gas alternatives, "more work needs to be done to specify the environmental, and perhaps other, standards that should be applied to nontraditional methane to qualify a source as 'renewable gas.'"

As part of its proposal, DPS invited interested parties to propose renewable gas standards in the gas planning proceeding for future commission consideration.

DPS also proposed establishing a best practices working group to calculate the "avoided cost of gas" for comparison with energy efficiency and other purposes. The working group would be open to interested parties but would also include state gas utilities, DPS staff and NY-SERDA.

A stakeholder *forum* is scheduled for 1 p.m. March 25 to discuss the two proposals.

Initial comments on the proposals are due on May 3, with reply comments due June 4. ■

Counterflow

By Steve Huntoon

The Mess in Texas

By Steve Huntoon



Nobody outside our industry understands our industry. And we ourselves see through a glass, darkly.

So with the tragedy in Texas (more specifically ERCOT, which is 90% of Texas' load), there are plenty of politicians and talking heads spinning

what happened and who or what is to blame. They're mostly wrong.

There are two things not to blame. And two things to blame. Please let me explain.

Thing No. 1 not to Blame: Wind Generation

Yes, there is a lot of wind in ERCOT: around 30,000 MW. And yes, wind is intermittent.

That's why ERCOT assumes that only a small fraction of maximum wind generation will be available when needed. The amount of available wind that ERCOT assumed this winter is 7,070 MW.¹ And ERCOT ran a sensitivity for low-wind output that assumed 5,279 of that 7,070 MW would not be available, leaving 1,791 MW available.

Now let's look at what actually happened. The chart above, "ERCOT Load vs. Actual Wind Output,"² shows that actual wind generation (the right vertical axis, in megawatts) during the Feb. 11-18 period had only two brief dips below the low-wind sensitivity of 1,791 MW.

So wind generation is a bit player in this tragedy.

Thing No. 2 not to Blame: Load Forecast

In the fall ERCOT forecasted an extreme weather winter peak load of 67,208 MW.³ Now let's look at the same chart showing ERCOT load during Feb. 11-18 (this time the left axis). The peak load was 69,222 MW, at 8 p.m. on Feb. 14.⁴ This is only 2,000 MW more than the forecasted extreme weather peak load, and this forecasted peak was exceeded for only five hours.

Now to complete the picture, we need to recognize that early in the morning of the next day, Feb. 15, ERCOT began shedding load. So we would need to add back load shed in order to simulate unrestricted load. The load shed



ERCOT load vs. actual wind output Feb. 11-18 | ERCOT

began at 10,500 MW at 1:25 a.m., and grew to 16,500 MW later that day.⁵ If you look at the chart and envision the addition of the load shed, you'll see that the unrestricted load does not exceed the peak at 8 p.m. on Feb. 14 of 69,222 MW.⁶

So the load forecast is also a bit player in this tragedy.

Thing No. 1 to Blame: Thermal Generation Maintenance Outages

Now we'll discuss the real culprits: thermal generation (gas, coal and nuclear) or, more accurately, the lack thereof.

Two things went wrong with thermal generation: maintenance (planned) outages and forced (unplanned) outages.

To understand what happened with the first thing, please look at the chart "Seasonal Risk Scenario,"⁷ (next page) which was prepared by the NERC in November 2020 from data provided by ERCOT. This is a "waterfall" chart starting with gross winter resources on the left side, and then making adjustments to arrive at expected net resources relative to extreme winter peak demand on the right side. As you can see, ERCOT forecasted an expected operating reserve of 2.3 GW under extreme conditions.⁸

If you look at the second bar from the left,

ERCOT forecasted 4.1 GW of "typical maintenance outages." Here's the problem: ERCOT approved 14 GW of maintenance outages for this period,⁹ about 10 GW more than it had forecasted.

This appears to be grid operator error.

Thing No. 2 to Blame: Thermal Generation Forced Outages

Now to thermal generation forced outages. Please look at the same chart, this time the third and fourth bars from the left. The third bar shows "typical forced outages" for thermal generation of 4.5 GW, and the fourth bar shows "derates" (outages) for "extreme conditions" for thermal generation of another 4.5 GW. The total is 9 GW, which is the forced outages for thermal generation under extreme conditions.¹⁰

Actual thermal generation forced outages: about 18 GW.¹¹ So actual forced outages were 9 GW more than ERCOT's extreme conditions scenario.

To recap, there were 10 GW of excess maintenance outages and 9 GW of excess forced outages, for a total of 19 GW in unanticipated thermal outages, in line with the necessary load shed of 16.5 GW.

The Why

As I said earlier, the excess maintenance outag-

Counterflow

By Steve Huntoon

es appear to be grid operator error.

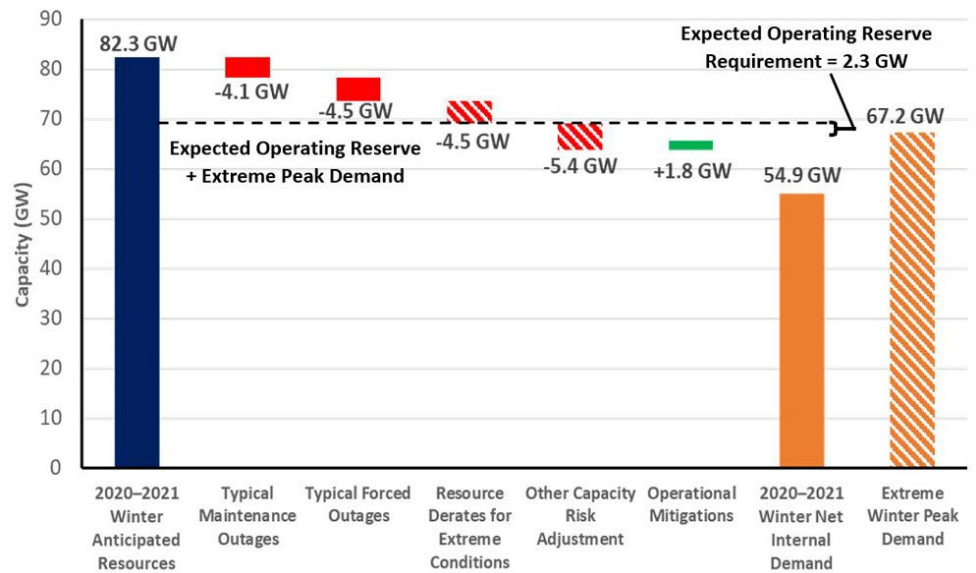
But what about the excess forced outages? Extreme winter conditions regularly occur around the U.S. and the world without catastrophic loss of electric generation.

ERCOT has a market design that assumes that as long as wholesale prices are unlimited, supply and demand will always “clear” — basically equalize. New resources will be built and upgraded in anticipation of occasionally getting very high prices. And existing resources would incur new capital costs in order to receive those very high prices occasionally.

The problem has always been that the needed high prices occur rarely — like every 10 years — when they max out at \$9,000/MWh, 360 times a typical wholesale price of \$25/MWh. Who would finance and build needed resources and their winterization on such a GameStop bet? And when such prices do occur, the political, regulatory and market fallout can be staggering.¹²

Because of these real-world limitations, grid operators like PJM have adopted a hybrid market structure: a capacity market to assure that adequate resources will be available when needed, and an energy market that matches supply and demand on a least-cost basis every hour.

A capacity market spreads the needed compensation to maintain, build and secure ade-



Texas RE-ERCOT Seasonal Risk Scenario | NERC

quate supply resources over every day, month and year instead of requiring speculation over a burst of revenue that happens maybe once every 10 years. And it penalizes any resource that does not perform when needed. The cost to customers is spread over time instead of unpredictable price surges maybe every 10 years.

It's a form of insurance: You don't need it until you need it.

As *The Economist* observed:¹³

“Perhaps most important, the state [Texas] does not have a ‘capacity market’ to ensure that there was extra power available for surging demand. Such systems elsewhere act as a sort of insurance policy so the lights will not go out, but it also means customers pay higher bills.”

Let me close by wishing the best to the good people of Texas, and the hope that we all learn the right lessons from this tragedy. ■

¹ <http://www.ercot.com/content/wcm/lists/197378/SARA-FinalWinter2020-2021.xlsx>, page 2.

² http://mis.ercot.com/misdownload/servlets/mirDownload?mimic_duns=000000000&doclookupId=759433704, page 4.

³ Same as footnote 1.

⁴ http://www.ercot.com/content/cdr/html/20210214_actual_loads_of_forecast_zones

⁵ ERCOT news releases, <http://www.ercot.com/news/releases>.

⁶ A Rice University atmospheric scientist estimated the unrestricted load at about 70,000 MW. <https://www.popsi.com/story/environment/texas-power-outages/>. The consultancy Enverus forecasted peak load on Feb. 15-16 of 66,000 to 69,000 MW in a Feb. 12 webinar. <https://www.enverus.com/blog/trading-and-risk/volatility-ahead-freezing-cold-sends-u-s-power-prices-higher/>, at 6:20. The U.S. Energy Information Administration reports that ERCOT forecasted some hours above 70,000 MW. <https://www.eia.gov/todayinenergy/detail.php?id=46836>

⁷ https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_WRA_2020_2021.pdf, page 27.

⁸ Wood Mackenzie points out that ERCOT does not combine extreme conditions of high thermal outages and low wind when comparing to extreme winter peak load.

⁹ <https://www.woodmac.com/news/editorial/Breaking-down-the-texas-winter-blackouts/full-report/>. Wood Mackenzie also reports that in the week before the storm hit, ERCOT tried to recall some of this generation but was not successful in doing so. Although Wood Mackenzie described all 14 GW as “offline for maintenance,” it is possible that some of that were forced outages, in which case that portion should be added to excess forced outages discussed in the next section. ERCOT apparently does not have the literal power to reject planned outage requests submitted more than 45 days in advance, but it is difficult to believe that a generator would insist on its timing if ERCOT advised that system reliability would be denigrated.

¹⁰ Wood Mackenzie points out that ERCOT does not combine extreme thermal outages and the low-wind sensitivity when comparing to extreme winter peak load and that, if ERCOT had done so, it would have shown a negative operating reserve of 4 GW.

¹¹ Wood Mackenzie reports that total thermal outages the morning of Feb. 15 went from the 14 GW of maintenance outages to 32 GW, the difference being 18 GW of forced outages. A chart stacking forced outages on top of maintenance outages is in an article by Enverus here, <https://www.enverus.com/blog/trading-and-risk/ercot-power-grid-outage-what-went-wrong/>.

¹² <http://www.energychoicematters.com/stories/20210218aa.html>; <https://www.vox.com/2021/2/20/22292926/texas-high-electric-bills-winter-storm-griddy>.

¹³ <https://www.economist.com/united-states/2021/02/17/the-freeze-in-texas-exposes-americas-infrastructure-failings>

FERC/Federal News



Glick Hits 'Refresh' at 1st FERC Open Meeting

Commission Issues New Gas Policy NOI; Will Review RTO Capacity Markets

Continued from page 1

information remain the same:

- the reliance on precedent agreements to demonstrate project need, and how contracts with pipeline affiliates should be treated;
- landowner interests and the use of eminent domain;
- the evaluation of alternatives and environmental effects under NEPA and the Natural Gas Act; and
- the efficiency and effectiveness of the commission's certificate processes.

But FERC also wants comments on another broad topic: "the commission's identification and addressing of any disproportionately high and adverse human health or environmental effects of its programs, policies and activities on environmental justice communities and the mitigation of those adverse impacts and burdens."

FERC explained that environmental justice communities include those of color and low income, which are particularly vulnerable to

pollution and the effects of climate change.

Glick gained unanimous support for the new NOI, comments on which are due 60 days after publication in the *Federal Register*, though Commissioner James Danly's was tepid.

"I, for one, don't believe there is any need whatsoever to revisit our certificate policy," Danly said. "But there's certainly nothing legally infirm about the commission examining its policies and asking questions. I don't have any particular point to make about the substance of the NOI other than to say that it's obviously rather contentious, and I will likely oppose most of the initiatives that the chairman is likely to embark upon."

But Danly also praised Glick for seeking his input and incorporating his requested edits, even though he knew that he did not support the effort.

Next Chapter on RTO Capacity Markets

FERC on Thursday also turned the page in the saga of electricity capacity markets, ending several proceedings while also promising to take a new look.

The meeting marked the end of one of the

most contentious issues at FERC over the past few years, PJM's minimum offer price rule (MOPR), with the commission vacating the infamous Footnote 134 ([EL16-49-006, et al.](#)).

FERC in October accepted PJM's compliance plan to expand the MOPR to include new state-subsidized resources. In accepting the compliance filing, the commission also clarified that resources procured in state-directed default service auctions are not subject to the expanded MOPR. However, a footnote in the order caused confusion among stakeholders, leading to a rehearing request from several generating companies who said the footnote's language conflicted with that of the order itself.

On Thursday, the commission said it agreed and vacated the footnote.

Danly dissented; at his last meeting as chair last month, he had proposed issuing an order that his colleagues, including predecessor Neil Chatterjee, rejected, saying it would only cause further confusion. (See [FERC Ends Trump Era with a Busy Agenda.](#))

"I believe that FERC has both the right and the obligation to protect their jurisdictional markets from the price-suppressive effects of state policies," Danly said. "I think that to have anything but a bright line against the participation of subsidized resources is simply an error and a dereliction of our duty to keep the markets properly insulated from the effects of those policies. ... To vacate [Footnote 134] now ... imperils the integrity of the market and also does not honor the earlier decision that the commission made."

Similarly, FERC partly backed off an order in NYISO's buyer-sider mitigation rules proceeding, ruling that commercial demand response resources are exempt from the rules. (See related story, [FERC Backtracks on NYISO BSM Exemptions.](#)) The commission also ended its long languishing docket on grid resilience, with Glick saying the issue was best handled regionally. (See related story, [Glick Eyes New Standards Following Texas Outages.](#))

But Glick also announced the commission would hold a series of technical conferences on modernizing capacity market design, beginning with PJM's next month and continuing with ISO-NE and NYISO. After that, the commission will examine modernizing energy and ancillary services markets. ■



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CAISO/West News

CAISO Speeds Rule Changes to Avoid Shortfalls

Summer Blackouts Prompted Market Enhancements Initiative

By Hudson Sangree

CAISO issued a draft final proposal for its summer readiness market enhancements initiative on Thursday, just three weeks after presenting a straw proposal in the form of a slide deck — not the usual written plan — because of what it said were time constraints.

The ISO held a virtual meeting Monday to discuss the draft final *proposal* and is pushing ahead to have the Board of Governors approve it before the end of March, with implementation scheduled for June 1. Passing a stakeholder initiative that quickly shaves at least a year off the usual deliberative process.

The extraordinary speed with which CAISO is advancing the initiative stems from last summer's energy emergencies, including the rolling blackouts it ordered in August, and its need to avoid further capacity shortfalls this summer. (See *CAISO Advances Summer Readiness Plan*.)

At the start of Monday's *meeting*, COO Mark Rothleder made an impromptu speech asking stakeholders to understand the urgency of the situation and the shortened timeline that has left some frustrated. He said CAISO management has taken stakeholder concerns seriously but must keep moving forward as expeditious as possible.

"These are very important and, in some cases, contentious issues that we're grappling with," Rothleder said. "I understand that not everybody is going to like where we landed ... but I want to assure you that we have tried to balance as much as we could under the time frame for this summer. What we're proposing here is really coming to the limits of our ability to execute and implement for this summer."

The plan responds largely to a root-cause analysis of the state's Aug. 14-15 blackouts, which identified problems such as transmission constraints, questionable exports from the ISO during tight supply conditions and market practices that undermined supply. (See *CAISO Says Constrained Tx Contributed to Blackouts*.)

The initiative's proposed enhancements focus on the often-arcane market practices that CAISO determined interfered with resource adequacy. Its goals include meeting load in the ISO's balancing authority area this summer, providing incentives for supply during tight system conditions, and "equitably [balancing] the reliability of serving CAISO ... load with



CAISO is trying to prevent shortfalls after solar power wanes in summer heat waves. | Shutterstock

the reliability of exports, while providing open access to the CAISO transmission system."

The plan includes measures dealing with export and wheeling priorities such as using the ISO's residual unit commitment process to distinguish between high-priority and low-priority exports. It also proposes modifying the scheduling priority of wheel-through self-schedules across the CAISO balancing authority area so they have equal priority with high-priority exports.

The plan addresses issues related to CAISO's Western Energy Imbalance Market, including upgrades to resource sufficiency tests intended to prevent participants from "leaning" on the market when they do not have sufficient supply.

"CAISO proposes to enhance the resource sufficiency evaluation by making ... changes to its bid range capacity test that will account for resource derates and rerates, ensure imports represented through mirror resources are not double counted [and] include load uncertainty within each balancing authority area's bid range capacity requirement," the draft final proposal says.

