

## Wind, Solar, EE, CO<sub>2</sub> Storage Win Tax Breaks

*Mixed Reviews from Climate Activists*

By Rich Heidorn Jr.

Wind and solar generation, energy efficiency and carbon capture all won tax break extensions in an energy bill included in the massive stimulus and budget bill approved by Congress Monday night.

While far from the ambitions of the Green New Deal, the *Energy Act of 2020* includes several measures to address climate change, including an agreement to phase out the use of hydrofluorocarbons used in air conditioning and refrigeration. That puts the U.S. in line with other nations whose efforts could help avoid as much as a half-degree Celsius in global warming by the end of the century. The bill also includes a “sense of Congress” statement that the Energy Department prioritize funding for research to transition to 100% “clean, renewable or zero-emission energy sources.”

The bill includes a two-year extension of the in-



Sens. Lisa Murkowski (R-Alaska) and Joe Manchin (D-W.Va.) sponsored some of the measures included in the Energy Act of 2020. | © RTO Insider

vestment tax credit (ITC) used by solar power generators (keeping the ITC at 26% through year-end 2022 instead of falling to 22% in calendar year 2021), a one-year extender for the production tax credit (PTC) used by wind

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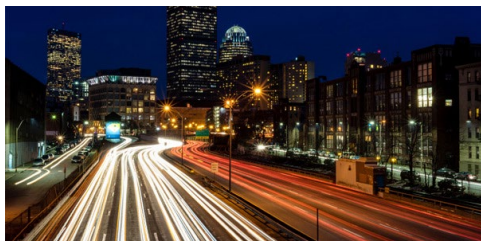
**Business Group Seeks to Triple Clean Energy R&D Funding** (p.8)

## NE States, DC Sign MOU to Cut Transportation Pollution

*TCI-P Seeks to Modernize Transportation, Combat Climate Change*

By Jason York

Connecticut, Massachusetts, Rhode Island and D.C. signed a *memorandum of understanding* Monday to launch the Transportation and Climate Initiative Program (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



The Transportation and Climate Initiative Program (TCI-P) aims to cut greenhouse gas pollution from vehicles by 26% from 2022 to 2032.

and public health improvements.

A cap-and-invest program, TCI-P will require large gasoline and diesel fuel suppliers to purchase allowances for the pollution and later auctioning them, which officials said will generate \$300 million for yearly investments in less polluting transportation. Each year, the total number of emission allowances would decline.

“Joining the Transportation and Climate Initiative is an investment in Rhode Islanders,” Gov. Gina Raimondo said in a statement. “This first-

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**Net Zero Price Tag: \$2.5 Trillion** (p.4)

**Report Explores Federal Authority for Tx Buildout** (p.6)

**AWEA: Biden Tx Buildout Could Double Renewables** (p.10)

## FERC Seeks More Participation in Gas Price Indices

By Amanda Durish Cook

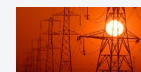
FERC on Thursday proposed revisions to its policy statement on natural gas price indices, and a new rule, to improve the participation in and formation of the indices.

The policy statement revisions would affect natural gas index developers and those who report prices to them (*PL20-3*). FERC staff said the changes are meant to bring stability and transparency to the indices, which are used as a locational cost proxy in the daily and monthly trading markets.

“Natural gas price indices play a vital role in the energy industry, as they are used to price billions of dollars of natural gas and electricity

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**FERC Won't Meddle in CAISO Resource Adequacy, Yet**

(p.15)



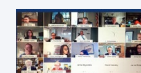
**Study Proposes New Capacity Treatment for Oregon**

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**Solar Power Boosts ERCOT's Reserve Margins**

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**NY Climate Action Council Focuses Scoping Efforts**

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**FERC Rejects PJM Stakeholder EOL Proposal**

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Your Eyes and Ears on the Organized Electric Markets  
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## FERC/Federal News



# Wind, Solar, EE, CO<sub>2</sub> Storage Win Tax Breaks

## Mixed Reviews from Climate Activists

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developers and a new 30% ITC for offshore wind projects that commence construction by the end of 2025.

In addition, the in-service window for the 45Q carbon capture and sequestration credit was extended by two years to the end of 2025 and waste-to-energy projects also will be eligible for the ITC.

The bill also re-authorizes the Advanced Research Projects Agency-Energy and the Weatherization Assistance Program through fiscal year 2025 and requires the secretary of the interior to seek to permit at least 25 GW of wind, solar and geothermal projects by 2025.

The provisions — consensus provisions from the Senate's American Energy Innovation Act (S. 2657) and the House's Clean Economy Innovation and Jobs Act (H.R. 4447) — were included as Division Z of the Consolidated Appropriations Act of 2021, a must-pass bill for Congress.

Sens. Lisa Murkowski (R-Alaska) and Joe Manchin (D-W.Va.), the sponsors of the Senate bill, called the legislation “the first comprehensive modernization of our nation’s energy policies in 13 years.”

Murkowski, chairman of the Senate Committee on Energy and Natural Resources, and Manchin, the ranking member, negotiated what they called a “six-corner” agreement with Reps. Frank Pallone (D-N.J.) and Greg Walden (R-Ore.), the chair and ranking member, respectively, of the House Energy and Commerce Committee, and Reps. Eddie Bernice Johnson (D-Texas) and Frank Lucas (R-Okla.), chair and ranking member of the House Science, Space and Technology Committee.

The bill “provides a down payment on the technologies that will be critical to reducing greenhouse gas emissions in the power sector, industry, and buildings and addressing climate change,” Manchin said in a statement. “This focus on research, development and demonstration will create high quality jobs and ensure the United States continues to lead the world in the clean energy future.”

“This is perhaps the most significant climate legislation Congress has ever passed,” Grant Carlisle, a senior policy adviser for the Natural Resources Defense Council, told *The*

*Washington Post*.

“But, overall, the bill is a mixed bag because of provisions that prop up dirty fuels and unsafe technologies,” John Bowman, managing director for government affairs at NRDC said in a *statement*. “Given President-elect [Joe] Biden’s historic commitment to address our climate crisis, we look forward to working with him and the new Congress to promote the genuine clean-energy transition we need.”

Here is a list of some of the most significant provisions:

- **Advanced Nuclear:** updates the definition of “advanced nuclear reactor” to include small modular reactors; (See *NRC OKs NuScale’s Small Modular Reactor Design*.) authorizes an R&D program to help build a competitive fusion power industry
- **Carbon Capture, Utilization and Storage (CCUS):** directs the Department of Energy to establish RD&D programs for carbon storage, carbon utilization and direct air capture, including a large-scale carbon sequestration demonstration program
- **Energy Storage:** includes RD&D provisions for energy storage and qualifies storage for loan guarantees under Title XVII of the Energy Policy Act of 2005
- **Energy Efficiency:** requires DOE to implement smart building technology in federal buildings and report to the president and Congress on each agency’s energy savings performance contracts, including their initial guaranteed savings compared to actual energy savings from the previous year; establishes rebate programs to encourage replacement of inefficient electric motors and transformers; formally authorizes the *Federal Energy Management Program*
- **Supply Chain:** requires the executive branch designate a list of critical minerals and update that list every three years, an effort to rebuild domestic supply chains; expands and extends limitations on Russian uranium imports
- **Grid Modernization:** re-authorizes the smart grid demonstration program in the Energy Independence and Security Act of 2007, and adds commercial application of distribution automation technologies to program goals; authorizes an RD&D and commercial application program on modeling

emerging technologies for security and reliability and technologies to improve sensing, monitoring and visualization

- **Technology Transfer:** creates programs to aid private sector access to DOE and its National Laboratories
- **FERC:** authorizes FERC to modify compensation to attract and retain individuals with highly specialized skillsets

### ‘Sweeping Update’

The bill won wide praise from renewable energy supporters.

“Stable policy support will help ensure that wind and solar can continue providing the backbone of our country’s electricity growth,” said Heather Zichal, CEO of the American Clean Power Association. “We also applaud Congress for recognizing the enormous potential of offshore wind, America’s largest untapped electricity source.”

Gregory Wetstone, CEO of the American Council on Renewable Energy, said that 13% of the clean energy workforce is currently out of work because of the coronavirus pandemic. “Extending the solar and wind tax incentives and making the investment tax credit available for offshore wind projects is a bipartisan vote of support for the renewable industry and the hundreds of thousands of Americans building our clean energy future. These policies will help get people back to work,” he said.

“Clean energy was the biggest job creating sector in the economy pre-COVID,” said Rob Cowin, director of government affairs for climate and energy for the Union of Concerned Scientists.

“This omnibus legislation features a sweeping update and expansion of federal research, development and demonstration programs for carbon capture, removal, use and storage ... along with enactment of a two-year extension of the 45Q tax credit,” Carbon Capture Coalition Director Brad Crabtree said. “While the coalition’s other top priority of a direct-pay option for 45Q did not make it into the final package, the measures included in the omnibus make this year-end legislation the most important accomplishment for carbon capture and removal since passage of the 2018 FUTURE Act that reformed and expanded the 45Q tax credit.” ■

# FERC/Federal News



## Net Zero Price Tag: \$2.5 Trillion

### Princeton Study Identifies Pathways, Interim Goals to 2050 Target

By Rich Heidom Jr.

Reaching net-zero greenhouse gas emissions will require at least \$2.5 trillion in additional capital investment into energy supply, industry, buildings and vehicles over the next decade, according to a major new study by Princeton University researchers.

“A successful net-zero transition could be accomplished with annual spending on energy that is comparable or lower as a percentage of GDP to what the nation spends annually on energy today. However, foresight and proactive policy and action are needed to achieve the lowest-cost outcomes,” the researchers said in their interim report, “*Net-Zero America: Potential Pathways, Infrastructure and Impacts*.” “Major investment decisions must start now, with levels of investments ramping up throughout the transition.”

Effectively eliminating GHG emissions economywide is widely considered the target needed to avoid the worst effects of climate change. A dozen states and numerous utilities and other major companies have pledged to eliminate their emissions by 2050.

#### 5 Paths

The Princeton researchers looked at five paths for getting to the 2050 goal, all of which they

said would keep energy spending in line with historical rates of 4 to 6% of GDP — but would require massive increases in transmission and renewable generation.

“We are agnostic as to which of these pathways is ‘best,’ and the final path the nation takes will no doubt differ from all of these,” they wrote. “Our goal is to provide confidence that the U.S. now has multiple genuine paths to net zero by 2050 and to provide a blueprint for priority actions for the next decade. These priorities include accelerating deployment at scale of technologies and solutions that are mature and affordable today and will have high value regardless of what path the nation takes, as well as a set of actions to build key enabling infrastructure and improve a set of less mature technologies that will help complete the transition to a net-zero America.”

#### Hurdles

The researchers said reaching the goal will require:

- deployment of technology and infrastructure “at historically unprecedented rates across most sectors”;
- mitigating the impacts on landscapes and communities to obtain sustained political support;
- mobilization of large amounts of risk capital

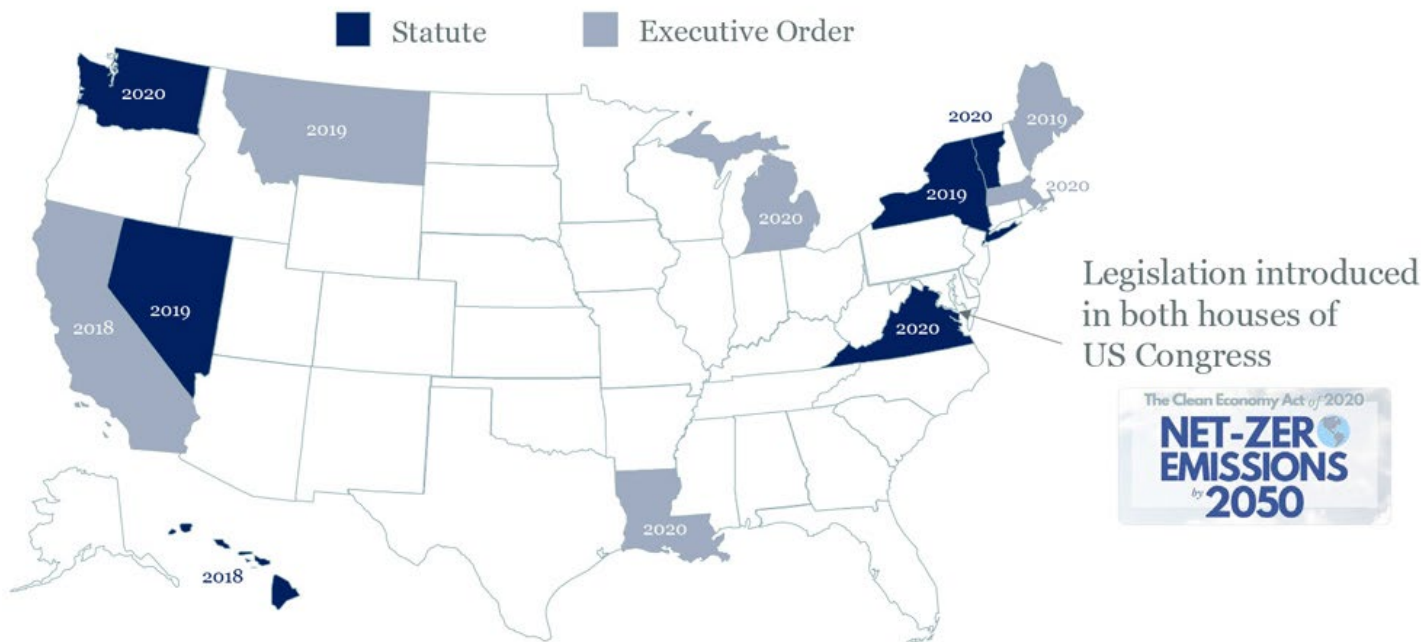
by government and private sectors;

- rapid adoption of building and transportation electrification by consumers; and
- the development of low-carbon industrial processes such as steel and cement manufacturing using electrification and hydrogen.

#### 2030 Goals

To get on the trajectory to 2050, the study says the expansion of low-carbon technology must begin immediately, with the following goals hit by 2030:

- put about 50 million electric vehicles on the road, with at least 3 million public charging ports to serve them;
- increase the share of electric heat pumps for home heating to 23% from 10% today and triple heat pumps’ use in commercial buildings;
- increase wind and solar generating capacity fourfold to 600 GW to supply half of U.S. electricity (vs. 10% today);
- expand high-voltage transmission capacity by 60% to deliver renewable power to load centers;
- increase annual uptake of carbon stored permanently in forests and agricultural soils



A dozen states have pledged to have net-zero emissions by 2050. | Princeton University



# FERC/Federal News



by 200 million metric tons; and

- reduce non-CO<sub>2</sub> GHG emissions, including methane, nitrous oxides and hydrofluorocarbons, by at least 10%.

“It may seem like 2050 is a long way off. But if you think about the timelines for policies, business decisions and capital investments, it’s really more like the day after tomorrow,” Jesse Jenkins, an assistant professor at Princeton and one of the authors of the report, told *The New York Times*.

The nation also will need to develop enabling infrastructure and innovative technologies during the next decade, the researchers said. Among the items on the to-do list are planning and permitting even more electric transmission, and planning and beginning construction of a nationwide CO<sub>2</sub> transportation network and accompanying permanent underground storage basins to address industrial sectors that cannot be decarbonized.

Investments also will be required to speed the maturation and reduce the costs of options such as clean “firm” electricity technologies (advanced nuclear, advanced geothermal and hydrogen combustion turbines); advanced bioenergy conversion and high-yield bioenergy crops; hydrogen and synthetic fuel production from clean electricity and biomass; natural gas with carbon capture; and direct air capture of CO<sub>2</sub>.

The five scenarios studied are based on the

Energy Information Administration’s projected energy demands for 2050 from the 2019 *Annual Energy Outlook* (AEO) and vary based on the extent of end-use electrification in transportation and buildings, solar and wind generation levels, and the contribution of biomass.

All but one of the scenarios assumes half of existing nuclear generation will run for an 80-year lifespan. All scenarios essentially eliminate coal use by 2030. “Overall, fossil fuels in the primary energy mix decline by 70 to 100% from 2020 to 2050 across scenarios,” it said, with oil and gas dropping 65 to 100%.

The study projects a net increase of 500,000 to 1 million jobs in the 2020s compared with the reference scenario in the AEO. Improved air quality would also prevent 200,000 to 300,000 premature deaths by 2050, according to the analysis.

Achieving the goals will require “coalitions of public support and political will” to enable massive infrastructure additions and address employment losses in particular communities, the study says. Policymakers also will have to overcome upfront cost premiums for EVs and heat pumps.

## Reaction

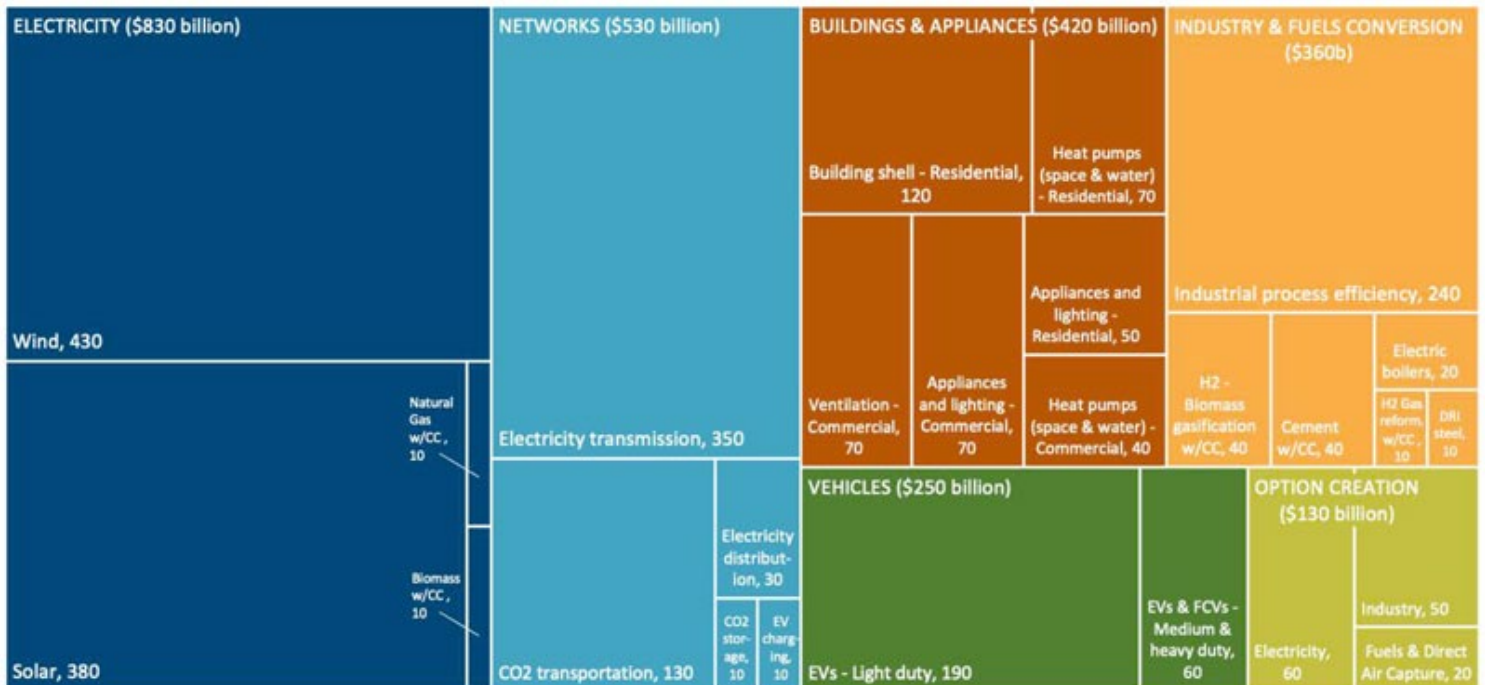
The report — whose findings are similar to those in a [study](#) released in October by the U.N. Sustainable Development Solutions Network — attracted attention from those arguing for a

continued role for fossil fuels.

The Carbon Capture Coalition cited the study in [endorsing](#) the Storing CO<sub>2</sub> and Lowering Emissions (SCALE) Act, which was introduced Wednesday by Rep. Marc Veasey (D-Texas) with cosponsors David McKinley (R-W.Va.), Cheri Bustos (D-Ill.) and Pete Stauber (R-Minn.). “The infrastructure buildout enabled by the SCALE Act is consistent with what the Princeton analysis finds is necessary in the next five to 10 years,” the coalition said in a press release.

“Across every scenario the Princeton team examined, the scale of investment needed to achieve our climate goals is truly massive. But it is possible, especially if resources are deployed in a strategic way,” said Steven Schleimer, Calpine’s senior vice president for government and regulatory affairs. “The report doesn’t examine a nationwide price on carbon, but when you look at the complexity of the challenge, it’s clear that pricing carbon is the most effective option to drive change.”

Schleimer urged the incoming Biden administration to review the Princeton report along with recent analyses performed by the *Energy Futures Initiatives* and *Energy and Environmental Economics*, which he said “all recognize that gas capacity will remain vital for the reliability of a fast-growing grid, even as the role of those units shifts to filling the supply gaps inherent to greater reliance on intermittent, renewable sources.” ■



Total additional capital invested (2021-2030) by sector and subsector for a net-zero pathway vs. business as usual (billion 2018\$) | Princeton University

# FERC/Federal News



## Report Explores Federal Authority for Tx Buildout

*Authors Cite Possibility of Overriding State Siting Laws and Processes*

By Michael Kuser

The authors of a new report last week detailed how, in the absence of action by Congress, the U.S. can build the transmission lines needed to accommodate the thousands of gigawatts in new renewable generation coming online in the next few decades.

Columbia University's Center on Global Energy Policy (CGEP) on Dec. 14 hosted a webinar on the *paper* it published jointly with the New York University School of Law's Institute for Policy Integrity.

Michael Gerrard, founder and faculty director of Columbia's Sabin Center for Climate Change Law, moderated the discussion. He noted that President-elect Joe Biden cam-

paigned on a goal of a carbon pollution-free power sector by 2035, and the U.S. power sector is now 38% carbon free, about half from renewable and half from nuclear.

"Moving from 38% to 100% will require an enormous increase in renewable generation capacity from the current 1,100 GW, to about 3,000 GW," Gerrard said. "Much of this new generation will be in areas that are far from where the power is needed, so the massive program of renewables construction will have to be accompanied by a massive program of new transmission, and we need the grid to have much greater functionality in many ways than it does now."

Melissa Lott, CGEP senior research scholar, said investments in the grid have been lagging,

despite the need.

"If we take away all the noise and just focus on the [market] signal, the reality is that we need new, long-distance transmission lines if we want to keep this transition affordable and if we want to do it on a timeline that's going to both mitigate climate change and protect public health," Lott said.

### States' Rights vs Federal Authority

If these long-distance transmission lines are so great, then why are they not getting built today? report co-author Sam Walsh, an attorney with Harris, Wiltshire & Grannis posed.

"One important reason, and which is partly the subject of our paper, has to do with state siting laws," Walsh said. "In general, if you want to build a transmission line, you need regulatory approval from each state that the line traverses, and this state-by-state requirement has proven to be a significant hindrance for long-distance transmission lines that cross multiple states."

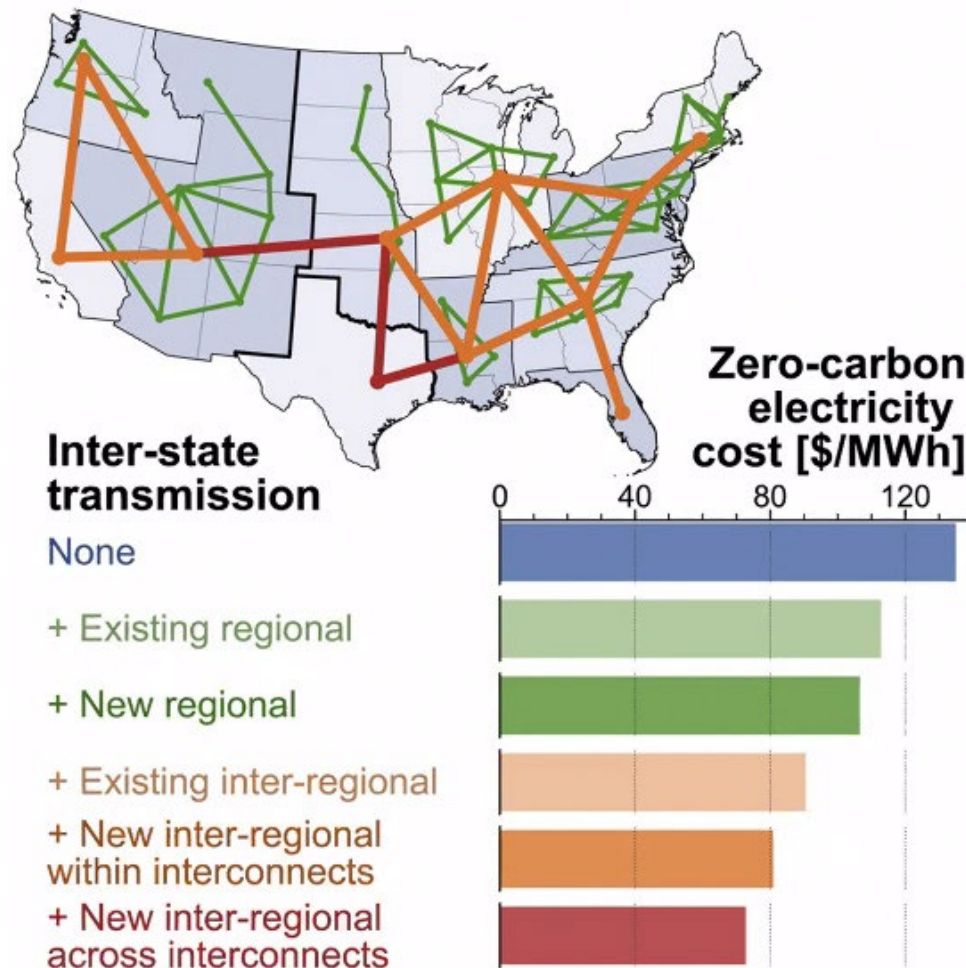
In some cases, this has proven to be an insurmountable barrier when one state has denied approval outright, Walsh said.

