

FERC: Send Us Your Carbon Pricing Plans *Could OK but not Initiate CO₂ Price*

By Rich Heidorn Jr. and Michael Brooks

FERC on Thursday proposed a policy statement inviting states to introduce carbon pricing in wholesale electricity markets but said it had no authority to initiate such programs itself (AD20-14).

Chairman Neil Chatterjee, a Republican, called the proposal — coming just two weeks after the commission's technical conference on carbon pricing — a "landmark action."



Ravenswood Generating Station, a 2,480-MW fossil fuel plant in New York City

But Democratic Commissioner Richard Glick said that although the proposal is a "positive step forward," the commission "consistently turns a blind eye" to climate change by refusing to assess whether new natural gas pipeline projects it has approved have a significant impact on greenhouse gas emissions. He noted that he was dissenting on several pipeline certificate orders Thursday, saying the commission's position ignores a D.C. Circuit Court of Appeals order requiring such assessments.

"I wouldn't describe this draft policy statement as groundbreaking, but if it is finalized, it does provide the states some confidence that the commission will accommodate state carbon

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States Demand 'Central Role' in ISO-NE Market Design *'Lack of Transparency' Criticized*

By Jason York and Rich Heidorn Jr.

New England states called on ISO-NE last week to increase its transparency and the role of states in its decision-making, saying the current structure is incompatible with their clean energy efforts and is raising costs for ratepayers.

The New England States Committee on Electricity (NESCOE) made the demands Friday in an eight-page *manifesto* titled "New England States' Vision for a Clean, Affordable and Reliable 21st Century Regional Electric Grid." It lays out in more detail a critique released two days earlier by the governors of Connecticut, Maine, Massachusetts, Rhode Island and Vermont, who said ISO-NE is frustrating their efforts to reduce economy-wide greenhouse gas emissions. (See related story, *New England Governors Call for RTO Reform.*)

Although New Hampshire Gov. Christopher Sununu (R) did not participate in Wednesday's statement, NESCOE said the state did join in the vision document, saying the state shared its neighbors' "interest in preserving efficient wholesale markets and in ensuring that transmission system planning achieves least-cost solutions." New Hampshire also wants "to prevent or minimize any rate impact of other states' policies" on its retail electric rates, NESCOE said.

The vision statement said ISO-NE should

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AWEA OFFSHORE WINDPOWER VIRTUAL SUMMIT



Vinyard Wind

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AWEA Offshore Windpower Virtual Summit

Panel: Election Unlikely to Shake Support for OSW

By Michael Kuser

Offshore wind advocates said Wednesday they are confident the industry will retain its bipartisan support regardless of the results of the U.S. elections this year.

"We are in a world now where utilities in Indiana are rushing forward building wind farms," said Seth Kaplan, director of government and regulatory affairs for Ocean Winds, the joint venture between ENGIE and EDP Renewables that has partnered with Shell New Energies to sponsor Mayflower Wind.

"It's a changed world, where there is a broad recognition that this is the kind of generation we are able to build now because of other concerns in terms of health, in terms of cost and such, that we are not seeing other types of large-scale generation getting built," Kaplan told the American Wind Energy Association's Offshore Windpower Virtual Summit.

As power plants retire, and as loads rise with new demand from electric cars and electrification of heating and cooling, "it is a truly bipartisan, across-the-board need for this large-scale generation source to move forward," Kaplan said. "It is not wholly dependent on climate policy; it's not wholly dependent on state policy. Those are all elements, but there is a unifying

bipartisan need from the shipyards in Louisiana to the ports in Massachusetts to the folks who want new generation in New York City."

Regulatory Push

Moderator Joshua Kaplowitz, senior counsel for GE Renewable Energy, noted that the federal regulatory regime governing offshore natural resources dates from nearly 100 years ago. Regulations specific to OSW have not been updated since the Bureau of Ocean Energy Management was created in 2011.

"We have come a long way — and I have been involved in this industry for 15 years now — but we continue to evolve. There is more work to be done," said Geri Edens, counsel for Vineyard Wind, a joint venture between Copenhagen Infrastructure Partners and Avangrid Renewables.

BOEM has done a "tremendous job" trying to make regulations largely modeled on those for the oil and gas industry fit the needs of OSW development, with little experience beyond the failed Cape Wind project, Edens said. "So, it's time to move on and try to start thinking about how the regulatory process can be improved."

Edens said she hoped the agency, which *announced* a rulemaking in 2014 to update the regulations and provide more flexibility, will

make more progress under a new administration.

"Now you see developers have to request numerous departures from the regulations because ... all the things that go into gathering that data are onerous and not always feasible to submit at the same time that you submit a COP [construction and operations plan]," Edens said.

Claire Richer, federal affairs director at AWEA, noted acting BOEM Director Walter Cruickshank testified Sept. 22 before the Senate Energy and Natural Resources Committee that Congress has provided sufficient funding needed to hire the staff to assess all new lease areas and OSW proposals.

BOEM worked through the pandemic and held a series of public hearings over the summer on the 800-MW Vineyard Wind project and the 1-nautical-mile turbine spacing advocated by developers and recommended by the U.S. Coast Guard. (See *Developers Seek 1-Mile Spacing for Vineyard Wind*.)

Kaplowitz asked about BOEM's authority under the Outer Continental Shelf Lands Act of 1953, "authority that was appended to Energy Policy Act of 2005 as a couple paragraphs to the end of one of the sections of a statute ... that has primarily been an offshore drilling statute." Are there changes that can be made to enhance BOEM's authority with respect to offshore wind permitting? he asked.

"It's really up to the developers to figure out what they want and what they think will be the best way forward," Richer said. "A lot of folks in Congress want to help offshore wind. I think there's a lot of bipartisan support. ... If we want it, we need to push for it."

Kaplan advised being "extremely careful" with making changes to a complicated regulatory structure, likening it to a game of Jenga, where if you pull any piece out it can cause the blocks to fall.

"Predictability is better than unpredictability," Kaplan said. ■



Clockwise from top left: Joshua Kaplowitz, GE Renewable Energy; Claire Richer, AWEA; Seth Kaplan, Ocean Winds; and Geri Edens, Vineyard Wind. | AWEA

AWEA Offshore Windpower Virtual Summit

OSW Supporters Look to Enroll Unconverted

‘Sauntering Away from the Apocalypse’

By Rich Heidom Jr.

Almost four years after the first wind turbines began commercial operations in American waters, and three weeks before an election that could change federal policy on climate change, speakers at the American Wind Energy Association Offshore Windpower Virtual Summit on Oct. 13 said it is time to engage everyone in the need for an energy transition.



Ali Zaidi, New York state | AWEA

“We’ve got to scramble all the jets in terms of the talent we need to attack the climate challenge and unlock the climate opportunity,” said Ali Zaidi, New York Gov. Anthony Cuomo’s deputy secretary for climate policy and finance. “That means

people from all disciplines joining us. It means people bringing a diversity of backgrounds and skill sets.”

Marine biologist Ayana Johnson, co-founder of the *Urban Ocean Lab*, which describes itself as a think tank for the future of coastal cities, sounded a similar message.



Ayana Johnson, Urban Ocean Lab | AWEA

“I think this is a moment in human history where we all need to think really carefully about what we’re good at and what we can contribute to [climate] solutions. There are plenty of problems [and] plenty of work to be done. So, the question is, how are

we each best suited to make things better,” she said.

For Johnson, the answers led her and journalist Alex Blumberg to launch a podcast on climate solutions, *“How to Save a Planet.”* She also co-edited an anthology of essays and poems, *“All We Can Save.”* And she helped craft Democratic presidential candidate Elizabeth Warren’s *“Blue New Deal,”* a plan for restoring ocean habitat and adapting to climate change.

But while Johnson has found her place, she fears many others haven’t been engaged.

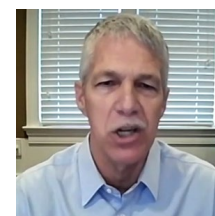
“The environmental movement and ... renewables [supporters] haven’t done a great job of describing what the future looks like if we get it right,” she said. “We have tons of media about the apocalypse and *the day after tomorrow* and the

“We’ve got to scramble all the jets in terms of the talent we need to attack the climate challenge and unlock the climate opportunity.”

—Ali Zaidi, New York state

uninhabitable earth, and the fire and brimstone. But we don’t have [a picture of] what if we do put offshore wind in all these places? What if we do have great public transit? What if we do transition to *regenerative farming*? What does that look like?

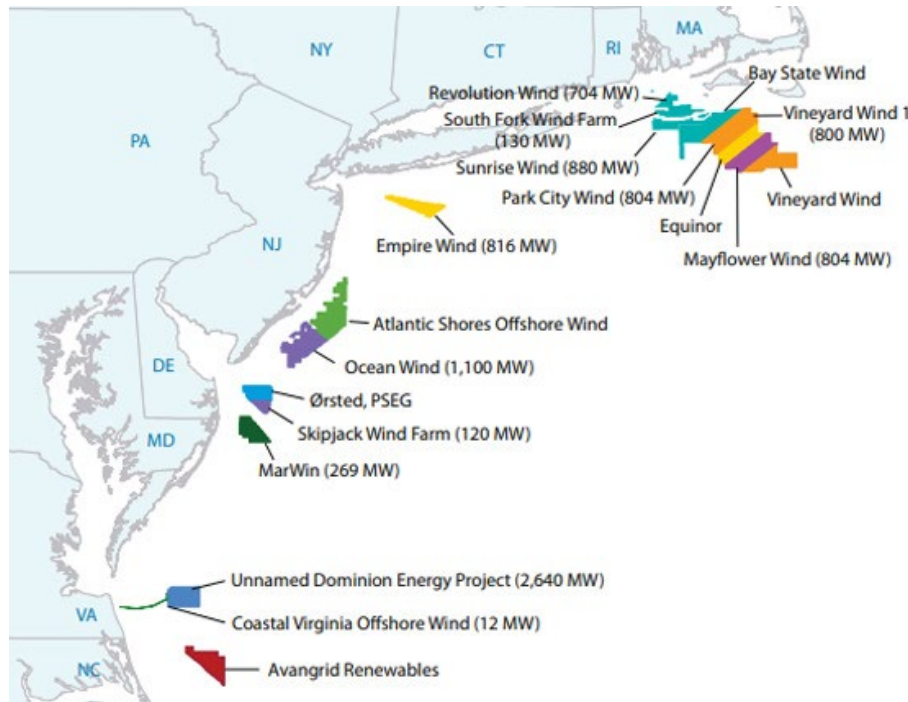
“And so a lot of my work right now is about how do we make more concrete what we’re working towards so we’re not just [saying] ‘Oh, I should run away from the apocalypse,’” she added. “We’re not running, honestly. We’re just kind of sauntering away from the apocalypse. And we need to pick up the pace.”