Sticking to Principles

Market incentives for imports during tight system conditions, including provisions for make-whole payments for real-time imports, also are part of the plan.

Making sure that storage resources maintain a

minimum state of charge is another plan component. Storage of solar power is essential for CAISO to meet demand in heat waves during the net peak, as the sun sets but demand remains high in the early evening. The August blackouts and close calls over Labor Day weekend occurred in the net peak.

There are currently 550 MW of storage connected to CAISO's grid but 1,800 MW are expected by summer.

Rothleder and others said several items had been removed or scaled back in response to stakeholder comments, including deleting an item that would have made system market power mitigation part of the proposal. But the time for further changes is ending, he said.

"We have to start preparing for this summer, and we have to balance things out, and we have to be principled about what we're doing here," Rothleder said. "We believe this is a fair and an appropriate approach for this summer. We understand that there may be some additional things that people would want to do if we had more time. We are open to that for the future, but we've got to start moving in the direction of implementing these things."

A separate resource adequacy enhancements *initiative* is advancing on a similarly fast track, with a meeting scheduled Tuesday on a draft final proposal.

The EIM Governing Body is scheduled to take up the plan on March 10 followed by the ISO's Board of Governors on March 24-25. ■

ERCOT News



With Crisis Behind it, ERCOT Now Faces the Music

Investigations, Hearings Begin this Week for Texas Grid Operator

Continued from page 1

night, the Public Utility Commission, which has regulatory oversight of ERCOT, said it was launching an investigation into the factors that, combined with the “devastating winter weather,” disrupted the flow of power to millions of Texas homes.

Texas Attorney General Ken Paxton earlier Friday *announced* his own investigation into the power outages and the prices that spent days at ERCOT’s scarcity cap of \$9,000/MWh. Paxton has requested ERCOT and 11 other entities hand over documents that show communications between them.

“We will get to the bottom of this power failure, and I will tirelessly pursue justice for Texans,” Paxton said in a statement.

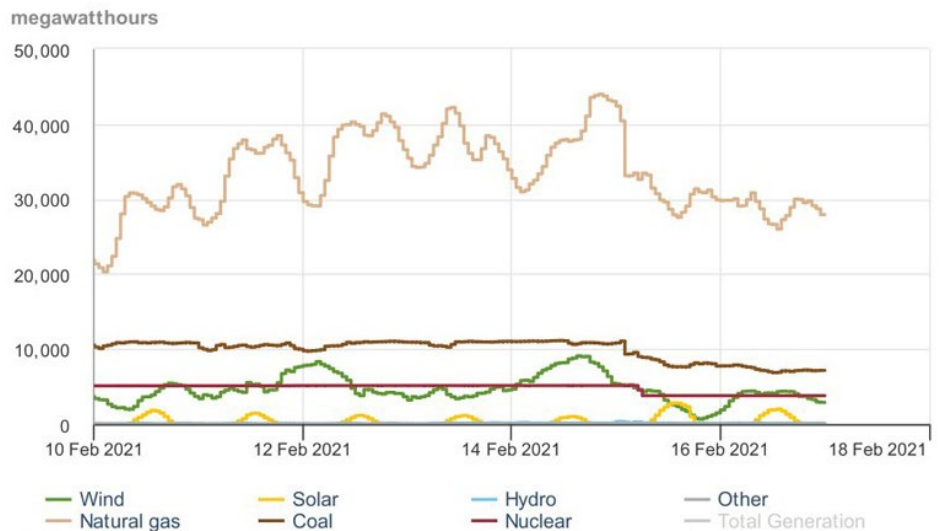
ERCOT, AEP Texas, Calpine, CenterPoint Energy, Griddy Energy, La Frontera Holdings, Luminant, NRG Texas Power, Oncor Electric Delivery, Panda Sherman Power, Temple Generation I and the Texas-New Mexico Power Co. have until March 15 to reply to the AG’s office.

U.S. Speaker Nancy Pelosi has indicated the House of Representatives will look into ERCOT’s response. Sen. Joe Manchin (D-W. Va.), chair of the Senate Energy and Natural Resources Committee, has promised to do the same with his committee. The Texas Democratic and Republican delegations sent separate letters to the grid operator asking how it anticipated demand and why it waited to announce outages.

In addition, FERC and NERC have *announced* a joint inquiry into the grid’s operational issues in the Midwest and South as the storm rolled through. (See related story, [Glick Eyes New Standards Following Texas Outages.](#))

“There will be a lot of review and determina-

Electric Reliability Council of Texas, Inc. (ERCOT) electricity generation by energy source 2/10/2021 – 2/17/2021, Central Time



ERCOT issued an operating condition notice Feb. 8 warning generators to prepare. | ERCOT

tion afterward, and there should be. We don’t want to see this happen again,” Magness said during one of the daily briefings ERCOT held last week.

The lack of winter weatherization has emerged as the primary suspect for the massive generation shortfall that led ERCOT to call for rotating outages after sub-zero temperatures knocked almost 10 GW of power — most of it thermal — offline during the early-morning hours of Feb. 15.

Without as much as 45 GW of generation — about 40% of its capacity — to work with, staff had to ask for as much as 20 GW of load to be taken offline. With transmission service providers unable to rotate the outages, some customers’ outages lasted more than 80 hours.

Magness stood by his operators and said the situation could have been much worse without their quick action.

“We were seeing generators coming off [the grid] in rapid succession,” he said. “Our frequency went to a level where, had the operators not reacted quickly enough, it could have been catastrophic.” (See [ERCOT: Grid was ‘Seconds and Minutes’ from Total Collapse.](#))

A postmortem following similar weather and rotating blackouts in 2011 identified inadequate winter weatherization as one of the major issues leading to the outages. Texas Comptroller Glenn Hegar, then a state senator, drafted [Senate Bill 1133](#), requiring the state to track and report how well prepared the Texas Interconnection is for extreme weather. The PUC filed that [report](#) in 2012.

“We must have the necessary processes and procedures in place to ensure that the burden of such drastic weather events does not risk the health and safety of Texans in the future,” Hegar wrote in an [opinion piece](#) published Sunday. “The outages represent a failure to meet our duty to Texans and a black eye that our economy cannot afford.”

FERC and NERC issued a similar [report](#) that recommended generators winterize their equipment, including insulating pipes. “Many generators failed to adequately apply and insti-

Feb 08 2021
18:53:55 CST

At 17:15, ERCOT is issuing an OCN for an extreme cold weather system approaching Thursday, February 11, 2021 through Monday, February 15, 2021 with temperatures anticipated to remain 32°F or below. QSEs are instructed to: Update COPs and HSLs when conditions change as soon practicable, Review fuel supplies, prepare to preserve fuel to best serve peak load, and notify ERCOT of any known or anticipated fuel restrictions, Review Planned Resource outages and consider delaying maintenance or returning from outage early, Review and implement winterization procedures. Notify ERCOT of any changes or conditions that could affect system reliability.

ERCOT issued an operating condition notice Feb. 8 warning generators to prepare. | ERCOT

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tionalize knowledge and recommendations from previous severe winter weather events, especially as to winterization of generation and plant auxiliary equipment," the agencies said.

Gov. Greg Abbott, who early last week called for the resignation of ERCOT's leadership and labeled the event "a total failure by ERCOT," has asked lawmakers to mandate and fund winterization efforts. Currently that is done on a voluntary basis by generation owners.

Dan Woodfin, ERCOT's senior director of system operations, said last week that staff conduct about 100 spot checks a year on power generators' plans to withstand extreme heat or cold. Those reviews were conducted virtually this year, he said, because of the COVID-19 pandemic.

"They have financial incentives to participate in the market," he pointed out, referencing ERCOT's \$9,000/MWh price cap during scarcity conditions.

Dallas-based Vistra was one company that was prepared. U.S. Rep. Colin Allred (D-Texas) recounted on Twitter a [discussion](#) he had with CEO Curt Morgan on Saturday morning. According to Allred, Vistra on Feb. 9 foresaw that the temperatures, which would eventually hit zero or below in some parts of the state, would play havoc with Texas' energy infrastructure.

"They alerted ERCOT immediately, as well as the [natural gas regulator] Texas Railroad Commission and other state government officials," Allred said. "By their account, no one seemed to react with the haste and urgency they believed necessary, and they emphasized that ERCOT's projections of the power supply were far below the demand they were seeing."

Vistra said in a [release](#) that its generation



The skies have cleared over much of Texas and its capitol, where legislators this week will hold hearings on the industry's response to last week's winter storm. | Shutterstock

subsidiary, Luminant, only lost about 1 GW of its 19 GW of capacity, which included nuclear, natural gas, coal, solar resources and battery resources. The company estimated it was able to produce about 25 to 30% of the grid's power on Feb. 15-16, above its normal market share of 18%.

"The reality is, the infrastructure in Texas was not built to handle weather this extreme," Vistra spokesperson Meranda Cohn said. "However, the coordination and planning by authorities across the broader energy sector were seemingly disproportionate to the severity of the situation. The warning signs were there, but the public was unaware of the gravity of the situation, which led to people being unable to respond and make the necessary adjustments for their families."

While Abbott has criticized ERCOT for poor

communications throughout the crisis, Magness pointed out several times during the media briefings that he stood beside the governor for a press conference on Feb. 13 prepping the public for what was to come.

ERCOT on Feb. 8 issued an operating condition notice through Feb. 16 for extreme cold weather. It was quickly followed by an advisory and a watch, the latter of which indicates the control room anticipates tight grid conditions. Magness told his board on Feb. 9 that the state would see its coldest weather in decades and that staff were expecting to set a new all-time winter peak demand mark. (See [ERCOT Bracing for Winter Storm, Record Demand.](#))

ERCOT eventually sent *dozens of notices* to plant operators and market participants throughout the days that followed. ■

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ERCOT News



Glick Eyes New Standards in Response to Texas Outages

'There Will be a Next Time'

By Holden Mann and Rich Heidom Jr.

FERC Chairman Richard Glick said Thursday he may seek new reliability standards to ensure generators and grid operators are prepared for severe winter conditions following last week's devastating outages in Texas and neighboring states.

While praising the efforts of those working to restore power to the affected areas — particularly Texas, where more than 350,000 outages were still reported across the state as of Thursday afternoon — Glick emphasized that losing electricity for days in the middle of a record cold snap was “simply unacceptable” and “constitutes a humanitarian crisis.” (See related story, [ERCOT: Grid was 'Seconds and Minutes' from Total Collapse.](#))

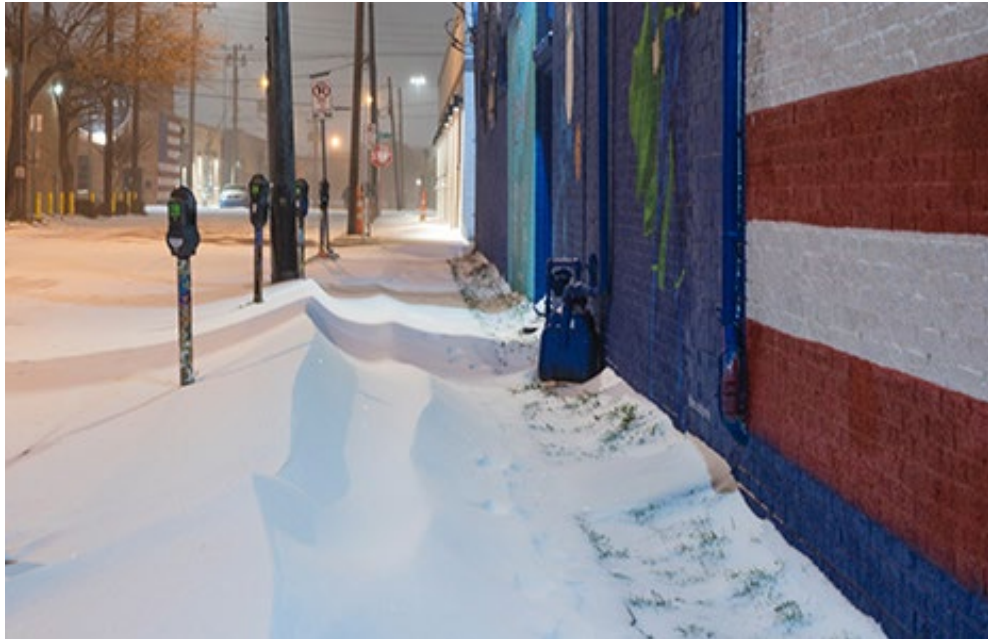
Many customers were without power for days, and *more than 35 deaths* have been attributed to severe weather in Texas and other states. FERC and NERC [announced](#) on Feb. 16 that they will conduct a joint inquiry into the causes of the crisis. (See [Slow Storm Restoration Sparks Anger in Texas, South.](#))

On Monday, FERC announced that the Office of Enforcement's Division of Analytics and Surveillance will be combing through wholesale natural gas and electricity market data to determine if any market participants engaged in market manipulation or other violations. The division uses trading data to screen transactions at most physical and financial natural gas trading hubs in the U.S. and the organized and bilateral wholesale electricity markets. Evidence of wrongdoing would become the subject of nonpublic investigations.

Separately, FERC announced that it will open a new proceeding to examine the threat that climate change and extreme weather events — including droughts, extreme cold, wildfires, hurricanes and prolonged heat waves — pose to electric reliability and how grid operators prepare for them. The proceeding will include an opportunity for parties to submit comments, followed by a technical conference.

Glick Open to Changing ERCOT Status

Although ERCOT's markets are not under federal jurisdiction, Glick noted that Texas is subject to NERC's reliability standards, which are approved by FERC. He promised that the organizations' inquiry would recommend steps necessary to prevent similar events in the



A snow-covered sidewalk in Deep Ellum, Texas | Matthew T Rader, CC BY-SA 4.0, via Wikimedia Commons

future, possibly including “the imposition of new mandatory standards” for cold weather preparedness.

“[We] need to ensure that the results of the inquiry don't just sit on the shelf gathering dust, like so many other reports of this kind, and that we don't do what happened after the [2011 event](#) in Texas and Arizona — rely on voluntary guidance to protect the public. We don't have to guess how effective that was,” Glick said. “Instead, I'm prepared, if necessary, to support the imposition of new mandatory standards to make sure that electric generators and others are better prepared when weather strikes next time. And there will be a next time.”

Glick also said Congress and Texas should reconsider what he called the “go-it-alone approach” — ERCOT's limited connection to the Eastern and Western Interconnections, which has allowed it to avoid being covered by the federal government's jurisdiction over interstate transmission. “Does it really make sense to isolate yourself and limit your ability to get power from neighboring regions just to keep FERC at bay?” he asked.

He added that with climate change “already having a dramatic impact on our weather,” there is a clear need for quick action to reform readiness standards for the grid.

While commending Glick for his response to

the emergency, Commissioner Neil Chatterjee argued that until the FERC-NERC inquiry is complete it is “too soon to try to advocate for solutions” including new mandatory standards. Chatterjee also distanced himself from Glick's suggestion that Texas consider strengthening its ties to the other interconnections, urging participants to “let the experts dig into it.”

Commissioner James Danly urged deliberation as well, observing that it has been “extraordinarily difficult to get even the basics” for comparing the performance of different types of generation during the cold spell.

“It is my fervent hope that my colleagues will show the solicitude to Texas that they often seem willing to afford all of the other states in pursuing their policy goals,” Danly said. “I see no reason to change ERCOT's status unless Texas itself wants to.”

Anger at Premature Blame

Commissioners joined Glick in expressing frustration about what he called “interest group flacks trying to pin blame on one generation source or another.” Some figures in media and politics have [speculated](#) that renewable energy resources such as solar panels and windmills bear most of the blame for the widespread outages, although ERCOT data show greater loss from thermal resources than from renewable ones. ERCOT said renewable perfor-

ERCOT News



mance “has been around the levels planned for.”

“Propagating such misinformation is irresponsible, and it’s callous, in light of the serious emergency situation we’re facing,” Commissioner Allison Clements said. “And presenting the cause of the outages should be done in a thorough, deliberate fashion, after we get the official data released. ... For now we should continue to focus on the restoration of power.”

Chatterjee Questions Closing Resilience Docket

Also Thursday, the commission voted 4-1 to close the resilience docket it opened in January 2018, after rejecting then-Energy Secretary Rick Perry’s call for cost-of-service payments to coal and nuclear generators (AD18-7). (See [FERC Rejects DOE Rule, Opens RTO ‘Resilience’ Inquiry](#).)

Some commissioners acknowledged the apparent inconsistency of closing the docket considering the ongoing energy crisis in Texas and the Midwest.