"The problem is especially acute in the states that are traversed by a transmission line, but which are neither at the source nor the sink of the line," Walsh said. "Regulators in those states may see little reason to approve a project or to authorize eminent domain for a project if their state is neither going to get the economic benefit of hosting the generation, nor the power itself."

Congress recognized this problem in the Energy Policy Act of 2005, which created two pathways to get transmission built that do not require state approval. The first pathway is the so-called "backstop" siting authority, said co-author Justin Gundlach of NYU.

Federal siting authority is provided for in Section 216 of the Federal Power Act, which empowers FERC to permit construction of a transmission project where a state agency would not do so, Gundlach said, noting two key features of the regulation.

"The first directs the Department of Energy to designate National Interest Energy Transmission Corridors in appropriate locations, and the second gives FERC backstop permitting authority within those borders, meaning there



Map and chart show the value of inter-regional coordination and transmission in decarbonizing the U.S. power grid. | Center on Global Energy Policy

# FERC/Federal News



— and only there — FERC can displace a state’s permitting authority,” Gundlach said.

Congress also limited the commission’s authority by requiring that it must establish that a project meets various public interest criteria.

DOE designated two corridors in 2007: one in the southwest and one in the mid-Atlantic. Their legality was challenged by states, their utilities and their utility regulators. In 2011 the 9th U.S. Circuit Court of Appeals *vacated* both designations, saying the department erred in not consulting the states about its study of the issue prior to the designations.

Since 2011, DOE has not recommended any further corridor designations, so the authority has sat dormant, Gundlach said.

The authors make 20 recommendations. “First, DOE should revise or supplement the 2020 congestion *study* that it just issued in the fall,” Gundlach said. “For instance, the initial version of this study only identifies instances of present congestion, whereas we think it ought to identify instances of both present and foreseeable future congestion.”

The authors also recommend that the department should designate one or several new corridors.

“When doing so, DOE should prioritize corridors that connect large, constrained renewable resources or potential to load, and recognizing that even just designating an area can make parties with an interest nervous, we think DOE should try to confine its corridor designations, in contrast to the two from 2007, to avoid a groundswell of opposition in locations where it’s unlikely that you’re actually going to see a project.”

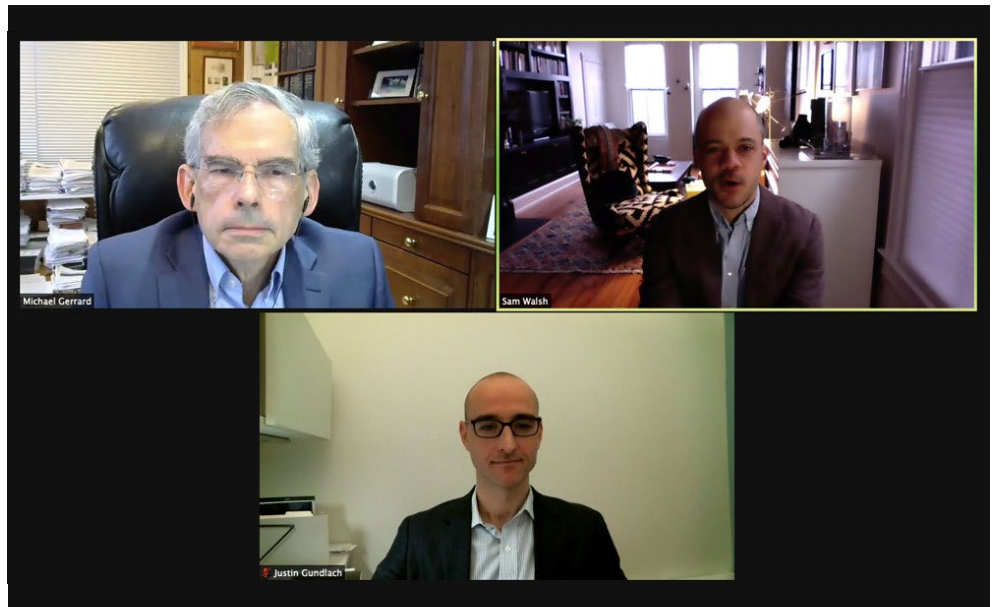
## Insiders’ View

David Hill, CGEP fellow and a member of the NYISO Board of Directors, found the paper well researched and liked its overall approach. “It doesn’t just complain; it’s got very detailed recommendations, and I think that’s excellent and that it deserves serious consideration.”

Hill said that relevant sections of EPAAct05 “are very powerful authorities, and they haven’t been used to their full extent, and there’s a lot more that they could be used for and should be used for.”

He recalled that he was involved in the designation of the two transmission corridors when he was general counsel at DOE.

“I know the courts decided that we didn’t do that right, but we thought very carefully about” designating such broad corridors, Hill said.



Clockwise from top left: Michael Gerrard, Columbia University; Sam Walsh, Harris, Wiltshire & Grannis; and Justin Gundlach, Institute for Policy Integrity | Center on Global Energy Policy

It ended up being problematic, but narrow corridors would have entailed other significant difficulties, he said.

While the authors suggest that the DOE ought to delegate its authority to FERC to help expedite the process, it’s clear that is not what Congress wanted, Hill said. Congress “knew very well what the functions of DOE were” and separated them from those of FERC, he said.

Former FERC Commissioner Cheryl LaFleur, now a CGEP fellow and member of the ISO-NE Board of Directors, agreed that more transmission is needed and that state siting and permitting authority — coupled with the influence of incumbent utilities that may oppose new lines coming through their territory — have been a major barrier to long-distance transmission across multiple states.

“I have testified in Congress more than once that Congress should rewrite Section 216 to restore effective FERC backstop siting authority, so you can see how effective that has been,” LaFleur said. “Given the unlikelihood of congressional action, I think this paper could not be more timely.”

While effective backstop authority could help new transmission get sited and built, even the mere threat of exercising such authority could encourage states to work together, she said.

“I do think, however, that FERC backstop authority would not be a silver bullet ... and we can expect that states that are opposed to transmission lines will find a way to use their existing authority ... to make life very difficult

for project sponsors,” LaFleur said. “All of this points to the continuing need to satisfy state authorities and citizens that the proposed facilities are in their best interests to really get them on board.”

With a new administration, it’s important that any steps it takes to improve environmental reviews for natural gas pipelines not “spill over and make it harder to build transmission lines for renewable projects,” she said, citing “schizophrenia” on the issue, with people wanting to slow down National Environmental Policy Act reviews for gas pipelines but speed up permitting for renewables.

Grid Strategies President Rob Gramlich said that the country will need two to three times more transmission than it has now, which doesn’t necessarily mean all that many new lines.

“Solar can be done closer to load, so you don’t see much congestion, but that is a temporary dynamic. ... Soon you’ll see solar congestion,” Gramlich said. “We need these lines built now for the end of the decade when we’ll really need it.”

Independent consultant Lauren Azar said that beside the siting challenges, “one of the key problems we have now is the weak nexus between the parties who would like to develop a national transmission plan and those who could actually get it built,” suggesting that President-elect Biden convene the grid operators, FERC commissioners and state governors to work on the issue. ■



# FERC/Federal News



## Business Group Seeks to Triple Clean Energy R&D Funding

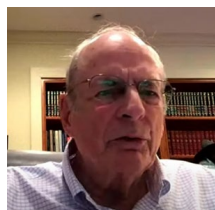
### Energy Provisions Possible in Year-end Budget Bill

By Rich Heidom Jr.

A group of utility CEOs and other business leaders last week said the U.S. should triple federal funding for clean energy innovation to \$25 billion annually over the next five years, calling it essential for addressing climate change and ensuring a leadership role for the U.S. in new technologies.

The *American Energy Innovation Council*, an 11-member group whose principals include the chairs of Southern Co., Dominion Energy, Xcel Energy and Royal Dutch Shell, said the increase should include a boost for the Advanced Research Projects Agency – Energy to \$1 billion a year from the current \$425 million.

Founded in 2010, the council is a project of the Bipartisan Policy Council, which presented a *panel discussion* Thursday on the group's *recommendations*.



Norm Augustine, retired chairman and CEO of Lockheed Martin | Bipartisan Policy Center

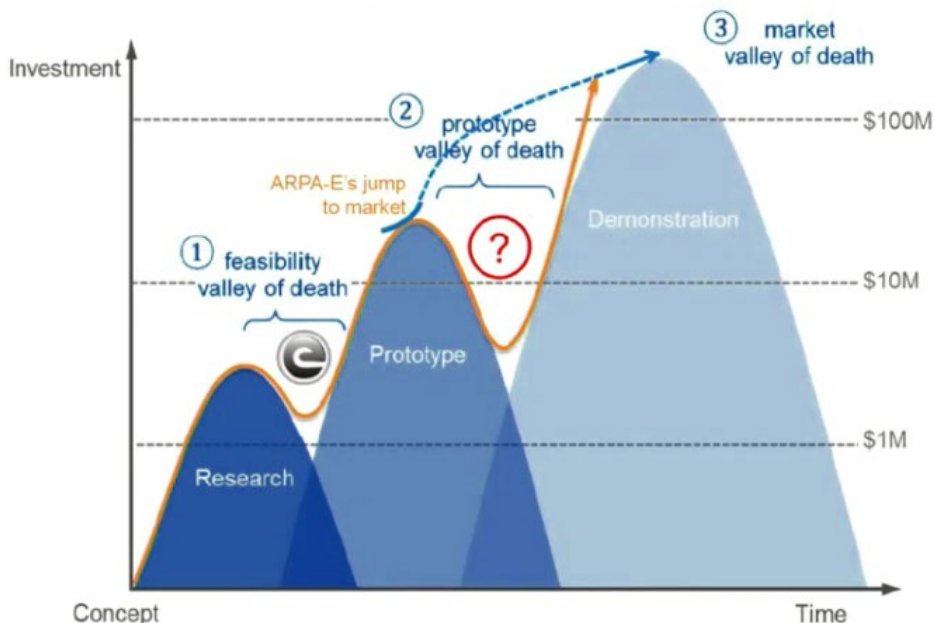
“There was a great deal of skepticism when we started as to whether [climate change] was really a problem. Today I think there are very few people who question whether or not we have a serious problem,” said Norm Augustine, retired chairman and CEO of Lockheed Martin. But he added:

“We have a long way to go. Even today, about 88% of the world’s energy consumption use still comes from fossil fuels. That’s a number that’s declined by about 1% in the last quarter of a century.”

#### A ‘Sputnik Moment’

The group cited research that 50 to 85% of annual GDP growth in the U.S. “can be traced to innovation.” In its first 11 years, ARPA-E provided \$2.4 billion in funding for more than 950 projects, 166 of which have attracted more than \$3.3 billion in private-sector follow-on funding, the group said. “Technology innovation improves productivity across industries and creates entirely new ones. Economists agree that innovation is the key engine of long-term economic growth and stability,” it said.

The council said the U.S. should expand “centers of excellence,” such as the Department of Energy’s *Energy Hubs*, *Energy Frontier Research Cen-*



The American Energy Innovation Council said additional federal funding is needed to sustain innovations through the second "valley of death" between prototype and demonstration projects. | *American Energy Innovation Council*

ters and *Lab Embedded Entrepreneurship Programs*.

“Technology innovation requires expensive equipment, well trained scientists, multiyear time horizons and flexibility in allocating funds. This can be done most efficiently and effectively if the institutions engaged in innovation are located in close proximity to each other, share operational objectives and are accountable to each other for results,” it said. “Resources should not be spread thinly across many institutions working on the same problem.”

The group said it is alarmed that competing nations’ investments in science and technology are outpacing the U.S.

In fiscal year 2020, Congress appropriated about \$9 billion for energy research, development and demonstration. But the U.S.’ “research intensity” — the ratio of R&D investments to GDP — has stagnated, while China’s tripled between 1995 and 2019, the group said.

“China’s recent announcement that it intends to completely decarbonize its economy by 2060 should be viewed as a new ‘Sputnik moment,’” they wrote, referring to the Russian satellite that prompted the U.S.-Soviet Union space race.

#### Valleys of Death

Although federal funding for early-stage R&D has increased in recent years, they said, “the later stages of demonstration and deployment continue to lag in resources and prioritization. Closing this gap is essential to successfully commercialize breakthrough technologies.”

Augustine said ARPA-E “does a fabulous job in dealing with that first ‘valley of death’ — the feasibility challenge between research and prototypes. But he said neither government nor industry has addressed the second gap between prototype and demonstration projects.

The council recommended creation of a national, politically neutral “Energy Strategy Board” that would include experts in energy technology and markets, develop a long-term national energy plan and oversee a “New Energy Challenge Program” to build large-scale pilot projects.

“If you go from ... research to prototype to demonstration it takes tremendous resolve, tremendous leadership and tremendous resources,” former PG&E Corp. CEO Geisha Williams said. “And I will tell you that no one company has the wherewithal to make it happen. It requires a very strong private and public partnership. And frankly, it’s going to



# FERC/Federal News



require the type of funding that only the federal government can provide.”

“The U.S. government hasn’t had an energy plan for a long time,” Augustine added. “We don’t even have a capital budget for anything. ... I know of no successful company that doesn’t have a capital budget.”

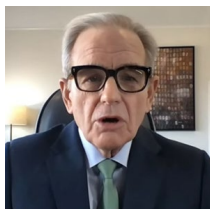
Augustine said such long-term planning is essential for a successful R&D program. “There will be failures; we’re talking about research and development,” he said. “My background is principally aerospace, and not every rocket works, I’ll guarantee you that. I’m afraid that’s true in the energy arena as well.”



Former PG&E Corp. CEO Geisha Williams | *Bipartisan Policy Center*

## Most Promising Technologies

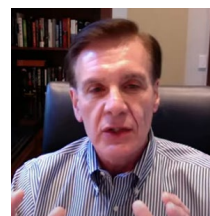
The group identified as the most promising technologies large-scale energy storage, advanced nuclear reactors, renewable and low-carbon hydrogen, and carbon capture and removal.



Chad Holliday, chairman of Royal Dutch Shell | *Bipartisan Policy Center*

“If we try to focus on everything, it will be too much,” said Chad Holliday, chairman of Royal Dutch Shell. “But I think hydrogen is certainly one of the candidates for [research spending], and I believe carbon capture and storage is a second candidate for that.”

“There’s a lot of projections that suggest within 30 years, hydrogen



Michael J. Graff, CEO of American Air Liquide Holdings | *Bipartisan Policy Center*

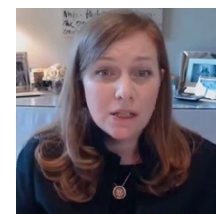
in itself could be about 20% of the entire energy supply requirements [of] the entire world,” said Michael J. Graff, CEO of industrial gas manufacturer American Air Liquide Holdings.

## Legislation

Speakers on Thursday expressed optimism

that some of the priorities identified by the council will receive attention in an energy package as part of the year-end budget omnibus bill. (See related story, [Wind, Solar, EE, CO<sub>2</sub> Storage Win Tax Breaks](#))

A discussion draft of the energy package includes a 75% increase in ARPA-E’s budget and funding for large-scale demonstrations of carbon capture utilization and storage technology, said Rep. Lizzie Fletcher (D-Texas), who also participated in the BPC forum.



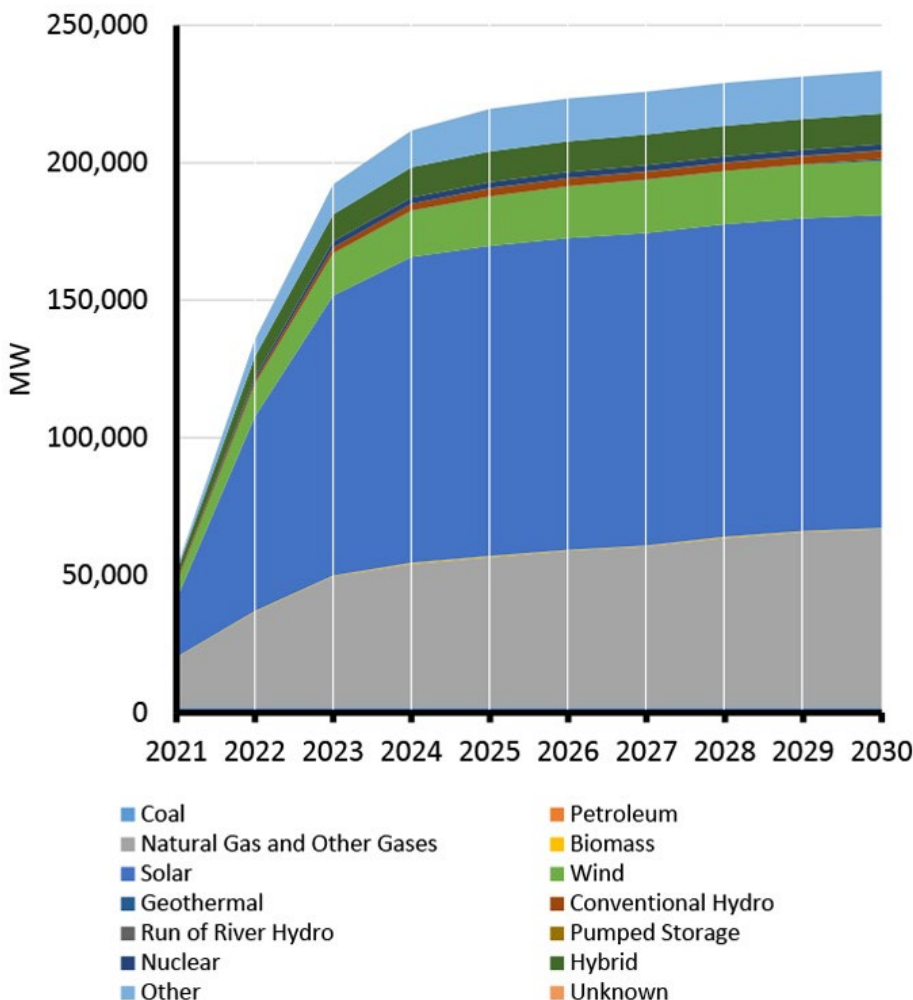
U.S. Rep. Lizzie Fletcher (D-Texas) | *Bipartisan Policy Center*

ARPA-E’s budget would increase gradually, from \$435 million for fiscal year 2021 to \$761 million for fiscal 2025.

The Better Energy Storage Technology Act, which would reauthorize DOE’s grid-scale storage research, also is part of the package, said Fletcher, chair of the House Science, Space and Technology Subcommittee on Energy and a member of the House Transportation and Infrastructure Committee. At least one demonstration project would be due by September 2023.

Fletcher said House Democrats’ \$1.5 trillion *Moving Forward Act*, which passed 233-188 in July, is not expected to clear this session, but it could be a “framework” for an infrastructure package in the next Congress. The *bill*, which received only three Republican votes, would allocate more than \$70 billion to upgrade the electric grid to accommodate more renewables and electric vehicle charging and provide tax credits for EVs.

“A lot of people are talking about the challenges. We need a lot of people talking about the answers,” Fletcher said. “I think that it’s essential that this work centers on crafting ambitious but workable plans and depoliticizing this conversation. ... That’s why ... AEIC’s leadership and vision at this moment is so important.” ■



The American Energy Innovation Council said the U.S. should triple federal funding for clean energy innovation to \$25 billion over the next five years. | *American Energy Innovation Council*

# FERC/Federal News



## AWEA: Biden Tx Buildout Could Double Renewables

By Hudson Sangree

The U.S. could nearly double its reliance on renewable energy in the next decade by building 10,000 miles of new transmission and taking other administrative actions under the incoming Biden administration, according to a study released by the American Wind Energy Association on Wednesday.

The effort would provide a major post-pandemic boost to the U.S. economy, the report by Wood Mackenzie and AWEA, which is merging into the American Clean Power Association on Jan. 1, concluded.

“Administrative action alone can enable a doubling of renewable energy penetration in the next decade,” from 19% to 37%, said

John Hensley, vice president of research and analytics at AWEA. “Transmission-focused policies will really be critical and fundamental to unlocking renewable potential in this decade.”

Legislative action would be necessary to reach a more ambitious target of having half the grid powered by renewable resources by 2030. That scenario is less likely because of political divisions in the Congress and among state legislatures, but it would provide an even bigger economic boost, the study, “A Majority Renewables Future,” found.

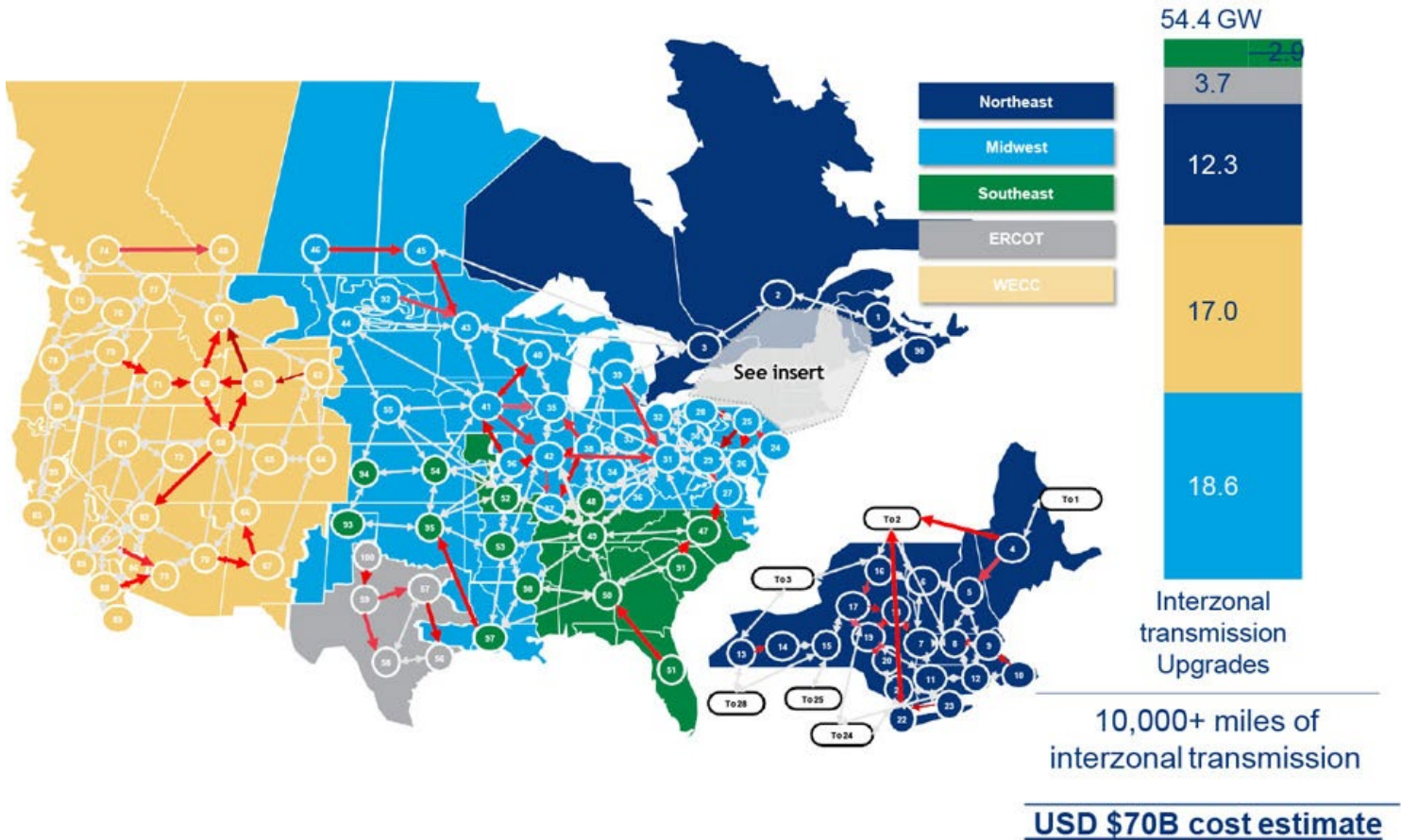
“Reaching a majority [renewables] grid by 2030 will deploy over a trillion dollars in capital investment in the American economy while supporting nearly a million direct renewable energy jobs,” Hensley said. “It’ll also stabilize wholesale power prices, reduce U.S. carbon

emissions by over 60% and all the while deliver tens of billions of dollars in state and local payments to governments and landowners.”

A key to the administrative-only 37% scenario would be building 10,000 miles of transmission infrastructure at a cost of \$70 billion or more, the report said. The new pathways the study proposes would link wind power in Wyoming and New Mexico to California and connect offshore wind in New England to western portions of ISO-NE, NYISO and PJM, among other projects.