AWEA CEO Tom Kiernan | AWEA

AWEA CEO Tom Kiernan said the offshore wind industry needs to speak as one voice to realize the potential of 83,000 new jobs and \$57 billion in investments the organization estimated in its *economic impact assessment* earlier this year.

“We do now have lots of different organizations advocating for offshore wind, and we’re not always perfectly aligned,” Kiernan said. “By working more as one, we can help our government partners do what we are asking them to do. So, for example, we are asking the federal government to establish transparency



East Coast offshore wind projects and lease areas | AWEA

AWEA Offshore Windpower Virtual Summit

and consistency in the regulatory process. ... We're asking them to finalize additional wind areas and subsequent lease areas that can be auctioned. And we're asking them to continue engaging with the fishing industry to find solutions that work for all of us."

Kiernan said that was the motivation for AWEA's decision to merge into a new group that also embraces solar power and storage, the American Clean Power Association. It is expected to launch in January.

"Working powerfully and at scale together, we can have a bigger influence with Congress, the administration and with state capitals throughout the country," Kiernan said. "This is a once-in-a-generation opportunity to create a whole new energy industry for America."

Among the companies that have agreed to join the new organization are EDF Renewables, Berkshire Hathaway and NextEra Energy. Notably, the Solar Energy Industries Association has declined to join, although it says it expects to work with the group.



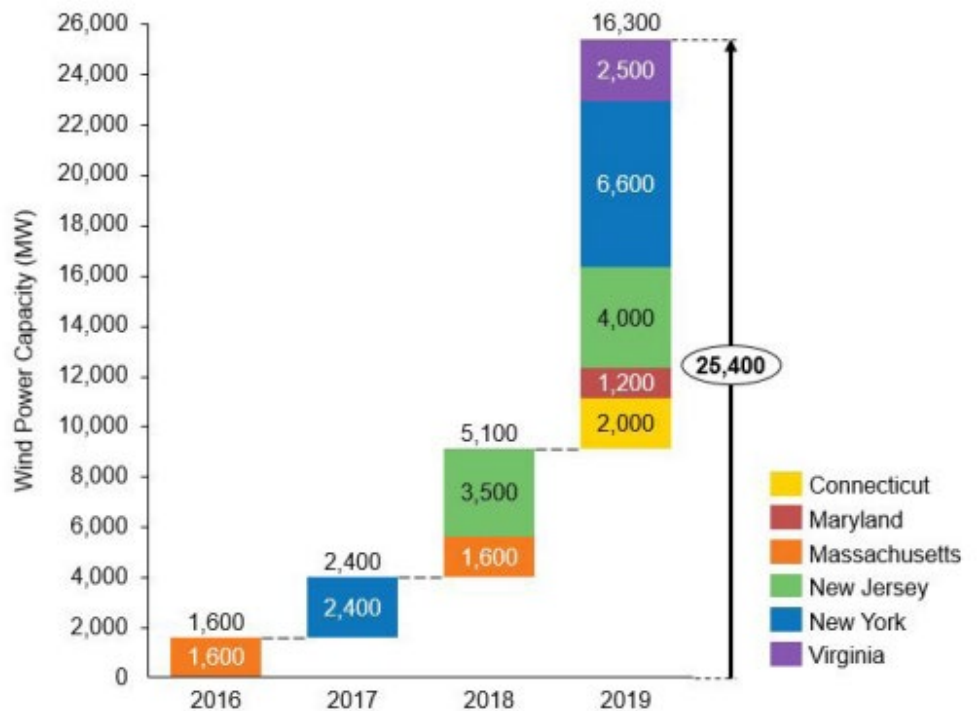
Eric Thumma, Avangrid Renewables | AWEA

Eric Thumma, who leads Avangrid Renewables' U.S. OSW commercial activities, was also bullish on the economic impact of the new generation. "We're talking about very large capital expenditures that are going to have significant multiplier

impacts," he said.

Thumma said Avangrid estimates its *Kitty Hawk project* off the coast of North Carolina and Virginia could produce 2.5 GW of power and \$2 billion of benefits through the development and construction of the project through 2030. "That doesn't count approximately \$100 million annually of wage increases and jobs that we'll have through the next 25 years of operations and maintenance," he said. "These projects can be economic engines. [Combining the Kitty Hawk project and Dominion Energy's 2.6-GW OSW project off Virginia], you have a pretty big amalgam of 5 GW of projects.

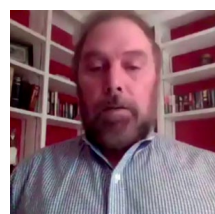
"What drives investments are the power purchase agreements and [offshore renewable energy credit] agreements. [States have] really laid out a schedule that we can have confidence in that there's going to be solicitations. That allows us to start talking about our ongoing investments and give the supply chain some confidence that those [requests for proposals] are going to be there."



State OSW targets | AWEA

Thumma said states could do more, however, by working more closely together on their OSW plans.

"We've sort of seen these [procurements] as one-offs. ... As a former state official, I understand the simplicity of it and the motivation to do it. But is there a way to further collectively rationalize and work together on these projects? And if you did that, would there be some spillover effects into other areas of policy, like transmission interconnection, where we know there's going to need to be cooperation in order to enhance the industry? I set that forward as a charge to the states to see if we can have some additional state leadership and cooperation in those areas."



Mark Mitchell, Dominion Energy | AWEA

Mark Mitchell, director of generation projects for Dominion, said the *Hampton Roads Alliance*, an economic development organization for the region around the Port of Virginia, is attempting to coordinate businesses and local governments to maximize the benefits of the OSW investments. "All of us are

making sure we're not missing any opportunity for anybody to go to work," Mitchell said.



Chris Hart, Atlantic Shores Offshore Wind | AWEA

Chris Hart, president of *Atlantic Shores Offshore Wind*, a joint venture of EDF Renewables and Shell New Energies that is developing an OSW project off of Atlantic City, N.J., said the industry's success will depend on collaboration with fishing interests and other stakeholders.

To that end, the company hired two lifelong New Jersey fishermen as liaisons to the recreational and commercial fishing industries.

"They really put their reputation as fishermen on the line by working with the offshore community. We don't take that lightly," he said. "We're working with them to build a collaborative, respectful relationship with a very tightly knit community that makes up New Jersey fishermen.

"We have to listen more than we speak. ... We don't have all the solutions. We may not even have the right problems identified. We need to listen." ■

AWEA Offshore Windpower Virtual Summit

Differences Aside, West Coast OSW Can Learn from East

By Robert Mullin

West Coast offshore wind developers can draw on environmental lessons from projects in the Atlantic Ocean, but they must still prepare for challenges unique to the Pacific, a panel of experts said last week.

Developers should also work among themselves and with independent researchers to collect and standardize as much ocean wildlife data as possible well before construction planning, as well as create “adaptive management strategies” to mitigate risks to species after turbines are in place, the experts advised.

“While wildlife risk assessment and the tools developed on the East Coast can inform development on the West Coast, the unique aspects of the West Coast must be identified and associated risks appropriately assessed and addressed,” Adam Stern, executive director of

Offshore Wind California, said as he kicked off the panel discussion at the American Wind Energy Association’s Offshore Windpower Virtual Summit on Oct. 13.

Stern noted that 14 developers responded to U.S. Bureau of Ocean Energy Management’s 2018 call for information and nominations to develop offshore wind facilities off the coast of California. Interest is also building to develop off the Oregon coast as well, he added.

Sarah Courbis, marine protected species and regulatory specialist at Advisian Worley Group, provided a rundown of the myriad ecological differences between the West and East coasts.

The East Coast has a large, relatively shallow ocean shelf, with a warm Gulf Stream current that comes up year-round. In contrast, the West Coast has a very narrow shelf with a steep drop-off close to shore, characterized by

changing currents over the course of the year and significant upwelling near shore, Courbis explained.

“As a result, there are differences in the wildlife and the habitats and what types of areas they use,” she said.

While both oceans are home to endangered right whales, Courbis said the southern resident killer whale would likely be a bigger concern on the West Coast.

The West Coast also has more pinniped species, such as seals, than East Coast, she said, and those species range offshore differently in the Pacific.

She also noted the many differences between bird species on the two coasts — and that species listed as endangered and threatened or “*species of concern*” will also be different.

Courbis advised developers to integrate



Clockwise from top left: Sarah Courbis, Advisian Worley Group; Adam Stern, Offshore Wind California; Brita Woeck, Deepwater Wind; Desray Reeb, BOEM; Mari Smultea, Smultea Sciences; and Garry George, National Audubon Society; | AWEA

AWEA Offshore Windpower Virtual Summit

environmental considerations into the process used to optimize turbine configurations for producing the most power cost-effectively.

That process “needs to consider what’s optimal for environmental impacts and permitting purposes,” she said. “If it doesn’t, you can have some very suboptimal situations that cause delays or problems with getting your authorizations, and your schedules may be thrown off.”

“We’re having this conversation early, and we have an opportunity that perhaps the East Coast didn’t have to really get ahead of development and start talking about regional data collection and standardization,” said Brita Woeck, manager of permitting and environmental affairs at Deepwater Wind.

The earlier start will give the industry a “broadscale” view of the West Coast environment, instead of leaving those details to be addressed repeatedly within the limited scope of individual wind projects, Woeck said.

“We really need to hone in on the species and specific uncertainties on the West Coast, focus our efforts now on getting those data gaps filled and look to the East Coast where we can to draw experience,” she said.

Woeck said East Coast projects will be the first to implement best practices and conduct post-construction monitoring for marine mammals, fish and birds.

“They serve as a real useful jumping-off point for taking some of those learnings and tailoring the practices to the species and habitats that are specific to the West Coast,” she said.