The docket sought feedback on how to define resilience and how each of the RTOs and ISOs assess resilience in their footprints. (See [RTO Resilience Filings Seek Time, More Gas Coordination](#).) But the majority said it concluded that a “generic” response to resilience concerns in all regions was inappropriate and might violate the Federal Power Act.

“That is not to suggest that resilience concerns are no longer an issue or that RTOs and ISOs have addressed all threats to the resilience of the bulk power system,” they said. “To the contrary, the resilience and reliability of the bulk

power system must — and will — remain one of the commission’s paramount responsibilities and concerns.”

Instead, they said the issues should be addressed “on a case-by-case and region-by-region basis. Be it wildfires in the West, hurricanes in the Southeast, or even the extreme cold weather experienced this week in Texas and the Great Plains, these threats present stark, but different challenges to the reliability of the electric grid. Addressing those individual challenges in a manner that is both effective — for the grid and the region — and consistent with our statutory authority under the FPA requires an approach that is tailored to the specific threats and circumstances in a particular region, not a one-size-fits-all solution.”

Chatterjee dissented, saying he was “not satisfied with a piecemeal, passive approach to ensuring its resilience, especially in the face of anticipated load increases due to economy-wide electrification goals.”

“The commission is well positioned to, for instance, adopt a definition of resilience that could be implemented in all regions, describe categories of resilience concerns that would include extreme weather events and common-mode failures, and then take additional steps to ensure that the commission, RTOs/ISOs, and stakeholders can understand how each RTO/ISO assesses the resilience of its region,” he said. “Such a holistic review would not only assist RTOs/ISOs and their stakeholders in considering different approaches to these efforts, but also help the commission understand how to best assess and address bulk power system resilience.”

Danly filled a concurrence but said he was concerned “that the resilience issues raised in this proceeding have not been solved — indeed, in most cases they have not even been addressed.”

He said the blackouts last week in ERCOT, SPP and MISO — following those last summer in CAISO — indicated an “urgent need for reform” to address market failures that are leaving dispatchable generation without enough revenue to invest in necessary upgrades.

“Many regions lack meaningful capacity markets, and the regions that do have capacity markets often allow state-subsidized resources to suppress prices such that the capacity markets cannot achieve one of the goals they were designed to achieve, which is to provide for revenues adequate to create incentives for the construction and operation of sufficient generation capacity to ensure reliability,” Danly said.

He also said RTO rules have been insufficient to persuade most gas-fired generators to obtain firm fuel contracts. “Increasing penalties when generators fail to obtain natural gas is a poor substitute for a market structure that compensates them for ensuring adequate fuel supplies in the first place,” he said. “Another increasingly serious problem is that intermittent resources largely are planned for, operated and compensated as if they provide reliability benefits that they, in fact, are incapable of providing.

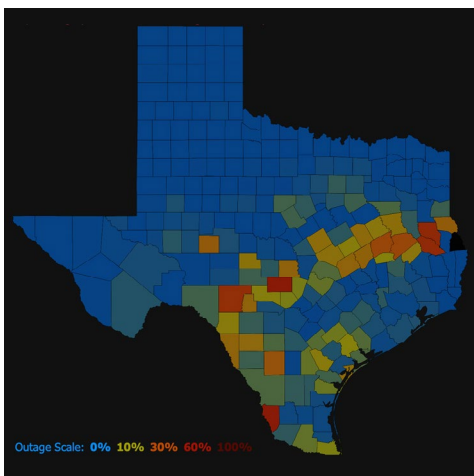
“We have tended to focus too much on low, short-term prices and development of new, clean power sources to the detriment of reliability,” he continued. “I do not believe these latest power crises to be yet another perfect storm, but a case of reaping what we have sown.”

Commissioner Mark Christie joined with Clements on a separate concurrence, saying RTOs and ISOs “must be willing to face and speak inconvenient truths about what is — and is not — feasible from an engineering standpoint, given the state of technology. They must also tell the public and the elected political leaders at both the state and federal levels about the realistic impacts on the bills consumers will have to pay for reliability. Politically driven mandates and deadlines may not be grounded in engineering reality, and we depend on the leadership of each RTO and ISO to provide forthright information about what is needed to ensure the 24/7 power supply Americans expect.”

Resilient Society’s Rehearing Request Addressed

Separately Thursday, the commission sustained its 2018 ruling rejecting Perry’s request for a Notice of Proposed Rulemaking and addressed issues raised by Foundation for Resilient Societies in a rehearing request (RM18-1-001). The rehearing request had been automatically denied when the commission failed to act on it within 30 days.

“Resilient Societies raises various arguments that the commission should have considered specific issues or should have initiated additional proceedings, but none of its arguments persuade us that the January 2018 order was in error on the threshold question of whether the proposed rule and the record in Docket No. RM18-1-000 satisfied [FPA] Section 206,” the commission said. “For example, while Resilient Societies raises concerns about ‘ghost capacity’ in ISO-NE, those concerns do not demonstrate that ISO-NE’s existing tariff or the tariffs of other RTOs/ISOs are unjust and unreasonable.” ■



Map of ongoing outages in Texas. As of 3:17 p.m. Feb. 18, more than 375,000 outages were still reported statewide. | [PowerOutage.US](#)

ERCOT News



Energy Transfer to Acquire Enable Midstream

Transaction Reduces Volatility for OGE, CenterPoint Energy

Energy Transfer *said* Wednesday it has entered into an agreement with Enable Midstream Partners, a master limited partnership between OGE Energy and CenterPoint Energy, in which it will acquire Enable in a \$7.2 billion all-equity transaction.

The companies said they have entered into a definitive merger agreement in which Energy Transfer will acquire all of Enable's outstanding limited partnership units through a unit-for-unit exchange ratio of 0.8595. OGE will own approximately 3% of Energy Transfer's outstanding LP units after the merger's consummation.

As part of the transaction, Energy Transfer will also acquire the general partner interests from OGE and CenterPoint for \$10 million in aggregate cash consideration. CenterPoint will also pay OGE \$30 million when the transaction closes.

OGE, Oklahoma Gas & Electric's parent company, holds a 25.5% LP interest and a 50% general partner interest in Enable. CenterPoint owns 53.7% of the common units representing Enable's LP interests.

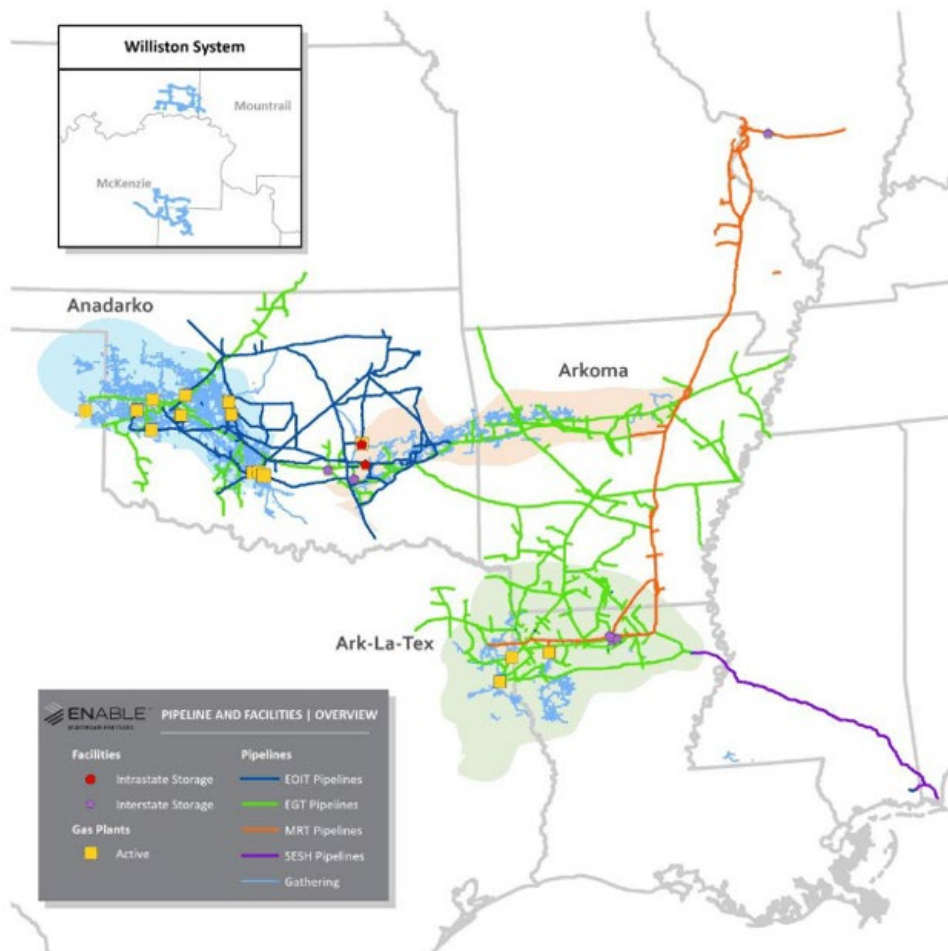
Both companies expressed their support for the acquisition in press releases, while also stressing their focus was on restoring service to their electric customers amid an unprecedented winter storm.

OGE *said* the transaction places the company "on a clear path to becoming a pure-play electric utility" and gives it flexibility to exit the investment. CEO Sean Trauschke promised additional details during the company's year-end earnings call this Thursday.

CenterPoint CEO David Lesar *said* the transaction "aligns with our new long-term growth strategy" and puts the company on "an accelerated path to reducing our exposure to the volatility of the midstream industry."

The deal is expected to close this year.

Enable was created in 2013 by merging OGE's Enogex midstream subsidiary with CenterPoint's pipeline and field services businesses. ■



Enable Midstream's service territory | Enable



Enable Midstream processing plant | Enable

— Tom Kleckner

ERCOT News



Texas PUC Turns Focus to High Customer Bills

By Tom Kleckner

In a twist of irony, Texas Public Utility Commission Chair DeAnn Walker found herself sitting in a chilly, darkened hearing room Sunday as she opened the commission's second emergency open meeting of the weekend.

The state's facilities group had turned down all the heating and nearly all the lights — except for safety lighting — in government buildings following last week's power outages, Walker explained.

The PUC then set about its business, issuing a set of orders intended to protect Texas electricity customers and prevent possible disconnections for non-payment on Monday. The directives immediately suspended disconnections until further notice and extended a COVID-19 measure that requires retail electric providers (REPs) to offer deferred payment plans upon request.

The orders only apply to customers of investor-owned utilities under the PUC's jurisdiction: American Electric Power Texas, CenterPoint Energy, Oncor and Texas-New Mexico Power.

The commissioners also urged REPs to delay invoicing for residential and small commercial customers. The IOUs rely primarily on automated meters that, in the case of a long-term outage, estimate meter reads based on historical usage.

"We may end up doing this every day," Walker warned her fellow commissioners. "Every day, a new rock may be turned over that requires us to take action."

On Friday evening during a hastily called meeting, the PUC waived deadlines surrounding its provider-of-last-resort (POLR) *program*, where REPs volunteer to accept customers from other providers exiting ERCOT's competitive market. These "volunteer" REPs are required to charge a competitive rate, rather than the higher POLR rate.

The move was driven by concern that some of the more than 100 REPs in the market may go under after wholesale prices reached \$9,000/MWh during the cold snap and stayed there for much of the time.

"I'm happy these customers will have a place to go," Commissioner Arthur D'Andrea said. "I don't want any of them to get on a bad POLR plan. They shouldn't have to deal with



PUC Chair DeAnn Walker convenes the open meeting Sunday with only safety lighting. | PUCT

that now."

Vistra's TXU Energy and NRG Energy's Reliant Energy, which together account for more than 70% of the retail market, are likely to benefit from the changes.

Horror stories abound of four-figure bills hitting customers who signed up with REPs that pass on wholesale real-time prices. Griddy grabbed most of the *headlines* by serving one customer a \$16,752 bill.

The company's CEO, Michael Fallquist, *said* Griddy was designed for an energy market that "allows consumers the ability to plan their usage based on the highs and lows of wholesale energy and shift their usage to the cheapest time periods."

Indeed, Griddy did warn its 29,000 customers as the winter storm approached to consider switching to other REPs.

For its part, TXU Energy assured its residential customers that they would not see any "near-term impact" because of the winter weather event, though some might experience above-normal bills because of higher usage.

"The headline-grabbing sky-high bills are related to wholesale plans offered by some providers; TXU Energy does not put its customers at risk by offering these plans," TXU President Scott Hudson said in a *statement*.

On Saturday, Texas Gov. Greg Abbott *convened a bipartisan virtual meeting* with 11 state legislators to begin discussions on how to insulate customers from electricity plans linked to wholesale prices.

"It is unacceptable for Texans who suffered

through days in the freezing cold without electricity or heat to now be hit with skyrocketing energy costs," Abbott said before the meeting.

"Our absolute top priority as a commission and a state is protecting electricity customers from the devastating effects of a storm that already affected their delivery of power," Walker said.

ERCOT, MPs Hit with Lawsuits

The first lawsuits have begun to roll in, targeting ERCOT and market participants for the non-rotating outages that left residents without power for at least 80 hours at a time.

In Houston, a trial lawyer filed a *\$100 million lawsuit* against the ISO and Entergy Texas over the hypothermia death of an 11-year-old boy. Another lawsuit filed in Houston seeks \$10 million from the grid operator and CenterPoint Energy for gross negligence. A third lawsuit filed in Corpus Christi asserts the grid operator and AEP Texas are responsible for property damage and business interruptions.

"We haven't yet reviewed the lawsuits and will respond accordingly once we do. Our thoughts are with all Texans who have and are suffering due to this past week," ERCOT said in a statement.

The legal efforts face long odds. ERCOT, a non-profit government agency, enjoys sovereign immunity. The ISO has said it needs immunity from lawsuits because generators' transaction fees fund the entity.

However, the Texas Supreme Court is *expected to rule* on a case later this year involving independent generator Panda Power and ERCOT that could eliminate that immunity. ■

ISO-NE News

'Future Grid' Session Highlights Tx Study, Net Carbon Pricing

By Jason York

The NEPOOL Participants Committee's first working session on the "Pathways to the Future Grid" effort last week featured ISO-NE's proposed work on market frameworks, including a long-range transmission study and examination of net carbon pricing.

The "pathways" effort is part of New England's *Future Grid Initiative*, which also includes a reliability study. A stakeholder-developed *framework document* for that study was presented to a joint meeting of NEPOOL's Markets and Reliability committees in December. (See *New England 'Future Grid' Study Takes Shape.*)

On Thursday, ISO-NE COO Vamsi Chadalavada discussed the RTO's approach to conducting Phase I of the reliability study and a transmission study.

The New England States Committed on Electricity last year released a *vision statement* calling for ISO-NE to adopt an updated transmission

planning process to help the region expand its grid to incorporate wind, hydro and distributed energy resources.

Chadalavada said the 2050 Transmission Study would develop high-level scenarios to evaluate large-scale renewable energy integration and cost estimates. It would also look far beyond the RTO's typical 10-year horizon for transmission needs but not outline any plans for specific projects.

He also said ISO-NE will analyze implementing a Forward Clean Energy Market (FCEM) or Integrated Clean Capacity Market as well as net carbon pricing, ideas Rutgers University professor Frank Felder presented to the Participants Committee in January. (See *Report Outlines NEPOOL 'Pathways' to a Future Grid.*)

The RTO has championed incorporating net carbon pricing into its market to supplement the Regional Greenhouse Gas Initiative (RGGI) carbon price, but states adamantly oppose such a move.

Net carbon pricing would require stakeholders to agree on a social cost of carbon, from which the RGGI price would be subtracted. ISO-NE would then charge emitting generators the resulting additional cost of carbon and rebate associated revenues back to load-serving entities.

The plan would mitigate — but not completely solve — the double payment issue that arises when clean resources earn payments from both subsidies and market revenues. It would also reduce states' ability to control the specific timing and type of clean energy resources to meet their individual policy objectives — and additionally fails to explicitly address the balancing resource issue.