The study also proposed building massive amounts of storage and sending Southwest solar power where it is needed.

It did not specify who would pay for the projects. ■



Reaching 37% renewables nationwide would require at least \$70 billion in transmission upgrades, a study found. | Wood Mackenzie



## FERC/Federal News



# FERC Seeks More Participation in Gas Price Indices

*Continued from page 1*

transactions annually in both the physical and financial markets,” Eric Primosch, of FERC’s Office of Energy Policy and Innovation, told commissioners during their monthly open meeting. “Natural gas markets depend on robust and accurate indices in order to ensure just and reasonable prices.” He noted that along with gas pipelines and utilities, RTOs and ISOs also reference the indices in their tariffs for various terms and conditions.

Staff said the changes are meant to reduce “perceived reporting burdens” and “increase confidence in the accuracy and reliability of wholesale natural gas prices.”

The commission created the policy statement in 2003 to encourage market participants’ reporting of their fixed-priced natural gas transactions to index developers. Since 2010, FERC said, voluntary reporting of transactions has declined 54%, even though the percentage of transactions referencing a price index in the U.S. physical natural gas market increased to 82% in 2019.

FERC proposed allowing market participants sending transaction data to report either their non-index-based next-day natural gas transactions or their non-index-based next-month natural gas transactions, or both, to price index developers. It would also allow market participants to self-audit the transactions they provide to price index developers on a biennial basis, instead of an annual basis.

The commission also proposed requiring index developers to re-up commission approval



Natural gas pipeline construction | Williams

for their indices to continue to be included in tariffs.

The policy statement covers both natural gas and electricity price indices; FERC’s proposed changes only apply to those for natural gas, but staff said they will “conduct outreach to explore the need for, and scope of, any potential policy updates for the electric industry.”

### Safe Harbor NOPR

FERC also issued a Notice of Proposed Rulemaking that seeks to add a safe harbor provision to its regulations to protect those who report natural gas trades to price index developers (RM20-7).

Max Multer, of the Office of Enforcement, told commissioners that a market participant who reports transactions would be “afforded a rebuttable presumption that its transac-

tion data is accurate, timely and submitted in good faith,” provided it followed the reporting standards in the policy statement. Multer said that “inadvertent reporting errors by such data providers will not constitute violations of those regulations.”

The provision is already spelled out in the policy statement, but the proposal would make it legally part of the commission’s regulations.

“The proposed change does not modify the existing policy. It is intended to promote voluntary reporting of wholesale natural gas and electricity transactions to price index developers by alleviating market participant concerns that the safe harbor policy is not binding on the commission,” staff said.

Comments on both proposals are due 90 days after their publication in the *Federal Register*. ■

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## FERC/Federal News



# FERC OKs Fuel Cells as Cogen Under PURPA

By Rich Heidom Jr.

FERC ruled unanimously Thursday that all fuel cells that use waste heat in an integrated fuel reforming process qualify as cogeneration facilities under the Public Utility Regulatory Policies Act of 1978 (*RM21-2, RM20-20*).

The commission's rulemaking, initiated in an October order, was prompted by a petition from fuel cell manufacturer Bloom Energy, which had sought approval for its solid oxide fuel cell (SOFCs) technology. (See *FERC Proposes Updating PURPA Regs for Fuel Cells*.)

In Thursday's final order, however, the commission said its new rule would also apply to carbonate fuel cells manufactured by Bloom Energy competitor *FuelCell Energy* in addition to SOFCs.

Fuel cells convert the chemical energy in hydrogen directly to electrical energy without combustion. SOFCs use a solid oxide ceramic material as their electrolyte — a substance that produces an electrically conducting solution — unlike fuel cells that use platinum or other

precious metals. The electrolyte oxidizes hydrogen, converting it to water vapor (H<sub>2</sub>O) while producing electricity.

FuelCell Energy said its fuel cells use waste heat to produce hydrogen in a manner similar to Bloom's.

The commission agreed with FuelCell Energy's argument that its original proposal was improper because it endorsed a specific technology rather than establishing standards that would apply to all similar fuel cells. "The commission has not endorsed specific types of solar panels, for example, in defining small power production facilities. Here, as FuelCell Energy recognizes, the focus should be on the integrated use of waste heat for reforming hydrocarbons to produce hydrogen to fuel a fuel cell, instead of the specific fuel cell technology utilized to accomplish that goal."

The commission rejected arguments by the Edison Electric Institute, which said Bloom's request constituted an expansion of the statutory definition of a cogeneration facility.

The Federal Power Act defined a cogeneration

facility as a facility that produces electric energy and steam or forms of useful energy, such as heat, which are used for industrial, commercial, heating or cooling purpose.

"Because ... a fuel cell system with an integrated hydrocarbon reformation process creates useful thermal energy in that it is used for an industrial purpose — here, producing a commercially valuable fuel, hydrogen — it fits within" the legal definition of cogeneration, the commission said.

FERC cited Bloom's filing of a declaration from former FERC Commissioners Vicky A. Bailey, Norman Bay, Nora Mead Brownell, Suedeen Kelly and William Massey, who said they supported the rulemaking as "consistent with the statutory text of PURPA and the definition of 'cogeneration facility'" in the FPA.

EI contended that FERC's Order 70, which implemented PURPA in 1980, said facilities eligible for qualifying-facility status did not include natural gas-fired combined cycle combustion plants, even though the sequential use of heat is used to produce more electricity. EI said the fact that combined cycle plants produce electricity from natural gas through a chemical reaction instead of combustion was not a meaningful distinction.

The commission disagreed. "Combined cycle electric generation, while admittedly a more efficient form of electric generation than, for example, a combustion turbine, is still not the same thing as a fuel cell system with an integrated steam hydrocarbon reformation process and does not warrant being identified as a qualifying facility," it said.

Commissioner Richard Glick joined with Chair James Danly and Commissioner Neil Chatterjee in the 3-0 vote. New Commissioner Allison Clements did not participate in the vote.

"Even though these fuel cell systems will be deemed to be qualifying facilities, the order makes clear that they still must pass the fundamental use test before utilities will be required to purchase the output from these projects," Glick said during the open meeting.

The fundamental use test narrowed the facilities that can invoke a utility's must-purchase obligation to include only cogeneration facilities for which at least 50% of their "electrical, thermal, chemical and mechanical output" is used for industrial, commercial or institutional purposes, and not intended fundamentally for sale to an electric utility. ■



Bloom Box energy servers using solid oxide fuel cells | Bloom Energy

## FERC/Federal News



# FERC OKs Ownership Change in IIF Subs

By Amanda Durish Cook

FERC last week authorized the installation of a new general partner and transfer of ownership interests in the privately held Infrastructure Investments Fund (IIF) that acquired El Paso Electric (EPE) earlier this year. (See [IIF Closes El Paso Electric Purchase](#).)

The commission on Thursday accepted a request by IIF US Holding and IIF US Holding 2 (master partnerships operating under the IIF umbrella name) to transfer one individual's 33.3% general partnership interest in the entities to Anne Cleary, another private individual ([EC20-94](#)).

In addition to EPE, IIF US Holding owns a string of public utilities authorized to sell wholesale electric energy, capacity and ancillary services at market-based rates.

The commission said it found no evidence that the transaction would have an adverse effect on horizontal competition, rates or federal or state regulation, nor would it produce vertical market power concerns or result in the cross-subsidization of a non-utility associate company by a utility company.

IIF said that save for EPE's transmission facilities and the "limited and discrete inter-connection facilities associated with individual generation facilities," it doesn't operate or control any transmission in the U.S. FERC said IIF's generation will continue to operate under existing market-based rate tariffs or cost-based rate schedules.

Public Citizen protested the transfer, criticizing Cleary's installation and noting that she



Anne Cleary | *Modern Grid Solutions*



| *El Paso Electric*

was president of a power company (Mirant California) that [declared bankruptcy](#) and was charged with market manipulation and other illegal conduct during California's electricity deregulation [crisis](#) in 2000-2001.

The consumer advocacy group argued that IIF failed to represent all of Cleary's energy-related affiliations as a former advisor of project managing service company Taffrail Group, a former principal with Modern Grid Solutions, and her link to a member of PJM's Board of Managers through her board position with the Bermuda-based Ascendant utility. The group also argued that Cleary already serves on the board of directors at IIF subsidiary Southwest Generation Operating Co.

Public Citizen said IIF is a "lightly regulated, off-the-books series of private equity shell companies." It said the three owners don't function as owners but as a board of directors that simply delegates the day-to-day management of IIF to J.P. Morgan. It also said it's "unclear what role J.P. Morgan played" in selecting Cleary for the Southwest Generation board seat.

IIF said it is advised by J.P. Morgan and structured as a "limited partnership investment vehicle, the equity of which is held by passive limited partners." The company disputed that J.P. Morgan directs IIF. It said its utilities handle their own "day-to-day management and activities." It also said because Cleary is a private individual, "there are no common officers or directors of parties" to the ownership transfer and that her role at Southwest Generation isn't relevant.

FERC said Cleary's connections are not a concern because Public Citizen did not prove that the transaction would harm competition.

"Public Citizen has not argued, let alone demonstrated, that its allegations, if proved true, show that the proposed transaction will have an adverse effect on competition, rates, regulation or result in cross-subsidization," the commission said.

FERC agreed with IIF that because Cleary and Dennis Clarke, the seller, are private individuals, there are no common officers or directors of parties to the transaction. ■



## CAISO/West News

# CAISO Board Fields RA Measures, Big and Small

## ISO Trying to Head off Capacity Shortfalls in Summer 2021

By Hudson Sangree

CAISO's Board of Governors voted Thursday to keep a small, older natural gas plant operating to maintain reliability and received a briefing on initiatives to revamp the ISO's resource adequacy construct.

Both were part of CAISO's push to prevent energy emergencies next summer like those that struck the state in August and September.

In an unusual request, management asked the board to approve a reliability-must-run (RMR) designation for two units at the Midway Sunset Cogeneration facility, a 250-MW plant built in the late 1980s in a Kern County oilfield.

The units were scheduled to retire at the end of this year. A third unit was already mothballed, but CAISO said the two remaining units may be necessary to help keep the lights on in the world's fifth largest economy.

The plant can contribute to meeting demand in summer heat waves in the net-peak hours, when California's solar resources ramp down but demand remains high in the evening. Rolling blackouts in mid-August and close calls over Labor Day weekend occurred during net-peak times. (See [CAISO CEO Defends Blackouts](#)

Response.)

"The Midway Sunset Cogen is required for the ISO to meet the 2021 systemwide reliability needs due to capacity insufficiency at the net-peak hour during the months July-September 2021," Neil Millar, vice president of infrastructure and operations planning, wrote in a memo to the board. "Accordingly, the ISO cannot allow the resource to retire or mothball because, absent these units, it faces an inability to meet reliability criteria during these months."

Stakeholders, including Pacific Gas and Electric, protested the lack of process in the decision and the rush to designate the plant as an RMR resource. Board Chair Angelina Galiteva acknowledged their concerns but said "reliability trumps" all other considerations with just days before the plant's scheduled shutdown.

### Stakeholder Initiatives

On a larger scale, CAISO is prioritizing stakeholder initiatives to promote resource adequacy in 2021 and 2022.

"This is important to ensure we are ready for next summer's heat events," Anna McKenna, interim head of market policy and performance, told the board.

Changes in the annual update to the ISO's three-year policy initiatives roadmap focus on the urgent need to "comprehensively reform resource adequacy requirements" in connection with the shift from fossil fuels to renewables and tightening supply across the West.

They include a comprehensive redesign of the ISO's resource adequacy construct, Greg Cook, executive director of market and infrastructure policy, said in his [presentation](#).

The efforts will try to ensure there is sufficient supply to serve net-peak load in heat waves and provide an adequate planning reserve margin, which CAISO wants the California Public Utilities Commission to increase from 15% to 20%.

A new workshop will try to make sure exports do not occur during times of tight supply, as occurred during the August blackouts. And the ISO is seeking to bring new storage resources online by the summer and ensure that imports are backed by specific out-of-state resources.

Many of the issues addressed in CAISO's slate of initiatives were identified in a preliminary root-cause analysis of the summer blackouts sent to Gov. Gavin Newsom in October. (See [CAISO Says Constrained Tx Contributed to Blackouts](#).) ■



The Midway Sunset Cogeneration plant sits in a Kern County oil field.



## CAISO/West News



# FERC Won't Meddle in CAISO Resource Adequacy, Yet Commissioners Reject Proposed Show-cause Order in Unusual Vote

By Hudson Sangree

FERC on Thursday rejected an effort by Chairman James Danly to take CAISO to task for the rolling blackouts of mid-August by using the commission's authority under Section 206 of the Federal Power Act (EL21-19).

In a rare occurrence, the commission voted 2-1 against a proposed order, which could have required CAISO to show it can meet demand during extreme heat events.

Amid a Western heat wave Aug. 14-15, CAISO ordered rolling blackouts as solar power waned in the evenings but demand remained high. More than a million residents lost power for short periods. (See [CAISO: Blackouts May Continue, Calls Emergency Meetings](#).) CAISO narrowly avoided blackouts over Labor Day weekend during another heat wave.

"The draft order finds that the heat events of Aug. 14-19, 2020, may indicate that CAISO's existing Tariff may be inadequate to ensure that sufficient resources are available to meet load and maintain system reliability," FERC Managing Attorney Michael Haddad told the commissioners in a [presentation](#) at their monthly open meeting.

Danly said he felt it was important for FERC to open a Section 206 proceeding to ensure CAISO's rates are just and reasonable under the circumstances.

"I think that there is an urgent need for action in CAISO," he said. "CAISO shed load on two days in August. It's not merely that there was a load-shedding event. It's the fact that the events that led to it are not unlikely to be replicated. The heat and the wildfires [in the West] seem to be increasingly common. We've had ever growing reliance on intermittent resources, and we apparently had only two-thirds of demand response that was called upon actually available.

"When you add that to the increasing drop-off in solar availability as the evening approached ... that produced a series of events all of which culminated in a real crisis that CAISO had to actively manage and manage with ever escalating aggression."

Danly urged FERC to act quickly to head off problems next summer. CAISO has acknowledged a repeat is possible, though it is taking steps to avoid future shortfalls. (See [CAISO CEO](#)

[Defends Blackouts Response](#).)

Commissioner Neil Chatterjee said he agreed that CAISO needs "serious work" but disagreed that FERC should get involved, at least not yet.

"A broad 206 proceeding at this time would distract from the current efforts that CAISO and its stakeholders are making," he said. "What's more, due to our *ex parte* rules, it would also reduce FERC's effectiveness by prohibiting commissioners and staff from providing assistance to, and engaging in an open dialogue with, CAISO as it works on solutions."

CAISO has proposed an increase in the state's planning reserve margin and undertaken reviews of scarcity pricing and resource adequacy rules, he noted.

Commissioner Richard Glick called the proposed order "ill advised."

"The last thing this commission should be doing is using Section 206 of the Federal Power Act to say to the states, 'We're from the federal government, and we know better than you do,'" he said. "This commission's bungling efforts have already made a complete mess of the resource adequacy construct in the three Eastern RTOs. Are we really now going to do the same thing to the West?"

More regional cooperation, including an RTO, would help the West, he said. The reluctance of California and other states to join forces has thwarted those efforts, but CAISO's Western Energy Imbalance Market and other regional partnerships are "baby steps" in the right direction, he said.

"What do we think's going to happen now that we have this draft order, if it were to go forward?" Glick said. "Everybody is going to run back to their corners and not emerge again for years."

Glick said FERC could help the West by other means. He proposed a technical conference, which would bring together stakeholders and state regulators, to discuss how the region could resolve concerns about resource adequacy.

Danly said he was "perfectly fine" with a technical conference because it would bring much needed attention. It should happen as soon as possible, he said.

It is rare for a FERC chair to bring a proposal to

a vote on an order likely to fail. It's "definitely happened in the history of FERC, but not recently," *observed* Jeff Dennis, general counsel of Advanced Energy Economy and former director of FERC's Division of Policy Development.

"Danly gets to show that he would've taken action on California. Chatterjee gets to occupy the political middle of the commission. Glick gets to signal deference to states," tweeted Travis Kavulla, vice president of regulation for NRG Energy and former vice chairman of the Montana Public Service Commission.

Danly, however, has brought to a vote at least one other order — albeit routine — on which he was in the minority. On Nov. 30, FERC reversed itself and approved a request by NYC ENERGY, a New York-based storage developer, for a waiver of NYISO interconnection procedures.

The chairman acknowledged that the company "explained why its waiver request was submitted in good faith and has presented sympathetic facts in support of its request," but he maintains that such waivers exceed the commission's authority under the filed-rate doctrine and the rule against retroactive ratemaking ([ER20-629-001](#)). He had more fully explained his reasoning for dissenting on such requests as a commissioner in previous orders. (See [Chatterjee, Danly Clash over 'Regulatory Flexibility'](#).)

It is up to the chairman's discretion as to what items the commission votes on, and when. During his time as chair, Chatterjee regularly removed gas items from open meeting agendas to avoid having them voted down or nullified by a tie vote.

"I don't know that I've ever done this before," Chatterjee said before casting his "no" vote Thursday.

"It gets easier the more you do it," joked Glick, a frequent dissenter at open meetings.

The vote came after a 25-minute discussion of the facts surrounding the Western "heat storm" in mid-August and CAISO's handling of strained grid conditions (AD21-3).

As of press time, the proposed order had not been posted to FERC's website. Commissioner Allison Clements, who joined the commission Dec. 8, did not vote on the order, nor on any of the items during the meeting. ■

**Michael Brooks contributed to this report.**

# CAISO/West News

## Study Proposes New Capacity Treatment for Ore.

By Robert Mullin

Oregon should recognize the capacity contributions of all resources including variable renewables, according to a new report commissioned by the state Public Utilities Commission.

The report from consulting firm Energy and Environmental Economics (E3) counsels the PUC to adopt a plan based on methods already familiar to market participants in Eastern RTOs. These include use of demand curves to adjust capacity prices and measuring the marginal capacity contributions from renewable resources based on effective load-carrying capability (ELCC).

The E3 report seeks to answer a key question the PUC posed in April 2019 when it initiated an investigation (UM 2011) into a “comprehensive approach” to recognizing the capacity contributions of the various resources in utility integrated resource plans (IRPs): How should capacity be valued?

“The capacity provided by a resource to the electric system plays a central role in determining that resource’s overall value and therefore informs fair compensation to that resource,” the PUC wrote then. The growing penetration of variable energy resources “requires an examination at how capacity from various resources should be valued.”

The PUC said its existing programs have dealt with capacity valuation on a “piecemeal” basis, using different methodologies to account for capacity from utility-scale generation, distrib-

uted resources, energy efficiency, storage and demand response. At the same time, variable resources were short-changed by receiving “little to no credit” for their contributions to peak needs.

“A holistic investigation into these issues related to capacity could lead to a harmonization of some of these disparate approaches,” the PUC said.

The regulator pointed out that capacity valuation can play a role in the implementation of time-of-use rates or in evaluating programs such as demand response that can avoid or postpone investments in new resources.

“Other program benefit evaluations where capacity value needs to be considered include transportation, electrification and energy storage,” the PUC said.

### Marching Down the Decarbonization Curve

“I think we’ve all seen across the West what can happen when capacity planning doesn’t quite go to plan,” E3 Director Zachary Ming said during a PUC-hosted video call Thursday to explain the capacity valuation report. “I’m really happy to be part of this proceeding that’s happening in Oregon to try to make sure the state gets ahead — and stays ahead — of the curve on this capacity issue that’s becoming more and more important with every year as we march down the decarbonization curve.”

Ming offered a primer on concepts that might be unfamiliar to Westerners not steeped in the organized capacity markets prevailing in

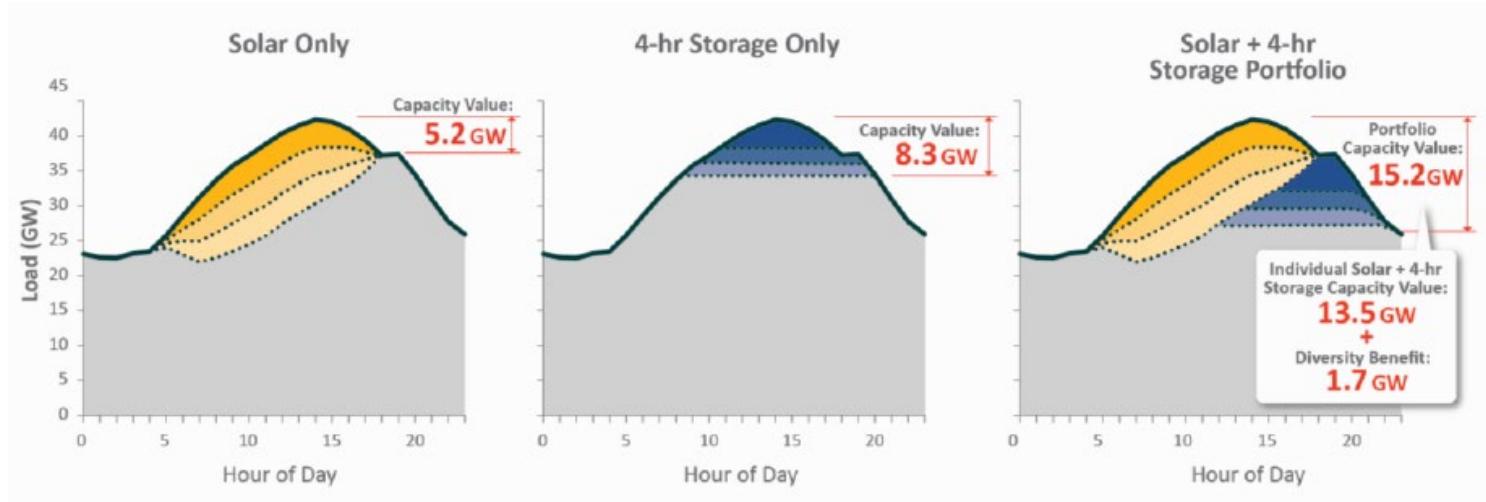
the East.

The study’s authors asked two questions in their effort to identify a capacity compensation scheme: How much capacity in megawatts can any one resource provide? And for any megawatt of capacity, what is the value of that capacity to the system?

“Once you answer those questions, then you can set a dollar value,” Ming said. Any compensation framework should “appropriately measure” the quantity and value of the capacity a resource is providing, he said.

Ming said ELCC is the “gold standard” for measuring a resource’s contribution to maintaining the one-day-in-10-years loss of load probability (LOLP) principle typically recognized as the basis for gauging system reliability. ELCC allows for a comparison between different types of resources and measures the “perfect capacity” from each that would provide equivalent system reliability. For example, based on operating characteristics, a 100 MW solar plant and 50 MW gas-fired plant would each be capable of providing 50 MW of capacity.

Measuring the ELCC of a resource such as solar can become particularly tricky, Ming said. Under the concept of “antagonistic pairings,” resources with similar limitations reduce each other’s ability to provide capacity, something that occurs when more solar plants are added to an already solar-heavy system. In contrast, the “synergistic” pairing of resources with different characteristics, such as solar and storage, improve each other’s ability to provide capacity.



Graph illustrates the "synergistic" benefit of combining solar and storage resources to improve the capacity contribution of both. | E3

# CAISO/West News

Regulators might have reasons for applying ELCC in different ways, Ming said. To assess overall system reliability, a “portfolio ELCC” approach can be used to capture the combined capabilities of all resources on the system. A “last-in ELCC” approach can capture the marginal ELCC of the next unit of a variable or energy-limited resource, an important tool when trying to understand how a newly procured resource will contribute to system capacity needs.

The industry widely uses simplified “approximation metrics” to reduce the complexity of estimating ELCC, Ming said. Among the most common is use of hourly LOLP to gauge ELCC. Historically, LOLP hours have been almost “exactly correlated” with peak load hours, he said.

“Resource availability wasn’t really an issue [in the past]. All resources — you could turn them on and off; you could run them for as long as you wanted. The only issue of not being able to meet load is if load got too high, which happened in peak hours or during extreme weather years,” Ming said.

Increased adoption of renewables, especially solar, means that LOLP has shifted into the evening hours when load is actually falling but the volume of energy produced is also declining with the setting sun.

“In today’s system, you see this most notably in California, although Oregon is headed in this direction, the loss of load probability hours have shifted [to] both later in the day and later in the summer,” Ming said.

He said the monetary value of capacity should be rooted in the principle of avoided cost. “A resource should be provided no more compensation than the least-cost resource that can be procured by the utility that provides equivalent reliability.”

To keep costs in check, the report proposes that Oregon policymakers adjust capacity prices based on a sloped demand curve “similar” to those used in organized capacity markets. That would enable the regulator to increase the value of capacity as the system moves from periods of resource sufficiency to deficiency. During times of sufficiency, the capacity value might reflect only operations and maintenance costs. In periods of deficiency, the value might rise to the net resource cost (similar to net cost of new entry), which reflects the total cost of building, integrating and operating a resource minus the revenue it earns from energy and ancillary services.

## Different Strokes

Acknowledging the difficulty of creating a single capacity compensation framework for all resource types, E3 instead recommended two broad approaches.

Dispatchable resources such as gas-fired plants would earn payments based on a fixed annual value determined by its MW capacity credit multiplied by the \$/MW-year value of the capacity. Resources paid under this “fixed payment” scheme would be subject to penalties for lack of performance during critical periods.