For the Birds

“Is offshore wind good for birds? I would say

‘yes,’” said Garry George, clean energy director at the National Audubon Society.

George cited a study by his group’s own climate scientists that found 389 species of birds worldwide would be threatened with extinction if the earth’s average temperature increases by 3 degrees Celsius over pre-industrial levels.

“The good news is, if we can hold warming down to 1.5 degrees Celsius, then we can actually help 75% of these birds,” George said. “Climate change is the biggest threat to birds.”

That’s why Audubon advocates for a policy of 100% clean energy and net-zero emissions by 2050, he said.

Seabird populations have already declined by about 70% since the 1950s, George said, before turning to a slide in his presentation that showed “the sum of what we pretty much know about the interaction” of floating turbines and seabirds off the California coast: “0.”

George noted that the slower progress in California OSW development has provided researchers and developers more time to gather data on the issue.

“I don’t want us to think we have to do everything now, but we have to have adaptive management plans in place” to mitigate potential detrimental outcomes from turbines, George said. As an example, he suggested improving onshore habitats and breeding grounds for seabirds.

Streamline, Standardize

Mari Smultea, CEO of Smultea Sciences, said developers on both coasts have access to numerous and extensive wildlife databases. But

she advocated for streamlining that data to foster more efficient planning in the West.

“One thing I suggest for the West Coast as we develop this is that we come up with one database where we all contribute the data to the same source, because sometimes these things are spread out across different data sources,” Smultea said.

She advised that developers come together in the “preplanning” phase to review existing data and standardize collection.

Smultea said “adaptive monitoring” of species should begin once an OSW facility has commenced operations, “where we can get feedback on what’s worked and what hasn’t worked so well in the field and how we can improve that.”

OSW siting on the East Coast has become more regionalized, while the West Coast — with its larger state coastlines — remains state-focused with separate task forces managing the California, Oregon and Hawaii processes, according to Desray Reeb, a marine biologist with the U.S. Bureau of Ocean Energy Management.

Reeb said BOEM has tried to be “proactive about stakeholder requests” and use its experience in analyzing OSW survey, site assessment and construction plans to compile “updated regulatory guidance” for developers.

“Although all these lessons are not necessarily directly transferable to the West Coast because of the environmental differences, some actually are,” she said. “I think we really are trying to take whatever we can from the East Coast experience and make the best of it on the West Coast without reinventing the wheel.” ■

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Coordinated OSW Tx a 'Perishable' Chance for US

By Michael Kuser

A discussion at the American Wind Energy Association Offshore Windpower Virtual Summit on Oct. 13 reinforced the argument that a planned transmission network for offshore wind would be more beneficial than the current every-project-for-itself approach.

But it also brought urgency to the issue. The benefits of an offshore network decreases with each project that interconnects by itself, said James Cotter, Shell general manager of U.S. offshore wind. And "an individual project that has a route to market or has its permits in hand doesn't want to be held up by waiting for the bigger, better solution, so it will run itself."

State and federal planning regulators are in the process of choosing between developers building their own generator lead lines — the radial system — or independent transmission construction and ownership, the network system. "If they're all radial connections at AC ... for 2 GW or 4 GW, you might end up with a difference of six to 12 cables routing through, whereas if you could use HVDC in a coordinated way, you only have two to three cables coming in," Cotter said. "Once you've laid a cable, in some of the approaches, it makes it very hard, if not impossible, to lay another project's set of cables in proximity to that; it's a very constrained area."

The U.S. has an "amazing, perishable opportunity of saying, 'How do we optimize transmission across the RTOs and ISOs, across the states, to enable cost-effective volume that will bring the industry here?'" Cotter said.

Zach Smith, NYISO vice president for system and resource planning, said transmission planning takes time, as planners must consider all options and at the same time.

"We do not do top-down planning; we don't dictate solutions. We turn to our market and what the market wants to do," Smith said. "One alternative is we turn to the state ... and what public policies do they

see as driving the need for transmission. If they declare there is a transmission need driven by public policy, then we act on that."

New York hosted a technical conference on transmission for renewable resources on Oct. 9, where Smith told state officials that without coordinated planning, transmission congestion around New York City could increase after the first 6,000 MW of offshore wind is interconnected. (See *OSW Growth to Test New York's Transmission Grid*.)

In terms of interregional planning, a Northeastern planning protocol was "beefed up" after Order 1000 to improve coordination among ISO-NE, NYISO and PJM, Smith said. The Inter-Regional Planning Stakeholder Advisory Committee (IPSAC) meets regularly to explore opportunities for joint transmission development, but "thus far, nothing has come up in terms of some definitive project."

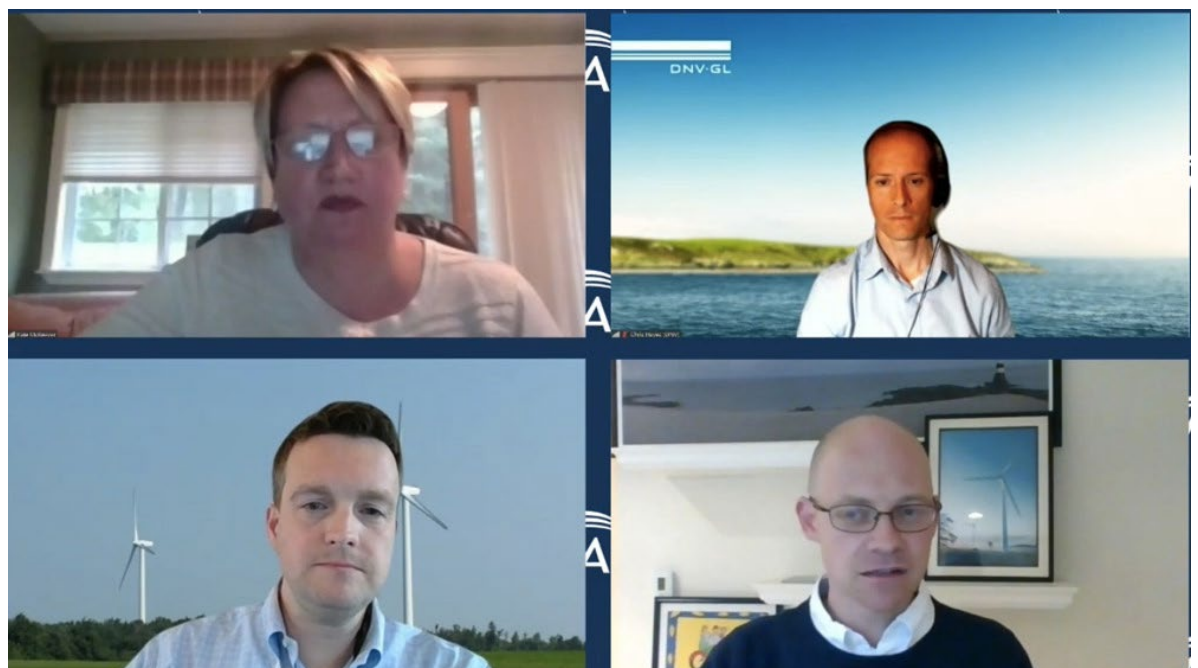
Massachusetts hosted a technical conference in March before officials decided they should not this year solicit proposals for a transmission network for offshore wind generation. Developers have proposed interconnecting up to 1,200 MW at various points along the southern New England coast, from Barnstable and Brayton Point in Massachusetts, to Kingston, R.I., and Montville, Conn. (See *Mass. DOER Explores Transmission for OSW*.)

Moderator Kate McKeever, director of government and regulatory affairs for U.S. offshore wind at German utility RWE, asked what constraints offshore wind would cause for onshore transmission.

Given that offshore wind will be injecting directly to load centers in New York City and Long Island, Smith said it will alleviate some of the transmission constraints upstate, "but there are going to be plenty of times a year when the amount of power coming in from offshore greatly exceeds whatever amount of load is in that local area, and you're going to need transmission facilities to get that power either off Long Island or out of the New York City area."

"We already were seeing constraints within the New York City and Long Island area," he said. "It's just natural that the power will want to flow out ... and up into the rest of New York and then across the Eastern Interconnection, so you'll need transmission investment in those areas to unbottle the constrained renewable resources."

Such investment would obviously help rate-payers in New York, he said, but "it ultimately turns into an East Coast issue where everyone could benefit, and no matter what, you have to overcome those transmission constraints from a legacy grid that was not designed to deliver that kind of power." ■



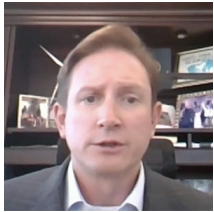
Clockwise from top left: Kate McKeever, RWE; Christopher Hayes, DNV GL; James Cotter, Shell; and Zach Smith, NYISO | AWEA

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Permits Will Kickstart OSW Supply Chain, Panel Says

By Michael Kuser

Permits are the first things needed to continue developing a sustainable supply chain for the U.S. offshore wind industry. All else flows from that starting point, a panel told the American Wind Energy Association's Offshore Windpower Virtual Summit on Wednesday.



Aaron Smith, OMSA | AWEA

"I'm tired of talking about potential; I want to talk about actual ... and for that we need certainty and transparency," said Aaron Smith, CEO of the Offshore Marine Service Association (OMSA), based in New Orleans.

Any time the U.S. maritime industry has had certainty and transparency, it has built and even overbuilt to the market need, from launch barges, to multipurpose supply vessels, to LNG carriers, Smith said.

"Every time there's certainty and transparency, we have built to that market, but you need to have that transparency, and you need to have that certainty, and the first step to getting there is to have those permits being issued," Smith said. "Permits equal certainty, equal a supply chain. So, that's what we need to see. If we can have the certainty in investment, then we can capitalize on it."

The first big OSW project in the permitting pipeline is the 800-MW Vineyard Wind project south of Martha's Vineyard off Massachusetts, on which the U.S. Bureau of Ocean Energy Management expects to issue a final decision in December. (See [Developers Seek 1-Mile Spacing for Vineyard Wind](#).)

Emmanuel Martin-Lauzer of Nexans High Voltage USA agreed with Smith, saying the U.S. market is difficult for investors to put money into without timely and predictable permits.