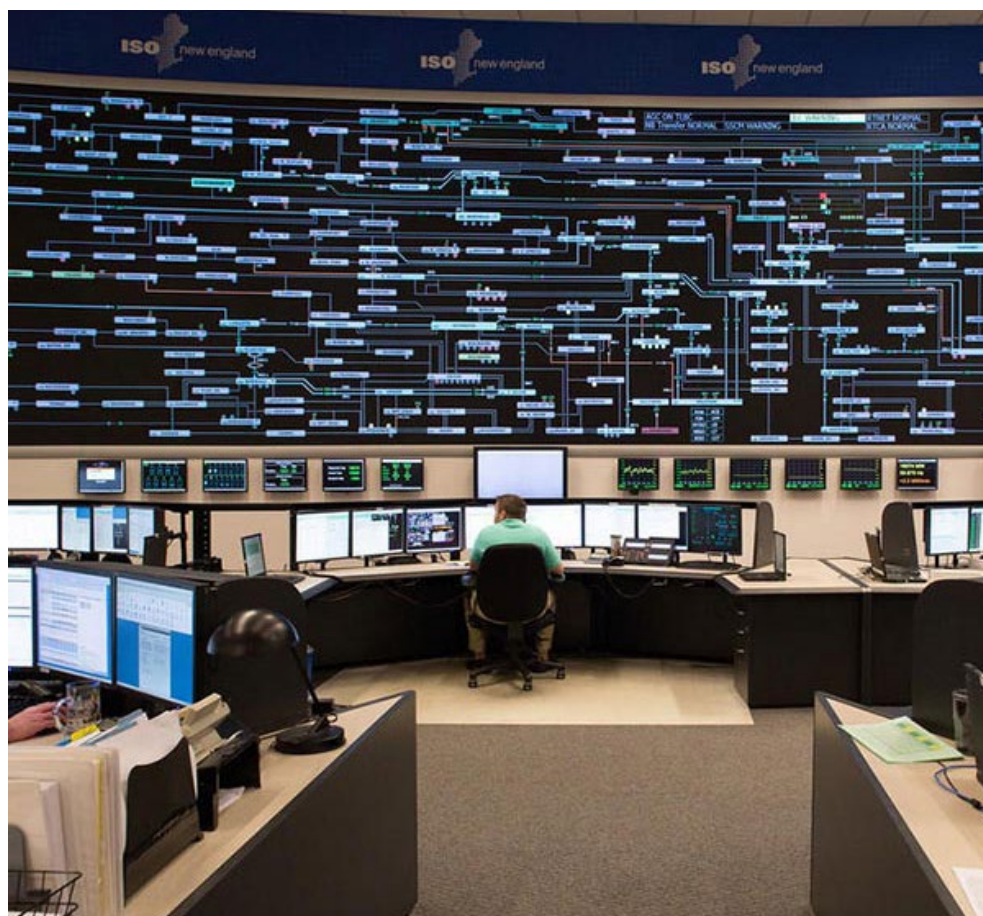
ISO-NE expects to provide more details on a potential net carbon pricing framework at the March working group meeting, according to Chris Geissler, economist for the grid operator.

The RTO also expects to complete the four analyses and studies by the first quarter of 2022. It has dedicated resources and budget to work with stakeholders to finalize scope and assumptions, develop models and run simulations, then present and discuss results of the four efforts, Chadalavada said.

But while ISO-NE could perform that work and respond to FERC orders, the complete effort could significantly strain the RTO's operating budget, Chadalavada said. If new priorities emerge, the RTO would seek to rebalance its work and discuss that with stakeholders, he said.

Chadalavada concluded that Phase II of the reliability study would require modeling improvements. Inverter technology is rapidly evolving from "grid following" to "grid forming," and the RTO has been working with NERC and industry vendors to develop and test the necessary models and tools.

Chadalavada said ISO-NE thinks it prudent to let some of these efforts mature before engaging in a longer-term system security study that would be part of Phase II. The pathway analyses will require building at least two models, one each for net carbon pricing and FCEM. This should determine how the Minimum Offer Price Rule (MOPR) will be treated in the modeling assumptions to assess how it affects the proposed frameworks' outcomes. FERC has recently made clear that addressing the MOPR is one of its top priorities. ■



ISO-NE control room | ISO-NE

ISO-NE News

Eversource Reports Profit Increase, Carbon Decrease

By Jason York

Eversource Energy CEO Jim Judge said Wednesday that the utility posted profits of \$1.2 billion (\$3.55/share) in 2020, even as it dealt with “the highest level of storm activity ever for our company.”

The figure represents about a 33% increase over 2019’s earnings of \$909.1 million (\$2.81/share).

Despite severe damage from Tropical Storm Isaias and other weather-related events, Eversource, which supplies electricity, natural gas and water service to 4.3 million customers in Connecticut, Massachusetts and New Hampshire, also reported net income of \$271.9 million for the fourth quarter last year, a nearly 9% increase over the same period in 2019. The quarter-over-quarter increase was off a comparable increase in total revenue, which the company said was led by gains in its transmission and distribution segments.

Judge also *detailed* Eversource’s long-term strategy of being “the principal catalyst to greenhouse gas reductions in New England.” He said that Eversource has divested all its

fossil-fuel generation, reduced methane leaks in the distribution system and improved “the efficiency of our delivery system, our facilities and our vehicles.”

“This has enabled us to be in sync with all the states of New England, which are targeting greenhouse gas reductions within their borders of at least 80% by year 2050,” Judge said. “Our long-term strategy is built around being a principal enabler of that reduction.”

Judge said Eversource has set a goal of net-zero emissions. The company invested more than \$500 million in custom energy efficiency initiatives in 2019 that will reduce emissions by 3.2 million metric tons, he said.

“Efforts to significantly expand our zero-emissions vehicle charging infrastructure and reduce the number of homes heated with oil offer very significant additional opportunities to reduce the region’s emissions,” Judge said.

Eversource’s “most significant initiative,” Judge said, is its partnership with Ørsted, which the company expects to result in the construction of 4,000 MW of offshore wind facilities off the coast of Massachusetts. It expects that will annually reduce GHG emissions by approxi-

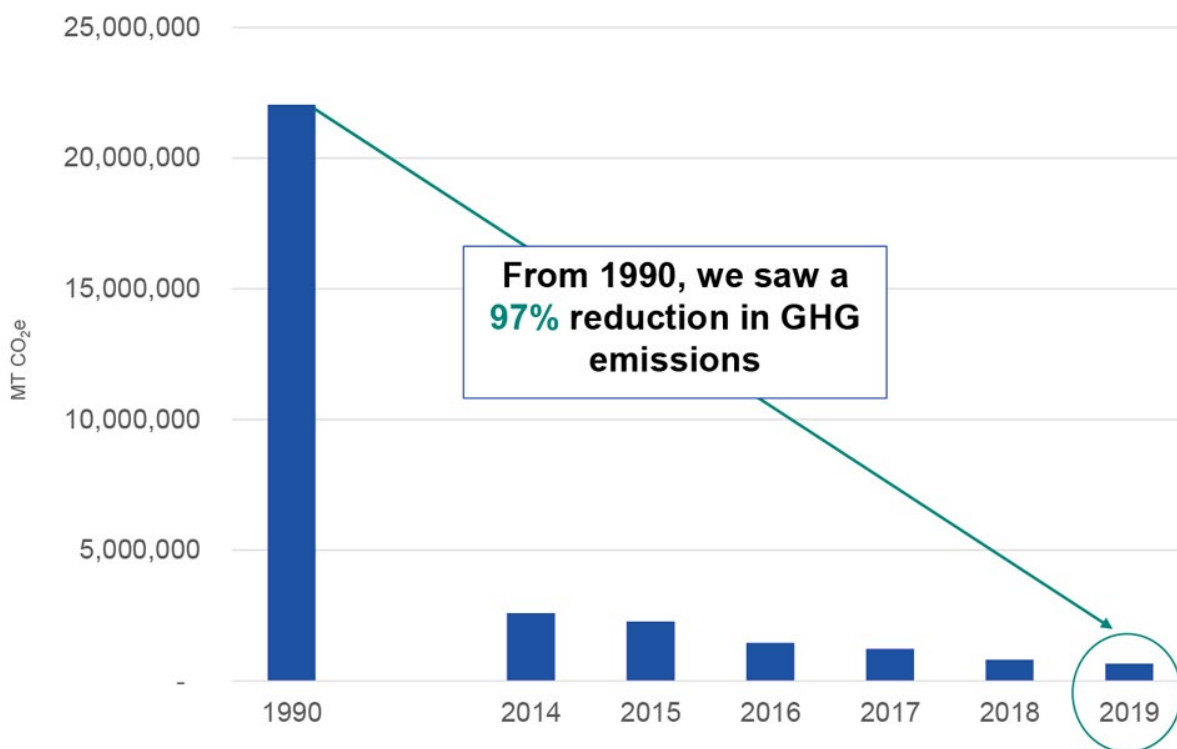
mately 6 million tons.

Judge added that all the steps in the South Fork Wind Farm review process in New York have either been met on or ahead of schedule since the U.S. Bureau of Ocean Energy Management established its revised schedule last summer.

Judge said that recent action at the federal level underscores the “government’s support for these projects” like South Fork, Sunrise Wind and Revolution Wind.

President Biden signed an executive order in January requiring that the Department of the Interior to conduct a full assessment of OSW siting processes to align with the administration’s renewable energy production goals. In December, Congress and the IRS provided additional financial incentives for OSW development that include a 30% investment tax credit for projects that commence construction before January 2026, with a 10-year safe harbor for eligible projects.

“Taken together, these changes add more certainty to the tax benefits available for offshore wind and underscore the federal government’s support for these projects,” Judge said. ■



Eversource Energy's reported progress toward net-zero emissions | Eversource Energy

ISO-NE News

ISO-NE Planning Advisory Committee Briefs

Utilities Detail Replacement, Refurbishment Projects

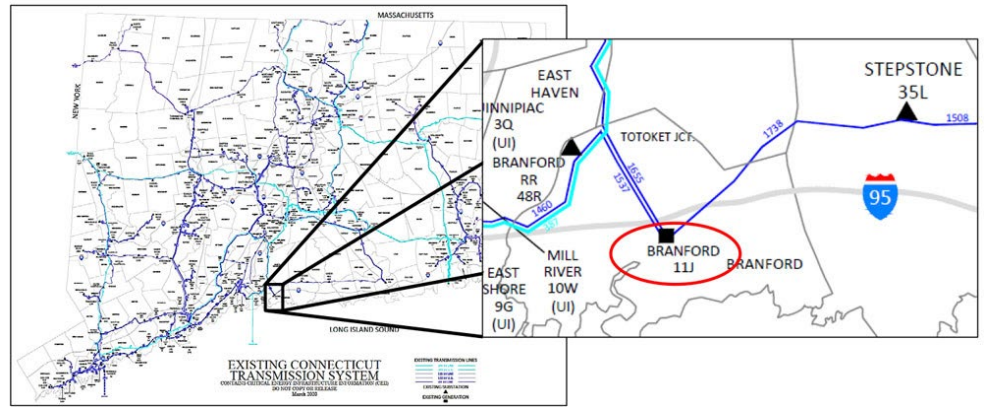
Eversource Energy and Vermont Electric Power Co. (VELCO) each presented replacement and refurbishment projects to the ISO-NE Planning Advisory Committee on Wednesday, with Eversource *detailing* its preferred solution to replace the only self-contained fluid-filled cable on its Connecticut transmission system.

Eversource's Paul Melzen said the utility plans to remove 400 feet of the existing cable system and install 520 feet of solid dielectric cable in the duct bank at Branford 11J, a 115/23-kV substation located along the Connecticut shoreline. The project also calls for replacing two existing bus support structures and the relocation of an NRG Energy-owned 23-kV circuit from a combustion turbine housed in the substation to accommodate the route of the 115-kV duct bank.

The work's estimated cost is \$8.8 million, with a projected in-service date in the fourth quarter.

The fluid-filled cable was initially manufactured in 1981, and its creators are no longer in business. The cable has logged 26 work orders since 2005, including fluid leaks that increased maintenance burdens and reliability concerns. The continued decrease in oil pressure or oil level will eventually result in a trip of the cable. There was a service interruption in March 2017 that required complex restoration methods, according to Melzen. The cable is also located near a waterway, an environmental risk.

Melzen mentioned two potential alternatives to Eversource's preferred solution. One is replacing the existing fluid-filled cable system



| Eversource Energy

with a new one, which would create the need for dielectric fluid accumulators, fluid-level pressure alarms, and additional maintenance and operational requirements. It would additionally pose an environmental threat with the release of dielectric fluid. There would also be limited equipment suppliers. The second is replacing the current cable system with an overhead bus, but there is a lack of real estate in and around the substation to accommodate it.

Hantz Presume of VELCO *outlined* three transmission line refurbishment projects at an estimated cost of \$31.6 million, with the work completed between 2022 and 2024.

The most significant portion of the work will be along the 26.4-mile line from Essex to Middlesex, where 116 out of 305 wood H-frame structures with rotten pole tops and cross arms will be replaced with mostly steel H-frames to reduce VELCO's current wood pole inventory. The line location is primarily mountainous, with difficult access and a challenging sloped right of way. The estimated cost is \$15.2 million for the project, which is

expected to be completed in 2024.

The other two projects are similar refurbishments along lines between Essex and Sandbar (11.2 miles) and West Rutland to Blissville (11.6 miles) that are expected to cost a combined \$16.4 million and replace a total of 123 wooden frames with steel by 2022. Both lines have seen rotten crossarms and pole tops, and moderate to severe woodpecker damage.

Additional Items

- ISO-NE Director of Transmission Planning Brett Oberlin gave a forward-looking *presentation* on dynamic reactive power devices. The RTO would like to use synchronous condensers as the preferred device to address system concerns identified in needs assessments, except under specific system limitations. Oberlin asked for stakeholder feedback by March 4.
- Steven Judd, principal engineer in system planning for ISO-NE, *provided* stakeholders a summary of DNV GL's stochastic time series analysis of variable energy resources (VERs). The RTO initially hired DNV GL in 2019 to use its weather modeling software and develop a historical dataset of all existing wind plants and future offshore wind plants from 2012 to 2018. It now contains hourly time series data for VERs, load and weather data in New England for 20 years (2000-2019). DNV GL also developed the Stochastic Engine, which can resample wind speed, irradiance, price and load into parallel and plausible scenarios. The weather-to-generation models simulate each weather scenario's expected power production, creating thousands of 20-year simulations of hourly weather and power outputs. ■



Eversource Energy wants to replace a self-contained, fluid-filled cable system with a solid dielectric cable system at a substation in Branford, Conn. | Eversource Energy

MISO News

FERC Maintains MISO TO Self-funding Authority over Resistance

By Amanda Durish Cook

FERC on Thursday approved unexecuted facilities service agreements (FSAs) for three NextEra Energy wind projects that refused to complete the FSAs in protest of a 2018 order reinstating MISO transmission owners' rights to self-fund network upgrades.

The decision marks a setback for NextEra's Heartland Divide II in Iowa ([ER21-720](#)), Walleye Wind in Minnesota ([ER21-721](#)) and Emmons-Logan Wind in North Dakota ([ER21-722](#)). All three proceedings involved transmission owner ITC Midwest.

In each case, the wind subsidiaries refused to execute FSAs and requested that MISO file an unexecuted document because they say FERC could reverse its policy regarding TOs' right to provide initial funding for the network upgrade that would accommodate the projects.

FSAs detail repayment of the cost of network upgrades and are signed by interconnection customers, MISO and the TOs that construct the system interconnections.

Heartland said it "expressly reserves the right to file with the commission to terminate the FSA if the commission reverts to its initial findings" so it can be made "financially whole." It also said interconnection customers should be able to "retroactively annul and reverse" FSAs and TO initial funding decisions should FERC overturn its decision.

The company asked FERC to direct MISO to amend the FSA by including a provision for the possible reversal of TOs' self-funding option.



| NextEra Energy

Walleye Wind took the same approach two weeks ago with TO Northern States Power. (See [MISO TOs' Self-funding Option Tested Again](#).)

As in the Walleye case, FERC refused to amend the FSA to include termination provisions should FERC reverse its position in the matter.

Chairman Richard Glick and Commissioner Allison Clements again questioned whether MISO's current self-funding arrangement is fair.

"I continue to believe MISO's interconnection rules may well merit additional scrutiny in the near future," Clements wrote in all three orders. She repeated concerns that FERC's ruling ignores that TOs can also be generation owners.

Glick said he agreed with the three orders because they "reflect the state of the law

today," but he noted that giving TOs priority on financing and construction might be unjust and unreasonable.

"The commission failed to meaningfully wrestle with these concerns in its orders allowing transmission owners the unilateral right to choose up-front funding," he said.

MISO in 2018 acted on FERC's direction and reinstated TOs' right to self-fund network upgrades necessary for new generation. The commission in 2015 barred TOs from electing to provide initial funding for network upgrades but walked back that position after the decision was remanded by the D.C. Circuit Court of Appeals. (See [MISO Gauging Aftershocks of TO Self-fund Order](#).) The move was unpopular with some MISO generation developers, who said it could allow TOs to discriminate against some interconnection customers and increase the cost of new generation. ■

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MISO News

MISO Touts \$3.5B in 2020 Savings for Members

By Amanda Durish Cook

MISO said its members collectively saved about \$3.5 billion in 2020 for choosing RTO membership over going it alone on the grid.

The grid operator's 2020 value proposition study showed that it provided between \$3.1 billion and \$3.9 billion in regional benefits. The annual value proposition study compares utility benefits of RTO membership versus flying solo.