A “pay-as-you-go” scheme would compensate variable renewables based on performance during peak demand or capacity scarcity hours. The plan could be structured to either pay resources dynamically during only periods of system stress, or it could “send a consistent pre-determined price signal for all hours that have a higher” LOLP, E3 said. The plan would avoid subjecting variable resources to an “undue performance requirement,” Ming noted.

Because of their dispatchability, storage resources would fall under the fixed payment

scheme, with compensation based on the product of the “last-in” ELCC and the monetary value of capacity.

“Performance would be measured by having the utility send a signal to the storage resource based on its capabilities. If it responds, it won’t be assessed penalties,” Ming said. Using pay-as-you-go to compensate storage could be “potentially discriminatory” because it could require the resource to cycle every day to receive payment. It also avoids compensating a storage resource when it’s not actually needed for capacity.

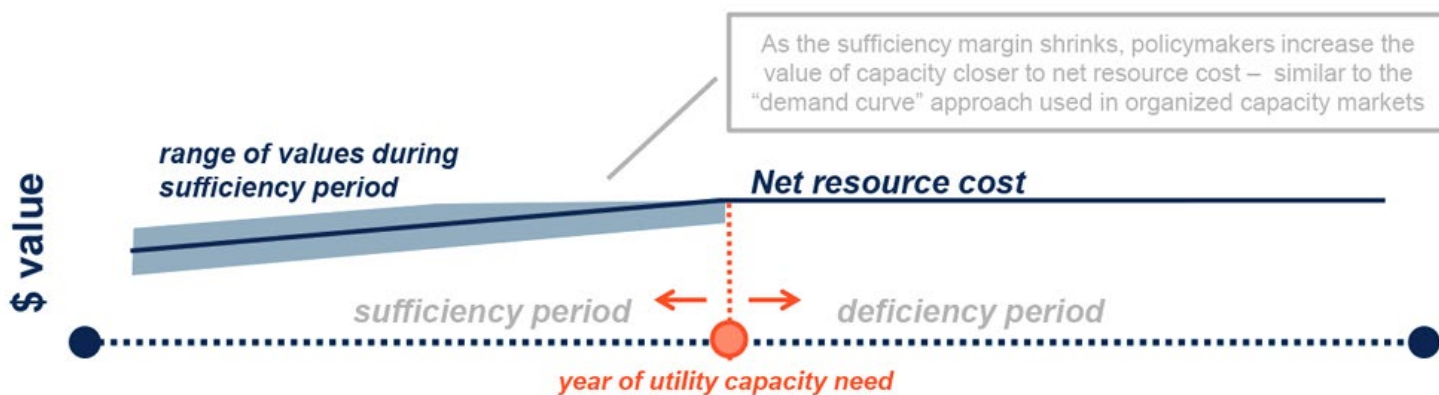
Like storage, demand response resources would receive fixed annual payments. Because DR has more limitations than storage, performance requirements would be based on a resource’s “inherent capabilities, identical to what is used in its ELCC calculation.”

For hybrid resources, E3 proposed a “bifurcated” scheme in which the renewable portion of the resource would be compensated under pay-as-you-go while the storage portion receives a fixed payment. “We do not think that a fixed payment only is appropriate for hybrids for the same reason it’s not for renewables,” Ming said.

## ‘Deliberately Provocative’

Fred Heutte, senior policy associate with the Northwest Energy Coalition, asked what E3 meant by “dispatchable” resources. Heutte noted that E3 had performed a *study* for Tampa Electric showing that solar can be dispatchable in providing incremental and decremental energy, providing load-following capability.

“It’s not something commonly done right now, but it’s certainly possible. Is that what you mean by dispatchable or is there something else?” Heutte asked.



Demand curve illustrates the rising value of capacity as a system moves from a sufficiency to a deficiency of capacity resources. | E3



# CAISO/West News

"I think for the purposes of providing non-capacity services to the system, dispatching solar can be useful, like providing ancillary services," Ming responded. "From a capacity perspective, I don't know that I'd consider solar dispatchable, but it's a term of art; there's a gray line, of course."

Dispatchability is really a function of how a capacity resource responds within its compensation framework, Ming continued. Solar will provide as much energy as it can when it's producing to meet capacity needs.

"Storage is going to provide energy when [the grid operator] sends a signal to dispatch, and to that extent the compensation framework impacts how storage is dispatched. The compensation framework does not impact how solar is dispatched," Ming said.

Representing the Oregon Solar Energy Industries Association, Patrick McGuire asked how E3 saw the "last-in" ELCC being updated over time. "If it's put into a contract, does it have to be leveled?"

"We would expect both the last-in ELCC and the table of loss of load probability hours is going to be different in each future year, and they're going to be changing as the resource mix and the loads on the system change," Ming

said. "In particular, we would expect the last-in ELCC of solar to decline over time."

Commissioner Letha Tawney asked whether the PUC should be concerned about whether LOLP data is sufficiently accounting for climate change.

"The West-wide heat storm this August was relatively unusual in the historical data, but over the multi-decadal timeframe of these contracts, [it] may not be such an outlier," Tawney said.

"The answer to that question is quite simply an emphatic 'yes,'" Ming said. "You do need to account for a changing climate. That is easier said than done. There are firms and researchers that are looking at how to do that. I would say the standard practice in the industry probably doesn't do as good of a job accounting for climate as it should."

Heutte posed a "deliberately provocative" question about the risks of introducing concepts from organized markets into Oregon's IRP process, such as net cost of new entry (CONE) and sloped demand curves. He said for the past two decades he's read prominent economists who claim capacity markets are the way forward for the electricity sector, but that recent talk from states such as Illinois,

Maryland and New Jersey about pulling out of PJM's capacity construct calls into question the concepts underpinning those markets.

"I'm wondering what can we learn from that. ... How can we be assured going forward that those kinds of design elements will actually produce the kind of results we're looking for?"

Ming said E3 explicitly avoided using the term net CONE and instead used net resource cost, which is fundamental to ratemaking.

"Trying to isolate the portion of the resource that's attributable to capacity and attributable to energy is something that's done in ratemaking in every regulated jurisdiction across the country," Ming said.

He said the reason states are looking to pull out of PJM is unrelated to the way the market sets net CONE or the demand curve.

"It's related to the inability of renewables to bid into the capacity market. They're forced to bid in prices that are higher than the clearing price and, ultimately, they don't clear the market and they don't get paid anything for capacity. So that minimum offer price rule implemented by FERC this year, that is what is driving the states to exit the capacity market," he said. ■

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# ERCOT News



## Solar Power Boosts ERCOT's Reserve Margins

### 9.3 GW of Solar Capacity to Come Online in Next 18 Months

By Tom Kleckner

ERCOT has met record demand in recent summers with only single-digit planning reserve margins. Thanks to the apparently never-ending stream of renewable projects, that margin will climb to 15.5% in 2021 and 27.3% the year after, where it will stay for the foreseeable future.

"It's a slightly different situation, isn't it?" Pete Warnken, the grid operator's manager of resource adequacy, said during a media conference call Wednesday. "It's cyclical. Boom or bust."

The Texas grid operator said that according to its latest capacity, demand and reserves (CDR) report, generator owners have added 5.6 GW of summer-rated capacity for 2021, which includes more than 3 GW of utility-scale solar resources and 1.8 GW of wind resources. Another 9.3 GW of summer-rated solar capacity is expected to be added by June 2022, further cementing the state's status as a solar powerhouse.

Warnken said ERCOT this year has more than doubled the solar capacity brought online in 2018-2019. "Certainly, that's going to continue in 2022 and 2023," he said.

Charlie Hemmeline, executive director of the Texas Solar Power Association, said during the Texas Energy Summit last month that solar developers in the state had expected 2020 to be their best year yet — an expectation that proved too strong following the COVID-19 pandemic.

"There's a giant solar resource here. The demand has never been better," Hemmeline said.

The grid operator is also seeing accelerated growth in rooftop solar projects. It included its first separate rooftop solar PV forecast in the

CDR to show the incremental capacity growth beyond the historical growth trend reflected in the load forecast.

The additional solar and wind capacity has helped negate the effects of fossil fuel retirements. Just last May, ERCOT's CDR projected planning reserve margins of 19.7% in 2022, dropping to 14.1% in 2025. The grid operator now foresees a 25.4% reserve margin in 2025.

ERCOT's footprint continues to see growth in customer demand. Using revised economic data released by Moody's Analytics in August,

staff are forecasting a 2021 summer peak of 77.2 GW. That would smash the peak demand record of 74.8 GW set in 2019.

This June, ERCOT will also begin serving some 470 MW of Lubbock Power and Light's load. (See *Texas PUC Approves LP&L Integration Project.*)

The grid operator expects to have 86.8 GW of capacity available to meet summer demand next year. Capacity is expected to jump to 97.6 GW in 2022 and flirt with 100 GW in 2025, when peak demand is expected to hit 82.1 GW. ■



Solar resources, like the Permian Solar Center, account for much of ERCOT's recent additional capacity. | Ørsted

Added renewable generation is resulting in healthy planning reserve margins in the future | ERCOT

# ERCOT News



## Texas Public Utility Commission Briefs

### Commissioners to Revisit ERCOT Market Repricing Issues in 2021

Texas regulators will begin the new year with a discussion of pricing issues within ERCOT following complaints from participants saying they were improperly charged for point-to-point (PTP) obligations in the day-ahead market (DAM).

The Public Utility Commission agreed during its open meeting Dec. 17 to pick up the conversation during one of its two meetings in January.

"I'm not saying I'm opposed to repricing, but I'd like to hear reasons we do it in some cases and a defense of it," Commissioner Arthur D'Andrea said. "I worry about the day when we're talking about really big numbers."

DC Energy Texas and Monterey TX, both qualified scheduling entities (QSEs), complained that their PTP obligations in the DAM were improperly priced in excess of their not-to-exceed bid prices following a market software error in September 2019. ERCOT's board approved price corrections for eight operating days affected by the error, along with 13 others. (See [Directors Approve Price Corrections for 21 Operating Days](#), *ERCOT Board of Directors Briefs: Dec. 10, 2019*.)

The QSEs said the resettled prices left them \$269,283.22 and \$86,647.98, respectively, out of pocket, and took their complaints through ERCOT's alternative dispute resolution process. The ISO determined in April that it had not violated any protocols in handling the resettlements and denied their requests.

The companies then filed complaints with the PUC in May. An administrative law judge in October [found](#) ERCOT had violated protocols when it issued the resettlement statements and said the QSEs were entitled to "a remedy that places them back in the position they would have been in had they never been awarded PTP obligations at prices more than \$0.01/MWh above their not-to-exceed bid prices" (50871).

"I have a lot of sympathy with what the [judge's decision] says," D'Andrea said. "These [P2P obligations] are hedging instruments. Putting a price not to exceed is part of risk management, but to blow those up doesn't feel right to me."

D'Andrea said ERCOT runs an "incredibly complicated system" but added that "the protocols read like an owner's manual for the atomic bomb."

"One thing I'm convinced on, like previous cases, is that the Protocols could be clearer," PUC Chair DeAnn Walker said, suggesting a rulemaking could be in order. "If everyone says this is an issue, but everyone says we can't agree on what the solution is ... that's what we're here for."

In October, ERCOT's Board of Directors approved two more sets of price corrections covering 25 operating days. Unaffiliated director Peter Cramton called for a strong policy on price corrections, while staff has responded by creating a monitoring group to review system design changes before they go live. (See ["Board Approves 2 Sets of Price Corrections," ERCOT Board of Directors Briefs: Oct. 13, 2020](#).)

### PUC Rejects Rulemaking Petition

The PUC rejected energy storage developer Broad Reach Power's petition for a rulemaking to clarify commission rules on how a transmission service provider's (TSP) transmission tariff applies to wholesale storage entities. Staff said its rule is "clear and unambiguous" in that a TSP's "tariff shall not apply to any entity engaging in wholesale storage" (51501).

Broad Reach filed the petition in November after Texas-New Mexico Power (TNMP) filed wholesale tariff revisions for transmission service that the energy storage developer said assessed distribution service charges to wholesale storage entities. Broad Reach said the changes were "inconsistent" with commission rules and applicable legal standards. (See ["Commission Threatens TNMP with 'Comprehensive' Rate Case," Texas PUC Briefs: Nov. 19, 2020](#).)

### Gleeson Named Executive Director

The commissioners approved COO Thomas Gleeson as their new executive director. He replaces John Paul Urban, whose [resignation](#) was announced Dec. 9.

Gleeson joined the PUC in 2008. He previously was a legislative analyst for the Texas Senate and a budget analyst for the Legislative Budget Board.

### Legislative Report Finalized

The PUC approved its [biennial report](#) to Texas lawmakers, who will begin their 87th legislative session on Jan. 12. The report includes a recommendation that the Legislature clarify that electric vehicle charging stations are not an electric utility or a retail electric provider



Staff's Darryl Tietjen addresses the commission. | *Texas PUC*

and that use of such stations is not a transaction governed by existing retail electric policies.

"These changes will provide regulatory right-sizing and consistency across the state, in areas inside and outside competition, to facilitate deployment and competition of electric vehicle charging stations for customers," the report says in [edits](#) offered by D'Andrea.

### \$307,500 in Administrative Penalties

The PUC hit three companies with a total of \$307,500 in administrative penalties. The commission:

- docked retailers Direct Energy, First Choice Power and Bounce Energy \$250,000 for various infractions that involved enrolling customers in postpaid service plans without obtaining written and signed letters of authorization; distributing inaccurate lists of authorized pay stations and improper customer disconnections. Direct Energy and First Choice Power are affiliates within the same brand family, which purchased Bounce Energy and acquired its customers following the violations (51277).
- agreed with TNMP on a \$50,000 penalty for violating staff's system average interruption duration index (SAIDI) standard of 54.77700 minutes (5% over the threshold) for the 2019 reporting year (51395).
- assessed Twin Eagle Resource Management, a QSE, \$7,500 for incorrectly opting out of a reliability unit commitment instruction (51154).

The PUC also approved rate case filing deadline extensions for Cross Texas Transmission (51534) and Electric Transmission Texas (51583). ■

— Tom Kleckner



## ISO-NE News



# NE Energy Leaders Discuss Paths to Decarbonization

By Jason York

State energy and environmental policy leaders from Connecticut, Massachusetts, Rhode Island and Maine outlined their long-term strategies to achieve decarbonization goals Dec. 15 during a webinar co-hosted by the Connecticut Power and Energy Society and New England Women in Energy and the Environment.

Heather Hunt, executive director of the New England States Committee on Electricity (NESCOE), served as moderator of a panel that examined decarbonization “Plans, Roadmaps and Pathways to 2030 and Beyond.”

Hannah Pingree, director of policy innovation and future for Maine Gov. Janet Mills and co-chair of the Maine Climate Council, said Mills was elected in 2018 with climate and energy policy issues leading the way. The governor signed legislation in 2019 to reduce carbon emissions by 45% by 2030 and 80% by 2050, and create the Climate Council, which recently released its *first report*. Pingree said decarbonizing transportation “is certainly our biggest nut to crack,” as 54% of the state’s emissions come from that sector. Another major hurdle for Maine is the heating sector, she said, where Mills set a goal of installing 100,000 new heat pumps by 2025.

“For a state with about 500,000 homes, these are fairly aggressive goals, and they get a lot more aggressive as we get out to 2030,” Pingree said.

Carrie Gill, an administrator in the Rhode Island Office of Energy Resources, said the electric and thermal sectors are responsible for “about two-thirds of our greenhouse gas emissions.” She noted that Gov. Gina Raimondo issued an executive order tasking her with developing pathways and action steps to meet 100% of the state’s electricity demand with renewable energy resources by 2030, “the fastest pace in the nation.”

Rhode Island consulted with The Brattle Group to conduct an in-depth analysis, which led to a “suite of recommendations that we will act on beginning in 2021.” Gill said some of those recommendations include pursuing a change in the state’s renewable portfolio standard “to ensure that we’re reaching 100% renewables by 2030, and importantly that we maintain 100% renewables past 2030.” The state wants to continue progress on strategically modernizing the electric grid and will

start to develop a role for energy storage, which Gill said is “a critical technology to balance renewable energy generation and electricity demand, especially as we green the regional grid.”

Katie Dykes, Connecticut’s Department of Energy and Environmental Protection commissioner, said state statutes require reduced carbon emissions economywide 45% from 2001 levels by 2030 and 80% by 2050. Additionally, last year Gov. Ned Lamont issued an executive order directing Dykes’ agency to evaluate pathways to achieve a 100% carbon-free electric supply for Connecticut by 2040.

“We all have very ambitious goals; some of them are framed slightly differently, but we know that to make progress effectively and get the best value out of the various strategies that we’re all implementing to meet these goals, our participation together in a shared regional grid ties together our fates in meeting these individual state goals,” Dykes said. “Strong regional collaboration is really essential to this effort for our integrated resources plan.”

Dykes said the electrification of the thermal and transportation sectors provides “the clearest pathways, both through procurement mechanisms and technologies that are continuing to come down in cost for reducing carbon emissions affordably.” She said the continued progress in decarbonizing the electric supply pays dividends and ensures that “those measures that we implement to clean up our transportation and thermal sectors will be even more effective in reducing emissions when we plug them in.”

Judy Chang, undersecretary of energy for the Massachusetts Executive Office of Energy and Environmental Affairs, said her state has committed to net-zero greenhouse gas emissions by 2050. Energy efficiency is the No. 1 “pillar” of its strategy, she said.

“We have to limit the way we leak,” Chang said. “We leak our energy out of our windows and walls.”

Massachusetts will also need about 15 GW of offshore wind and 25 GW of solar “to power our economy,” and those numbers need to roughly double for the rest of New England “for the next 30 years.”

“We can’t do this by piecemeal planning, and we can’t afford to go into this without a

long-term view,” Chang said. “We also cannot afford on the wholesale market side to keep going with our current market design and the current way of planning for transmission.”

That requires collaboration, she said, and “not only do we need to collaborate from a regional perspective ... but also at the federal level.”

“We cannot actually achieve all the things that we want to achieve in the next 10 years as we set targets for 2030 without a federal government that can also support that,” Chang said.

Collaboration between the states, such as the Regional Greenhouse Gas Initiative or, potentially, the Transportation Climate Initiative, is not going anywhere. Earlier this fall, five of the six New England governors, excluding New Hampshire, signed a joint statement that was later followed by a vision statement from all six states through NESCOE calling on ISO-NE to make changes and reforms to wholesale market design, transmission planning and RTO governance to enable states to better meet their decarbonization goals. (See *New England Governors Call for RTO Reform* and *States Demand Central Role in ISO-NE Market Design*.)

“I think this is acutely needed, not only to ensure that our voices are heard and that there’s responsiveness within the [ISO-NE] board to state public policies, but also transparency and accountability to consumers,” Dykes said.

She added that from her time as chair of Connecticut’s Public Utilities Regulatory Authority, she recognizes the importance of “transparency and accessibility of the deliberative process that is incredibly important from a governance standpoint.”

“I’m optimistic about where it will take us and the possibilities for real collaboration amongst states, and with the ISO, that I think will be in our future,” Dykes said.

Chang announced an upcoming series of *technical conferences* in January and February on wholesale market design, transmission planning and governance reform.

“Understanding there are resource constraints on people and organizations, we really cannot afford to just go along and hope that we will land with the right market design and the right transmission pieces that need to be built,” Chang said. “I think that’s the ultimate vision ... to really work collaboratively so that we can achieve this future in the least amount of disruption and at the lowest cost.” ■

## ISO-NE News

# NE States, DC Sign MOU to Cut Transportation Pollution

## TCI-P Seeks to Modernize Transportation, Combat Climate Change

*Continued from page 1*

of-its-kind program will provide \$20 million annually for public transit, safe streets for bikers and pedestrians, and other green projects. ... I look forward to working with the Rhode Island General Assembly to launch this program and protect the health of Rhode Islanders.”

TCI-P *projects* carbon allowance prices beginning at nearly \$6.60/metric ton in 2023 and rising to almost \$12.50 in 2032, including inflation. In 2023, if allowance prices fall below \$6.50, the emissions containment reserve (ECR) would tighten the cap by up to 10% to take advantage of the opportunity to reduce emissions at a lower-than-expected cost. If allowance prices rise above \$12, the cost containment reserve (CCR) would release additional allowances equal to up to 10% of the cap to mitigate higher-than-expected prices.

The states and D.C. also committed to investing a minimum of 35% of their proceeds, nearly \$100 million each year, to ensure that communities underserved by the transportation system and overburdened by pollution benefit

equitably from clean transportation projects and programs. The program would designate advisory bodies to identify underserved and overburdened communities, provide investment guidance and measure progress toward goals. Members of the advisory bodies would be representative of the underserved and overburdened communities.

Eight other states signaled in a *statement* that they would work with the MOU signers on the program’s development while pursuing state-specific initiatives to reduce emissions and provide clean transportation solutions. As part of the *Transportation and Climate Initiative* (TCI), Delaware, Maryland, New Jersey, New York, North Carolina, Pennsylvania, Vermont and Virginia actively participated in developing the program and can join it in the future. If all the TCI states eventually choose to implement the program, the amount available annually for investment could exceed \$2 billion.

Massachusetts Gov. Charlie Baker said in a statement: “By partnering with our neighbor states with which we share tightly connected economies and transportation systems, we

can make a more significant impact on climate change while creating jobs and growing the economy as a result. Several other Transportation and Climate Initiative states are also committing to this effort today, and we look forward to these partners moving ahead with us as we build out this first-in-the-nation program.”

“By working together across our borders at the state level, we can take on the greatest challenges posed by climate change,” D.C. Mayor Muriel Bowser said in a statement. “Through this multijurisdictional commitment, we will cut pollution, improve health outcomes and deliver much needed investments for our most vulnerable communities.”

Added Connecticut Gov. Ned Lamont: “Participating in the TCI-P will help grow our economy through a fresh injection of capital to provide for jobs and new infrastructure. This collaboration will cut our greenhouse gas emissions, and it will make our urban centers healthier after decades of being adversely impacted by the emissions being released by traffic every day.” ■

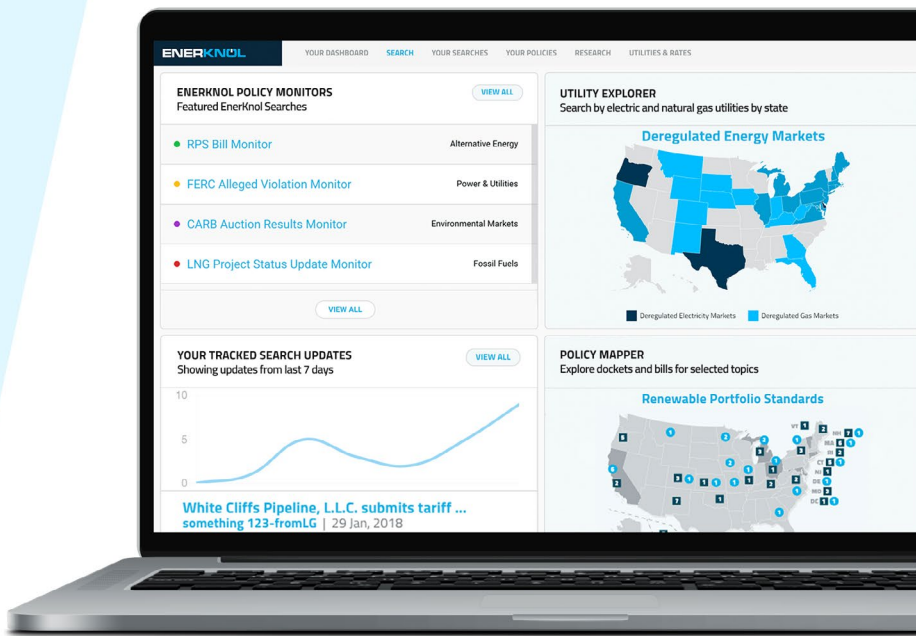
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## ISO-NE News

# NEPOOL Reliability Committee Briefs

## RC Votes to Support Revisions for Planning Procedures

The NEPOOL Reliability Committee last week *recommended* that the Participants Committee support *revisions* to ISO-NE's Planning Procedures 5-5 (PP5-5), 5-1 and 5-0.

The proposed changes to PP5-5 would align the RTO's planning procedures with upcoming changes in NERC requirements and terminology, including the shift from special protection systems to remedial action schemes (RASes). It will also align PP5-5 requirements with NERC standard PRC-012-2, effective Jan. 1, 2021, which requires submittal of information on new and functionally modified RASes.

Each entity with an RAS will be required to submit a completed Attachment 1 for each of its existing schemes within six months of the changes' effective date for ISO-NE to populate an RAS database. This information will help the RTO appropriately evaluate the impacts of RASes on the grid, as required by NERC and Northeast Power Coordinating Council.

ISO-NE also provided some responses to feedback received on the proposed revisions during last month's RC meeting. The RTO clarified the definition of an automatic control scheme (ACS). ISO-NE said automatic under-frequency load shedding, out-of-step



tripping and power swing blocking schemes are not considered ACSes, though automatic sectionalization schemes, such as restoring load tapped from a faulted line by re-energizing the non-faulted section, are.

The RTO also answered a question about how the requirements of PP5-5 will apply to RASes located on or affecting non-bulk electric system and non-pool transmission facilities. It said language will be added to clarify that section 1.3.9 requirements and schemes located on sub-69-kV facilities that could have a significant adverse impact on the transmission

system or a market participant are subject to 1.3.9 approval but not NPCC/NERC review.