Despite the very slow start in the U.S. compared to Europe, Nexans, which has several offices around the country and in Canada, is adding submarine cable manufacturing capability to its existing facility in South Carolina.

Jones Act and More

OSW supply chain factors other than permitting include workforce training, the Jones Act requirement that vessels working coastal trade be built in the U.S., local content requirements, and the potential of benefiting from oil and gas

industry assets and experience.



Maria Ravn, MHI Vestas OSW | AWEA

Moderator Maria Ravn, U.S. global supply chain management lead at turbine manufacturer MHI Vestas Offshore Wind, relayed an audience question on how the lack of Jones-compliant vessels is affecting planning or projects timelines.

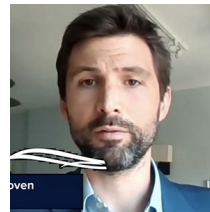
"Is it a known fact that there are no available large installation vessels for turbines and foundations, at least for the monopile foundations?" said Joris Veldhoven, treasurer and commercial director of Atlantic Shores Offshore Wind, a joint venture created by Shell New Energies and EDF Renewables to develop a lease area off New Jersey.

"I think that's a reality that all the developers can work around and are working around; all the projects along the East Coast are certainly maturing their development plans in sight of this," Veldhoven said. "It has the potential to be a gamechanger ... but when it comes to local content, even beyond the offshore scope, a lot of local content development is going on in spite of this."

Smith said the question appeared targeted to wind turbine installation vessel (WTIV) fleets, and that floating platforms and jack-up heavy-lift vessels — and vertical lifts — don't need to be Jones-compliant.

When Danish shipping company Maersk applied to do the installations for Vineyard, for example, it was going to use a foreign-flagged ship being supplied by U.S. feeder vessels, "so, that is a perfectly legal way for these operations to happen; so, no, there is no impact," Smith said. "Now, how do we ensure that we have the U.S. feeding vessels? I know of at least four different companies that are looking to invest in this space, but they need certainty."

Shipowners and builders have not yet seen the certainty to invest in feeding vessels, and some wonder if there is going to be a strict adherence to the Jones Act on this matter, or if WTIVs would be used to transport and install turbines and foundations, Smith said.



Joris Veldhoven, Atlantic Shores | AWEA

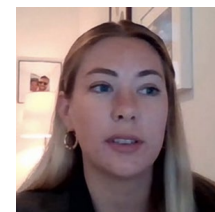
Diversification and Training

Edward Anthes-Washburn, executive director of the New Bedford Port Authority, which hosts the main OSW terminal for the state of Massachusetts, said Gulf of Mexico infrastructure tailored to oil and gas drilling can be repurposed for OSW, and that companies are looking at the downturn in oil and gas as an opportunity to diversify.

"Especially right now, with the price of oil so low, they've been cutting in half the deep-water drilling operations, so there's a lot of equipment," Anthes-Washburn said. "In the U.S. market, there's a lot of expertise that exists in the gulf, and that's what our target will look like 10 years from now — it will be a combination of northern Europe and southern Louisiana."

Nexans' Martin-Lauzer said that repurposing the feeder barges and jack-up feeder barges developed in the gulf wouldn't necessarily cost much more because those jack-up vessels are very expensive by the day, and using feeder vessels would actually minimize the amount of time the jack-up rig has to be offshore.

And the skills needed to run those vessels and operate the heavy machinery already exist in the Gulf, with "200 of 800 vessels out of action now because of the downturn in the oil and gas sector," Smith said.



Emily Kuhn, Renewables Consulting Group | AWEA

Emily Kuhn of The Renewables Consulting Group said the Northeast also has a skilled workforce, but that more people will be needed for an estimated \$80 billion in OSW construction contracts over the coming decade, and the sooner people can start being trained for such jobs, the better.

"So that when the time comes, we don't have a non-U.S. labor force coming in and taking the jobs ... training can help make the U.S. on a par with more experienced workforces around the world," Kuhn said. "The jobs will follow the infrastructure and ... the jobs do not end up moving to Europe." ■



Edward Anthes-Washburn, New Bedford Port | AWEA

AWEA Offshore Windpower Virtual Summit

States Detail OSW Workforce Development Initiatives

Emphasis on Creating State, Regional Ecosystem of Qualified Workers

By Jason York

An estimated 20,000 to 30,000 MW of offshore wind capacity representing a \$28 billion to \$57 billion investment in the U.S. economy will be operational by 2030, according to the *U.S. Offshore Wind Power Economic Impact Assessment*.

OSW project development, construction and operations could bring a projected 83,000 jobs in that time and deliver \$12.5 billion to \$25.4 billion per year in economic output. During a panel at the American Wind Energy Association's Offshore Windpower Virtual Summit on Wednesday, state officials from Massachusetts, New Jersey, New York and Rhode Island discussed their role in training tens of thousands of people for those jobs as part of that hoped for economic boon.



Kirsten Holland |
Massachusetts Clean
Energy Center

Kirsten Holland, program manager for offshore wind for the Massachusetts Clean Energy Center (CEC), said a "well trained and highly skilled workforce" is needed for OSW jobs where educational requirements range from apprenticeships to ad-

vanced degrees. Holland's agency released an assessment in 2018 examining the workforce needs and economic impact associated with 1,600 MW of OSW development.

"It really laid the groundwork for our workforce development initiatives by demonstrating that there are thousands of jobs and hundreds of millions to billions of dollars in economic impact associated with just 1,600 MW of offshore wind built out," Holland said.

Building on that initial assessment, Holland said the CEC maintains a [website](#) dedicated to training and educational programs for clean energy jobs, including OSW, which lays out career pathways, educational offerings and training programs. Additionally, Holland said there is an active process to identify unemployed or underemployed people to set up those "who need the jobs most" with education and technical training programs.

According to Holland, another priority area was increasing access to OSW jobs, specifically

those in the commercial fishing industry. She said \$2 million in grant funding to 15 institutions, including a public university, community colleges and other organizations, have helped build a bridge to new employment opportunities and training over the last two years.



Laura Hastings | RI
Department of Labor &
Training

Laura Hastings, deputy director of the Rhode Island Department of Labor and Training's Real Jobs program, said her state offers the Wind Win RI certification program for high school students looking to work in the OSW industry. The state also

offers two free years of tuition at a community college for a renewable energy program, and there is a partnership with the Business Network for Offshore Wind to train companies that want to work in the industry. (See *Tiny RI Seeks its Share of Offshore Wind Jobs*.)

Earn and Learn

Matthew Vestal, senior adviser for large-scale renewables at the New York State Energy Research and Development Authority, noted his state's legislative mandate to install 9 GW of offshore wind by 2035. By his "fairly conservative estimate," that could mean 10,000 jobs and the capacity to provide enough renewable energy to power 6 million homes and produce 30% of the state's electricity load.

"We recognize that offshore wind is a very unique economic opportunity," Vestal said.

Vestal said New York is spending \$20 million to create the Offshore Wind Training Institute at the Farmingdale State College and Stony Brook University campuses and additionally providing grant funds for the Center of Excellence for Offshore Energy at SUNY Maritime College. The developers of the Sunrise Wind project will spend \$10 million on the Offshore Wind Training Center at Suffolk County Community College. (See related story, [Preparing the Wind Energy Workforce](#).)

Brian Sabina, senior vice president of eco-



Brian Sabina | NJEDA

economic transformation at the New Jersey Economic Development Authority, said Gov. Phil Murphy wants to expand opportunities for good-paying OSW jobs through "on-ramps and off-ramps" so that people can "earn and

learn at the same time," especially people of color and women.

"We've more than doubled participation in apprenticeship programs by Black, Latinx and female apprentices," Sabina said.

One area where apprenticeships are needed is welding, a skilled trade that Sabina said has leveled off in New Jersey. That is where increased regional cooperation comes into play, according to Hastings.

"Welding is robust in Rhode Island and Connecticut, as we can build nuclear submarines, largely with welders, so that's one way we can use regionalization to play on each other's strengths versus what we don't have," Hastings said.

"There's definitely the opportunity for direct or indirect collaboration on workforce training," Vestal added. "I think there's the ability to send workers to different states to make this a regional workforce rather than a state-by-state workforce."

For students in either high school or college considering the OSW industry, Hastings said that critical-thinking and problem-solving skills are in-demand attributes, aside from education and training initiatives.

"Being able to look at something critically and come up with a new solution that doesn't exist yet, this industry is ripe for that, and if that's the kind of person and kind of thought process that you go through, that would only help you," Hastings said. ■



| Vinyard Wind

AWEA Offshore Windpower Virtual Summit

Preparing the Wind Energy Workforce

Panel Discusses Education, Training at 2020 AWEA OSW Summit

By Jason York and Rich Heidorn Jr.

Michael Hanson has been in the wind energy workforce for 14 years. He started onshore, managing the operation, maintenance and repair of turbines at a number of sites before moving to the first offshore wind farm in the Western Hemisphere, the 5-MW facility off Block Island, R.I.



Michael Hanson | GE Renewable Energy

It takes a diverse village to run a successful wind farm, according to Hanson.

“You can cast a wide net and get good people from a variety of backgrounds,” said Hanson, operations and maintenance manager for GE Renewable Energy.

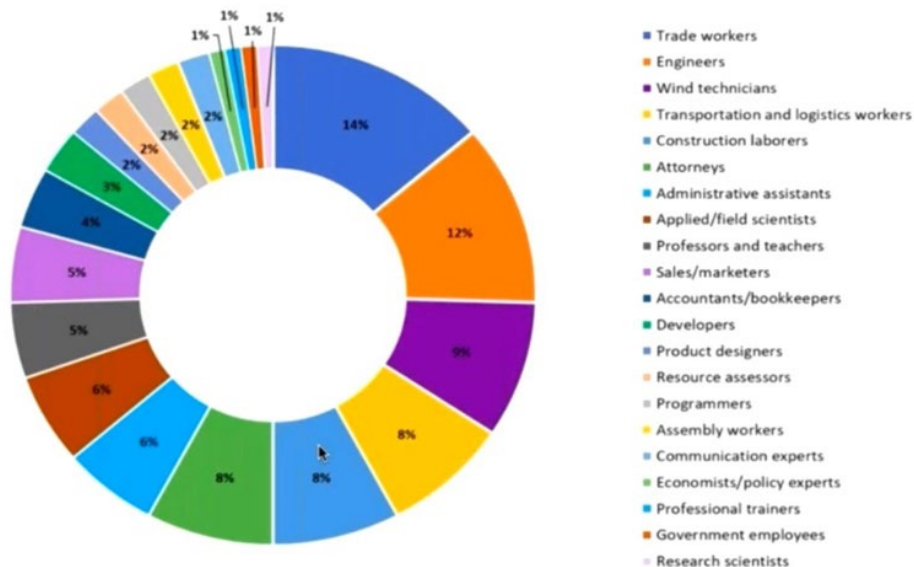
Hanson was part of a panel at the American Wind Energy Association’s Offshore Windpower Virtual Summit on Oct. 13 that discussed the education and training needed to prepare the American wind energy workforce of the present and future.