MISO chalked the savings up to improved reliability, more efficient use of the region's existing assets and reduced need for new assets.

Despite the pandemic, the cost reductions didn't change much from a year earlier, when MISO said it saved members between \$3.2 billion and \$4 billion. For the past four years, the grid operator has claimed annual cost savings between \$3 billion and \$4 billion. (See [MISO Estimates up to \\$4B in 2019 Benefits](#).)

Spokesperson Brandon Morris said the pandemic didn't affect value proposition results because MISO was able to consistently maintain normal reliability and operations functions.

"Our member utilities' shared commitment to serving the footprint reliably — combined with relatively stable year-over-year load levels as compared to 2019 — resulted in a 2020 value proposition which was largely shielded from the devastating impacts of COVID-19," Morris told *RTO Insider*.

"The value proposition has been relatively stable for the past few years at about \$3.5 billion," Strategy and Business Development Adviser Brad Decker told stakeholders at a teleconference Feb. 19 to discuss the savings.

MISO has documented more than \$30 billion in benefits to its members since 2009. "This benefit has grown as MISO has grown," Decker said.

Broken down, MISO estimated it has saved members between \$384 million and \$447 million because of its ability to offer improved reliability and perform compliance tasks on behalf of its members.

The RTO said members also avoided spending another \$517 million to \$572 million because it dispatches existing assets efficiently and offers energy regulation and spinning reserves.

"Before MISO, the region operated as a decentralized, bilateral market," Decker said. "Now,

the day-ahead and real-time market processes are used to minimize total production costs."

But MISO said its most attractive benefit is its members' diminished need to build new generating assets, worth between \$2.47 million to \$3.22 million in savings.

The grid operator said its footprint diversity accounted for about \$1.9 billion to \$2.4 billion of that reduced need for assets. Decker said the RTO's geographic expanse means load can rely on other generation assets because weather and demand fluctuate by region.

"If you shared a car with your neighbors, you have fewer cars in garages, and that's exactly what's happening under footprint diversity," Decker said.

Other drivers of the reduced generation need were MISO's efforts to better incorporate wind into the resource mix, which it valued at a \$450-\$517 million savings to members, and its demand response programs, which it valued at \$116-\$211 million.

"MISO's regional planning enables more economic placement of wind resources, reducing the overall capacity needed to meet required wind energy output," Decker said. ■



MISO's Carmel headquarters | © RTO Insider

MISO News

MISO Stakeholder Removal Rules Narrowly Win Approval

Advisory Committee Chair Breaks Tie

By Amanda Durish Cook

MISO members narrowly approved new stakeholder removal provisions last week despite concerns that the rules give the RTO too much latitude.

Advisory Committee members voted 11-10 during a teleconference Wednesday to recommend MISO be able to remove stakeholders and committee leadership for abusive behavior. AC Chair Audrey Penner, who usually refrains from voting, broke a 10-10 tie.

The provisions will be added to MISO's Stakeholder Governance Guide, though some members called for more talk and reconsideration on the tie-breaking vote.

MISO last month sought to codify its ability to remove the chair of a stakeholder committee

and unilaterally ban disorderly stakeholders from meetings. However, some members said MISO's initial proposed language was too vague. (See [Members Send MISO Back to Drawing Board on Stakeholder Removal Rules](#).)

The revised *rules* allow MISO to "unilaterally and immediately remove a stakeholder" from meeting participation or a leadership role for being "abusive" to others "through physical, vocal or written means;" threatening physical harm or causing "a disruption or damage while on MISO property." The grid operator also said it could remove or ban individuals when it has "become aware of information that would justify or otherwise provide a reasonable basis for such an action."

Some members criticized MISO's revised proposal as still too broad and subjective and asked for amendments.

Madison Gas and Electric's Megan Wisersky said MISO's proposal "disturbs" the transmission-dependent utilities sector and added that it could impede on stakeholders' ability "to speak freely."

"We see this essentially as a road to stakeholder censorship in the sense that speech could be deemed as violent if a stakeholder disagrees with MISO. ... I know that you might think I'm being hyperbolic about this, but you don't have to look very far in today's culture to see speech equated to violence," she said.

Wisersky said MISO should not be able to oust stakeholders with "standards that are not well-developed."

MISO General Counsel Timothy Caister said removal provisions are necessary to prevent or stop damage, physical harm and abusive behavior. He said the measures help MISO ensure its responsibility to provide a safe and secure environment.

"This is here for the protection of our employees, our stakeholders and our property," Caister said. "There might be an instance where we have to remove someone to meet our obligation of safety."

In 2019, MISO banned a stakeholder from its facilities after the individual sent threatening emails to multiple MISO executives. The incident resulted in two MISO executives filing orders of personal protection against the stakeholder.

"There's not a good way to clear your name and get back in MISO's good graces," Wisersky observed of the stakeholder removal provisions. "If we're not fired by our own companies, how does a stakeholder get back in the process?"

Caister said MISO didn't outline a path to getting back inside MISO's meeting rooms.

"I suspect it will have to be handled on a case-by-case basis. We have that question today, what is that process to re-engage?" he said.

Less hotly debated were separate governance guide rules allowing MISO to remove a committee chair for not being available for meetings or not professionally managing them. MISO recommendations for leadership removal for those reasons would not be immediate and would come after a stakeholder vote, Caister said. ■



MISO's Advisory Committee in 2019 | © RTO Insider

MISO News

FERC Orders Settlement Proceedings in Tx Rate Dispute

By Amanda Durish Cook

FERC last week ordered Wisconsin Electric Power Co. and a Northern Michigan cooperative into settlement proceedings to resolve a complaint over excessive rates.

Cloverland Electric Cooperative argued that the 11% return on equity it pays to Wisconsin Electric as part of the formula rate under a capacity and load-following service agreement is outside the zone of reasonableness, even considering the COVID-19 pandemic amplifying financial risk ([EL20-57](#)).

Cloverland said its analysis found that Wisconsin Electric should use an ROE between about 8 to 9%.

The analysis used a combination of the discounted cash flow model, capital asset pricing model and risk premium model that FERC last year prescribed for transmission owners' ROE calculation. (See [FERC Stands by 10.02% ROE](#).)

The co-op estimated that every 100-basis-point reduction in Wisconsin Electric's ROE would lower its costs by about \$2.34 million over the remaining life of the agreement.

Wisconsin Electric fired back that Cloverland's analysis did not account for the "extremely volatile prevailing market conditions created by the COVID-19 pandemic, leading to the erroneous conclusion that risk to Wisconsin Electric's equity investors has declined since 2007."

The utility said the pandemic "has caused a level of uncertainty and volatility in the market even greater than during the Great Recession of 2008/2009," justifying an ROE between 10 and 11%.

FERC said it could not resolve the matter based on the record and put the disagreement to settlement and hearing proceedings.

Commissioner James Danly said a paper hear-

ing would help the two companies work with the most up-to-date information.

"The data and analyses submitted by Cloverland Electric Cooperative and Wisconsin Electric Power Co. cover only the time periods ending on April 2020 and July 2020, respectively. Further, some of the submitted data may not reflect market conditions, particularly in light of the COVID-19 pandemic and the policies adopted in response to the pandemic. Hearing procedures will afford an opportunity for the parties to update the record to reflect more recent data," Danly said.

However, Danly warned against the matter escalating into an evidentiary hearing, which he called pricey and time-consuming.

"Further, the commission has a record of issuing untimely decisions in ROE proceedings," Danly warned, pointing to last year's decision, which was in response to a complaint filed in 2013. ■



Cloverland's hydroelectric plant in Northern Michigan | Cloverland Electric Cooperative

MISO News

CenterPoint, Hedge Fund not Affiliates, FERC Rules

By Amanda Durish Cook

FERC on Thursday dismissed Public Citizen's allegations that CenterPoint Energy concealed from the commission an infusion of cash from a hedge fund manager that brought new management on board.

The consumer advocate contended that Elliott International's \$625 million equity investment and subsequent leadership additions should have compelled CenterPoint subsidiary Southern Indiana Gas and Electric Co. — which has market-based rate authority — to file a change in status with FERC to show an affiliate status with its investor.

The commission disagreed and declined to order any action (EL21-2).

Public Citizen said that even though Elliott's equity investment secured less than 10% ownership in CenterPoint, the cash essentially bought the appointment of two new independent directors on CenterPoint's formerly eight-member board. It said the handpicked directors, David Lesar and Barry Smitherman, were "preferred by Elliott." Months later, Lesar was installed as CenterPoint's new CEO. (See [New CenterPoint CEO Promises to 'Simplify the Story.'](#))

Public Citizen also noted that CenterPoint's board created a new Business Review and Evaluation Committee after the investment, the purpose of which is "to assist the board in evaluating and optimizing the various busi-

nesses, assets and ownership interests" of CenterPoint and its subsidiaries.

"The delivery of the cash was a *quid pro quo* for a management overhaul that results in the new investors exerting control over CenterPoint, and therefore the leader of these investors [Elliott] should now be considered an affiliate of CenterPoint," Public Citizen said. It also alleged that two nonpublic confidentiality agreements between Elliott and CenterPoint "may convey certain rights and privileges" to Elliott.

"Elliott's use of nonpublic negotiations and agreements, combined with their ongoing efforts to sway management to pursue their preferred agenda, should render them affiliates of CenterPoint," Public Citizen said.

But FERC said Public Citizen did not meet its burden of proof that Southern Indiana should have filed a change in status. It pointed out that "owning or controlling less than 10% of the outstanding voting securities of a company creates a rebuttable presumption of lack of control."

FERC also said Public Citizen did not establish "that there may be a lack of arm's length dealing between CenterPoint and Elliott that would warrant a finding of affiliation."

The commission found nothing amiss with Elliott's provision that should one of the two board members step down, CenterPoint must "cooperate with [it] to mutually select an acceptable qualified candidate to be appointed



CenterPoint CEO David Lesar | CenterPoint Energy

to the board as a substitute outside director." It said the provision did not convey control of CenterPoint by Elliott.

"While it appears that Elliott chose the two new directors, the governance agreement states that there are no arrangements or understandings between Messrs. Lesar and Smitherman and any other person pursuant to which they were selected as a director," the commission wrote. It added that the "two new board members are not affiliated with Elliott, are not compensated by Elliott, are not removable by Elliott, and do not have any agreement or arrangement with Elliott regarding the person's service as director." ■

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MISO News

DC Circuit Upholds FERC on ITC Adders

Independence of Transmission Owners Post-merger at Issue

By Hudson Sangree

The D.C. Circuit Court of Appeals on Friday upheld a FERC ruling that found a 2016 merger had left three ITC Holdings subsidiaries no longer fully independent, disqualifying them from a full return on equity incentive for standalone transmission providers.

The *decision* found there was “substantial evidence to support FERC’s finding that the merger had reduced ITC’s independence, thereby rendering the existing adders unjust and unreasonable” (*International Transmission Company, et al. v. FERC*, 19-1190).

FERC had granted International Transmission Co. and Michigan Electric Transmission Co. 100-basis-point adders in 2003 and 2005, respectively, and granted ITC Midwest a 50-point adder in 2015. But in October 2018 the commission found the companies were no longer fully independent because their parent company, ITC Holdings, had merged with Ca-

nadian and Singaporean companies (*EL18-140*).

FERC reduced their “transco” adders to 25 basis points each. (See *FERC Reduces ITC Adders over Independence Issues*.)

The commission affirmed its ruling in July 2019, saying the reduction in the adders was appropriate because the merger had reduced but not eliminated the companies’ independence. (See *FERC Rebuffs ITC Call to Restore Full ROE Adders*.)

The transmission companies appealed to the D.C. Circuit. They argued FERC had “arbitrarily and capriciously departed from precedent establishing a particular methodology to assess transco independence.” And they contended FERC had “exceeded its statutory authority by reducing ITC’s transco adders without first finding the adders to be unjust and unreasonable,” according to the court.

Regarding the first argument, a three-judge panel found it “fails at the outset because FERC, consistent with its stated intent in Or-

der No. 679, never established any definitive methodology, let alone the one ITC claims it did.”

“FERC has consistently applied a case-by-case approach to determining transco independence, considering ownership and business structure as part of that inquiry since it first granted a transco adder in 2003,” the court said.

The companies’ claim that FERC had exceeded its statutory authority under Section 206 of the Federal Power Act also failed, the court found.

The law requires “FERC to show that an existing rate is unlawful before ordering a new rate,” and ITC argued that FERC had violated that mandate by failing to find the existing adders to be unjust or unreasonable before reducing them by half; the judges wrote. FERC’s analysis, however, “clearly tracked the two-step procedure mandated by Section 206,” they said. ■



ITC Midwest has been upgrading transmission in Iowa. | ITC

NYISO News



FERC Backtracks on NYISO BSM Exemptions

By Michael Kuser

FERC on Thursday modified its Oct. 7 *decision* disqualifying New York's Commercial System Distribution Load Relief Programs (CSRPs) from an exemption under NYISO's buyer-side mitigation (BSM) regime, agreeing with the complainants that the programs help companies avoid or defer costly distribution infrastructure upgrades and are not primarily designed to offset transmission investment (*EL16-92-004, et al.*).

The commission unanimously approved the order, with Commissioners Allison Clements and Mark Christie filing separate concurrences.

Then-Commissioner Richard Glick, now chairman, had dissented from the commission's decision not to exempt commercial demand response programs from NYISO's BSM rules, saying the rules "have evolved into a scheme for propping up prices, freezing in place the current resource mix and blocking states' exercise of their authority over resource decision making." (See *FERC: NY DR Program Not Exempt from Offer Floor Rule.*)

The New York State Public Service Commission, New York State Energy Research and Development Authority, New York City, Natural Resources Defense Council, Advanced Energy Management Alliance, Energy Spectrum and The E Cubed Co. jointly filed a request for rehearing. Consolidated Edison also filed a request separately.

Program Design

The dispute grew from a paper hearing begun by the commission a year ago, when it narrowed the resources exempt from NYISO's BSM rules in southeastern New York, partly reversing the commission's 2017 decision granting a blanket exemption from the rules for special-case resources (SCRs). (See *FERC Narrows NYISO Mitigation Exemptions.*)

The whole topic has been fraught with contention, and NYISO in January filed a *petition* with the D.C. Circuit Court of Appeals asking it to review the commission's rejection of the ISO's proposal to exempt public policy resources from its BSM rules (*ER20-1718-001*). (See *NYISO Appeals FERC Rejection of BSM Proposal.*)

Upon reconsideration of the testimony and clarification provided by the rehearing requests, the commission concluded that payments received under the CSRPs qualify for exemption from the calculation of SCR offer

Study Month/Effective Month	Reference Month	Publishing Month	Heat Rate Threshold mmBTU	LBMP Threshold \$/MWh	Offer Cap \$/MWh
March, 2021	March, 2020	February, 2021	15.41264	\$46.931	\$68.36
February, 2021	February, 2020	January, 2021	16.25077	\$54.107	\$134.80
January, 2021	January, 2020	December, 2020	15.58827	\$239.36	\$174.99
December, 2020	December, 2019	November, 2020	16.01137	\$93.218	\$222.80
November, 2020	November, 2019	October, 2020	17.23948	\$44.909	\$233.92
October, 2020	October, 2019	September, 2020	15.60492	\$31.946	\$95.06
September, 2020	September, 2019	August, 2020	15.59142	\$29.844	\$148.57
August, 2020	August, 2019	July, 2020	15.84346	\$24.063	\$350
July, 2020	July, 2019	June, 2020	17.556	\$28.226	\$500
June, 2020	June, 2019	May, 2020	14.93895	\$22.937	\$166.71
May, 2020	May, 2019	April, 2020	15.54056	\$23.46	\$155.13
April, 2020	April, 2019	March, 2020	14.87448	\$25.276	\$79.12

NYISO demand response monthly net benefit offer floor prices over the past 12 months | NYISO

floors, as do the payments received under the Distribution Load Relief Programs (DLRPs), which it had ruled exemptible in October.

Companies alleged that the commission strayed from its own February 2020 order in applying an "exclusive benefit" standard in evaluating a retail-level DR programs' eligibility for exclusion from the SCR offer floor calculation.

Similarly, the state and environmental parties argued that the commission, by finding that any program that provides reliability benefits to the transmission system does not solely address distribution reliability needs, contradicted its October order that said DR programs that are designed to address and predominantly address distribution-level reliability needs are not properly considered as providing capacity.

"We also find persuasive companies' explanation that, although the companies' CSRPs are triggered based on forecasted system peaks, the relief occurs at the distribution level," the commission said. "Accordingly, we agree that the CSRPs under consideration here are not designed to address systemwide needs and that any incidental systemwide reliability benefit that the CSRPs might provide is not the result of the programs' design. That finding is consistent with the commission's treatment of DLRPs, which may have a similar, incidental systemwide benefit."