The proposed changes to PP5-0 and PP5-1 are minor but required to conform with those to PP5-5. The PC will vote on all the revisions at its next meeting Jan. 7.

## Stein Re-elected

The committee re-elected Robert Stein, a consultant for H.Q. Energy Services and principal for Signal Hill Consulting Group, as vice chair. ■

— Jason York

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## ISO-NE News

# New England 'Future Grid' Study Takes Shape

By Jason York

NEPOOL members got a look last week at what will ultimately underpin a new study to better understand the impact of New England's ambitious greenhouse gas goals on the operation of the ISO-NE grid.

An expected dramatic reduction in New England GHGs by 2050 will recast the ISO-NE energy mix to include significantly more carbon-free resources, while electrification of the building and transportation sectors will drastically alter load volumes, peaks and profiles.

NEPOOL is embarking on a *reliability study* to better understand the implications of those changes as part of New England's *Future Grid Initiative*. The study will examine whether current market revenues are sufficient to attract and retain the new and existing resources necessary to reliably operate the system. It will also identify operational and reliability challenges and outline possible ways to address them.

Peter Flynn, the consultant hired by NEPOOL and the New England States Committee on Electricity (NESCOE) to serve as administrator of the Future Grid project, presented the study's stakeholder-developed *framework document* to the joint meeting of the Markets and Reliability committees on Thursday.

Flynn, former deputy general counsel for National Grid, said the study will eventually consist of several analyses using different computer models because "no single model can address the range of issues that NEPOOL stakeholders desire to assess."

The analyses will be staggered, and the results from one will inform decisions about what to model in others. Close collaboration will be required between ISO-NE and any consultants retained by NEPOOL, according to the framework.

NEPOOL approved the *objective and scope* of the study, which will assess and discuss the future of the regional power system through the prism of state energy and environmental laws. The study's scope is to define and evaluate the future grid by identifying the resource mix in the coming years and resource, operational and reliability needs.

Additional assumptions and scenarios are being developed through the stakeholder process at joint meetings of NEPOOL's Markets and Reliability committees. A gap analysis will determine whether the existing markets are equipped to maintain system reliability and identify any deficits to be addressed to assure operations meet NERC, Northeast Power Coordinating Council (NPCC) and ISO-NE standards.

The study will feature economic analysis that includes production cost and ancillary services simulations, while a revenue sufficiency analysis will determine whether forecasted market revenues will be sufficient to attract and retain necessary resources.

An engineering analysis will include energy and ancillary services (EAS) simulations and a resource adequacy screen, while an availability and security analysis will answer questions about the conditions most likely to pose operational or reliability challenges.

## EAS Market Simulations

The EAS market simulations will consist of nine matrix scenarios and 18 alternative scenarios.

The "Near Future Scenario" from National Grid assumes compliance with state requirements for 2035. The resource mix comprises approximately equal 8,000 MW amounts each of offshore wind, utility-scale PV and behind-the-meter PV, and 2000 MW of electric storage. It assumes about 16,000 GWh of building and transportation load.

Eversource's "Distributed Pathway Scenario" is modeled to 2040 and represents a path toward reducing emissions consistent with an 80% economy-wide emissions reduction by 2050. The resource mix consists of approximately 12,000 MW of behind-the-meter PV solar, 9,000 MW of utility-scale PV, 8,000 MW of OSW and 4,000 MW of electric storage. It assumes 25,000 GWh of building and transportation load weighted toward transportation.

NESCOE's "Offshore Pathway Scenario" is also modeled to 2040 and assumes carbon reduction that would put New England on course to comply with state law requirements by 2050. The resource mix consists of approximately 16,500 MW of OSW, 15,000 MW of utility-scale PV, 12,500 MW of rooftop PV and undetermined power amounts from electric storage and energy efficiency. It assumes approximately 76,000 GWh of building and transportation load, weighted equally, and load shapes consistent with such a high electrification level.

## Next Steps

NEPOOL has asked stakeholders to provide feedback on these materials and assumptions on alternative scenarios by Dec. 31 to incorporate those comments and additional data in time for the RC/MC meeting on Jan. 19, 2021.

The committee expects study assumptions for the first phase of the report to be finalized by March 1. The final production cost simulation is scheduled for September 2021 to March 2022, and the ancillary services simulation from September 2021 to January 2022. MARS analyses will occur between October 2021 and January 2022. A final report is expected by May 2022.

For the second phase, dates have not been determined for the revenue sufficiency analysis and system security analyses, but they will not start before September 2021. ■



ISO-NE control room | ISO-NE

## ISO-NE News

# ISO-NE PAC Briefs

### RTO Reviews Comments Received on Boston 2028 RFP Process

ISO-NE Director of Transmission Planning Brent Oberlin on Wednesday *presented* to the Planning Advisory Committee feedback on “lessons learned” from competitive solicitations under FERC Order 1000. The Boston 2028 request for proposals was the RTO’s first under Order 1000.

The RTO ran the RFP from December 2019 through July of this year, and the process concluded with the selection of a \$49 million project by National Grid and Eversource Energy, which had the lowest cost of the 36 received proposals. (See *ISO-NE Chooses Incumbent as Boston RFP Winner*.) ISO-NE also promised stakeholders, many of whom challenged its selection process, discussions on what did not work well or could be improved in future RFPs and their execution, including developing a submittal template that will summarize any recommendations and guide changes to the Tariff and process.

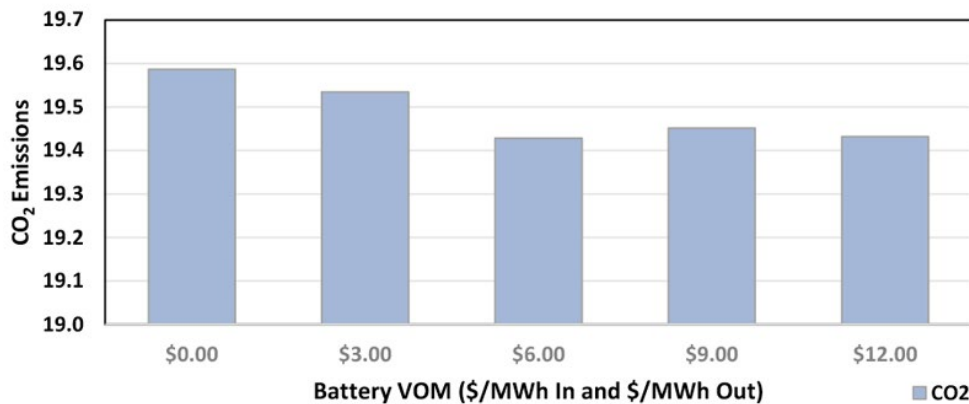
Oberlin said ISO-NE received comments from eight submitters, including the RTO itself.

Anbaric made several recommendations, including that public presentations should be made to the PAC on all submitted proposals to the RTO, which would allow for adjustments to submissions that are not material project redesigns. Additionally, Anbaric posted that the “goal of Order 1000 for more cost-efficient or cost-effective [projects] should not be defeated by narrowly looking at project capital costs.”

“Seemingly more expensive projects may actually be less expensive to consumers over time because they displace the need for other transmission [and] lower the cost of electricity by allowing for the deliverability of more low-cost renewables energy or solving for out-of-merit dispatch needs due to transmission system limitations,” Anbaric wrote. “The Tariff does not restrict the evaluation criteria such that the ISO is unable to take a broad view to find the best projects in terms of costs to consumers, and such an approach is consistent with Order No. 1000. If needed, the ISO should seek declaratory relief from FERC confirming the latitude it possesses in setting out big-picture evaluation criteria.”

The New England States Committee on Electricity (NESCOE) recommended allowing storage as transmission and the ability to add a new element to the incumbent utility’s system.

### CO<sub>2</sub> Emissions (Million Short Tons/Year)



The effect of increasing variable operations and maintenance (VOM) costs on carbon emissions is small, ISO-NE has found. The carbon reduction appears to be related to reduced fossil generation needed because of lower total storage losses. | *ISO-NE*

“ISO-NE did not allow submissions that included storage as part of their solution,” NESCOE said. “ISO-NE should work to modify its Tariff to allow including storage-as-a-transmission-only asset both in competitive solicitations and incumbent solution studies. FERC precedent supports enhancing competition by expanding eligibility to these storage facilities.”

NESCOE added that when it comes to new elements, “many bids were eliminated because they proposed to add a new element to an incumbent’s system.”

“This reason for elimination needs to be re-examined,” NESCOE wrote. “If the new element is technically a required part of the solution or is superior to any other solution, this restriction could eliminate all bidders but the incumbent.”

Oberlin said because of the nature of many of the comments, ISO-NE has not had sufficient time to provide feedback and that most of them will require further stakeholder discussion. The RTO said it expects to give feedback on the comments early next year.

### How and Why for Modeling Batteries in Economic Studies

Wayne Coste, technical manager for resource studies and assessments for the RTO, *described* how batteries have been modeled in economic studies and why.

Coste said energy storage has become a focus of economic studies, whether it is pumped storage, grid-scale market-facing batteries and energy banking via Quebec. GridView, a

software program that simulates power systems’ economic operation in hourly intervals for periods ranging from one day to many years, investigated batteries’ utilization under various cases and sensitivities.

For the key metrics used in the *2020 Economic Study*, the direct impact of higher variable operation and maintenance (VOM) costs for batteries is shifting opportunities to pumped storage and raising LMPs in some hours because charge or discharge cannot be justified, which results in a small reduction in the number of export hours in bidirectional ties.

Developments in batteries’ evolution merit continued monitoring, Coste said, including augmentation strategies and associated VOM to be reviewed before the next economic studies.

The study assumed 2.2 million electric vehicles, which is equivalent to 180 GWh of vehicle battery storage, more than 22 times the amount of assumed grid-facing batteries (8 GWh). But Coste said it is uncertain whether EV owners will be receptive to sharing batteries for grid services. Advocates also claim batteries are not degraded by vehicle-to-grid operation.

Time-of-use incentives for charging or discharging might be useful with extensive penetration of solar PV, but not with large penetrations of offshore wind. Coste said repurposing degraded vehicle batteries can augment stationary batteries. ■

— Jason York

## MISO News

# OMS Debates MISO Long-term Tx Cost Allocation

By Amanda Durish Cook

MISO state regulators are mulling over “postage stamp” rates, decarbonization goals and portfolio groupings as part of advice it will later send to the grid operator on the cost sharing of new transmission.

The Organization of MISO States is putting together a list of guiding principles for allocating the costs of MISO’s upcoming long-term transmission plan. (See *MISO Prepares Members for Pricey Transmission Expansion*.)

During a teleconference of OMS’ Cost Allocation Principles Committee on Dec. 14, several regulators said that MISO should not socialize transmission benefits through a postage-stamp rate — one that is flat and footprint-wide and does not take geography into consideration. They said MISO should instead look for more specific beneficiaries to assign costs. The Transmission Owner sector has said the grid operator’s hourglass-shaped footprint means that such a blanket allocation will never make sense.

However, Minnesota Public Utilities Commissioner Matt Schuerger said he did not want stakeholders to preclude a subregional postage-stamp method. He asked other regulators to be cautious about “false precision and getting too granular.”

“We should be locking in as much as the

analytical precision allows us. I think other conversations ignore that inputs are uncertain. The outputs are ‘roughly commensurate,’ not ‘exactly commensurate,’” Schuerger said, referencing FERC Order 1000’s principle of allocating project costs “in a manner that is at least roughly commensurate with their benefits.”

Indiana Utility Regulatory Commissioner Sarah Freeman said that OMS’ draft principles would urge MISO to use the “roughly commensurate” principles as the “bare minimum” standard for cost allocation.

“Postage stamping is essentially saying, ‘We don’t have the tools to get there,’” Michigan Public Service Commissioner Dan Scripps said.

OMS solicited cost allocation advice from stakeholders as part of the work. Several said MISO should explore the creation of new benefit metrics beyond adjusted production costs, avoided reliability projects and savings when a project can reduce dependency on the RTO’s Midwest-to-South transmission constraint. Others asked that MISO minimize free rider-ship on new transmission investment.

Clean Grid Alliance advised that evaluation of a cost-effective project should not “be overly conservative; otherwise consumers will not reap the economic benefits of new economic transmission infrastructure.”

Schuerger said MISO also should not foreclose

the idea of approving projects by portfolio rather than on an individual basis. He said portfolios would be useful in regions where many transmission projects are needed. RTO executives have indicated that long-term transmission recommendations will come in annual Transmission Expansion Plans, not in a special portfolio.

“Those projects have to be put together thoughtfully and deliberately for it to make sense,” Wisconsin Public Service Commission Chair Rebecca Valcq said.

A few regulators said states should not pay for transmission to further the decarbonization goals of other states. MISO has said it needs to address its “rapidly worsening deliverability” so that members can achieve their decarbonization goals and renewable targets.

Scripps suggested MISO planners put a temporary “blindfold” on regarding public policy considerations and examine a project’s reliability and economic benefits first. He suggested that projects could be first allocated based on reliability and economic needs, and then any remaining costs divided up among states who want to pursue decarbonization.

A study published by MIT on Dec. 11 found that nationally coordinated transmission planning can reduce costs by as much as 46% when compared to standalone state decarbonization efforts. ■



| American Transmission Co.



# NYISO News



## NY Climate Action Council Focuses Scoping Efforts

*Council Looks at Waste Emissions, Bioenergy, and Seeks Utility Expertise*

By Michael Kuser

The New York State Climate Action Council (CAC) met last week to discuss bioenergy, methane emissions and the formation of a utility consultation group while also receiving [updates](#) from its seven advisory groups.

The 22-member CAC is working toward a fall 2021 target for completing a scoping plan for achieving the state's goals under the Climate Leadership and Community Protection Act (CLCPA).

### Bioenergy



NYSERDA interim CEO Doreen Harris | NYDPS

New York State Energy Research and Development Authority (NYSERDA) Interim CEO Doreen Harris, serving as CAC co-chair, said the council recommended the advisory panels conduct a study on the role bioenergy can play in meeting

the state's goals — switching to 100% zero-emission electricity by 2040 and reducing greenhouse gas emissions to 85% below 1990 levels by 2050.

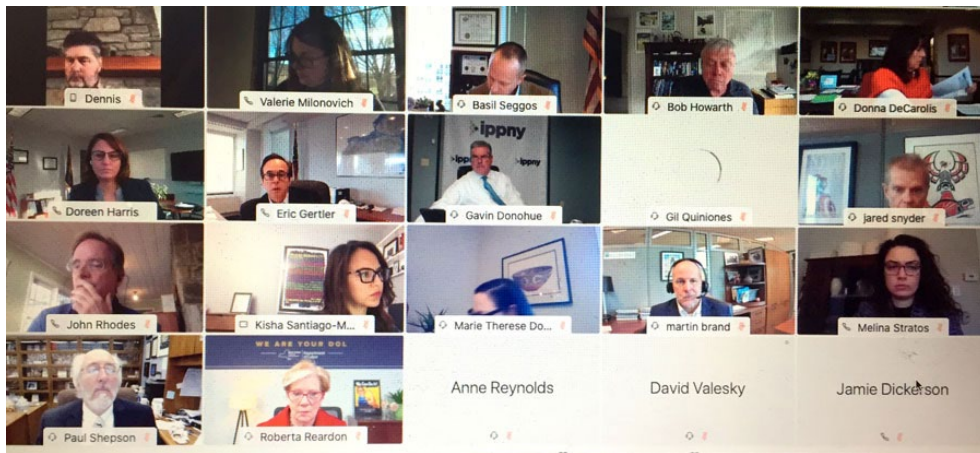
The initial intent was to see where the CLCPA explicitly addresses bioenergy. Now it is up to the advisory panels to identify opportunities in the various bioenergy sectors, Harris said.

Harris highlighted that NYSERDA earlier this month issued a [request for proposals](#) seeking contractors to conduct site reuse planning studies for retired power plants, and that the state's \$226 billion pension plan announced it will [divest](#) from fossil fuels. (See [NY Seeks 'Just Transition' in Decarbonization Plans](#).)

### Utility Consultation Group

Harris invited the CEOs of the New York Power Authority (NYPA) and the Long Island Power Authority (LIPA) to participate in the utility consultation group along with representatives from each of the investor-owned utilities — National Grid, the Avangrid utilities, Central Hudson and Consolidated Edison.

"We see this group serving as a resource to the panels at large to help inform them of system considerations to account for in their strategy and recommendation development," Harris



The NY State Climate Action Council met via webinar Dec. 15. | NYDPS

said. "So, we see this group also becoming very helpful with cross-panel issues such as buildings and transportation electrification strategies ... and through the scoping panel process, I welcome thoughts on where this utility information would help to promote our state investments and objectives."

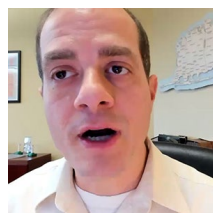
Gavin Donohue, CEO of the Independent Power Producers of New York (IPPNY), thanked the co-chairs for recognizing his efforts to get more utility involvement in the council's proceedings at the working group level.

NYPA CEO Gil Quiniones said the authority's [strategic plan](#) first focuses on "preserving and enhancing the value of our hydropower assets to serve as the base of our state's renewable energy" as the country's largest state-owned utility.



NYPA CEO Gil Quiniones | NYDPS

"We will also look to build priority transmission projects to integrate land-based and offshore wind renewables into our system," Quiniones said.

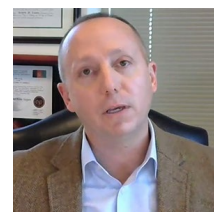


LIPA CEO Thomas Falcone | NYDPS

LIPA CEO Thomas Falcone said the transmission cable permitting process for New York's first OSW project, South Fork, is moving forward with the Public Service Commission and the federal Bureau

of Ocean Energy Management. LIPA and Con Edison recently submitted to the PSC and NYSERDA a study of the transmission reinforcements necessary to deliver 9,000 MW of OSW.

### Waste Not, Want Not



NYDEC Commissioner Basil Seggos | NYDPS

CAC Co-Chair and Department of Environmental Conservation (DEC) Commissioner Basil Seggos said that the DEC that day had [finalized](#) the regulations to reduce GHG emissions, the first regulatory requirement of the CLCPA.

The state in October completed its public hearing process on the proposed ([Part 496](#)) emissions limits. (See [New York Holds Final CLCPA Emissions Hearings](#).)

The CLCPA directs the DEC to measure GHG emissions on a common scale using the carbon dioxide equivalence metric (CO<sub>2</sub>e) and the 20-year global warming potential of each gas, as derived from the U.N.'s [Intergovernmental Panel on Climate Change](#).



Martin Brand, DEC | NYDPS

DEC Deputy Commissioner Martin Brand said the waste emissions advisory panel has met twice since its founding in November and is focusing on methane emissions as well as collaborating with other panels on "a

# NYISO News

number of cross-cutting issues that we have to discuss.”

“All the goals are based on the goal of reducing methane emissions, primarily, and certainly there are a number of ancillary benefits for some of these programs,” Brand said. “A general theme is waste avoidance: Don’t create the waste in the first place. ... Certainly, we’re going to focus on disposal avoidance, landfill avoidance, capture of resources and emissions from facilities for other use, and to reduce the impact of waste activities on host communities around the state.”



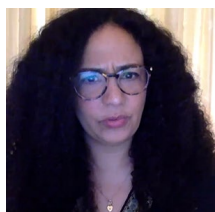
Robert Howarth, Cornell University | NYDPS

*Methane Emissions.*)

## Panel Updates

Transportation Commissioner Marie Therese Dominguez said the Transmission Advisory Panel held public meetings this fall, including two roundtables in December that discussed electrification and green hydrogen, among other topics. (See *NY Panel Examines Vehicle Electrification, Cleaner Fuels.*)

Howarth, a professor of ecology and environmental biology, said he lived in a rural area and would like to see more electric buses in upstate New York, but was skeptical that significant amounts of green hydrogen could be generated through clean energy, and was concerned about generating hydrogen from natural gas.



Raya Salter, NY Reviews | NYDPS

“To the extent that we have surplus renewable electricity, there are far more efficient ways to store and use it than to generate hydrogen,” Howarth said.

Raya Salter, lead policy organizer for environmental advocacy group

*NY Renews*, said that she would like to see the state “get it right” in analyzing the lifecycle of co-pollutants so that there is strong guidance on these issues.

PSC Chair John B. Rhodes said that the Power Generation Advisory Panel he leads had organized itself into sub-groups:



NYPSC Chair John B. Rhodes | NYDPS

- The Equity Sub-group is developing recommendations to address community impacts relating to siting, health concerns and access to renewables and energy efficiency.
- The Barriers Subgroup is focused on clean energy siting and energy delivery and hosting capacity.
- The Solutions for the Future Subgroup is addressing technology and research needs and identifying market solutions to ensure system efficiency and send correct price signals to resources.
- The Resource Mix Subgroup is focused on the growth of renewables and EE, transitioning away from fossil fuel generation and the deployment of energy storage and distributed energy resources.

The resource mix is “where a lot of the technical complexity really shows up,” Rhodes said.

Paul Shepson, dean of the College of Marine and Atmospheric Sciences at Stony Brook University, said he is “really fascinated by the distributed energy opportunity” and wanted to hear a comment on the analysis the power generation panel had done on small-scale, community-based power generation.



Paul Shepson, Stony Brook University | NYDPS

Rhodes said that while a 5-MW solar plant may be less efficient than a 100-MW solar plant, the former can still be valuable if it is close to load.

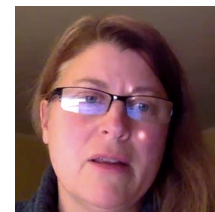
IPPNY’s Donohue said that while the generation working group is prioritizing a market solution, he didn’t hear any mention of carbon pricing, which his organization believes “could be the next iteration of a market outcome.”

Rhodes said the panel discussed it, and that it’s

## “A general theme is waste avoidance: Don’t create the waste in the first place.”

—DEC Deputy Commissioner  
Martin Brand

also a CAC agenda topic. “It’s hard to imagine us getting through this process without figuring out a position to recommend on carbon pricing,” he agreed.



Anne Reynolds, ACE NY | NYDPS

Anne Reynolds, executive director of the Alliance for Clean Energy New York (ACE NY), said that the barriers to getting renewable energy built include establishing uniform property tax rates statewide instead of developers negotiating agreements

with every local government. While some people “believe that the main problems are behind us, from developers’ view that is not necessarily true,” Reynolds said. “We’re not all the way through fixing permitting.”

Labor Commissioner Roberta Reardon, co-chair of the Just Transition Working Group, which addresses environmental justice and social equity issues, said that the jobs being created in the clean energy transition “are not simply in the construction trades and in the flow of energy, but in all the support industries that go into it. There’s really a much larger area for workforce development than people tend to think.”

DEC Deputy Commissioner Jared Snyder said the next step in the scoping process would be for consultants Energy and Environmental Economics (E3) to complete technical analyses of the new state targets and standards and for the council to deliberate over recommendations from the advisory panels.

Peter Iwanowicz, executive director of Environmental Advocates NY asked if NYSERDA and DEC were still looking for someone to help run the CAC. Harris replied yes, saying the agencies “hope to have an announcement sooner than later.” ■



# NYISO News



## NYISO Management Committee Briefs

### All Systems Go, Despite Pandemic

NYISO CEO Rich Dewey told the Management Committee Wednesday that the ISO succeeded in completing many stakeholder processes despite the coronavirus pandemic. "This has been probably one of the most challenging years of any of our professional experience," he said, referring to the challenges of working remotely.

He thanked stakeholders and staff for helping the ISO replace its energy management system and business management system, complete a demand curve reset and roll out market rules for energy storage.

"I hope 2021 is a little easier, but there's still a significant chance that it will get a whole lot worse before it starts getting better," Dewey said. "So I want to encourage everybody to stay safe as we head into the holiday season."

COO Rick Gonzales noted the "remarkable decrease in the fuel prices year-over-year"

with natural gas in November averaging \$1.47/ MMBtu, down 44.5% from the previous year. Distillate prices dropped 36.9% year-over-year.

The ISO did an "ad hoc update to its generator survey to include pandemic impacts ... but none of the generation sector participants are reporting outages or derates as a result of the pandemic," Gonzales said. "As a result, we're not projecting any reliability issues, certainly at this point in time, as a result of the pandemic."

### NYISO Strategic Plan 2021-2025

Executive Vice President Emilie Nelson *presented* the NYISO *Strategic Plan* for 2021-2025, reiterating the accomplishments of the year and looking ahead to how the ISO will incorporate the clean energy mandates in the state's Climate Leadership and Community Protection Act.

"The board [of directors] thought it was more important than ever in these times of uncer-

tainty to provide some clarity on what the objectives of the organization are for the future," Nelson said. "If you consider the multitude of planning studies looking out 10 to 20 years in order to inform how the grid is going to transition, there's a lot of quality work there."

In addition to deploying the energy storage participation rules in August, Nelson said the ISO continued its exploration of carbon pricing and won FERC approval for its distributed energy resources participation model. She also cited as accomplishments improvements to its market rules for ancillary services and a proposed design for the hybrid co-located model.

Stakeholders and NYISO staff worked hard through the demand curve reset process, "which is always very involved, and ... we progressed through the largest class year in a record time, all representing improvements that stakeholders have worked with the ISO on through the years," Nelson said of the *transmission queue* that began in August 2019 and concluded this fall.