Marjaneh Issapour, an electrical engineering professor and director of the *Renewable Energy and Sustainability Center* at Farmingdale State College in New York, said there are many different areas of expertise and credentials needed to “fully deploy the wind energy workforce in the United States.”

Issapour said about 47% of jobs in the field are entry-level, open to high school graduates or those who have completed apprenticeships or associate degrees. Another 41% require a bachelor’s degree, with only 12% requiring a master’s or doctorate.

Among the two job titles in most demand are wind technicians, representing 9% of the total, and wind engineers, representing 12%. “Wind engineer is a multidisciplinary expertise that is a cross ... of mechanical, electrical and possibly civil engineering,” she said.

Nuria Soto, senior director of offshore operations for Avangrid Renewables, said that 20 years ago, there were no offshore wind technicians, and “now it’s an established industry” that is also moving very fast and also needs workers for development, construction and operations.



Workers needed for the U.S. wind energy workforce | National Renewable Energy Laboratory



Nuria Soto | Avangrid Renewables

“One of the main challenges is to ensure that the workforce is ready and the supply chain is ready,” Soto said. “All these jobs will support the different phases of each project.”

In another panel, Mark Mitchell, director of generation projects for Dominion Energy, said the industry is generating an increasing number of jobs today.

This summer, Mitchell said, Dominion had more than 25 vessels operating with more than 400 people working on the utility’s two-turbine pilot project, now in operation, and early work on its 2.6-GW commercial-scale project.

“We’ve got several hundred [people] working today offshore. It’s not just something in the future. It’s kind of here and now, creating many, many jobs,” Mitchell said.

Bruce Gresham of the International Marine Contractors Association said there’s “a mix of different levels of experience” needed to work on OSW facilities. Gresham added that tens of thousands of workers in the offshore oil and gas industry laid off during the COVID-19 pandemic have that kind of baseline experience.

“The younger generation is much more interested in working for the wind industry than the dirty oil industry,” he said.

Soto said Avangrid’s internships are a good opportunity to see how a project is developed and understand different roles.

Hanson said the best training from his perspective is to come from an onshore facility. OSW turbines are “the biggest, most technologically advanced in the world, and having that experience on the smaller machines, I think, is second to none.”

That does not diminish other experiences, Hanson added.

“There [are] so many different jobs that are going on within a turbine: You can come from being an electrician or technician or a mechanic or someone from the oil and gas industry or, of course, from another renewable energy field or utility,” said Hanson, who also mentioned technical college and military training.

“The maintenance and construction of generators at heights in a marine environment is a new industry,” said Andy Goldsmith, a technical adviser for IMCA. “But marine construction and going to sea ... is not a new industry. Lighthouses and such ... have been constructed for eons, let alone the oil and gas industry, which of course started back in the 60s.” ■

2020 EBA Fall Conference

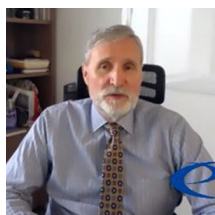
Energy Sector Still Grappling with Pandemic Impact

By Michael Yoder

The U.S. energy industry is still wrestling with the economic and social impacts of the COVID-19 pandemic that gripped the world nearly nine months ago, experts said last week.

Managing the magnitude of the pandemic was the first discussion at the Energy Bar Association's 2020 Fall Conference, held virtually beginning Oct. 13 because of the pandemic. The discussion covered load impacts and economic consequences for utilities, regulatory responses, consumer-side adjustments, and fuel and supply chain price changes.

Panelists included John O'Brien, executive vice president for strategy and public affairs at Washington Gas, and David DesLauriers, vice president at Charles River Associates.



Frank Graves, principal of The Brattle Group. | Energy Bar Association

Frank Graves, a principal with The Brattle Group, said the COVID-19 burden has been "uneven" across the energy industry, with different utilities and sectors experiencing contrasting impacts.

Utility companies have weathered most of the

economic impacts of COVID-19, Graves said, while some businesses in the energy sector, such as small oil and gas development companies, have experienced bankruptcy. He said utility stocks have trailed the S&P 500, remaining relatively sluggish throughout the summer versus the index's overall growth of 10%.

"Even though we've improved a lot, we still aren't very close to where we would like to be," Graves said.

The U.S. Energy Information Administration forecasts that total 2020 electricity consumption will be 2.2% less than in 2019, based on a 3.2% increase in residential sales, a 6.2% drop in commercial sales and a 5.6% drop in industrial sales.

Daily LMPs have been below past two-year averages by 10 to 70% in almost every month since February in every ISO/RTO, Graves said. The drop in LMPs is not solely because of COVID-19 consumption changes, he said, with lower natural gas costs — also partially the result of the pandemic — likely playing a bigger role.

ENERGY AND FINANCIAL SECTOR IMPACTS

Impact on Regional Electric Loads

Compared to the prior 4 years, September 2020 average hourly power loads for seven major ISOs* dropped 7%, comparable to the deepest monthly reductions experienced in the first few months of the pandemic.

- * The majority of reduction occurred in MISO and PJM, our largest power pools operating in areas in which COVID-19 intensity grew dramatically from midsummer to the present.

The EIA forecasts that 2020 electricity consumption will drop by 2.2% relative to 2019 (based on a 3.2% increase in residential sales, a 6.2% drop in commercial sales, and a 5.6% drop in industrial sales).¹²



Frank Graves of The Brattle Group presents a slide on the COVID-19 impacts on regional electric loads on ISOs/RTOs. | Energy Bar Association

But the drop in LMPs will strain the viability for some coal and nuclear plants, Graves said. ERCOT prices were down 64% in September compared to the two-year historical average, while PJM and NYISO have seen declines of 33% and 32%, respectively, in the same period.

Graves highlighted the impact on regional electric loads, which declined by 7% in September compared with the previous four years, despite a return to relatively normal in midsummer. The September decline was in line with the April (6.5%) and May (7.5%) declines at the height of the pandemic.

PJM and MISO accounted for most of the September decrease, with states in their footprints seeing among the largest surges in COVID-19 cases since midsummer, Graves said. Higher-than-normal temperatures in those regions also contributed to the decline, along with colleges and universities that have not reopened campuses.

"We haven't been able to unpack this very much, but that's a surprise that there's a big drop in September when we've had some economic rebound over the last few months," Graves said.

'Devastating'

Sandra Mattavous-Frye, head of the D.C. Office of the People's Counsel, said the pandemic has been "the single most devastating event to impact our country" in more than a century, and no sector, population or industry has gone unscathed, including the energy industry.

Mattavous-Frye said the unique nature of the pandemic provides challenges for the energy industry but affordable, safe and reliable utility service, along with strong consumer protections, remains her guiding principle as a consumer advocate.

She said three principles must be in place when dealing with the fallout from COVID-19.

First, there must be equitable cost sharing. While the financial stability of utilities must be ensured, it can't be "business as usual" where ratepayers are expected to bear the entire cost; utilities must also carry a fair share, she said.

Second, public officials must implement enhanced and sustainable permanent consumer protections for underserved and low- to moderate-income households. Those protections must offer a comprehensive approach to service disconnections, including reasonable payment and billing plans.

Finally, industry participants should identify the short- and long-term negative impacts of the pandemic on all segments of the energy industry. She said forums like EBA's are a good start.

"I really believe it is an obligation to step outside of the box of our traditional regulatory roles with a shared commitment to overcome the challenges we are facing and explore viable options to address the problem head on," Mattavous-Frye said. ■

2020 EBA Fall Conference

EBA Panel Probes FERC's Allegheny Response

By Robert Mullin

A panel at last week's Energy Bar Association annual Fall Conference examining FERC's response to the D.C. Circuit of Appeals' *Allegheny Defense Project v. FERC* ruling evolved into an in-depth Q&A with panelist David Morenoff, FERC's acting general counsel.

Allegheny upended longstanding FERC practice by barring the commission from using tolling orders to delay judicial review under the Natural Gas Act and Federal Power Act. The July order by the D.C. Circuit Court of Appeals concluded that the commission's use of tolling orders to stop the 30-day clock for acting on rehearing requests improperly prevents litigants from appealing its rulings indefinitely even as it allows gas pipeline companies to seize property under eminent domain and begin construction. (See *D.C. Circuit Rejects FERC on Tolling Orders*.)

Moderator Adrienne Claire, a partner with Thompson Coburn, noted that FERC Chairman Neil Chatterjee and Commission Richard Glick asked Congress to provide the commission with a "reasonable amount of time to act on rehearing requests." (In light of *Allegheny*, FERC must now respond to all rehearing requests within 30 days or they are deemed denied "by operation of law.")

"What would be a reasonable amount of time in your opinion? What's feasible?" Claire asked.

Morenoff said Chatterjee developed "great respect" for members of Congress and their staff from both parties through his extensive experience working on Capitol Hill, "so he leaves to Congress the question about what will be the reasonable amount of additional time if Congress were to respond to that call and take action."

Morenoff pointed to two bills introduced into Congress last spring, *H.R. 6982* and *H.R. 6963*, to address rights to timely rehearing of FERC de-

isions under the NGA and FPA, respectively. The two bills would set rehearing time frames to 90 days under the NGA and 120 days under the FPA, "perhaps reflecting the relative greater complexity that we often see in rehearing requests under the FPA with respect to particularly the organized markets," he said.

"I think that those provide a really good starting point for discussions that are proceeding on the Hill," Morenoff said.