'Trench Warfare'

Clements said that former Chair Norman Bay was "prescient" four years ago when he cautioned that misapplication of market power mitigation in the form of minimum offer price rules (MOPRs) was "unsound in principle and

unworkable in practice," and that it would place the commission in direct conflict with the states.

"Where there is evidence that market power exists and could lead to unjust and unreasonable wholesale rates, we must address it. But NYISO's buyer-side mitigation rules have, with the complicity of the commission, been misappropriated toward ends unrelated to mitigating market power," Clements said. "NYISO's market rules must instead acknowledge the state's exercise of legitimate authority and provide for an efficient wholesale market framework that respects the state's resource mix choices."

Christie decried "this continuing trench warfare over 'MOPR-type' issues in individual cases in which only a tiny fraction of the interested universe can participate."

While the issues involved in Thursday's order have been described as an example of the alleged misuse by the commission of BSM rules, he said others may describe them as an effort to prevent retail subsidies paid to certain DR providers from unfairly impacting prices in NYISO's Installed Capacity market, which is under FERC jurisdiction, he said.

That same day, Chair Glick announced that the commission would convene technical conferences on each of the capacity markets under its jurisdiction, including NYISO's. (See related story, *Glick Hits 'Refresh' at 1st FERC Open Meeting.*)

"If consumers in other states were disadvantaged, I may well view this matter differently, but on this record — and with the desire to see this entire issue teed up for review and consideration — I concur," Christie said. ■

NYISO News

Con Edison 2020 Earnings down 18% YOY

By Michael Kuser

Consolidated Edison on Thursday reported net income of \$1.1 billion (\$3.29/share) for 2020, down about 18% from the previous year because of lower commercial and industrial demand during the COVID-19 pandemic and costs associated with Tropical Storm Isaias last August.

The company's net income for the fourth quarter net income was \$43 million (\$0.13/share), compared with \$295 million (\$0.89/share) for the same period in 2019.

"I want to thank our essential frontline employees for their dedication and sacrifice throughout the pandemic. Their exceptional work in providing safe and reliable energy to New Yorkers has made a critical difference throughout this most difficult year," CEO Timothy P. Cawley said in a statement.

Last March, Con Ed began suspending utility service disconnections, certain collection notices, final bill collection agency activity, new late payment charges and certain other fees for all customers. The company estimates foregone revenues at approximately \$61 million and \$3 million for Consolidated Edison Company of New York (CECONY) – its utility subsidiary serving New York City and Westchester County – and Orange and Rockland Utilities (O&R), respectively.



Con Edison deployed a 1-MW generator to support the field hospital at the Brooklyn Cruise Terminal in Red Hook. | Con Ed

The company estimates the financial impact from COVID-19 for the full year to be \$102 million. CECONY's C&I demand was down 15% for the year, with revenue for the sector down 13%; O&R's were down 9% and 8%, respectively.

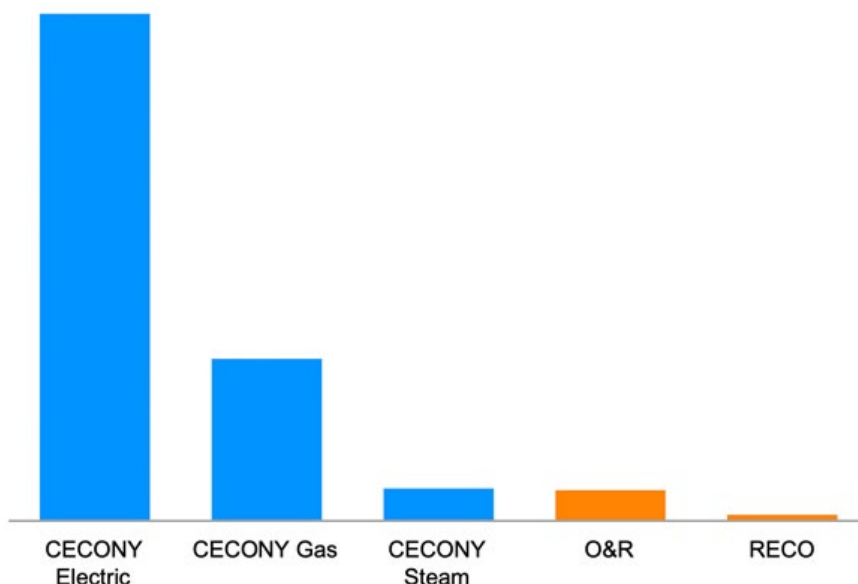
The New York Public Service Commission in January approved further investigation into the Isaias preparation and response by Central Hudson Gas & Electric, CECONY, O&R and PSEG Long Island. PSEG is not under PSC jurisdiction, but the other three utilities "now face maximum potential penalties of up to

\$137.3 million, with Con Edison and O&R also facing potential license revocation depending upon a finding of repeat violations," the commission said. (See "NYSEG Dinged for Isaias; Other IOU Cases Pending," *NY PSC OKs Utility Storage Deployment, Cost Recovery.*)

New York Gov. Andrew Cuomo on Friday announced that he is advancing legislation to eliminate caps on penalties to ensure they align with actual damages caused by specific violations and to establish a clear process for revocation of a utility's operating certificate upon recurring failures. ■

CECONY		(\$ in millions)
Electric	NY	\$22,101
Gas	NY	7,110
Steam	NY	1,486
Total CECONY		\$30,697

O&R		(\$ in millions)
O&R Electric	NY	\$901
O&R Gas	NY	490
RECO	NJ	271
Total O&R		\$1,662



Total Rate Base \$32,359

Composition of Con Edison's regulatory rate base as of Dec. 31, 2020 | Con Ed

PJM News



FirstEnergy Shares Jump on Icahn Investment

Nonprofit at Heart of Federal Probe Pleads Guilty

By Michael Yoder

FirstEnergy officials updated investors Thursday on the ongoing investigation into the fallout from House Bill 6 during its fourth quarter earnings call while also disclosing billionaire investor Carl Icahn is looking to acquire a stake in the company.

Officials said it disclosed in its most recent Securities and Exchange Committee *filing* that it received a letter on Feb. 16 from Florida-based Icahn Capital informing them that Icahn is making a filing with the Federal Trade Commission of its intention to acquire voting securities of FirstEnergy in “an amount exceeding \$184 million but less than \$920 million,” depending on market conditions. The company’s market capitalization is almost 18.5 billion.

FirstEnergy said it does not know whether Icahn or his associates have already acquired FirstEnergy stock, and it did not know his intentions regarding the company. The letter was the only contact so far with Icahn, officials said.

Icahn earned a reputation in the 1980s as a “corporate raider,” known for his hostile takeover and asset stripping of airline TWA. Icahn briefly served as an economic adviser in the Trump administration in 2017.

FirstEnergy’s share price jumped 7.2% to \$34.25 by the end of trading on Thursday on the news involving Icahn, climbing as high as \$35.36 per share after noon. Nearly 19 million shares traded hands, about three times as many on a typical day in the last year. The



FirstEnergy President Steven Strah | *FirstEnergy*



FirstEnergy has started construction on a new transmission substation in Trumbull County, Ohio, to support the expanding electric vehicle industry in the region. | *FirstEnergy*

share price closed Friday at \$34.03 on a trading volume of 5.3 million shares.

“We thought it was noteworthy, and that’s why we’re just being open and transparent about it,” acting CEO and FirstEnergy President Steven Strah said. “We just don’t know enough at this point.”

An electric utilities industry analyst at KeyBanc in Cleveland said in a note to clients that Icahn was likely attracted because FirstEnergy is undervalued.

“We believe that there are multiple avenues for [FirstEnergy] to close its valuation gap where an activist could have an impact – up to and including a sale of the company,” said KeyBanc analyst Sophie Karp, who added that Icahn’s interest could result in a sale of the utility or of non-core assets.

HB 6 Investigation

Thursday’s earnings call was the first held since five FirstEnergy officials were fired in the wake of the fallout surrounding the alleged \$61 million bribery scheme that resulted in the passage of HB 6 to rescue struggling nuclear plants in Ohio at a cost to the public of more than \$1 billion. The scandal also claimed Ohio Public Utilities Commission Chair Sam Randazzo, who resigned after the FBI raided his home. Randazzo has not been charged in the Justice Department investigation of the scheme. (See *Chief Ethics, Legal Officers ‘Separate’ from FirstEnergy* and *PUCO Chair Randazzo Resigns*.)

Neither FirstEnergy nor its former executives

have been charged.

But on Friday, the Justice Department’s Southern District of Ohio *announced* that Generation Now, a nonprofit social welfare agency at the center of the purported racketeering scheme created to conceal more than \$60 million in corporate money to former Ohio House Speaker Larry Householder, pleaded guilty to one count of racketeering conspiracy.

Householder and his longtime political strategist Jeffrey Longstreth signed the guilty plea on behalf of Generation Now. Longstreth pleaded guilty in October to an identical individual charge and faces up to 20 years in prison. Householder has pleaded not guilty and is awaiting trial. Stripped of his title as speaker, Householder continues to serve as a state representative. Strah, who took over for former CEO Charles Jones after he was fired in late October, said FirstEnergy is “deeply committed” to creating a culture in the company where its leaders “encourage open and transparent communications with all of our stakeholders.” (See *FirstEnergy Fires Jones over Bribe Probe*.)

“We are dedicated to re-emphasizing that every employee at every level has the responsibility to consistently act in accordance with our core values and behaviors and to speak up if they see inappropriate behavior anywhere in the organization,” Strah said. “At the same time, we’re taking decisive actions to rebuild our reputation and brand and focus on the future.”

Strah said FirstEnergy is continuing to coop-

PJM News



erate with the Department of Justice and SEC as the investigation into the alleged bribery scheme continues.

Christopher Pappas, FirstEnergy executive director and independent board member, said the company's internal investigation has not resulted in any new material to disclose. Pappas said investigators have found certain transactions, including vendor services, that were either improperly classified, misallocated to utility or transmission companies or lacked proper supporting documentation.

The transactions, Pappas said, resulted in amounts collected from customers that were "immaterial" to FirstEnergy and will work with regulatory agencies "to address these amounts." The exact amounts were not disclosed.

"Our internal investigation continues to be thorough and robust and includes assistance from external law firms who are supported by several other consultants," Pappas said.

FirstEnergy announced it has stopped making political contributions and will no longer make contributions to political nonprofit 501 (c) (4) organizations.

The company on Thursday also named John Somerhalder, a former executive with CenterPoint Energy in Texas, as vice chairman of FirstEnergy. Somerhalder will also serve as executive director and a member of FirstEnergy's executive leadership team in a transitional capacity and is tasked with improving the company's governance and rebuilding relationships

with regulators.

Clean Energy Investment

FirstEnergy reaffirmed its commitment to modernizing its grid and become carbon neutral by 2050. Last year, the company invested \$3 billion in its distribution and transmission system and grid modernization. FirstEnergy continues to operate about 3,100 MW of coal-fired power plants in West Virginia, according to its most recent 10K filing. The company has committed to owning 50 MW of solar generation in West Virginia by 2030 and has pledged to look for other ways to reduce coal burning in the state. "We believe robust long-term organic growth opportunities are well aligned with the focus on electrification and the critical role the grid plays in supporting the transition to a carbon neutral economy," Strah said.

The company recently announced a \$19.6 million project to construct a new transmission substation in Trumbull County, Ohio, to support the energy demands of the electric vehicle industry expanding in the region. The new transmission infrastructure will provide electric service to Ultium Cells — a 3 million-square-foot EV battery-cell manufacturing plant backed by General Motors and South Korea's LG Chem.

In its *strategic plan* announced last month, FirstEnergy pledged to achieve carbon neutrality by 2050. It said all new light-duty and aerial trucks will be electric or hybrid vehicles beginning this year and 30% of the fleet will be

electrified by 2030.

"This ambitious goal reflects our transformation to a regulated electric utility and our responsibility to help create a sustainable energy future," Strah said.

Earnings

The company reported earnings of \$1.1 billion (\$1.99/share), on revenue of \$10.8 billion for fiscal year 2020 and \$242 million (\$0.45/share) on revenue of \$2.5 billion for its fourth quarter.

The year-end results were an improvement over 2019, when the company earned \$908 million (\$1.70/share) on revenue of \$11 billion.

FirstEnergy CFO Jon Taylor said he expects a profit of \$1.3 billion to \$1.4 billion for the current 2021 fiscal year.

FERC Docket Closed

Also Friday, FERC terminated a docket it had opened to consider whether FirstEnergy Solutions, FE's former merchant generation unit, could abrogate its contracts with Maryland Solar and the Ohio Valley Electric Corp. (OVEC). The commission said the proceeding was made moot after a U.S. bankruptcy court approved settlements FES' successor, Energy Harbor, made with Maryland Solar and OVEC (EL20-35). (See *Energy Harbor Settles with Solar Co. for \$66M.*) ■

John Funk contributed to this article.

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PJM News



PJM MRC/MC Preview

Below is a summary of the issues scheduled to be brought to a vote at the PJM Markets and Reliability and Members committees on Wednesday. Each item is listed by agenda number, description and projected time of discussion, followed by a summary of the issue and links to prior coverage in RTO Insider.

RTO Insider will be covering the discussions and votes. See next Tuesday's newsletter for a full report.

Markets and Reliability Committee

Consent Agenda (9:05-9:10)

B. The MRC will be asked to *endorse* proposed *revisions* to Manual 40: Training and Certification Requirements resulting from a periodic review. The Operating Committee endorsed the revisions Feb. 11. (See "Manual 40 Changes Endorsed," *PJM Operating Committee Briefs: Feb. 11, 2021.*)

Endorsements/Approvals (9:10-11:00)

1. Black Start Unit Testing, CRF, Involuntary Termination, MTSL and Substitution (9:10-10)

A. Members will be asked to endorse a *proposal* addressing black start unit involuntary termination, substitution rules, capital recovery factor (CRF) and minimum tank suction level (MTSL). Greg Poulos, executive director of the Consumer Advocates of the PJM States, introduced the proposal on behalf of the Delaware

Division of the Public Advocate at the January MRC meeting after proposals from PJM and Dominion Energy failed to receive endorsement. (See *PJM MRC/MC Briefs: Jan. 27, 2021.*)

B. Susan Bruce of the PJM Industrial Customer Coalition and Sharon Midgley of Exelon will also ask stakeholders to endorse an alternative PJM *proposal* on the same issue on first read. The proposal received 43% stakeholder support at the OC in December.

2. Storage as a Transmission Asset (SATA) (10-10:40)

The MRC will be asked to endorse PJM's *proposal* for addressing how storage should be considered in the Regional Transmission Expansion Plan, along associated tariff and Operating Agreement *revisions*. Stakeholders endorsed the proposal at the Planning Committee in December. (See *PJM PC OKs RTEP Rules for SATA.*)

3. Competitive Exemption OA Revisions for SATA Resources (10:40-11)

Contingent on approval of the SATA proposal, Sharon Segner of LS Power will introduce a friendly *amendment* with OA revisions specifying, among other things, that SATA resources are ineligible for qualifying as immediate-need reliability projects.

Members Committee

Consent Agenda (1:20-1:25)

B. Stakeholders will be asked to endorse pro-

posed Tariff Attachment K and OA Schedule 1 *revisions* addressing market rules for real-time values. The package was endorsed with a sector-weighted vote of 4.9 (98%) at the January MRC meeting. (See "Real-time Values Market Rules," *PJM MRC/MC Briefs: Jan. 27, 2021.*)

C. The MC will be asked to *endorse* proposed *tariff*, OA and *Reliability Assurance Agreement* (RAA) revisions addressing the disposition of price-responsive demand credits. The package was unanimously endorsed at the January MRC meeting. (See "PRD Credits Disposition," *PJM MRC/MC Briefs: Jan. 27, 2021.*)

D. Members will be asked to *endorse* proposed tariff and OA *revisions* related to stability limits in markets and operations. The package was endorsed with a sector-weighted vote of 4.05 (81%) at the January MRC meeting. (See "Stability Limits Endorsed," *PJM MRC/MC Briefs: Jan. 27, 2021.*)

Endorsements/ Approvals (1:25-2:25)

1. MC Resolutions (1:25-2:25)

Midgley and Jim Davis of Dominion Energy will ask stakeholders to endorse a *proposal*, along with associated OA *revisions*, developing rules to address sufficient member approval of a resolution at the MC. Poulos will *review* an alternative proposal. ■

— Michael Yoder

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PJM News



PPL Close to UK Sale, Ramping up Investments

By Michael Yoder

PPL officials are looking for the sale of its U.K. utility to help fund billions of dollars in clean energy and infrastructure investments in the U.S.