### Tx Planning Changes and TAM Clarification

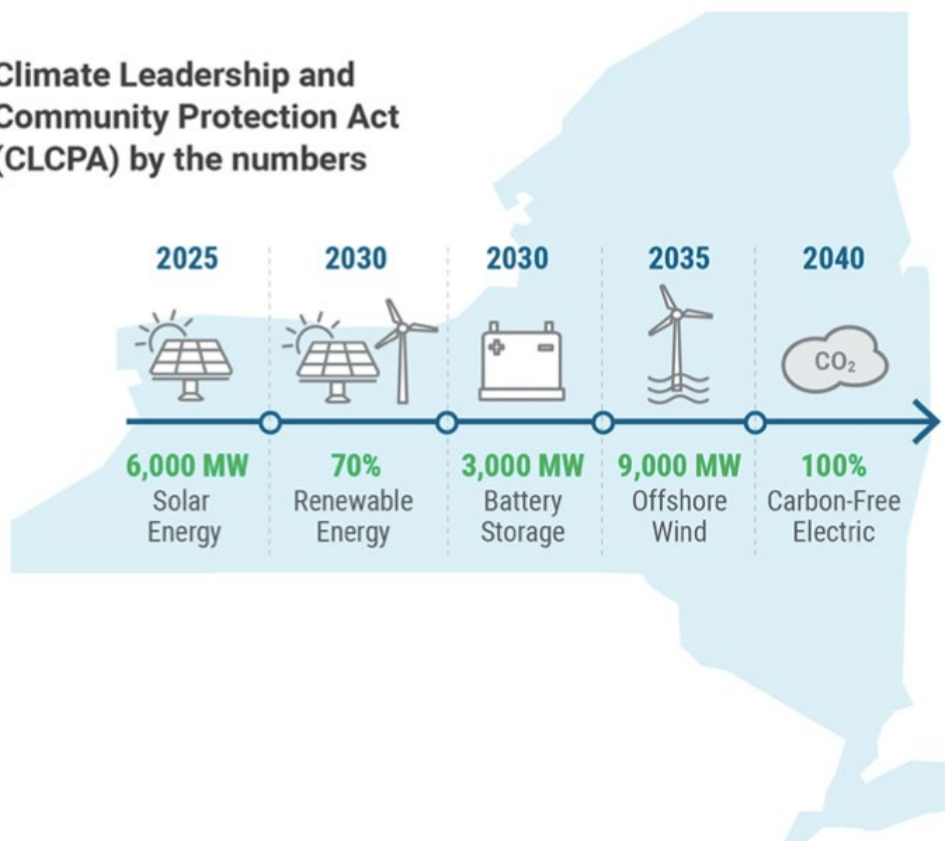
The committee approved *revisions* to streamline the ISO's economic and transmission planning and expand its scope to capture the grid's ability to deliver energy from the future generation resource mix to the forecasted load. The changes rename the Congestion Analysis and Resource Integration Study as the draft System & Resource Outlook and double the assessment periods to 20 years, consistent with the study period for proposed economic or public policy transmission projects. (See *NYISO Business Issues Committee Briefs: Dec. 9, 2020*.)

NYISO will continue to make additional economic planning studies available to interested parties, including one on the new energy deliverability metric. The Board must approve the Attachment Y Tariff revisions before the ISO can make a Section 205 filing with FERC in January.

The MC also approved a clarification on how the ISO's new Tailored Availability Metric *rules* apply to landfill gas resources as well as to wind and solar. The clarification will replace the terms "wind and solar resources" with "intermittent power resources," which includes landfill gas, in section 5.12.14.3 of the Market Administration and Control Area Services Tariff. ■

– Michael Kuser

### Climate Leadership and Community Protection Act (CLCPA) by the numbers



NYISO's five-year Strategic Plan takes the big-picture view of stakeholder processes to meet the CLCPA statutory requirements in the electricity sector. | NYISO



## NYISO News



# LIPA Allowed to Compete for NY EV Prize Funds

By Michael Kuser

The New York Public Service Commission on Thursday ruled that projects located anywhere in New York may be eligible for state-sponsored electric vehicle prize competitions, granting a *request* from the Long Island Power Authority (LIPA), which is normally not subject to PSC jurisdiction.

The commission in July approved just over \$700 million in spending over the next five years to install more than 50,000 light-duty EV charging stations throughout the state, including \$80 million for three prize competitions to be administered by the New York State Energy Research and Development Authority (NYSERDA) (18-E-0138). (See *NYPSC Approves \$700 Million for EV Chargers*.)

The EV Make-Ready Program is funded by investor-owned utilities through a cost-sharing program meant to incentivize utilities and charging station developers to site EV charging infrastructure in places that will provide maximum benefits to consumers.

The commission's declaratory *ruling* Thursday "remains consistent with the July order by continuing the policy that benefits will accrue to the ratepayers funding a chosen prize," said Bridget Woebbe, assistant counsel in the Department of Public Service. "However, other communities throughout the state would also be allowed to participate in the prize competitions so long as a separate funding source is secured for any project selected outside of an investor-owned utility service territory."

LIPA and its service provider, PSEG Long Island, have pledged to add 4,650 new charging ports by 2025 — enough to support 188,000 EVs — beginning with a proposed investment next year of \$4.4 million.

Gov. Andrew Cuomo's office *said* the three prizes are intended to support clean transportation options benefiting "lower socio-economic and environmental justice communities."

They include a \$40 million environmental justice program to reduce air pollution in "frontline communities" and create transportation "green zones" across the state and a \$25 million program aimed at individual buyers that will seek "innovative and high impact approaches that enable access to clean transportation services for disadvantaged and underserved communities."

In addition, a \$20 million program will seek



Southampton, Long Island, offers plug-in EV charging at the Ponquogue Beach parking lot. | Southampton Town

"innovative and high-impact approaches to medium- and heavy-duty electrification that can be replicated at scale, including for 'last-mile' solutions, one of the fastest growing emissions sources in this class of vehicles."

The state's EV program allocated \$206 million toward equitable access and benefits for poor and disadvantaged communities, which also will be eligible for a higher incentive supporting up to 100% of the costs to make a site ready for EV charging. The Climate Leadership and Community Protection Act (CLCPA) requires all state agencies to prioritize greenhouse gas emissions reductions in disadvantaged communities and stipulates that at least 35% of the overall benefits of spending on clean energy programs benefit disadvantaged communities.

The commission has yet to rule on New York's six local distribution companies' recent proposals for managed charging programs, which were split between "passive" and "active" approaches. (See *NY Utilities Diverge on Managed EV Charging*.)

### Long-term Concerns

While the initial focus was on funding projects located in communities served by investor-owned utilities, the commission said that the objectives to advance transportation electrification, expand access to clean transportation and reduce emissions in disadvantaged communities are relevant throughout the state. (See *NY Panel Examines Vehicle Electrification, Cleaner Fuels*.)

The prize competition is important "in that it expands the realm of the possible," PSC Chair John B. Rhodes said. "We need functional, cost-effective electric transportation solutions across the board, and we need more innovation on a couple of areas: in finding good

solutions for disadvantaged communities and neighborhoods and in terms of expanding beyond passenger and light-duty vehicles, which are relatively well established now as electric vehicle use cases, to other more heavy- and medium-duty vehicles."

Commissioner Diane Burman supported the ruling but expressed concern for the future.

"I do think that at some point we're going to have to consider a broader statewide policy for the medium- and heavy-duty sectors, and so [that] prize itself really is looking at how this investment and lessons learned from that may be," Burman said.

Commissioner Tracey Edwards said the PSC should ensure that disadvantaged communities are not left behind.

"I would have liked to see for the future some status reports with NYSERDA that have a direct line back to our policies within the PSC, just some timelines and checkpoints to make sure that whatever we have outlined is actually working so that if we have to change course or amend any of the things in place, we have time to do that," Edwards said.

Commissioner John Howard said he was concerned about financing the work required by the CLCPA and other initiatives to change the grid and electrify transportation and buildings.

"We cannot finance it exclusively through ratepayer dollars," Howard said. "It is my sincere hope with a new administration in Washington that these initiatives will be funded at least in part if not in total through the federal [government]. The benefits will be both statewide and worldwide ... and I agree with Commissioner Edwards that we need to be able to provide flexibility so that we can know quickly when things aren't going as intended." ■

## PJM News



# FERC Rejects PJM Stakeholder EOL Proposal

## Reaffirms OK of TO Filing

By Michael Yoder

FERC on Thursday rejected a PJM joint stakeholder proposal regarding end-of-life (EOL) projects, siding with transmission owners who argued moving EOL projects under the RTO's planning authority violated their rights (*ER20-2308*).

The commission also reaffirmed its August decision accepting the TO sector's own Tariff amendments concerning EOL projects, rejecting arguments in rehearing requests by more than a dozen load-side stakeholders (*ER20-2046*). The rehearing request was automatically denied when the commission did not rule on it within 30 days. (See *Rehearing Sought on PJM End-of-life Order*.)

FERC said the proposed Operating Agreement amendments initiated by American Municipal Power (AMP) and Old Dominion Electric Cooperative (ODEC) and passed at the PJM Members Committee meeting on June 18, went "beyond the scope of planning responsibilities" delegated to PJM in the OA.

The June vote created lengthy and vigorous debates among stakeholders and a protest by the TOs, who claimed in a *letter* and discussions that the amendments violated their rights under the Consolidated Transmission Owners Agreement (CTOA). (See *PJM Stakeholders Endorse End-of-Life Proposal* and *UPDATED: PJM Files EOL Proposal over TO Protest*.)

"Consistent with the August 2020 order, we find here that the PJM Transmission Owners retain the right to 'maintain' their transmission facilities, and generally reserve all rights not specifically granted to PJM."

FERC said PJM and the TOs originally signed the CTOA to "memorialize the division of responsibility" in planning between the RTO and the TOs. In its August order, the commission found that, under the terms of the CTOA, the TOs retain all rights that they did not specifically grant to PJM.

Specifically, FERC cited language in the CTOA that TOs agreed to "transfer to PJM ... the responsibility to prepare a Regional Transmission Expansion Plan (RTEP) and to provide information reasonably requested by PJM to prepare the Regional Transmission Expansion Plan and shall otherwise cooperate with PJM in such preparation." The commission said, "Pursuant to the CTOA, PJM is limited to '[conducting] its



Crane lifts workers to top of transmission tower in Potomac, Md. | © RTO Insider

planning for the expansion and enhancement of transmission facilities.'" (See *FERC Accepts PJM TOs' End-of-life Revisions*.)

In its 279-page *filing* in July, the joint stakeholder proposal called for requiring TOs to notify PJM and stakeholders of any facility nearing the end of its life at least six years before its retirement date so that the project could be included in five-year planning models and potentially opened to competitive bidding. It also sought to modify the supplemental project definition to exclude EOL projects, which would become a new category of regionally planned projects.

The commission ruled that the joint stakeholder proposal went too far in its scope, saying a transmission project addressing EOL conditions that is limited to replacing existing equipment or involving an incidental increase in transmission capacity does not involve expansion or enhancement of the regional transmission system.

"Such a replacement project does not fall under regional transmission planning under the PJM Operating Agreement as it relates solely to maintenance of existing facilities, and it does not 'expand' or 'enhance' the PJM grid as the CTOA requires for transmission planning responsibilities transferred to PJM," FERC said.

In its order defending its August decision accepting the TO's Tariff amendments, FERC said it disagreed with the arguments made by load-side stakeholders.

The stakeholders argued that the order was improper because it gives TOs unilateral

authority to propose revisions related to transmission planning, veto authority over future planning methodologies, restricts PJM's role as the regional planner and reduces transparency and the rights of other stakeholders.

The New Jersey Board of Public Utilities also filed a *challenge*, saying the order violates the transparency principles of Order 890 and ignores cost concerns over "unchecked transmission owner investment."

FERC disagreed with the stakeholder arguments, citing its ruling in the August order.

"The PJM Transmission Owners' proposal does not shift responsibility for planning asset management projects from PJM to the PJM Transmission Owners for the very reason that PJM never had this planning responsibility," FERC said. "The filing merely provides that these projects would be planned according to Order No. 890 principles, making more transparent the procedures the PJM Transmission Owners would use to plan these projects."

### MOPR Rehearing Denied

Separately, the commission gave notice that it had also rejected a request to rehear its Oct. 15 ruling approving most of PJM's compliance filing on its expanded minimum offer price rule (MOPR) (*EL16-49-006*). (See *FERC Acts on PJM MOPR Filing*.)

The rehearing request also was denied automatically when the commission did not act on it within 30 days. The commission said it would provide substantive responses to the rehearing arguments in a future order. ■

## PJM News

# Mixed Ruling for PJM on Fast-start Pricing

By Rich Heidom Jr.

FERC on Thursday ordered PJM to make an additional compliance filing on its rules for fast-start resources, saying the RTO's proposal gave itself too much discretion (*ER19-2722*).

The commission found that PJM partially complied with its April 2019 ruling following a paper hearing, which concluded that the RTO's fast-start pricing practices were unjust and unreasonable because they did not allow prices to reflect the marginal cost of serving load. (See *FERC Orders Fast-start Rules for PJM, NYISO*.)

FERC ordered PJM to submit an additional compliance filing within 60 days and a one-time informational report within five months on its progress on addressing long-term pricing and dispatch issues.

The paper hearing order contained eight directives, including that PJM implement software changes so that fast-start resources are considered dispatchable from zero to their economic maximum operating limits for the purpose of setting prices. It also required the RTO to apply fast-start pricing to all fast-start resources instead of only block-loaded resources and to revise its real-time energy market clearing process to consider fast-start resources consistent with minimizing production costs.

The commission accepted PJM's responses on six of the directives, which were not challenged by intervenors.

### More Detail Needed

But FERC said the RTO failed to provide sufficient detail in its proposed Tariff changes on its process for determining eligibility for fast-start resources.

The commission agreed with commenters that PJM's proposed definition, which would have allowed the RTO's Office of the Interconnection to deem a resource capable of meeting eligibility criteria based on its operating characteristics, would give PJM too much discretion.

"Specifically, PJM must provide the standards and process by which the PJM Office of Interconnection will deem a resource capable of meeting eligibility criteria including, for example, which operational characteristics may be considered as well as the conditions under which PJM may change a resource's status as a fast-start resource," FERC said. "While we acknowledge that PJM may need some amount

of discretion in determining eligibility in order to prevent sellers from erroneously triggering fast-start pricing, the criteria and process that PJM uses to exercise this discretion should be transparent and clearly defined in the Tariff."

It rejected PJM's contention that its proposal was appropriate because it has broad authority to determine which units are physically capable of providing synchronized reserves. "Because fast-start resources are often the marginal unit and the eligibility to be considered a fast-start resource changes how that resource will affect prices, we find that fast-start resource eligibility is distinct from synchronous reserves in PJM," FERC said.

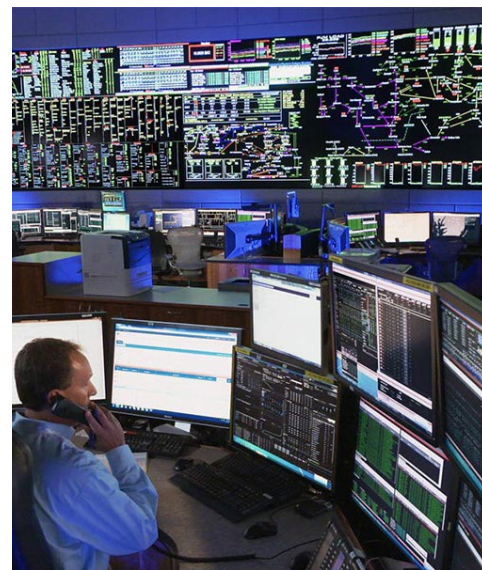
### 'Price Chasing'

The commission accepted PJM's proposal to use lost-opportunity-cost payments to offset the incentive for over-generation or "price chasing," rejecting protests by the Independent Market Monitor and consumer advocates from Illinois, Maryland, New Jersey, D.C., West Virginia and the PJM Industrial Customer Coalition (filing together as Joint Customer Advocates).

"PJM's proposed Tariff revisions ensure that resources do not have an incentive to deviate from PJM's dispatch instructions" to take advantage of higher prices that result from fast-start pricing, FERC said. "We are not persuaded by arguments made by Joint Customer Advocates and the Market Monitor that PJM's proposal to pay dispatch differential lost opportunity credits would do so on a five-minute basis without regard to the overall profitability of the resource. We find that PJM's proposal ensures that resources follow dispatch instructions and do not deviate for financial gain."

The commission said it agreed with PJM that the introduction of distinct dispatch and pricing runs in the day-ahead market could result in cases in which the day-ahead scheduling reserve clearing price credit may not fully cover the opportunity cost associated with the day-ahead scheduling reserve commitment obtained from the dispatch run. It also agreed that fast-start pricing may change the incentives for virtual transactions, price-sensitive demand and dispatchable exports.

But it rejected as beyond the scope of the proceeding PJM's proposal to provide additional uplift payments to address those issues. Instead, it said the RTO should "monitor these issues and work with its stakeholders to address whether uplift payments for virtual transac-



PJM control room | PJM

tions, price-sensitive demand and dispatchable exports may be needed in the future."

It also directed PJM to include in its compliance filing a proposed effective date for its Tariff changes that reflected its estimate of when software changes will be completed to implement the changes.

### Offer Cap

The commission rejected PJM's proposal to apply the offer cap requirements of Order 831 to the composite energy offers under its fast-start pricing proposal. (See *New FERC Rule Will Double RTO Offer Caps*.)

"We recognize, as PJM states, that such a proposal may be complex and may require an administrative solution. However, PJM must propose a solution that complies with Order No. 831's requirements."

It ordered PJM to provide Tariff revisions capping composite energy offers at the higher of \$1,000/MWh or a resource's verified composite energy offer and capping composite energy offers at \$2,000/MWh for purposes of setting LMPs.

It accepted PJM's proposal to trigger shortage pricing based on the results of the pricing run, rejecting the Monitor's contention that it will result in false negatives. It agreed with PJM that its approach could introduce false positives, "but we find that the likelihood of such positives to be *de minimis* given the commission's recent approval of PJM's reforms to its reserve penalty factor provisions." ■



# PJM News



## PJM MRC/MC Briefs

### Markets and Reliability Committee

#### Stability Limits in Markets and Operations

PJM stakeholders at last week's Markets and Reliability Committee meeting heard a first read of manual language advanced regarding a stability limits capacity constraint proposal that some members are still challenging.

PJM and the Independent Market Monitor put forward the capacity constraint proposal, which was endorsed at the Market Implementation Committee meeting on Dec. 2 with 64% support. The proposal addresses the allocation of limits to multiple units by stating that the limit will apply to the sum of the output of the affected units plus ancillary service megawatts. (See "Stability Limits Review," *PJM MIC Briefs: Dec. 2, 2020*.)

Joseph Ciabattoni, manager of interregional market operations for PJM, reviewed the proposed capacity constraint solution *package* and corresponding Operating Agreement and Tariff *revisions*. Ciabattoni said the units would be dispatched in economic merit order up to the stated stability limitation.



Joseph Ciabattoni, PJM | © RTO Insider

The package was the result of several months of discussion at the MIC on potential changes to how PJM curtails generating output to maintain stability during maintenance outages. Generating units are sometimes reduced below their normal economic max limit if a planned or unplanned transmission outage presents stability problems that could damage the units. (See "Stability Limits in Markets and Operations," *PJM MIC Briefs: May 13, 2020*.)

Current rules require the RTO to implement a thermal surrogate to reflect the stability constraint in the day-ahead and real-time markets and to bind the constraint, affecting the unit's dispatch.

If a unit chooses not to remedy a stability limitation identified during the planning process, its operating restrictions — as documented in its interconnection service agreement — would be invoked prior to those for other units, Ciabattoni said.

Lost opportunity cost (LOC) credits would not be paid for any reduction required to honor the stability limit. Similarly, LOC is not paid for economic megawatts of a resource that cannot produce because of a ramp limitation.

Lisa Morelli, director of market design for PJM, *provided* an overview of the MIC's work activities and related procedural history for the *stability limits in markets and operations* issue.



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

Paul Sotkiewicz of E-Cubed Policy Associates reviewed a proposed opportunity cost solution package. The proposal, presented by J-POWER and endorsed with 58% support at the December MIC meeting, was fundamentally the same as the PJM-

Monitor package except for providing compensation for LOCs.

Sotkiewicz said if a generator is requested to take an outage when it can still run, the unit is in essence being asked to "misrepresent their true capabilities." He said generation owners are very sensitive to the outage issue and that is why they're seeking compensation for LOCs.

Carl Johnson of the PJM Public Power Coalition said he's been "struggling" with how PJM can hold generators responsible when a contingency event is imposed. Johnson said he's been ruminating on whether it's never or all ways right to pay LOC.



Carl Johnson, PJM Public Power Coalition | © RTO Insider

Johnson said he's also not certain that all contingencies can be identified at the time of generator interconnection because "the topology of the system changes."

Consultant Roy Shanker said the stability limits issue seems more like a "contract matter" best dealt with when an interconnection agreement is signed.

"A better interconnection agreement would resolve all this going

forward," Shanker said.

Market Monitor Joseph Bowring said generators are "not held harmless" from all instances of being backed down because it's not explicitly stated in the interconnection agreement. He said if there were no consequences in the agreement, the interconnection "would have cost a great deal more than it did."



PJM Monitor Joseph Bowring | © RTO Insider

Bowring also noted that "there are no opportunity costs because the unit cannot run at a higher output and therefore there is no lost opportunity."

#### Real-time Values Market Rules

Laura Walter, senior lead economist for PJM, *reviewed* the solution package addressing *real-time value (RTV) market rules* endorsed at the November MIC meeting. Walter also reviewed proposed revisions to *Manual 11* and the *Tariff and Operating Agreement*.



Laura Walter, PJM | © RTO Insider

Stakeholders endorsed PJM's package of updates to RTV that call for additional penalties for generation operators that abuse the rules. The MIC endorsed the RTO's package with 73% support, and it received 55% support over maintaining the status quo in a nonbinding poll. (See "Real-time Value Market Rules Endorsed," *PJM MIC Briefs: Nov. 5, 2020*.)

The *issue charge* and *problem statement*, originally endorsed last December at the MRC, said observations indicated RTVs were being used to consistently override unit-specific parameter limits or parameter-limited exceptions. (See "Real-time Values," *PJM MRC Briefs: Dec. 19, 2019*.)

Walter said the original intent of RTVs was to provide a way for generation operators to communicate current operating capability to PJM if their resources could not meet their unit-specific parameter limits or exceptions. Generators opting to use RTVs forfeit operating reserve credits and make-whole payments.

The PJM package requires that market par-

# PJM News



Participants repeatedly failing to reflect actual operating conditions in their submitted operating parameters could be referred to FERC for enforcement. A market participant would be required to enter a forced outage ticket into PJM's Generator Availability Data System (eGADS) for the period of increased notification, start-up time and/or minimum downtime.

For the timeline of an RTV submittal, Walter said, the package would require that the requested period not exceed one market day. She said that when an RTV is requested, it would be available for that one day, then the entire schedule would revert to the previous day's values.

The package also calls for adding RTVs to the Tariff. Currently, RTVs are mentioned only in the manual, Walter said.

Siva Josyula of Monitoring Analytics said the Monitor is concerned that the changes proposed in the PJM package undermine the parameter-limited scheduling (PLS) rules used in RTVs. The PLS rules are part of the capacity performance rules requiring units to operate to defined parameters, he said.



Siva Josyula, Monitoring Analytics | © RTO Insider

"The proposal we see essentially allows generators to circumvent the requirements without any justification during most of the days," Josyula said.



David "Scarp" Scarpignato, Calpine | © RTO Insider

Calpine's David "Scarp" Scarpignato said RTVs are important to have in place because PJM needs to know what the units can and can't do in real-time.

Scarp said it seems like the Monitor wants to penalize units that get paid for capacity that provide more flexibility compared to intermittent resources. He said the generators that are flexible are being held to a higher standard than other capacity resources that are less flexible.

"We push for a level playing field," Scarp said.

## Capital Recovery Factors

Jeff Bastian, senior consultant of market operations for PJM, *provided* an informational update regarding the capital recovery factor

(CRF) for avoidable project investment rate (APIR) determinations from a *statement* PJM issued to stakeholders on Dec. 7.

PJM's statement came in response to the Monitor's *letter* Dec. 4 saying CRF values used by PJM do not reflect current federal tax law. The CRF is used to calculate the APIR as a component of the net avoidable cost rate (ACR) of a resource.

Bastian said the net ACR of a given resource sets the market seller offer cap and the minimum offer price rule (MOPR) floor offer price depending on which is applicable. *Attachment DD* of the Tariff includes tables of CRF values for resources to calculate the market seller offer cap or the MOPR floor offer price.

The Monitor said in its letter that the tables should have been updated in 2018 and need to be updated before the next capacity market auction takes place early next year.

"Correct CRFs will ensure that offer caps and offer floors in the capacity market are correct," the letter said. "The required changes are clear and unambiguous."

Bastian said PJM is officially introducing the table update issue at the January Markets Implementation Committee meeting and addressing the issue in a "quick fix process" with a same-day vote.

"We understand the IMM's concern, but we also appreciate the need for stakeholder input before making any changes to the Tariff," he said.

Sotkiewicz said he can envision a scenario in which a market seller decides to take the issue to FERC because of the changes to the Tariff. He said a challenge could potentially delay the capacity auction, which stakeholders want to avoid.