In response to Claire's question about what changes FERC has already made in response to *Allegheny*, Morenoff said that, even before *Allegheny*, Chatterjee had directed commission staff to expedite actions on rehearing requests, especially regarding landowner requests in gas pipeline certificate proceedings.

"We have been doing coordination among not only the sections across [FERC's Office of the General Counsel], including the rehearings section that we set up in February, but among the various program offices at FERC that work closely on a rehearing request ... and I think that's just more important now as we try to move even more quickly to cover that same ground in a post-*Allegheny* world," Morenoff said.

Allegheny also prompted FERC to begin issuing two types of new notices in response to rehearing requests, Morenoff said. The first states that "rehearing may be deemed denied, period," while the second says that "rehearing may be deemed denied and the commission intends to issue a further order on the merits addressing arguments on rehearing," he said. (See *FERC will not Seek SCOTUS Review of Tolling Decision*.)

"We've been trying to move quickly on those second orders, but I think both of those notices indicate that the commission is going to put more emphasis on our underlying orders more often because, as we're trying to move more quickly, the old kind of standing rehearing order that would have a lengthy background section, then summarize the order in detail, then summarize all the arguments raised in rehearing, that probably isn't possible anymore given these time frames," Morenoff said.

'Uphill Battle'

"One of the issues that was percolating a few years ago was whether in the absence of a quorum, FERC could even issue a merits order on rehearing, much less a tolling order," an audience member said. "Do you think the



Adrienne Claire, Thompson Coburn | Energy Bar Association

Allegheny decision gives us any insight into how the courts might resolve that issue?"

"I don't think that *Allegheny* sheds a great deal of light on that subject, but I think it's a very important question because regrettably we've had less time recently with five commissioners that all of us inside and outside would like," Morenoff responded. He noted that when the commission realized it would be dropping below quorum in 2017, it issued an order that covered the delegation of additional responsibilities to staff.

"At the time, based on the research we had done, we felt quite confident that as long as there is a proper delegation from the quorum of the commission, there's quite a good deal that can be done by staff," he said.

Claire turned to the broader panel to pose a hypothetical question about how the Supreme Court would have responded had FERC appealed *Allegheny*, a step the commission said last month it would not take.

"I think there's a decent chance the court would've granted review because it has a pretty high rate of granting petitions when the government is asking it to do so," said Erin Murphy, an Environmental Defense Fund attorney.

But Murphy thought FERC would have faced a "pretty uphill battle" on appeal because the court, while potentially sympathetic to FERC's arguments about the tolling orders as a long-standing policy matter, would still doubt that the rehearing delays complied with what Congress was "trying to accomplish" when it set rehearing request deadlines under the NGA.

"There's certainly arguments about congressional acquiescence, and there's a lot of water under the bridge at this point, but I think that there's just that dynamic of [the rehearing delays] feeling like circumvention that would've been hard to overcome at the court," Murphy said. ■



David Morenoff, FERC | Energy Bar Association

2020 EBA Fall Conference

Future of Tx Planning Debated at EBA Conference

By Michael Yoder

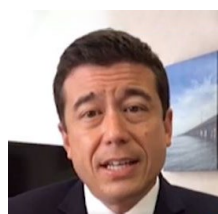
Transmission owners, regulators and stakeholders face a massive task in planning for new transmission as they attempt to modernize the grid and prepare for an influx of renewable resources.

That was the key takeaway of a panel at last week's Energy Bar Association annual Fall Conference entitled "Looking into the Transmission Crystal Ball: What are the biggest issues facing the transmission industry in the next five years?"

A diverse cross-section of stakeholders from around the country working in various aspects of the energy industry quizzed a panel of transmission experts on their outlook for the grid.



| © RTO Insider



Jason Stanek, Maryland PSC | Energy Bar Association

Jason Stanek, chairman of the Maryland Public Service Commission, said transmission assets built to meet delivery needs almost 100 years ago are reaching the end of their useful life and are being slated for replacement. At the same time, states like Maryland are advancing clean energy policies like offshore wind that will require transmission upgrades.

Stanek said the delivery systems were originally planned under an "umbrella approach" that considered the "interplay of regulatory policies and customer needs in a just and reasonable manner." Planning for grid upgrades has become more complicated now that transmission planning today is primarily the responsibility of RTOs and ISOs, along with the growing state-federal conflict over energy and environmental policies, Stanek said.

In his question to the panelists, Stanek asked how regulators and stakeholders can "reopen the umbrella" to have coordinated and cost-effective transmission planning to achieve a clean energy future.

Beth Emery, senior vice president and general counsel for GridLiance, said she is seeing major pushback from RTO/ISO stakeholders over what some claim to



Beth Emery, GridLiance | Energy Bar Association

Beth Emery, senior vice president and general counsel for GridLiance, said she is seeing major pushback from RTO/ISO stakeholders over what some claim to

be "the spiraling cost of transmission." Emery said most of the current costs for transmission are tied up in reliability projects, in which cost-benefit analyses are not typically done, adding to the skepticism about costs.

Unless stakeholders, including state regulators, have open and transparent access to what projects are being proposed, planning estimates and the actual costs, Emery said, it will be difficult to convince ratepayers that the transmission projects have value.

Emery said FERC's push toward forward-looking transmission formula rates seems to have made the transparency problem even worse, encouraging new transmission builds but making it even less clear on the costs.

GridLiance has a published white paper proposing FERC require RTOs to collect and publish consistent data on transmission investment, Emery said, which some RTOs already do, but the information can be difficult to find.

"It's almost impossible for customers to get useful project-by-project information in the formula rate protocol process," Emery said. "I think TOs need to be able to plan and make prudent decisions for local reliability, and they absolutely need to maintain their existing assets. But plans should be transparent and costs discoverable."



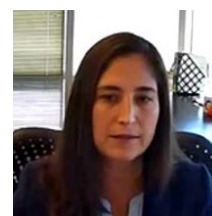
Valerie Teeter, Exelon | Energy Bar Association

Valerie Teeter, senior manager of federal regulatory affairs at

Exelon, said Stanek's question addressed an important trend. In states that have restructured transmission planning, Teeter said, there has been a move away from integrated resource planning between utilities and the states to determine the needed resources to meet environmental goals and the role transmission will play.

Teeter said broader regional planning creates some "disconnects" between the utilities and states, with utilities waiting to see what projects get into the generation interconnection queue. She encouraged state regulators to think about how they could play more of a role in planning because they have the clearest vision of state energy goals.

"States have clean energy goals; they have ideas of what they want their future to look like," Teeter said. "They understand the resource mix they're hoping to see to lead them to their clean energy future."



Lisa McAlister, AMP | Energy Bar Association

Lisa McAlister, senior vice president and general counsel for American Municipal Power, said customers are experiencing "sticker shock" as TOs continue to replace aging infrastructure across the country.

McAlister agreed that greater transparency in the planning process and rate structures would help customers better understand the projects and help TOs better justify the projects that are most

2020 EBA Fall Conference

cost-effective.

McAlister said efforts currently underway in PJM, ISO-NE and CAISO by TOs to remove projects from the regional transmission planning processes and make themselves solely responsible for planning will “balkanize the transmission grid,” increasing costs and customer complaints.

“That’s going to make achieving a clean energy future more challenging,” McAlister said.

5-year Discussion

John Moura, NERC director of reliability assessment, said he views the changing resource mix as one of the most important reliability issues to tackle over the next decade. Moura said industry-supported studies have determined that an extra-high-voltage network from Wyoming to Ohio will be needed to achieve carbon-reduction goals.

Moura asked how to start difficult conversations about transmission among stakeholders in the next five years.

Customer demand is driving the development of renewable resources and carbon pricing, McAlister said, and having discussions with a focus on meeting mandated or voluntary objectives, whether carbon-reduction goals or planning for the grid of the future, will require a coordinated approach between consumers, load-serving entities, distribution and transmission utilities, the RTOs, FERC and Congress.

“Now, more than ever, we need to develop a

collaborative and a consensus-based approach to building transmission that spans multiple states to connect these renewable resources to the load pockets,” McAlister said. “The most effective pathway forward will be through the RTOs because they have the most comprehensive information regarding new generation and the interconnection queue, congestion and other market data.”

Emery said stakeholders involved in the planning process understand the steps needed to be taken to build a consensus, but reaching that consensus is difficult. Consensus is built by making people comfortable and helping them understand the costs of projects and what the benefits will be once they are completed, she said.

She said she believes federal legislative action is needed to make interregional planning successful and that states will not be able to do the necessary planning without a prompt from Congress. There must also be a mechanism for everyone involved in the planning process to benefit in some way, she said.

Emery pointed to the creation of the interstate highway system as a federal model to strive toward.

“We need to figure out how we take that model and apply it in the context of transmission where there’s a cooperation between the federal government and the state governments and all the consumers because people see both local and national benefits from what we’re doing,” Emery said.

Federal Policies

Rob Gramlich, president of Grid Strategies, said modeling shows the need for larger regional and interregional transmission, but the regulatory structure is not in place to effectively facilitate for planning. Gramlich said FERC Orders 890, 2000 and 1000 all attempted to address some of the regional transmission planning, but a gap exists between what needs to be done and where the process currently stands.

Gramlich asked how policies can be put in place through FERC or Congress to make regional and interregional planning happen more often and more smoothly.

Jennifer Curran, MISO’s vice president of system planning, said when the conversation of interregional planning comes up in the RTO, there are three conditions that take precedent in transmission building: “policy consensus, robust business case and fair cost allocation.”

Curran said policy consensus does not mean all stakeholders are pursuing the same goals, but it does mean that stakeholders have decided transmission is a way to help meet renewable goals and bridge the diversity among state goals. She said her expectation is that a federal policy to provide for regional and interregional transmission planning would have to be “pretty extreme” because many states will want to go faster in the planning process, while others would continue to be resistant to change.

“If we can get to a place where everybody understands transmission is part of the answer, then I think that’s helpful,” Curran said. ■

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2020 EBA Fall Conference

'Massive' Clean Energy Stimulus Under Biden Likely

By Michael Brooks

The closing session of the Energy Bar Association's annual Fall Conference on Wednesday provided insight into not just how the makeup of the U.S. government might look next year, but also how national energy and climate policies could shift.

The panelists focused on three scenarios: the status quo, in which President Trump wins re-election and Republicans retain control of the Senate; former Vice President Joe Biden winning the presidential election and the GOP keeping the Senate; and Democrats sweeping both the White House and Congress.