During last week's fourth-quarter *earnings call*, PPL CEO Vincent Sorgi said the sale of Western Power Distribution (WPD) — the distribution utility for parts of England and Wales — is progressing and could be announced in the first half of this year. PPL made the decision to sell WPD following a "comprehensive strategic review" last year by the company's board of directors. (See [PPL to Sell UK Operations, Focus on US](#).)

Sorgi said the goal this year is to focus on "re-positioning" PPL as a purely U.S.-focused utility company and "delivering long-term value for our customers and our shareowners."

"We believe a sale of the U.K. business will simplify our business mix, strengthen our balance sheet and enhance the company's long-term earnings growth rate," Sorgi said. "In addition, we believe it will give the company greater financial flexibility to invest in sustainable energy solutions."

Infrastructure and Renewables

Despite the challenges experienced in 2020 with COVID-19, Sorgi said PPL was able to build on the \$27 billion the company has invested in the last decade, completing more than \$3 billion in infrastructure improvements over the year. He said of that, nearly 90% was focused on transmission and distribution infrastructure aimed at strengthening grid

resilience, incorporating new technology and advancing PPL's clean energy strategy.

Sorgi highlighted PPL's securing of regulatory approval for a 100-MW solar power purchase agreement to meet increasing customer demand for clean energy in Kentucky and the expansion of customer participation in the company's solar share program. LG&E and KU is expanding its solar share facility in the spring, adding two new solar sections to the facility in Simpsonville that will eventually consist of eight 500-kW sections.

PPL's Safari Energy business added more than 90 MW of solar capacity to its portfolio, Sorgi said, increasing its own capacity to 110 MW. The new capacity is contracted to be a long-term power purchase agreement.

In August, PPL joined a five-year industry initiative designed to accelerate the development of low-carbon energy technology and decarbonization across the economy. PPL partnered with the Electric Power Research Institute (EPRI) and the Gas Technology Institute (GTI) to sponsor the initiative.

"We recognize that going even further faster than the goals that we've set to address climate change requires new ideas, technology and systems that can be delivered safely, reliably and affordably," Sorgi said.

PPL has outlined more than \$14 billion in investments from 2021 to 2025, Sorgi said, supporting its continued monetization of the transmission and distribution networks and to "advance a cleaner energy future." (See [PPL Spells out \\$14B International Tx Upgrade Plan](#).)

Sorgi said the forecasted spending represents

a \$1 billion increase of incremental capital expenditures from 2021 to 2024 compared to the spending plan first introduced last year. The increases include \$400 million in Kentucky to support the full deployment of advanced metering infrastructure and \$300 million in Pennsylvania for additional transmission investments and funding for IT initiatives focused on smart grid technology.

Biden Administration

Sorgi was asked his thoughts on what the Biden administration's energy policies will mean for PPL. He said the company is closely monitoring developments at the federal level, but it has been too early to determine their specific effects on regulations and the economy.

He said it's clear climate change will play a key part in the decisions of the administration, so PPL will "remain engaged" in talks about the administration's goals and ways to successfully advance some of its policies.

One of the biggest issues will be rejoining the Paris Agreement, Sorgi said, which will lead to more aggressive carbon-reduction commitments. He said the targets being discussed would require major advancements in technology.

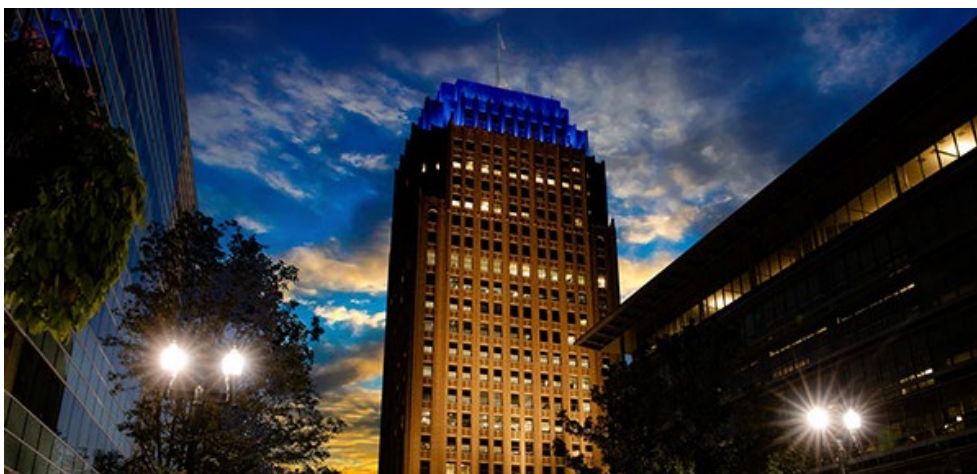
While the industry has been supportive of the overall goals, Sorgi said, "we don't quite have agreement on how to get there and the ability of the industry to meet those aggressive targets."

Earnings

PPL CFO Joseph Bergstein Jr. announced the company's earnings, saying its profits fell 16% in 2020, as COVID-19 impacted the economy across the board. The company earned \$1.47 billion last year, on revenue of \$7.6 billion, compared with \$1.75 billion on about the same revenue during 2019.

In the fourth quarter, PPL earned \$290 million (\$0.45/share), down from \$364 million (\$0.48/share) in 2019. Revenue was flat at \$1.9 billion.

Bergstein said that in Pennsylvania, the largest dips in electricity usage remain in retail and service industries, including restaurants, bars and hotels, as the businesses are impacted from closures and limitations from pandemic regulations. He said PPL expects sales to remain down until restrictions are ended or relaxed. ■



PPL's headquarters in Allentown, Pa. | PPL

PJM News



FERC Approves PJM's Immediate-need Revisions

By Michael Yoder

FERC last week approved PJM's proposed Operating Agreement language to provide more transparency in the conditions that exempt "immediate need" transmission projects from competition under Order 1000 (ER20-2686).

The commission first opened an investigation into PJM's practices for designating immediate-need projects in October 2018, questioning whether it was opposing Order 1000's competition mandate by misusing the exemption. (See [FERC to Probe Order 1000 Competition Exemptions](#).)

Order 1000 allows a right of first refusal (ROFR) for transmission projects needed for reliability so urgently that there is insufficient time to hold a competitive proposal window.

The commission determined Thursday that PJM's compliance filing "establishes a just and reasonable implementation structure for immediate-need reliability projects." PJM had been ordered in June to make OA changes regarding language it developed to create a ROFR exemption. (See [More Transparency Ordered on PJM 'Immediate Need' Tx.](#))

Criteria Met

In its June order, FERC concluded PJM was complying with only two of the five criteria to limit the RTO's discretion for applying the immediate-need exemption, saying it should be used only in "certain limited circumstances."

Regarding the second criterion, FERC said PJM did not comply with a requirement that it separately identify and post an explanation of reliability violations and system conditions for which there is a time-sensitive need, including sufficient detail of the need and time sensitivity.

In Thursday's filing, the commission determined that PJM's proposed supplemental document providing details on each identified immediate-need reliability violation that the RTO proposes to exempt from the competitive proposal window process complied with requirements of the criterion. FERC also said PJM's plan to both post the supplemental document on its website and include the supplemental document with Transmission Expansion Advisory Committee meeting materials met the criterion.

As an example of what the supplemental documentation would look like, PJM provided



© RTO Insider

the [compliance attachments](#) for the Northern Neck Area and Manassas Area, two reliability violations the RTO identified as immediate need in 2020.

LS Power argued in a protest filing that the supplemental document should be part of "presentation" materials rather than "informational" materials. FERC said it was not persuaded by LS Power's arguments and that it was satisfied with PJM's solution.

"We expect PJM to adequately inform its stakeholders about all immediate-need reliability transmission projects such that transmission project-specific information will be included in the materials for TEAC meetings, included for discussion, and stakeholders will have opportunities to raise comments and questions about specific immediate-need reliability projects," FERC said.

For the third criterion, FERC said PJM must provide a "full and supported written description" on any decision to award a project to an incumbent TO, including an explanation of other transmission or non-transmission options that the RTO considered and the cause of the need and why it was not identified earlier.

PJM proposed that the example attachments comply with the requirement to "provide a full and supported description of its decision to designate the immediate-need reliability project to the incumbent transmission owner, the alternatives considered and the circumstances generating the need, including why the need was not identified earlier."

Protesters argued that the compliance attachments do not explain if other transmission and non-transmission alternatives were considered or why a time-sensitive reliability need

was not identified earlier. LS Power also argued that the compliance attachments "make only sweeping statements about the reliability issues and the resulting determination that a competitive proposal window is infeasible."

FERC said it agreed that PJM's clarifications are "adequately responsive to these concerns" and that the compliance attachment for the Manassas Area specifically identified why a reliability need was not identified earlier. FERC did say PJM acknowledged that it "did not explicitly provide discussion of the alternative transmission and non-transmission options" considered in the attachment.

"In all future supplemental documents, we expect PJM to include an explicit explanation of other transmission or non-transmission options that it considered before designating an immediate-need reliability project," FERC said.

Finally, in the fourth criterion, FERC said stakeholders must be permitted time to provide comments in response to the project description and the comments must be made publicly available. The commission had found that PJM providing three days for stakeholders to review immediate-need reliability project materials was not an adequate amount of time.

PJM proposed to revise the OA to add a specific period of "no less than 10 days" for stakeholders to review the meeting materials and transmission project-specific supplemental documents.

"We find that PJM's proposed revisions are just and reasonable given the time-sensitivity of the reliability violations being addressed by proposed immediate need reliability projects," FERC said. ■

PJM News



Rehearing Denied in PPL ROE Case

FERC last week denied a request for rehearing by PPL of the commission's Oct. 15 order that established hearing and settlement judge procedures in a complaint over the company's base return on equity methodology (EL20-48).

On May 21, the PP&L Industrial Customer Alliance (PPLICA), an *ad hoc* group of PPL commercial and industrial customers, filed a complaint that alleged the company's 11.18% base ROE was unjust and unreasonable and argued it should be 8%. On June 10, PPLICA filed a supplement to the initial complaint to reflect revisions to the commission's ROE methodology developed in Opinion 569-A, recommending a replacement ROE of 8.5%. (See [FERC Ups MISO TO ROE, Reverses Stance on Models.](#))

In the October order, FERC found that because PPLICA's initial complaint was complete when it was filed in May, "consistent with the commission's general policy of providing maximum protection to ratepayers," the refund effective date would be set at the earliest date possible of May 21, the date of the PPLICA's initial complaint.

PPL asserted that the commission's determination that PPLICA's initial complaint was



Susquehanna Steam Electric Station operated by PPL | Jakec, CC BY-SA 4.0, via Wikimedia Commons

complete when filed was arbitrary and capricious, with the company contending that the decision was unsupported by record evidence and FERC precedent.

"We continue to find, as set forth in the order on complaint, that PPLICA's initial complaint was complete when filed," FERC said. "As an ini-

tial matter, the commission's issuance of Opinion No. 569-A did not render PPLICA unable to 'move forward with the initial complaint' or make it 'likely' that the commission would 'have rejected PPLICA's complaint' without PPLICA's supplement." ■

— Michael Yoder

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SPP News



SPP RSC Finalizes Recommendations for SLC

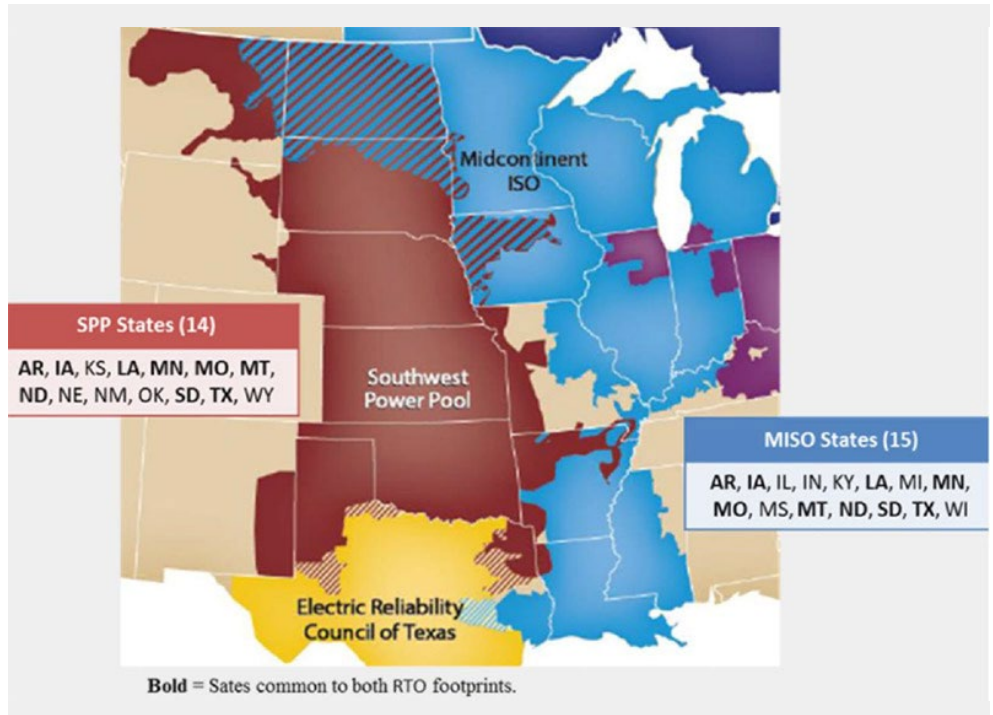
SPP’s state regulators recently agreed on revisions to a package of recommendations that would improve operations along the RTO’s seam with MISO.

Texas Public Utility Commission Chair DeAnn Walker facilitated the Regional State Committee’s modifications to the *document*, which prioritizes resolving rate pancaking and adds a category for smaller interregional projects. (See *RSC Keeps MISO Liaison Committee Alive*.)

The RSC, meeting on Feb. 12 shortly before severe winter weather overwhelmed many of its members’ states, agreed that rate pancaking and smaller interregional projects should remain their two top priorities.

The regulators also agreed that the RSC-Organization of MISO States Seams Liaison Committee (SLC) should create a working group focused on inventorying the different types of rate pancaking along the MISO-SPP seam and sided with the SLC’s recommendation that a survey be conducted of transmission owners and other stakeholders to measure interest in studying the issue.

“Creating that inventory is important,” Kansas Corporation Commissioner Andrew French said. “It’s important to get feedback from the TOs and other stakeholders. It’s not just TOs experiencing those issues.”



The MISO-SPP seam | *Organization of MISO States*

The SLC has said the working group should comprise RSC and OMS members and an equal number of other stakeholders chosen by the two regulatory groups.

Walker, the RSC’s lead on the SLC, was to send the revised document to OMS Executive Director Marcus Hawkins. ■

— Tom Kleckner

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SPP News

FERC Remands GridLiance ATRR Settlement

By Tom Kleckner

FERC last week rejected a contested settlement agreement between SPP and GridLiance High Plains and remanded the proceedings back to the chief administrative law judge to resume hearing procedures (ER18-99).

In an order approved at its open meeting Thursday, the commission said SPP's 2019 settlement offer was contested and could not be approved under any of the four *Trailblazer* approaches for approving contested settlements.

The docket was opened in 2017 when SPP proposed tariff revisions to add an annual transmission revenue requirement (ATRR), a formula rate template and implementation protocols for GridLiance-owned facilities in Nixa, Mo. The RTO decided to place the facilities in transmission pricing Zone 10 because they served load located there.

Several parties protested, including several cities in the zone, Nebraska Public Power District and a group of SPP transmission owners. FERC set the Tariff revisions for hearing and settlement judge procedures in March 2018.

GridLiance eventually reached an agreement with the Missouri cities that was certified by an ALJ last year. At the same time, the judge determined several issues were “arguably policy concerns that do not constitute genuine issues of material fact” and that the record contained substantial evidence upon which FERC could reach a decision in accordance with *Trailblazer*.

The TOs said the real issue was the originally proposed cost allocation, which would not be improved by the settlement. The commission agreed, saying the alleged cost shift caused by the Nixa assets' inclusion in the zone was not addressed by the settlement.

FERC said its review of the record “shows that there may be a significant rate increase for Zone 10 customers upon the inclusion of the Nixa assets.”

“Based on the issues raised by the [TOs] with respect to the cost shift caused by the inclusion of the Nixa assets into SPP that we are unable to resolve based upon the record before us, we cannot approve the settlement under the first *Trailblazer* approach,” the commission said.

FERC did not address the merit of the TOs' other issues because it rejected the first

Trailblazer approach based on the cost shift issue.