He then suggested taking the table update issue away from the 2022/23 capacity auction so it could operate normally and not face any challenges.

"We've had enough delays to last a lifetime already," Sotkiewicz said.

Bowring said he has opposed further delaying the capacity auction and wants it completed as quickly as possible. He said the issue remains that the tables need to be updated and PJM does not have the authority to take the issue



Jeff Bastian, PJM | © RTO Insider

"off the table."

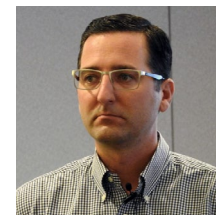
"Our view is the table should be changed quickly so there's no confusion, no uncertainty and no risk of litigation," Bowring said. "It's the low-risk path forward, and I'm not sure why anyone would oppose that."

## Manual 14C Delayed

Stakeholders voted to delay an endorsement of *proposed* revisions to *Manual 14C: Generation and Transmission Interconnection Facility Construction* as part of the biennial cover-to-cover review.

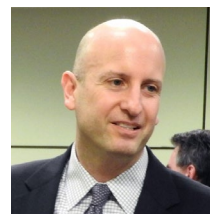
Members endorsed the motion to defer the revisions for a month with a sector-weighted vote of 3.67 (73.4%). The revisions were originally unanimously endorsed at the November Planning Committee meeting. (See "Manual 14C Endorsed," *PJM PC/TEAC Briefs: Nov. 4, 2020*.)

Mark Sims, PJM's manager of infrastructure coordination, said the committee proposed minor changes to Manual 14C, including an update of the latest Tariff provisions clarifying the filing process for title transfers and associated title documentation in Section 5. New sections on cost-tracking for baseline projects and another for supplemental cost-tracking were also proposed.



Mark Sims, PJM | © RTO Insider

Greg Poulos, executive director of the Consumer Advocates of the PJM States, made the request to delay the endorsement by one month to work with PJM on some language suggestions. Poulos expressed concern about some of the proposed manual language.



Greg Poulos, CAPS | © RTO Insider

Poulos specifically referenced sections 6.1.2 and 6.2.1 dealing with tracking of supplemental projects. Both sections say, "PJM may request additional information regarding projects."

"I know that I 'may request' things a lot, and it doesn't mean I'm going to get it," Poulos said. "I don't necessarily understand where that fits into a manual. It feels like it's weakening the standard."

Jason Barker of Exelon said he was "a bit troubled" by the issue being brought to the MRC. Barker said the discussion over the language

# PJM News



would have been more appropriate when it was first brought up at the PC.

## Manual 28 Revisions Endorsed

Stakeholders unanimously endorsed proposed revisions to *Manual 28: Operating Agreement Accounting* to comply with FERC directives and address the allocation of real-time and day-ahead uplift to up-to-congestion (UTC) transactions. The revisions were originally endorsed at the December MIC meeting. (See “UTC Uplift Changes,” *PJM MIC Briefs: Dec. 2, 2020*.)

In its order issued in July, FERC determined that PJM’s current uplift allocation rules are unjust because they do not allocate uplift to UTCs (EL14-37). (See *FERC Orders Uplift Charges on PJM UTCs*.)

The commission directed PJM to submit a replacement rate that revises the RTO’s rules to allocate uplift to UTCs “in a manner that treats a UTC, for uplift allocation purposes, as if the UTC were equivalent to a [decrement bid] at the sink point of the UTC.”

## PRD Credits Disposition

Pete Langbein of PJM reviewed a proposed solution package addressing the disposition of price-responsive demand (PRD) credits during a first read of the issue. Members unanimously approved an issue charge to address a disconnect in PJM’s settlement rules regarding payment for PRD at the July MIC meeting. (See “PRD Credits Disposition,” *PJM MIC Briefs: July 8, 2020*.)



Pete Langbein, PJM | © RTO Insider

PJM’s settlement rules call for revenues associated with PRD to be credited to the load-serving entity for an area and do not address the roles of electric distribution companies (EDCs) or curtailment service providers (CSPs), meaning some LSEs are paid for PRD service supplied by EDCs and CSPs. PRD providers represent retail customers that have the capability to reduce load in response to prices.

Langbein said PJM has an increasing share of load that is responsive to changing wholesale prices because of the implementation of dynamic and time-differentiated retail rates and utility investment in advanced metering infrastructure. Several EDCs cleared PRD as a capacity resource for the first time for the 2020/21 delivery year.

He presented revisions to *Manual 11, Manual*

18 and the *Tariff*. Stakeholders will vote on the revisions at the MRC meeting on Jan. 27.

## Members Committee

### Committee Elections

PJM stakeholders elected new members of the 2020/21 Finance Committee and the 2021 Sector Whips, with Erik Heinle of the D.C. Office of the People’s Counsel selected as the vice chair of the Members Committee.

The Finance Committee members elected include: Adrien Ford of Old Dominion Electric Cooperative (Electric Distributors); Poulos of the Consumer Advocates of the PJM States (End-Use Customers); George Kogut of the New York Power Authority (Other Suppliers); and Jim Benchek of FirstEnergy (Transmission Owners).



Steve Lieberman, AMP | © RTO Insider

The sector whips elected include: Steve Lieberman of American Municipal Power (Electric Distributors); Susan Bruce of the PJM Industrial Customer Coalition (End-Use Customers); Michael Borgatti of Gabel Associates (Generation Owners); Brian Kauffman of Enel North America (Other Suppliers); and Sharon Midgley of Exelon (Transmission Owners).

### Risk Management Committee Charter

Members unanimously endorsed the charter for the Risk Management Committee originally voted on at the MRC meeting in August.



Jennifer Tribulski, PJM | © RTO Insider

Jennifer Tribulski, senior director of member services for PJM, presented the charter establishing the Risk Management Committee (RMC) as a new standing committee. Though stakeholders unanimously endorsed the charter, PJM later determined the charter needed the MC’s approval to establish a new standing committee. (See “Risk Management Committee Charter,” *PJM MRC Briefs: Aug. 20, 2020*.)

The Risk Management Committee is set to meet for the first time on Jan. 26, taking the place of the Credit Subcommittee by expanding its scope to incorporate risk and changing its reporting structure. Under the revised charter, the subcommittee will report

to the MRC rather than the MIC.

In her presentation, Tribulski said the Credit Subcommittee last met in March 2019 with much of the work around the RTO’s credit and risk rules accomplished through the Financial Risk Management Senior Task Force in the wake of the GreenHat Energy default.

She said the task force was established for the specific purpose of overhauling PJM’s rules for managing the credit risks of market participants and was not tasked with reviewing credit and risk management issues outside of its limited purposes. (See *PJM Members OK Tighter Credit Rules*.) She said PJM felt it was important to have a committee available to review and work on issues beyond those contemplated by the task force.

### Chairman Lieberman

Lieberman, assistant vice president of transmission and PJM affairs for American Municipal Power (AMP), finished his last meeting as chairman of the MC. Katie Guerry, the current MC vice chair and head of regulatory affairs for Enel North America, will serve as the MC chairwoman for 2021.

Lieberman thanked the PJM Board and stakeholders for helping guide him through a year that saw major changes in operations with the onset of the COVID-19 pandemic, forcing discussions into a virtual setting. He said he had some “personal disappointment” that he was unable to chair the meetings in person.

“I hope I was still able to serve you in this role in a successful and professional way,” Lieberman said.



PJM CEO Manu Asthana | © RTO Insider

PJM CEO Manu Asthana thanked Lieberman for his service as chairman of the MC. Asthana said in working with him he came to find his “incredibly generous spirit” and an “amazing knowledge of the industry.”

Asthana said Lieberman played an important role in helping PJM navigate a “very difficult year.”

“We have been lucky to have you in the chair at the Members Committee,” Asthana said. “I know you didn’t get to govern in the personal manner to which you’re accustomed, but I know you have found a way to adapt and to project your character and personality through these phone calls.” ■

— Michael Yoder



## SPP News

# SPP Hires Wyo. PSC Chair Fornstrom as Policy Lead

## Fornstrom to Head State Regulatory Policy Efforts

By Tom Kleckner

In what may be a nod to its aspirations for regional markets in the Western Interconnection, SPP said Thursday it has hired Kara Fornstrom, chair of the Wyoming Public Service Commission, as its director of state regulatory policy.

Fornstrom will be responsible for leading SPP's state regulatory policy efforts and supporting its efforts on related RTO policy matters. She will join the organization Jan. 19. Her last day at the PSC will be Jan. 15, according to a [press release](#) from Wyoming Gov. Mark Gordon.

"It's an honor to join the SPP team of great professionals and work with stakeholders on the important state regulatory policy issues that are critical to the market's success," Fornstrom said in a [statement](#). "I'm especially grateful for the opportunity given SPP's exciting expansion into the Western Interconnection."

NRG Energy's Travis Kavulla, a former commissioner for eight years in neighboring Montana and one-time president of the National Association of Regulatory Utility Commissioners, [tweeted](#) his support for Fornstrom.

"She has been a champion for Wyoming in her role as chair of its PSC, and I'm glad to see she'll be involved in the future of organized markets as they continue to evolve out West,"



**Travis Kavulla**   
@TKavulla

**Congrats to @k2bfornstrom on starting a new role @SPPorg next month! She has been a champion for Wyoming in her role as chair of its PSC, and I'm glad to see she'll be involved in the future of organized markets as they continue to evolve out West.**

### Kara Fornstrom to serve as SPP Director of State Regulatory Policy

LITTLE ROCK, ARK. — Southwest Power Pool (SPP) has chosen Wyoming Public Service Commission Chairman Kara Fornstrom to serve as Director of State Regulatory Policy, effective January 19, 2021.

In her new role, Fornstrom will lead SPP's state regulatory policy efforts and support the company's work on related regional transmission organization policy matters, interacting with a wide array of stakeholder groups and organizations.



Wyoming PSC Chair Kara Fornstrom | Wyoming Public Service Commission

he said.

A former president of the Western Conference of Public Service Commissioners (WCPSC), Fornstrom has also served on NARUC's Board of Directors. She has more than 20 years of experience advocating for natural resources and electricity issues.

She has represented Wyoming as chair of the Western Interconnection Regional Advisory

Board, vice chair of the Energy Imbalance Market's Body of State Regulators, a Class 5 Member of the WECC Advisory Committee, and a member of the Committee on Regional Electric Power Cooperation and the Northern Tier Transmission Group.

"Kara has extensive experience in state regulatory and policy matters involving the electric industry and will provide effective counsel for our organization," SPP General Counsel Paul Suskie said.

An RTO spokesman said Fornstrom will be "very involved" in NARUC and other regional organizations, like the WCPSC and the Mid-America Regulatory Conference. She will also continue the RTO's interactions with its Regional State Committee and state commissioners. Her hire won't result any organizational structure changes in SPP's legal or regulatory groups.

"I want to thank Kara for her dedication to Wyoming and her diligence and commitment to the ratepayers of the state," Gordon said. "During her tenure she addressed a number of challenging issues and helped to set an agenda to provide reliable, consistent, affordable electricity to Wyoming consumers, while also recognizing our ability to do all of that and help reduce CO<sub>2</sub> emissions with carbon capture."

The governor said he would announce a replacement "shortly" to complete Fornstrom's term, which ends in 2025. ■

| Travis Kavulla via Twitter

# SPP News



## Record \$14.63 M2M Settlement for SPP, MISO

By Tom Kleckner

SPP and MISO in October registered a record \$14.63 million in market-to-market (M2M) settlements, more than doubling the amount set just the month before.

“It was a very big month,” SPP’s Jack Williamson told the Seams Steering Committee (SSC) on Wednesday.

In September, the RTOs recorded \$7.19 million in M2M settlements. Both amounts accrued in SPP’s favor, as they have for 12 of the previous 13 months and 51 times in the 68 months since the two began the M2M process in March 2015.

MISO has now accrued \$117.36 million to compensate SPP for redispatching transmission around congested flowgates on the former’s side of the seam.

“The upward trend in net [M2M] settlements is an indicator of underlying circumstances including real-time congestion and, ultimately,

transmission constraints along our seam with MISO,” SPP spokesman Derek Wingfield said.

Staff said wind resources on the MISO side and various outages led to much of the congestion in October. Twelve permanent flowgates were binding for 412 hours, resulting in \$6.92 million in M2M settlements, while 50 temporary flowgates bound for 1,359 hours, accounting for \$7.71 million in payments.

The 161-kV Neosho-Riverton permanent flowgate in eastern Kansas is responsible for almost a third of the M2M settlements, with \$35.68 million in SPP’s favor. That point was not lost on Adam McKinnie, an economist with the Missouri Public Service Commission.

“Every year we don’t work on a fix for the Neosho-Riverton flowgate is another year SPP is going to pay for a problem,” he said during the SSC meeting.

The RTOs say the process benefits customers in both footprints by providing a “more optimal solution to congestion than either party could

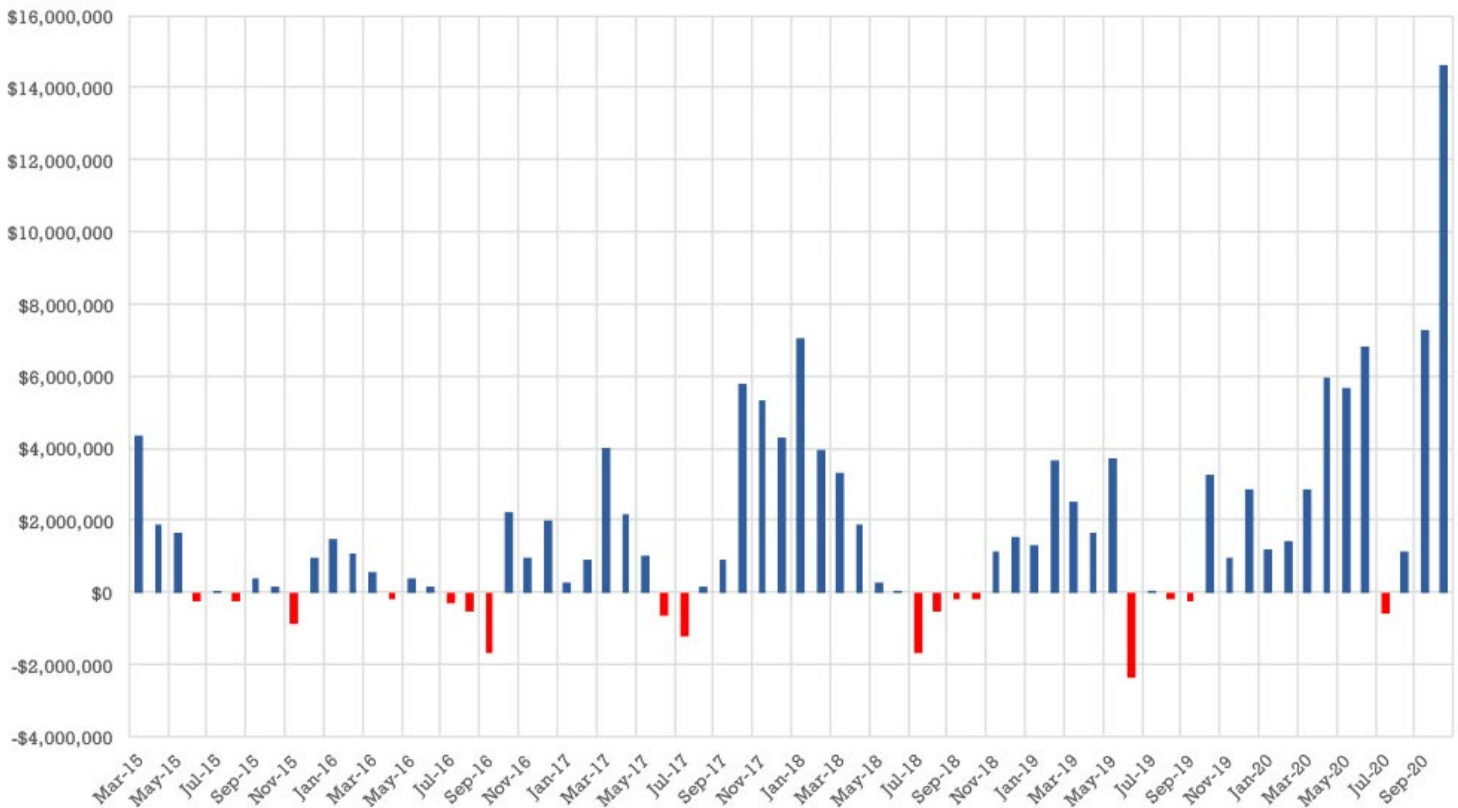
have obtained on its own.” That hasn’t stopped SPP and MISO from working together to improve the M2M coordination processes and ensure that subsequent settlements between the regions are appropriate.

Wingfield said SPP is hopeful of finding “effective ways to create additional transmission capacity” to relieve congestion and ensure the M2M coordination processes “continue to provide significant reliability and economic benefits to both regions.”

SPP said it is evaluating solutions to the M2M issues through its generator interconnection and interregional planning processes. The recently announced targeted joint study with MISO is focused on the Upper Midwest seam where much of the congestion occurs between the RTOs. (See [MISO, SPP Stakeholders Applaud New Joint Study](#).)

Regulators of both RTOs are also trying to address the issue through their SPP Regional State Committee-Organization of MISO States Seams Liaison Committee. ■

M2M Settlements since Go-Live



Note: Positive values are payments to SPP from MISO; negative values are payments from SPP to MISO.

Market-to-market settlements between SPP and MISO since March 2015 | SPP

## SPP News

# SPP FERC Order Briefs

## Basin Electric Wins Expansion of Market-based Rate Authority

FERC last week approved Basin Electric Power Cooperative's revised market-based rate tariff, allowing it to make wholesale sales of energy, capacity and ancillary services at market rates in its Southwest, Southeast, Northeast and Northwest regions, effective Sept. 30, 2020 (ER20-2590).

The order expands Basin Electric's authority to make sales at market-based rates beyond the SPP and Central regions. The commission found the cooperative's lack of horizontal or vertical market power in the requested regions satisfied its requirements for market-based rate authority.

FERC designated Basin Electric, which became commission jurisdictional in November 2019, as a category 1 seller in the Southwest, Southeast and Northeast regions and as a category 2 seller in the Northwest.

Under FERC Order 697, category 1 status applies to wholesale marketers and producers that own or control 500 MW or less of

generation per region; do not own, operate or control transmission facilities other than that necessary to connect individual resources to the grid; are not affiliated with anyone that owns, operates or controls transmission facilities in the same region as the seller's generation assets; are not affiliated with a franchised public utility in the same region as the seller's generation assets; and do not raise other vertical market power issues. Category 2 sellers are those that do not fall into category 1 and are required to file updated market power analyses.

## SPP TCR Collateral Requirements Upped

The commission on Wednesday accepted SPP's proposed Tariff revisions to establish minimum collateral requirements for transmission congestion rights (TCRs) (ER21-79.)

The RTO's stakeholders and staff strengthened the use of credit in SPP's TCR market following the 2018 GreenHat Energy default in PJM that left members liable for more than \$100 million. The minimum capitalization for TCR market participants has been increased to either at least \$20 million in assets or \$10

million in net worth. (See "Staff Strengthening TCR Credit Practices," *SPP Board/Members Committee Briefs: April 28, 2020.*)

## Tri-State Order 845 Compliance Lacking

FERC ruled last week that Tri-State Generation and Transmission Association has partially complied with Orders 845 and 845-A, directing a further compliance filing within 60 days (ER20-687).

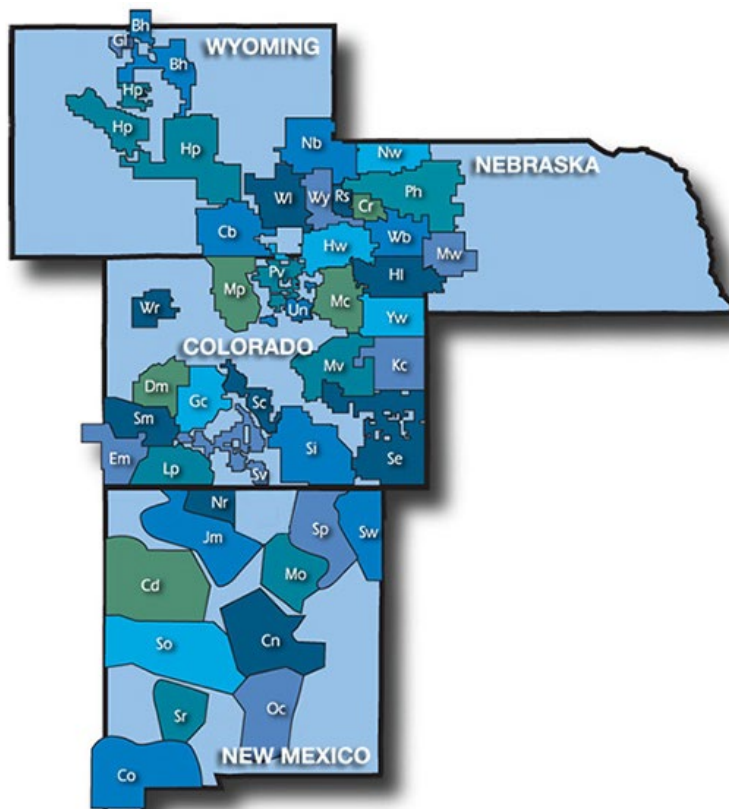
The commission in May said Tri-State had partially complied with the orders, directing the cooperative to describe the specific technical screens or analyses and the triggering thresholds or criteria it will use to determine which facilities are contingent facilities — unbuilt interconnection facilities and network upgrades upon which an interconnection request's costs and timing are dependent.

In its order on Thursday, FERC found Tri-State's proposed changes to its pro forma large generator interconnection procedures described the specific technical screens and analyses and provided requisite transparency. However, it said Tri-State's proposal to evaluate system performance "against the technical screens" was not clear as to where the cooperative would post the information and what is included in its "posted engineering standards."

The commission directed Tri-State to submit a description of the transmission provider's posted engineering standards and the posted information's location. FERC also ordered Tri-State to identify whether the interconnection customer's costs, timing and study findings are dependent on the unbuilt facility, consistent with the definition of contingent facilities.

FERC disagreed with renewable energy developer Gladstone New Energy's protest that Tri-State's proposed changes were beyond the scope of the proceeding. The commission said the cooperative did not add to its existing procedure for determining contingent facilities, but instead revised it.

FERC issued Orders 845 and 845-A in 2018 and 2019 to increase the generator interconnection process' transparency and speed. The changes are grouped into three categories: improved certainty for interconnection customers; promoting more informed interconnection decisions; and process improvements. (See *FERC Order Seeks to Reduce Time, Uncertainty on Interconnections.*) ■





## SPP News



# SPP Out to Improve Competitive Tx Selection

By Tom Kleckner

Following the awarding of its second competitive project in four years, SPP has begun gathering stakeholder feedback as staff works to again improve its project selection processes under FERC Order 1000.

“We’re trying to mirror this process similar to what we did in 2016,” General Counsel Paul Suskie said during a webinar with stakeholders Friday.

Now, as in 2016, staff will gather member suggestions to improve its Order 1000 processes and other written comments, with a Dec. 29 deadline. The Markets and Operations Policy and Strategic Plan committees will coordinate the information before the January governance meetings, with a task force likely to be formed to present final recommendations to the Board of Directors.

SPP created a similar task force to improve its competitive transmission practices after its first Order 1000 project was canceled because of falling load projections. The task

force’s chief recommendation was to allow re-study requests before issuing a notification to construct (NTC), which would have identified the change in load sooner. (See [SPP Cancels First Competitive Tx Project, Citing Falling Demand Projections.](#))

“We knew we had to re-study, but [following the Tariff] we had to wait until the NTC was filed,” said Ben Bright, SPP manager of regulatory processes. He said the task force helped implement about half the 56 suggested stakeholder changes before it was disbanded in 2018.