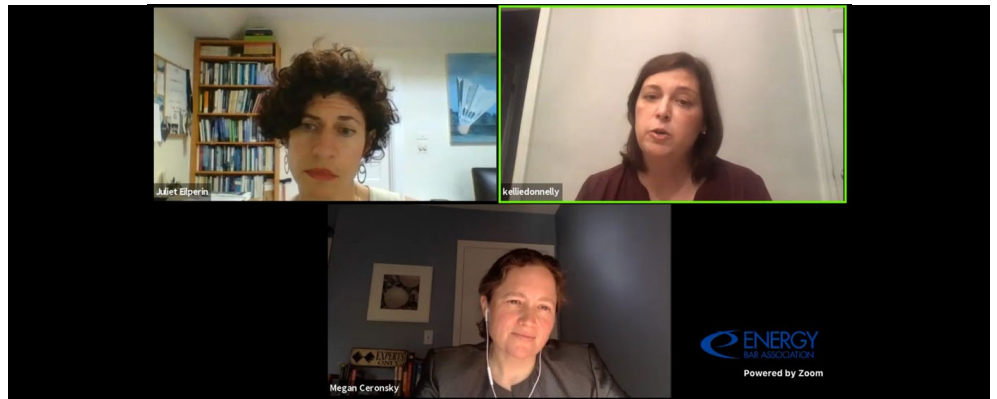
Not likely: Republicans flipping the House of Representatives, or Trump winning but the Senate flipping, the latter of which Kellie Donnelly, general counsel for public relations firm *Lot Sixteen*, said her firm has been calling a black swan event.

As of press time, data analysis website FiveThirtyEight gives Biden an **88%** chance of winning the presidency and Democrats a **74%** chance of winning the Senate, based on an aggregation of national polls.

Under the status quo, Donnelly said, Trump is likely to continue his "trade wars" with other countries and climate policy will go unchanged. But that would not preclude passage of a major tax and infrastructure package, "something that President Trump has long been interested in," she said. Sens. Lisa Murkowski (R-Alaska) and Joe Manchin's (D-W.Va.) American Energy Innovation Act, which has languished for various reasons, including the COVID-19 pandemic, "could also see new life." (See *Murkowski, Manchin Offer Bipartisan Energy Bill*.)

Megan Ceronsky, executive director of the *Center for Applied Environmental Law and Policy*, said that under a unified Democratic government, Congress' first acts would likely be "massive" stimulus spending to address the pandemic-induced recession. The spending could include funding for "clean energy job creation," electric vehicle infrastructure and environmentally friendly public transportation, which she said "are really high priorities" for Biden.

Although Biden's first priority will be addressing the economy, he often frames action on climate change as a way to alleviate the impact of the pandemic — for example, renewable energy jobs for the unemployed and cleaner air for those dealing with respiratory problems



Clockwise from top left: panel moderator Juliet Eilperin, a reporter for The Washington Post; Kellie Donnelly, *Lot Sixteen*; and Megan Ceronsky, Center for Applied Environmental Law and Policy | *Energy Bar Association*

because of the virus.

Predicting "gets much trickier" under a divided-government scenario, Ceronsky said. Biden's clean-energy priorities would likely still get more funding than under Trump, and tax credits for renewable and carbon capture projects could be extended. But instead of climate-related bills being passed, "we will see a lot of action under existing statutory authorities from the regulatory side," she said.

Unlikely to happen under any scenario, Donnelly said, is a tax on carbon emissions. "I don't think members [of Congress] are going to actually vote to impose a new tax on people" in the middle of a recession, she said. There are plenty of other options that Biden favors and are more politically popular, she said.

Ceronsky agreed. Even though economists agree that such a tax would be the most efficient way to reduce emissions, she said "anything that has the word 'tax' in it has always been a challenge for Congress."

Will FERC be 'Boring Again'?

The makeup of FERC after the elections will depend not just on who wins but also on the parties' political calculus regarding the commission, the panelists said.

The president cannot fire a commissioner without cause and must select the chairman from among the sitting commissioners. If Biden wins, and pending nominees Mark Christie (R) and Allison Clements (D) are confirmed during the lame duck session, Congress would be "basically locking in a 3-2 Republican majority" for up to June 30, 2021, when current Chair Neil Chatterjee's term ends, Donnelly said. "I can't imagine" that Democrats would want that, she said. (See *FERC Nominees Bob and Weave Through*

Senate Hearing.)

If the current GOP-controlled Senate elects not to confirm the two current nominees before the end of the year, it is possible that Christie, the chair of the Virginia State Corporation Commission, loses his nomination and Biden renominates Clements and another Democrat, Donnelly said.

Commissioner Richard Glick, currently the panel's only Democrat, is almost certain to be named chair in a Biden administration, Donnelly said, although it is possible Biden could nominate someone else to be chair after Glick.

Donnelly noted that Murkowski has often said that she wants to "make FERC boring again." But regardless of the elections, she said somewhat jokingly, "FERC is always interesting, and it will never be boring again."

Ceronsky disagreed with that statement, saying, "We really do need to make FERC boring again; 'boring' in that it should be about highly competent individuals making what, to the rest of us, are a little bit hard-to-understand decisions because they are so, so in the weeds.

"I do think one thing that would change in a FERC under a Biden administration ... is a reversal of the direction that the commission has gone in terms with trying to interfere with state generating resource decisions," Ceronsky said. She called the extension of PJM's minimum offer price rule "a pretty blatant attack on states' authority to actually decide what type of generating resources they have. ...

"I cannot see states staying in these organized markets if all of their energy policies are being countermanded by the FERC's pricing decisions." (See related story, *FERC Acts on PJM MOPR Filing*.) ■

2020 EBA Fall Conference

Hydrogen: 21st Century's 'Oil'?

EBA Panel Sees Role as Fuel, Storage Medium

By Rich Heidom Jr.

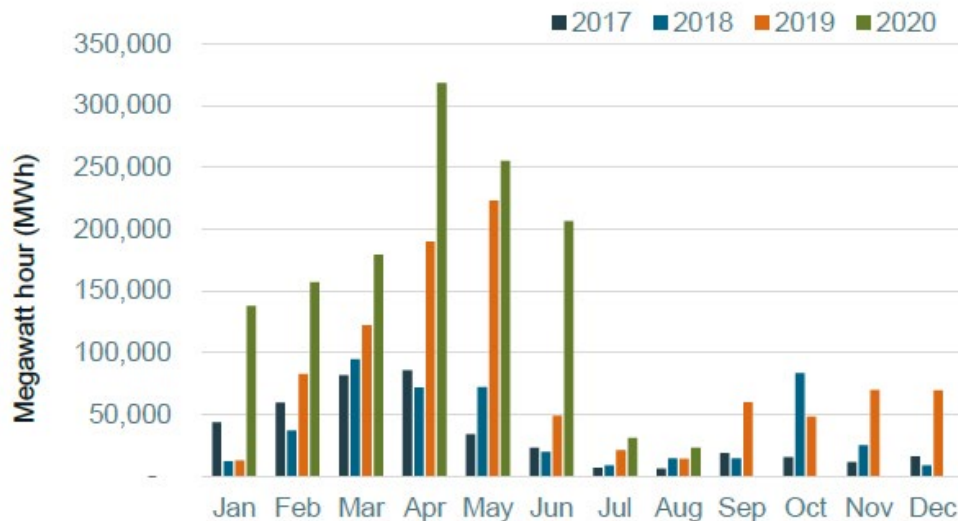
When historians write about the power industry's efforts to reach net-zero carbon emissions decades from now, chances are good that hydrogen will be a big part of the story, speakers told the Energy Bar Association's annual Fall Conference last week.

Hydrogen is currently used in fertilizer, petroleum refining and other industrial applications, as well as in fuel cells for vehicles and on-site power generation. Supporters see it being increasingly used as a fuel for power generation, transportation and energy storage paired with renewable power.

Panel moderator James Bowe, a partner with King & Spalding, told attendees that hydrogen's use as a fuel and storage medium got 21 mentions in first-quarter earnings calls of Uniper and eight other European utilities pioneering the technology. For the companies' second-quarter earnings calls, he said, there were 210 mentions — a tenfold increase. "In a couple of decades, hydrogen could be as important for the world as oil was in the past," Andreas Schierenbeck, CEO of Düsseldorf-based Uniper, said in his company's second-quarter call.

No Longer Just Talk

"The talk around hydrogen is no longer really



At 30% renewable integration, CAISO's peak monthly curtailment exceeds 300,000 MWh. | Mitsubishi Power, using CAISO data

just talk," said Michael Ducker, a vice president with Mitsubishi Power. "We really are making some substantive moves."

In March, Ducker's company — formerly Mitsubishi Hitachi Power Systems — announced the first sale of its hydrogen-capable gas turbines, to Utah's state-owned Intermountain Power Agency. The 840-MW project will use so-called "green hydrogen," which is produced from water through electrolysis with no carbon

emissions — powered by renewable sources.

"This project is under contract, moving forward. And in 2025 this facility will operate on a blend of 30% green hydrogen and 70% natural gas. And by 2045 it will have to operate on 100% green hydrogen," Ducker said. "So, this really represents the world's first true application of green hydrogen at scale supporting the overall integration of renewables — in this case, helping California and parts of Utah achieve their [climate] goals."

Adjacent to the Intermountain power project is a salt cavern with capacity for enough hydrogen to store 150,000 MWh of dispatchable energy. Mitsubishi and partner Magnum Development say it will be the biggest renewable energy storage project in the world.

"To put that in perspective, the entire United States right now has just over 1,000 MWh of lithium ion batteries installed," Ducker said. "So, just with this one project, we have about 150 times the entire installed base of batteries in the U.S. And by the way, we've got upwards of 100-cavern capability at the site."

"This project really encompasses that opportunity to achieve scale, help get costs down and really help drive the value proposition behind bringing hydrogen into the market," he added.