Under the *Trailblazer* precedent, FERC may approve a contested settlement:

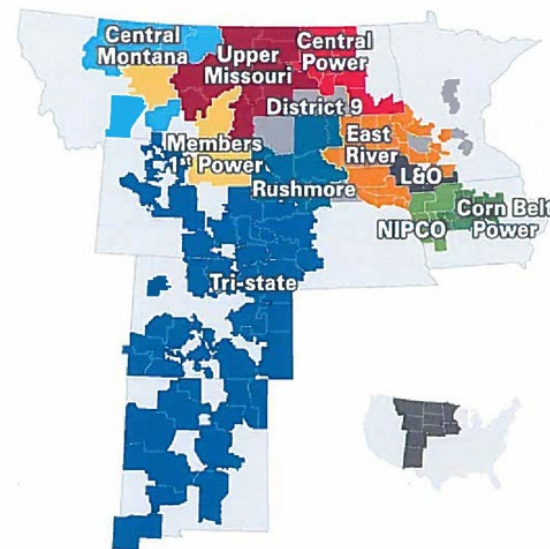
- “if [it] can address the contentions of the contesting parties on the merits.” The commission has held that it “cannot approve a contested settlement under this approach if some of the contesting parties' positions are found to have merit or the record lacks sufficient evidence to support a finding on the merits.”
- “as a package on the grounds that the overall result of the settlement is just and reasonable.” The approach requires a “detailed and independent cost-benefit analysis ... versus continued litigation.”
- “where it determines that the contesting party's interest is sufficiently attenuated that the settlement can be analyzed under the fair and reasonable standard applicable to uncontested settlements, and the commission [makes] an independent finding that the settlement benefits the directly affected settling parties.”
- “for consenting parties and sever the contesting party or any contested issue.”

Basin Electric Rate Order Sustained

FERC last week also sustained a September 2020 order that accepted Basin Electric Power Cooperative's 2020 rate schedule and wholesale power contracts but that also opened an investigation under Federal Power Act Section 206 into the rates' justness and reasonableness. The order also granted clarification requests regarding the proceedings' scope (ER20-2441).

In its September order, the commission found Basin's rate schedule and power contracts with its 19 members raised factual issues that should be addressed through hearing and settlement judge procedures. It disagreed with intervenors' arguments that a lack of withdrawal and termination procedures rendered the wholesale contracts unjust and unreasonable, saying each contract includes provisions requiring notice of termination for the contract term's end. (See [FERC to Investigate Basin Electric Rates; Daily Dissents](#).)

Wheat Belt Public Power District and McKen-



Basin Electric's service territory | Basin Electric

zie Electric Cooperative both filed clarification requests or, in the alternative, a rehearing of the September order. Dakota Energy Cooperative and Meeker Cooperative Light & Power Association filed a joint request for rehearing.

FERC denied the rehearing requests but granted Wheat Belt's and McKenzie's requests for clarification.

In other orders from last week's meeting:

- the commission conditionally accepted SPP's compliance filing that lets interconnection customers know where in the RTO's business practices manuals or other coordination documents they may find the modeling details staff use when studying a project as energy resource interconnection service or network resource interconnection service. SPP has 30 days to revise sections of its “Guidelines for the SPP GIP Process and Business Practices” document (ER20-945).
- FERC approved an uncontested settlement agreement addressing the ratemaking treatment of Northwest Iowa Power Cooperative's grandfathered agreements with MidAmerican Energy, saying it resolved all remaining issues set for the original hearing. The commission applied the Mobile-Sierra “public interest” presumption obligating it to treat any freely negotiated wholesale transaction as satisfying the requirement of justness and reasonableness unless it finds that the agreed-upon arrangements seriously harm the public interest (ER15-2115). ■

Company Briefs

FirstEnergy Says Randazzo Payment 'May Have Been' Misrepresented



In a new disclosure to federal regulators,

FirstEnergy said a \$4 million payment made in early 2019 to end a consulting agreement with former Public Utilities Commission of Ohio Chairman Sam Randazzo "may have been for purposes other than those represented within the consulting agreement."

The company first disclosed the payment in October, saying it was discovered during an internal investigation prompted by the fallout from the federal corruption probe into House Bill 6. The company said it could not determine "if the payments were for the purposes represented within the consulting agreement," blamed then-CEO Chuck Jones and two senior executives and fired them for violating company policies and codes of conduct.

Randazzo has not commented on the payment, other than referencing it in his resignation letter as a distraction to the Gov. Mike DeWine administration.

More: [Cleveland.com](#)

First Solar Continues US Asset Sell-off in Arizona

First Solar last week continued the dumping of its utility-scale solar assets by agreeing



to sell 900 MW of its Arizona portfolio to Longroad Energy.

First Solar agreed to sell the Sun Streams 2 (200 MW), 4 (200 MW) and 5 (500 MW) projects, which have the further potential of 1 to 2 GW of battery storage. Longroad has closed the acquisition of Sun Streams 2, which is currently under construction; the deals for Sun Streams 4 and 5 are subject to regulatory approval.

As part of the deal, Longroad has agreed to purchase agreements for 900 MW of First Solar's Series 6 modules, with 700 MW of that constituting as new orders for First Solar.

More: [PV Tech](#)

IBM Pledges Net-zero Emissions by 2030



IBM has pledged to cut its greenhouse gas emissions 65% by 2025 compared with

2010 levels, while increasing the amount of electricity it consumes from renewable sources to 90% by 2030.

In a statement released last week, the company also said it will increase its use of carbon capture and other technology to fully offset its residual emissions by 2030.

In a sustainability report last year, IBM said

it had reduced carbon emissions by 39.7% since 2005 and increased the portion of electricity consumed from renewable sources to 47% as of 2019.

More: [The Hill](#)

Generation Now Submits Guilty Plea in Connection with HB 6

Generation Now last week admitted to a single felony racketeering count in Cincinnati in connection to House Bill 6 and what prosecutors call the largest political corruption case in state history.



Jeffrey Longstreth, a longtime aide of former Republican House Speaker Larry Householder, signed the plea agreement late last month as the representative of Generation Now. As part of the plea,

the group will forfeit \$1.5 million and faces up to five years of probation. U.S. District Judge Timothy S. Black will announce a final sentence at a later date.

Investigators say Generation Now, formed by Householder and Longstreth, received tens of millions of dollars to ensure passage of HB 6. As a social welfare nonprofit, the group was not required to disclose its donors.

More: [The Columbus Dispatch](#)

Federal Briefs

Biden Picks Turk as Deputy Energy Chief



President Joe Biden last week selected former Obama administration official **David Turk** as his choice for the No. 2 role at the Department of Energy.

Turk will serve as deputy to Jennifer Granholm, the former governor of Michigan, if both are confirmed by the Senate.

Turk has been at the International Energy Agency since 2016. Prior to that, he held roles as deputy assistant secretary for

international climate and technology at the Department of Energy and deputy special envoy for climate change at the State Department. He has also served on the National Security Council.

More: [The Hill](#)

BOEM Issues Lease for Wave Energy Research Project



The Bureau of Ocean Energy Management last week issued a lease for the nation's

first pre-permitted wave energy testing facility off the coast of Oregon.

The \$80 million PacWave South project, led

by Oregon State University, will be the first full-scale, utility grid-connected wave energy test site in the U.S. It is designed to give developers the opportunity to test different technologies for harnessing the energy of ocean waves.

The 1,696-acre site will consist of four test berths to support the testing of up to 20 floating or underwater wave energy converter devices, with a capacity of 20 MW, to demonstrate the viability of wave energy. The device converts the kinetic and potential energy of moving waves into electrical or mechanical energy. Five power and data cables buried below the seafloor will connect the test site to a shoreside facility.

More: [Offshore Engineer](#)

State Briefs

CALIFORNIA

Lake Forest Backs Out on New Regional Renewable Energy Agency

Despite calls from residents for the city to remain with the Orange County Power Authority, the Lake Forest City Council last week voted 4-1 to back out of the authority and community choice program.

Some residents claimed the program could provide an alternative to Southern California Edison, which they described as a monopoly. Proponents also argued the program would lower wildfire rates.

Councilman Mark Tettemer, who voted to leave the authority, said he is not opposed to a community choice program and added if "all roads lead back to" the county's power authority he'd happily rejoin it.

More: [Voice of OC](#)

Senators Introduces Bill to Ban Fracking by 2027

Sens. Scott Wiener (D) and Monique Limon (D) last week introduced a bill that would halt the issuance of permits for hydraulic fracturing in the state by Jan. 1, 2022, and terminate all fracking operations by Jan. 1, 2027.

The bill comes in response to comments from Gov. Gavin Newsom, who in September called on the Legislature to stop issuing new permits for fracking. This legislation goes further, seeking an end to fracking and reviving an effort to create buffer zones around wells. Also, any new or modified permits for oil and gas production will be prohibited within 2,500 feet of homes, schools, health care facilities or long-term care facilities.

More: [San Francisco Chronicle](#)

COLORADO

Cap-and-trade Greenhouse Gas Cuts Rejected by AQCC

Air Quality Control Commissioners last week voted 7-1 to reject a petition from the Environmental Defense Fund to create rules for a cap-and-trade program covering carbon dioxide emissions. The AQCC said the plan was intriguing, but too complex and expensive to execute now as it is in the middle of a two-year rulemaking process to require emissions cuts across multiple industries.

Under the EDF proposal, AQCC staff would identify current carbon dioxide emissions and set annual, declining targets that would reach the 2025, 2030 and 2050 limits in state law. Industries would be handed formal credits, or "allowances," which would shrink each year to reach the targets. However, Gov. Jared Polis and the Air Pollution Control Division have opposed the petition.

APCD Director Garry Kaufman said they have different visions of how to reach the goals. He also said the governor "has laid out a bold plan," and officials are "well on the way to carrying it out."

More: [The Colorado Sun](#)

Colorado Springs Utilities Sets Record for Electricity Consumed in a Day

On Feb. 14, Colorado Springs Utilities set a record for the most electricity consumed on a winter day as temperatures across the city reached sub-zero lows.

Residents consumed 16,621 MWh of power on the day, surpassing the previous winter peak of 16,593 MWh consumed on Feb. 1, 2011. However, the usage remained below the summer peak of 17,751 set in July 2019.

More: [The Gazette](#)

ILLINOIS

Madigan Resigns as House Speaker



Michael Madigan announced his resignation last week from the House of Representatives, where he was the nation's longest-serving statehouse speaker at 36 years.

Madigan's resignation comes a little more than a month after he was deposed by fellow Democrats after being named in a federal corruption investigation involving Commonwealth Edison. He has yet to be charged with any wrongdoing and has denied any knowledge of the influence scheme.

Madigan remains the state's Democratic Party chairman and head of the 13th Ward Democratic organization, which will allow him to choose his successor. Aides said he has no plans to step down from either role.

More: [Chicago Tribune](#)

MARYLAND

Department of the Environment Releases Climate Action Plan

The Department of the Environment last week released a 279-page report outlining the state's plan to reduce greenhouse gas emissions and achieve net-zero emissions by 2045.

The 2030 Greenhouse Gas Reduction Act Plan comes after the Greenhouse Gas Emissions Reduction Act was reauthorized in 2016, which required the department to adopt a plan to achieve climate goals by Dec. 31, 2019. It then released a draft in October 2019 before publishing the final plan. It also outlines the Clean and Renewable Energy Standard, which is a bill that Gov. Larry Hogan said would lead to a 100% clean and renewable energy portfolio by 2040. It did not move out of committee last year.

Although the 2016 law called for a 40% reduction in emissions by 2030, the department decided to pursue a 50% reduction in response to the Commission on Climate Change's recommendations in its annual report last November.

More: [Maryland Matters](#)

NEVADA

Clark County Adopts Climate Action Plan

Clark County lawmakers adopted the county's first comprehensive sustainability and climate action plan last week, in preparation for a shift in operations to reduce greenhouse gas emissions to net zero by 2050.

The plan calls for a reduction in total energy consumption at county facilities by 20% over the next decade; its fleet of vehicles would be powered by alternative fuels by 2050. It focuses on five key areas: clean and reliable energy; resilient operations; smart waste management and reduction; sustainable transportation; and water conservation and protection.

An implementation strategy, and communitywide sustainability and climate action plan, are expected to be adopted within the coming months.

More: [Las Vegas Review-Journal](#)

NEW HAMPSHIRE

Blink Charging Expands EV Charging Infrastructure

Blink Charging last week announced its first deployment of electric vehicle charging stations in the state.

The company will set up two level-2 IQ 200 units at the Windsor Hill Condominiums in Waterville Valley. They will be the only charging stations within 30 miles.

More: [Blink Charging](#)

NORTH DAKOTA

Lawmakers Water Down Grid Reliability Bill

The Senate Energy and Natural Resources Committee last week reworked a proposal focused on the reliability of the grid and legislators scrapped the idea of requiring that wind or solar farm operators secure a certain amount of electricity from sources such as coal or natural gas to back up their facilities' output.

The new version, which the committee approved by a 5-1 vote, requires the state to prepare an annual report about the resilience of the grid. State Transmission Authority Director John Weeda would oversee the report, which would be delivered to the Industrial Commission, Legislative Council and grid operators.

The bill next moves to the full Senate.

More: [The Bismarck Tribune](#)

OHIO

DeWine Reappoints Ex-judge to PUCO



Gov. **Mike DeWine** announced last week that he has appointed former state appeals court judge Dennis Deters to a full term on the Public Utilities Commission.

Deters, who was first appointed to the PUC by DeWine in 2019, was recommended for a full five-year term by a nominating committee last month.

The nominating committee also sent four new names to DeWine to choose from to fill Sam Randazzo's chair seat. They include Jenifer French, Virginia King, Daniel Shields and Melissa Shilling.

More: [Cleveland.com](#)

Senate Passes Bill that Amends House Bill 6

The Senate last week unanimously passed a bill that makes changes to House Bill 6 by eliminating a provision that gives FirstEnergy a guaranteed level of revenue.

The bill eliminates and refunds a "decoupling" provision in which FirstEnergy is guaranteed a yearly revenue of \$978 million. It was the amount the company raised in 2018, thanks to hot weather and other factors. Earlier this month, FirstEnergy came to an agreement with Attorney General Dave Yost and halted the collection of money as allowed under the decoupling in exchange for the state suspending its legal challenge to the policy.

The bill now heads to the House.

More: [Cleveland.com](#)

TEXAS

Colorado City Mayor Resigns amid Backlash from Social Media Post

Colorado City Mayor Tim Boyd resigned last week after facing backlash from a Facebook post in which he said residents were owed nothing as many went without power or heat during the recent cold snap.

"No one owes you [or] your family anything," Boyd said in a since-deleted post. "I'm sick and tired of people looking for a damn handout! The city and county, along with power providers or any other service, owes you NOTHING!" he said while urging residents to "step up and come up with a game plan" for acquiring power or heat. "Only the strong will survive and the weak will [perish]," he added.

In a subsequent post, Boyd said he "won't deny for one minute" anything he said and announced his resignation. He also claimed his wife had been fired from her job over his comments and his family had received threats.

More: [The Hill](#)

VIRGINIA

Senate Committee Squashes Electric Utility Rate Reforms

The Senate Commerce and Labor Committee last week killed more than half a dozen bills aimed at reforming the state's electric utility rate review system. Five of the bills that came before the committee, several of which combined proposals from earlier in the session, had received bipartisan support in the House of Delegates. All except one

received a recommendation that they be struck down from the committee's energy panel, and all were killed by the full committee.

The move angered groups and lawmakers in both parties that have been lobbying to roll back regulations seen as enabling excessive profits for the state's two largest electric monopolies, Dominion Energy and Appalachian Power.

The outcome pushed some senators to call for a reconvening of the Commission on Electric Utility Regulation, a group of six delegates and four senators created in 2008 to monitor the system of electric utility regulation. The Commerce and Labor Committee voted to send a letter to the commission asking it to review four of the bills killed. The commission has not met since 2017.

More: [Virginia Mercury](#)

WEST VIRGINIA

PSC Grants Siting Certificate for Solar Project in Jefferson County

The Public Service Commission recently granted a siting certificate to Wild Hill Solar for the future operation of a 92.5-MW facility in Jefferson County.

The generating facility by EDF Renewables needed the certification to begin construction on approximately 795 acres of agricultural land. Construction is expected to begin this year and be completed in the third quarter of 2022.

More: [The Journal](#)

WISCONSIN

WEC, MGE Propose Investment in Kenosha Solar Farm

WEC Energy Group and Madison Gas and Electric last week filed a joint application with the Public Service Commission to purchase the 310-MW Paris Solar-Battery Park for roughly \$426 million, though they are requesting the authority to spend up to 10% more than that.

The 200-MW farm would be coupled with a battery system that could produce 110 MW for up to four hours. WEC subsidiaries We Energies and Wisconsin Public Service would own 90% of the project, while MGE would own the other 10%.

The purchase requires PSC approval. If approved, construction is expected to begin in 2022 and be completed by 2023.

More: [Wisconsin State Journal](#)