The board in October approved an industry expert panel’s (IEP) recommendation to grant SPP’s second competitive project, the 75-mile, 345-kV Sooner-Wekiwa project in Oklahoma to Transource Missouri, the panel’s “designated transmission owner.” (See [Transource Tapped for SPP’s 2nd Competitive Tx Project.](#))

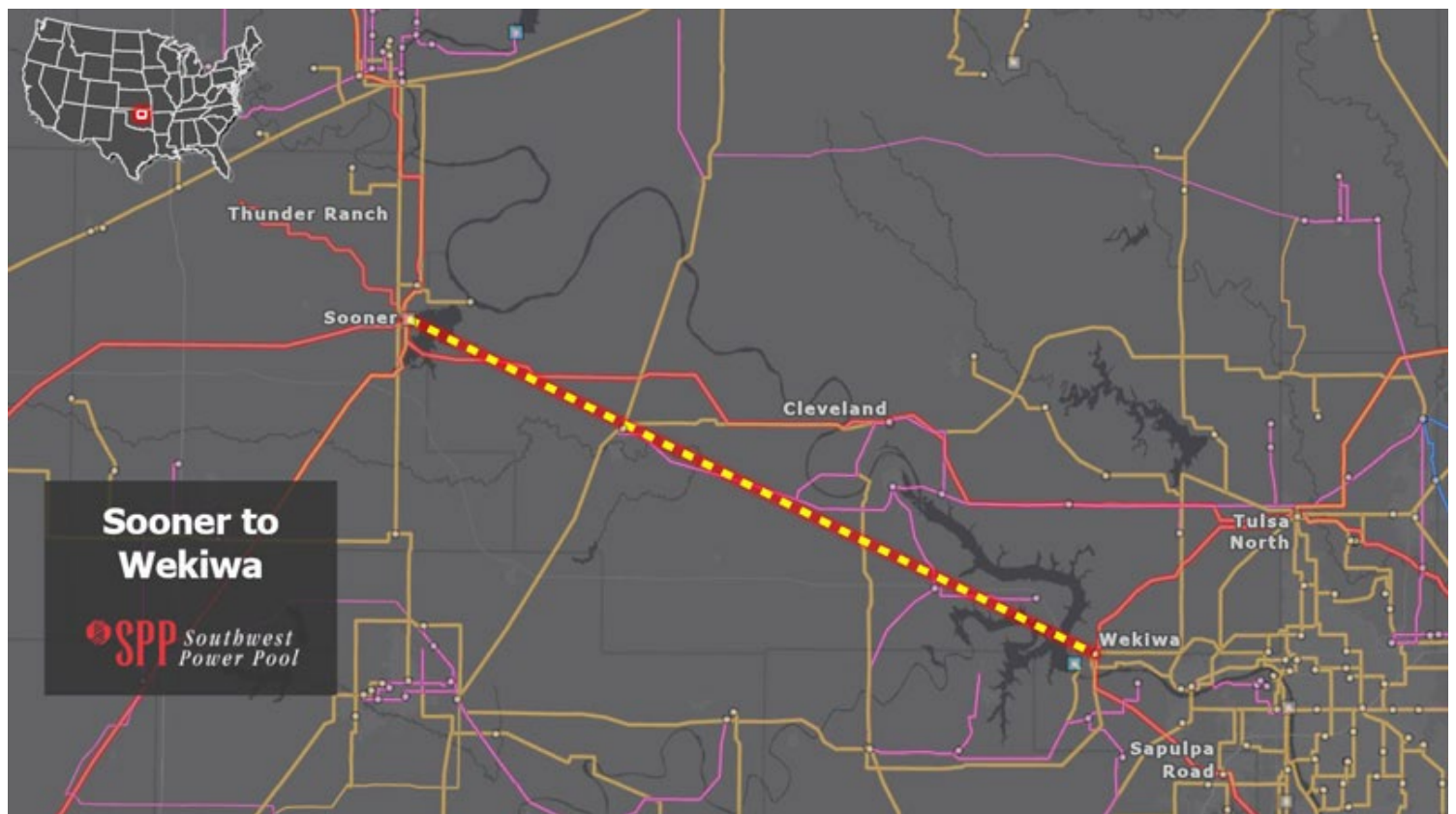
SPP selects a five-person IEP, based on its expertise in engineering design, project management construction, operations, rate analysis and finance, to evaluate project proposals in those categories. Developer proposals

submitted as detailed project proposals under SPP’s [transmission owner selection process](#) qualify for incentive points during the scoring.

Five entities — Transource, Xcel Energy Southwest Transmission (the Sooner project’s alternate builder), Liberty Utilities, LS Power-Southwest Transmission, and City Utilities of Springfield (Mo.) — have already submitted 18 proposals and staff added 13 more.

LS Power’s Pat Hayes suggested that the process of granting incentive points is “broken,” given the staff burden to evaluate proposals that number in the hundreds. He called for Tariff revisions requiring the IEP to justify its recommendation according to the projects’ efficacy and costs.

“The goal of the TSOP should be to deliver more efficient and cost-effective projects,” he said. “If it’s causing excessive costs and inefficiencies on SPP staff in the initial stage, we need to do something different. We think the easiest alternative is to scrap the incentive points altogether. There has to be some way to reduce the number of solutions and ideas.”



The Sooner-Wekiwa project, running west of Tulsa | SPP

# SPP News



Bright said that after discussions with engineering support staff, SPP would “probably” recommend the removal of incentive points.

“If there’s a way to improve and provide value, we certainly want to have those conversations,” he said.

Bright said staff is also interested in revising the templates used in project submissions. He said the granular nature of confidential information resulted in a lack of transparency.

“The public version of the reports showed there wasn’t much there [behind the redactions],” he said. “It would be nice to differentiate publicly one proposal from another.”

LS Power and Xcel Energy both proposed changes to the intricate scoring matrix, which resulted in Transource winning the Sooner bid despite turning in the three most expensive proposals. They called for RFP respondents to be provided with details on how the IEP will evaluate and score their submissions.

Other suggested improvements included adding a resiliency metric and offering unsuccessful bidders an opportunity to meet with staff and review the strengths and weaknesses of their proposals.

## Affected Systems Issues

Staff also visited with the Seams Steering Committee (SSC) and the Generation Interconnection Users Forum during their meetings last week to gather feedback on SPP’s affected system studies.

Staffer Jon Langford told the SSC that SPP is experiencing a “couple of core issues” in the affected system studies it uses to determine the effects of non-jurisdictional and neighboring interconnection requests on its transmission system. He said neighboring entities, transmission owners and customers have expressed concerns over the RTO’s interconnection queue priorities and the transmission services it studies.

Affected system studies are currently performed when needed and separately from SPP’s GI requests. They account for interconnection requests on neighboring grids, including MISO, Associated Electric Cooperative Inc. (AECI), Minnkota Power Cooperative and Northwestern Energy.

Langford said neighboring transmission providers and planning coordinators typically agree on a defined queue priority in their joint agreements. As an example, he said SPP’s pri-

ority practices with AECI are not documented.

“The big questions are those affecting our ability to respond to affected system study requests in a timely manner,” said SPP’s David Kelley, director of seams and Tariff services. “That’s creating disputes and consternation, if you will, from customers on both sides of the equation.”

The committee agreed to revisit the subject at its meeting Jan. 7. Staff hope to have a recommendation to bring before MOPC later in January.

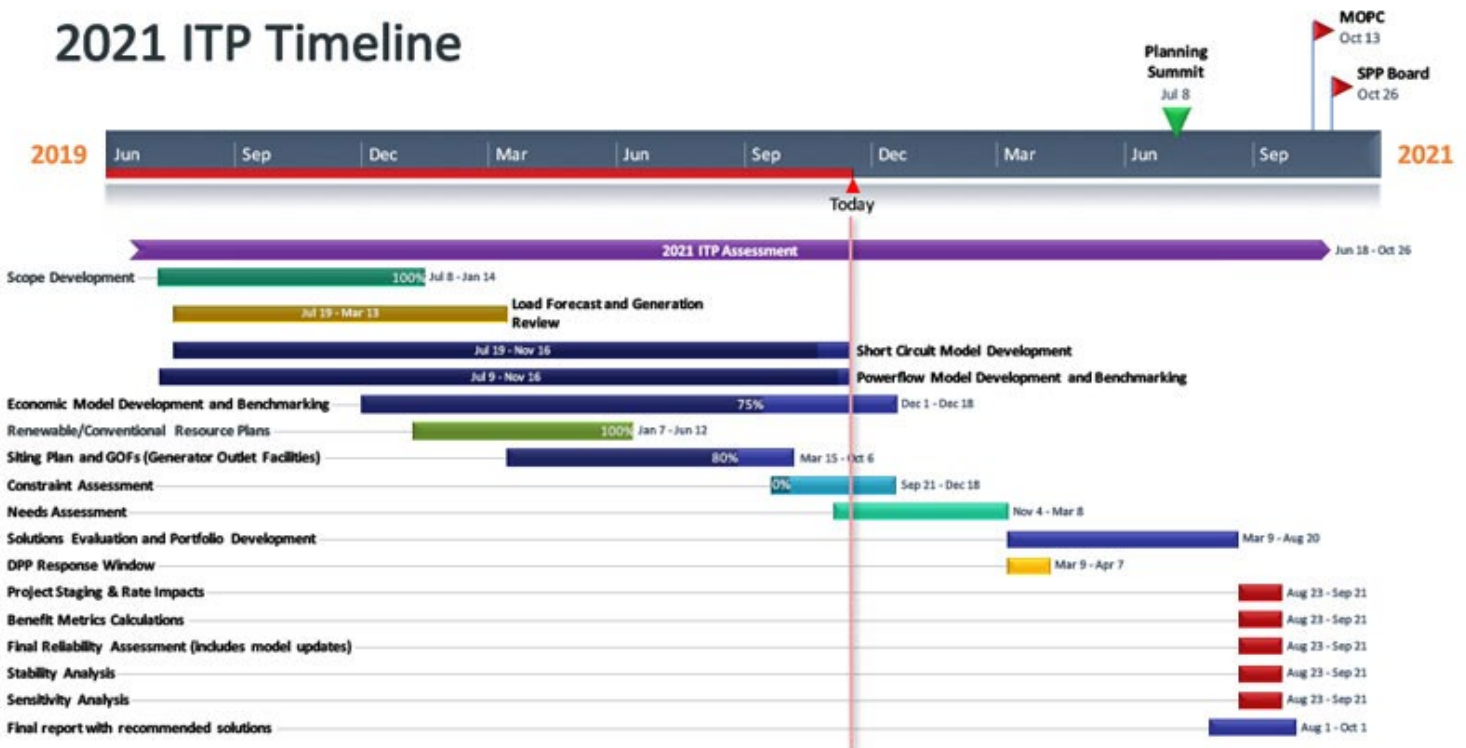
## SPP Faced with 3 Planning Studies

Any work on coordinated system studies with MISO and AECI will have to wait, staff told the SSC on Wednesday, as SPP is working on three different transmission planning assessments.

“Obviously, there’s a very full workload amongst all of the planning staff. It’s going to be crucial we don’t duplicate work,” SPP’s Neil Robertson said.

Staff are well into work on the 2021 and 2022 studies and the 20-year assessment. The long-term assessment is scheduled to be completed in 2022. ■

## 2021 ITP Timeline



## Company Briefs

### Broad Reach Power Acquires Wind, Solar Projects

Broad Reach Power last week announced it has acquired a 250-MW wind project and a 250-MW solar project in Montana. The company purchased the projects, located in Billings, from Invenergy. Financials of the deal were not disclosed.

The solar and wind projects are expected to come online in 2022 and 2023, respectively.

"I am looking forward to begin developing these projects as we continue investing in Montana," Broad Reach Developer Daniel Zolnikov said in a statement. "Once completed, these projects will provide much needed reliability to the region's grid."

More: [Broad Reach Power](#)

### El Paso Electric Power Plant Project Rejected by NM PRC



The New Mexico Public Regulation Commission last week unanimously rejected El Paso

Electric's plan to spend \$163.8 million to add a natural gas-fired generating unit to the Newman power plant.

Legal Counsel Russell Fisk told the PRC it

had no choice but to reject the 228-MW project because it would not comply with a new law requiring EPE to supply 100% of its power using carbon-free sources by 2045, which is before the generator's projected 40-year life span expires. The project was approved by the Public Utility Commission of Texas in October, but EPE also needed the New Mexico PRC's approval to allow the generator to be used to serve its customers in the southern part of the state.

Company officials are considering moving forward with the project without the PRC's approval, which would mean the generator could only be used for its El Paso customers and not those in the Las Cruces area.

More: [El Paso Times](#)

### Exxon Pledges to Reduce Emissions



ExxonMobil last week said it would reduce greenhouse gas emission "intensity" — or emissions per barrel of oil and gas — of its production by 15 to 20% by 2025 compared to 2016 levels.

The company also said it would reduce methane emissions intensity by 40 to 50% and flaring intensity by 35 to 45% to reach its larger emissions goal.

Exxon's target is limited to the drilling and production that it operates, which, according to data analyzed by the Environmental Defense Fund, accounts for only about half of its total production. The pledge also does not represent a change in strategy for the company, which has remained committed to expanding oil and gas production.

More: [InsideClimate News](#)

### Shell Signals Another Poor Quarter for Oil Majors



Royal Dutch Shell on Monday said it would write down the value of its assets by up to \$4.5 billion and warned it would likely report a third consecutive loss in the fourth quarter.

The company said the flagged \$3.5 billion to \$4.5 billion write-down includes an impairment of its deep-water oil-and-gas project Appomattox, as well as charges related to its refining operations and onerous gas contracts. The accounting charge follows the \$16.8 billion post-tax write down Shell took earlier in the pandemic partly because of lower energy prices.

More: [The Wall Street Journal](#)

## Federal Briefs

### Biden Fills out Energy Posts in Cabinet



President-elect Joe Biden last week announced his intended nominees for several major positions related to energy and the environment in his cabinet, including **Jennifer Granholm**

to run the Department of Energy. Granholm, who served two terms as Michigan's governor, has experience dealing with the auto industry, which could potentially help Biden as he seeks to speed up the rollout of electric vehicles and the charging network. If confirmed, Granholm would be the second woman to lead the department since its creation in 1977.

Biden also announced Rep. Deb Haaland (D-N.M.) as his choice for interior secretary. She would be the first Native American to

head a department that, along with overseeing tribal and protected lands and national monuments, contains the Bureau of Ocean Energy Management.

Michael Regan, who heads the North Carolina Department of Environmental Quality, is Biden's pick to be EPA administrator. Regan would be the first Black man to run the agency.

Biden also selected Gina McCarthy, EPA administrator under President Barack Obama, to oversee domestic climate policy at the White House. McCarthy's role is intended to be a counterpart to that of former Secretary of State John Kerry, who will guide international climate policy. Both will help oversee Biden's commitment to help the U.S. reach net-zero emissions by 2050.

Finally, Biden tapped Brenda Mallory to lead his Council on Environmental Quality, a role that will have her coordinating government-wide efforts to combat climate

change and promote sustainable development. If confirmed, Mallory would be the first Black person to hold the position.

More: [POLITICO](#); [The Washington Post](#); [The Hill](#); [Bloomberg Green](#); [The Washington Post](#)

### Federal Reserve Joins Climate Network

The Federal Reserve Board last week unanimously voted to become a member of the Network of Central Banks and Supervisors for Greening the Financial System. The central bank began participating in the group more than a year ago, but the move makes it official.

The network is meant to help central banks and other regulators exchange ideas, research and best practices as they figure out how to account for environment and climate risk in the financial sector.

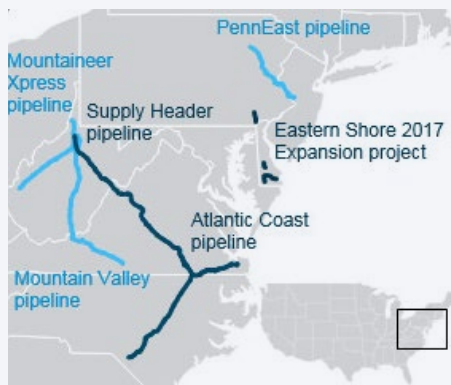
More: [The New York Times](#)



## Mountain Valley Pipeline Gets Another Approval

FERC last week approved Mountain Valley Pipeline's request to resume work on a 17-mile stretch of the pipeline that passes through Giles and Craig counties in Virginia, between two sections of the Jefferson National Forest.

Voting 2-1, the commission ruled that the company had presented sufficient evidence to show that resuming work on the segment of the pipeline on private land would not harm the forest. Commissioner Richard Glick was the dissenting vote. He said the ruling was "a serious mistake" and that Mountain Valley has yet to get renewed approval to pass through the national



forest, while other permits involving stream crossings and the protection of endangered species have been tossed out on appeal.

More: [The Roanoke Times](#)

## US Adds 3.8 GW of Solar in Q3

The U.S. brought 3.8 GW of solar capacity online in the third quarter of this year, making for a total of 19 GW for the year, according to the latest U.S. Solar Market Insight report.

Around 70% of the installations from July to September came from the utility-scale market, where 2.7 GW of solar parks went online. The residential segment grew by 14% in quarterly terms and thus beat COVID recovery expectations.

In the end, the report expects 2020 solar capacity additions to be up by 43% on the previous year.

More: [Renewables Now](#)

## State Briefs

### ARKANSAS

#### PSC Approves New CAW Solar Array

The Public Service Commission last week approved Central Arkansas Water's plan to draw power from a 4.8-MW solar array with Scenic Hill Solar. The project is the state's first for a net metering facility with a capacity above 1 MW.

Under the deal, Scenic Hill will build, own and operate the facility and sell power to the water utility at 5.1 cents/kWh.

Construction is set to begin in January and be completed late next year.

More: [Arkansas Business](#)

### CALIFORNIA

#### PUC Rules SoCal Residents Can Get RNG

The Public Utilities Commission last week approved a three-year plan by Southern California Gas and San Diego Gas & Electric to sell renewable natural gas that comes from capturing methane from manure lagoons at dairy farms and landfills.

The utilities say it is a way to reduce the release of greenhouse gas and help the state meet its climate goals. Under their proposal, customers can pay a higher rate to have the RNG blended into their gas. However, environmental groups say RNG does little to cut emissions or address the environmental impacts of industrial dairy farms.

More: [Bloomberg Green](#)

### COLORADO

#### AQCC Reverses Order to Close Coal Plants Early

The Air Quality Control Commission last week rescinded an order for the early closure of three coal-fired power plants that it issued last month. Commissioner Jana Milford said the original decision, which was made with the intent of reducing haze at national parks, was based on "incomplete information."

The three plants targeted were Tri-State Generation and Transmission Association's Craig Unit 3; Platte River Power Authority's Rawhide plant; and Colorado Springs Utilities' Ray D. Nixon plant. The plants, which would have closed on their own in 2030, had their dates expedited to 2028 by the commission in November.

The state is required to cut its emissions by 26% from 2005 levels by 2025; 50% by 2030; and 90% by 2050. The AQCC's original order was driven, in part, by an effort to lock-in reductions in CO<sub>2</sub> from the plants.

More: [The Colorado Sun](#)

### ILLINOIS

#### Statehouse Committee Looking into Madigan Finds No Wrongdoing

The committee looking into House Speaker Michael Madigan's dealings with Commonwealth Edison said it found that Madigan did not do anything wrong, concluding its work

after convening three times and hearing from one witness.

In their first meeting since September, members argued over motions to subpoena Madigan and others tied to the investigation surrounding an alleged bribery scheme in which ComEd is accused of sending \$1.3 million to Madigan's associates. On that the six-member committee deadlocked, with three Republicans voting to approve a charge that Madigan engaged in conduct unbecoming of a legislator, while three Democrats voted no.

Democrats believed the investigation was a "sham" and an attempt by Minority Leader Jim Durkin to become speaker, while Republicans believed the Democratic members made little to no attempt to achieve anything with the committee.

More: [Chicago Sun-Times](#)

#### Rockland Capital Shuts down Grand Tower Energy Center

**ROCKLAND CAPITAL** Rockland Capital's Grand Tower Energy Center, a natural gas plant in Jackson County, ceased operations last week.

Company representative Jonathan Beach said the facility "is in an extended outage" after it suffered some "significant mechanical failures" over the past two quarters. He went on to say that ownership is reviewing its future options.

More: [The Southern Illinoisian](#)

## INDIANA

### NIPSCO Signs PPA with Solar Project



Northern Indiana Public Service Co. last week agreed to a power purchase agreement with Capital Dynamics to buy 280 MW from the Gibson Solar project.

The project is one of 19 that Capital Dynamics acquired from Tenaska in November 2018 and April 2019. It is currently in the development stage, with construction expected to start in 2022 and commercial operation anticipated in 2023.

More: [Solar Power World](#)

## MICHIGAN

### PSC Approves Consumers' Rate Increase Request

The Public Service Commission last week approved a \$100 million rate increase for Consumers Energy. The increase is less than half of what the utility requested.

Consumers had sought an increase of approximately \$254 million to fund the replacement and modernization of its distribution system infrastructure, as well as eliminate coal-fired electricity generation and reduce carbon emissions.

More: [Michigan.gov](#)

## NORTH CAROLINA

### Avangrid Submits Plans for Kitty Hawk Wind Project



Avangrid Renewables last week submitted construction and operations plans for the first phase of its Kitty Hawk Offshore Wind project, a development it says will generate \$2 billion between 2021 and 2030.

The first phase of construction could begin by 2024 and have the capacity to generate 800 MW. When all three phases are complete in 2026, 2028 and 2029, respectively, the project is anticipated to have a total generation of up to 2,500 MW.

More: [Virginia Business](#)

## NORTH DAKOTA

### MDU Gas Customers to See Rate Hike in 2021

The Public Service Commission last week

approved Montana-Dakota Utilities' request to raise natural gas rates an average of \$3.57/month for residential customers.

The interim rate increase, which will likely change after regulators make a decision on the company's general rate case in March, will take effect on Jan. 1. MDU is asking the PSC to ultimately approve a rate increase of \$6.26/month for the average household as it seeks to collect an additional \$9 million in annual revenues.

More: [The Bismarck Tribune](#)

## OHIO

### Nominating Committee Sends PUCO Finalists to DeWine



A screening panel has submitted four finalists for Gov. **Mike DeWine** to consider as he moves to fill a vacancy on the Public Utilities Commission.

The finalists are Greg Poulos, executive director of Consumer Advocates of the PJM States; Angela Amos, a senior policy adviser for FERC; state Supreme Court Justice Judith French; and Anne Vogel, an assistant policy director in the DeWine administration.

They are competing for the spot vacated by Chair Sam Randazzo, who resigned after being named in an internal investigation into the House Bill 6 bribery scandal. The next appointee will serve until April 10, 2024.

More: [Cleveland.com](#)

### DeWine Says He Would Sign Nuclear Bailout Delay Bill

Gov. Mike DeWine last week said he would sign a bill that puts off the effects of the state's \$1 billion nuclear plant bailout law for a year.

"If the legislature presents me with this bill, and the bill has in it what I think it is, then I certainly would sign it," he said.

The bill would allow for the refund of any surcharges collected from consumers via their monthly bills beginning in January — money that was supposed to fuel a \$150 million/year fund to subsidize operations of the Davis-Besse and Perry nuclear plants. It would also put off the scheduled flow of that money to Energy Harbor, the post-bankruptcy successor to FirstEnergy Solutions and owner of the plants, until April 2022.

More: [The Blade](#)

## VIRGINIA

### Dominion Files Plan for Offshore Wind Farm



Dominion Energy last week submitted a construction and operations plan to the Bureau of Ocean Energy Management for a 2.64-GW offshore wind project.

The project follows the 12-MW Coastal Virginia Offshore Wind pilot scheme and will be adjacent to the demo facility, located 27 miles off the coast of Virginia Beach.

Construction of the project, which must be cleared by the State Corporation Commission, is slated to begin in 2024 as BOEM's review will take about two years.

More: [Renewables Now](#)

### SCC to Reconsider Rate Denial for Appalachian Power



Less than a month after denying Appalachian Power's request to raise its base rates, the State Corporation Commission last week suspended its final order — which turned down Appalachian's bid for an increase that would have cost an average residential customer an extra \$10/month — until further notice.

After testimony and arguments, the commission ruled on Nov. 24 that Appalachian had earned a profit within its authorized range during a three-year period from 2017 to 2019, which precluded a rate increase. However, the utility argued it earned well below its approved level of 9.42%.

Will Cleveland, an attorney for the Southern Environmental Law Center who asked the SCC to deny the rate increase, said it is "pretty pro forma" for a request for reconsideration to be granted by the SCC, but it is not an indication it will reverse its earlier finding.

More: [The Roanoke Times](#)

## WASHINGTON

### Inslee Proposes Latest Climate Change Package

Gov. Jay Inslee last week unveiled a new climate change package that includes a renewed push for a clean fuels standard and the capping of some greenhouse gas emissions. The plan comes as part of Inslee's new two-year budget proposal.

One of the main pieces of the proposal is a low-carbon fuel standard for transportation fuel that aims to reduce the carbon content in transportation fuels. This year's proposal calls for a 10% reduction in the amount of carbon in fuels by 2028 and a 20% reduction by 2035.

More: *The Seattle Times*

## WEST VIRGINIA

### Report Suggests State Must Embrace Renewables for Economic Growth

A report released last week from the Center for Energy and Sustainable Development at West Virginia University's College of Law said the state would be better off with renewable energy and offered suggestions for how to work around obstacles expected along the way.

The 52-page report makes the case for a "major ramping up" of renewable energy and

energy efficiency over the next 15 years and argues it would be more cost-competitive for the state than continuing to depend on coal. The report cites an October 2020 analysis from the financial advisory firm Lazard that estimated the ongoing cost of a new solar energy project is \$24 to \$32/MWh, \$10 to \$16 less than the cost to operate an existing coal-fired plant.

The state is one of 13 without any renewable portfolio standard or target, according to the National Conference of State Legislatures. Coal-fired power plants accounted for 91% of the state's electricity net generation in 2019.

More: *Charleston Gazette-Mail*

## WYOMING

### EQC Upholds Permit for State's 1st Coal Mine in Decades

The Environmental Quality Council last

week voted to affirm a decision by environmental regulators to grant a mining permit to coal technology company Ramaco Carbon. The permit allows the coal firm to dig at a former mine site. It would be the state's first new coal mine to open in decades.

The Powder River Basin Resource Council had submitted an administrative appeal to the Environmental Quality Council, saying the permit application was deficient on multiple grounds and lacked an adequate subsidence control plan or a full traffic plan for haul roads, among other requirements stipulated in the Environmental Quality Act.

However, according to the final permit issued by environmental regulators, Ramaco's "Brook Mine surface coal mine permit application substantially complies with Article 4 of the Wyoming Environmental Quality Act and all other applicable state and federal laws and regulations."

More: *Casper Star-Tribune*

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