The company recently also announced several gigawatts worth of power projects in employing green hydrogen:



Speaking at the Energy Bar Association's panel "The Future is Hydrogen," were (clockwise from top right): James Bowe, King & Spalding; Buck Endemann, K&L Gates; Michael Ducker, Mitsubishi Power; and Bryn Karaus, Van Ness Feldman. | Energy Bar Association

2020 EBA Fall Conference

- Balico's 1,600-MW Chickahominy Power Project in Virginia; EmberClear's 1,084-MW Harrison Power Project in Cadiz, Ohio; and Danskammer Energy's 600-MW plant in Newburgh, N.Y., will *spend* \$3 billion on Mitsubishi's green hydrogen technology in projects expected to go into operation in 2022 and 2023.
- Entergy will *collaborate* with Mitsubishi on projects in Arkansas, Louisiana, Mississippi and Texas to create hydrogen-capable combined cycle facilities, green hydrogen production powered by Entergy's nuclear fleet and storage and transportation.

"We've been storing hydrogen in salt caverns in the Gulf Coast since the 1980s, and at the scales we're talking about here," Ducker said. "People don't realize we've been doing this already for decades. There's a good reason why: because luckily, we haven't had any incidents."

Comparison with Fuel Cells, Lithium Ion

Hydrogen faces several chief challenges, however. The cost of producing it is currently much higher than the fossil fuels it would replace. In addition, its energy density is lower than natural gas, and efficiency is lost in conversion.

Nevertheless, Ducker said he is confident hydrogen will take a growing role alongside fuel cells, which also convert the chemical energy in hydrogen to electricity without combustion.

And while lithium ion batteries can provide short-duration intraday storage, hydrogen can provide interday and seasonal storage that will be needed to maintain system reliability in an all-renewable world, he said.

California, with 30% renewable integration,

is facing increasing renewable curtailments in the late winter and spring. Yet during a heat wave this summer, the state was hit with rolling blackouts because it was short on energy late in the day. "So, we're literally throwing away energy in the spring and then [in] the summer, we're hitting some of these peak demand periods and shortages of renewables," Ducker said. "We're no longer looking to address the proverbial duck curve. ... This is really starting to signal that we need longer-duration, more seasonal storage capabilities if we're truly going to achieve 100% decarbonized grids and do that affordably and reliably."

Ducker said hydrogen also makes more sense than heavy lithium ion batteries for freight-hauling trucks that travel hundreds of miles daily, quoting one expert: "I can either haul cargo, or I can haul batteries. I can't haul both."

West Coast States

Buck Endemann, a partner with K&L Gates, gave a presentation on West Coast states' regulation of hydrogen in transportation, utility cost recovery and resource planning.

California, Oregon and Washington each have made hydrogen vehicles eligible for zero-emission vehicle funding and rebates.

Oregon in 2019 enacted SB 98, which will allow utilities to add hydrogen infrastructure and the higher cost of the commodity to their rate bases. Washington's Substitute SB 5588 authorized utilities to produce, distribute and sell hydrogen produced from renewable resources.

Washington officials "really want to develop

hydrogen into a long-duration energy storage technology ... to take some of the pressure off of those large hydro[power] plants that Washington relies upon," Endemann said.

He noted that a "high hydrogen" future is one of the three scenarios the California Energy Commission and Public Utilities Commission are considering in their planning toward 2045, along with high electrification and high biofuels.

Bryn Karas, of counsel to Van Ness Feldman, discussed safety regulation of hydrogen operations.

The U.S. has 1,600 miles of low-pressure hydrogen pipelines, most used for industrial purposes. Hydrogen also is transported as a liquid in insulated cryogenic tanker trucks.

Hydrogen gas is regulated under the Pipeline Safety Act and the Pipeline and Hazardous Materials Safety Administration's (PHMSA) Part 192, but the regulations were not written with hydrogen in mind. As a result, Karas said, "there is still significant enforcement risk if the industry does not meet the Part 192 performance standards."

Hydrogen has been found to cause pipeline steel and welds to become brittle. The National Institute of Standards and Technology found that hydrogen pipeline costs could be reduced by allowing higher-strength steel without requiring thicker pipe walls, but this would require changes to industry codes and PHMSA's adoption of those codes into Part 192.

Another puzzle is finding an "odorant" like that used in natural gas to detect leaks before an emergency. There is no known odorant light enough to "travel with" hydrogen, she said. ■

The Hydrogen Palette: Methods used to produce hydrogen

Green	Produced from water through electrolysis with power generated by renewable sources (no carbon emissions)
Blue	Blue: Produced from natural gas with carbon emissions captured (emissions reduced by about 90%)
Pink	Pink and Yellow: Produced using nuclear-generated electricity (no carbon emissions)
Gray	Gray: Produced from natural gas (emissions not captured)
Black & Brown	Black and Brown: Produced from coal and oil

FERC/Federal News



FERC: Send Us Your Carbon Pricing Plans

Could OK but not Initiate CO2 Price

Continued from page 1

pricing decisions,” Glick said in remarks during the commission’s virtual open meeting. “There is an obvious opportunity for consensus here, but we can’t move forward if the commission continues to treat climate change differently than all other environmental impacts.”

Republican Commissioner James Danly dissented in part on the proposal, calling it “unnecessary and unwise.”

Jurisdiction

The statement would assert that the commission has jurisdiction over organized wholesale electric market rules that incorporate a state-determined carbon price and “also seeks to encourage regional electric market operators to explore and consider the benefits of establishing such rules,” FERC said in a press release.

The commission said the Sept. 30 technical conference highlighted the potential benefits of carbon pricing, including “technology-neutral, transparent price signals ... and providing market certainty to support investment.” (See [FERC Urged to Embrace Carbon Pricing](#).)

“As states actively seek to reduce greenhouse gas emissions within their regions, carbon pricing has emerged as an important, market-based tool that has wide support from across sectors,” Chatterjee said in a statement. “The

commission is not an environmental regulator, but we may be called upon to review proposals that incorporate a state-determined state carbon price into these regional markets. These rules could improve the efficiency and transparency of the organized wholesale markets by providing a market-based method to reduce GHG emissions.”

In a teleconference with reporters, Chatterjee rejected the notion that the proposal represented an evolution in his thinking on climate change, saying he has been consistent since he joined the commission: that it is a real and existential threat and human-caused, and that “decarbonization should occur through market-driven” solutions.

FERC defined carbon pricing to include both “price-based” methods that directly establish a price on GHG emissions as well as “quantity-based” approaches under a cap-and-trade system.

The commission noted that 11 states — California and the 10 New England and Mid-Atlantic states in the Regional Greenhouse Gas Initiative — use a form of carbon pricing. PJM, NYISO and ISO-NE are also investigating it.

FERC said regional market rules incorporating a state-determined carbon price are within the commission’s jurisdiction over wholesale rates under Federal Power Act Section 205.

“Whether the rules proposed in any particular

FPA Section 205 filing do, in fact, fall under commission jurisdiction is a determination we will make based on the facts and circumstances in any such proceeding.”

The statement noted that FERC “has long permitted generating resources to recover through wholesale rates the costs of complying with environmental regulations, including the costs of emissions pricing regimes,” citing its approval of the CAISO Energy Imbalance Market’s incorporation of a carbon charge on EIM imports into California.

The commission also cited the Supreme Court’s *EPSA* decision, which said the commission has jurisdiction over practices that “directly affect” wholesale rates as long as it doesn’t cover matters the FPA reserves for exclusive state jurisdiction. The court ruled that FERC’s actions under Order 745, which covers demand response compensation, “meet that standard with room to spare.”

“Because the decision about the carbon price would be determined by the state — which could select a price of zero, should it choose — state authority would be unaffected, further removing any doubt that rules that incorporate such a state-determined carbon price would comply,” the commission continued.

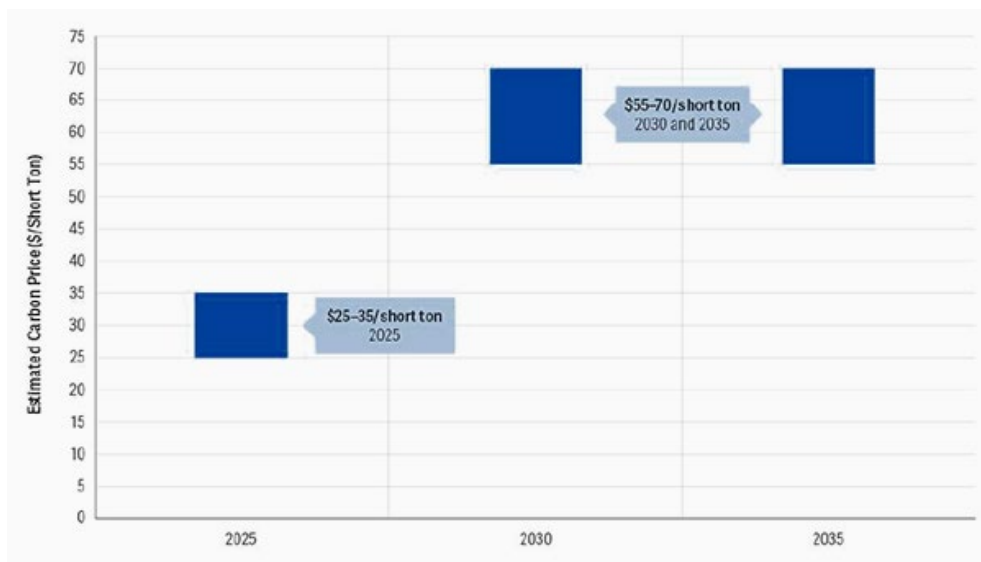
“Incorporating a state-determined carbon price into RTO/ISO markets could represent another example of the type of ‘program of cooperative federalism’ that the court noted with approval in *EPSA*,” FERC said.

Comments Sought

The commission will accept comments on the proposed policy statement until Nov. 16 with reply comments due Dec. 1.

FERC said it seeks comment on what information it should consider when reviewing such a filing, including:

- How do market design considerations change based on how the state or states determine the carbon price? How will that price be updated?
- How does the proposal ensure price transparency and enhance price formation?
- How will the carbon price or prices be reflected in LMPs?
- How will the incorporation of the carbon price affect generation dispatch? Will it



The Analysis Group’s study concluded that New England needs a carbon price of \$25 to \$35/short ton by 2025, rising to \$55 to \$70 by 2030, to meet New England states’ carbon emissions goals. | [Analysis Group](#)

FERC/Federal News



affect how the market co-optimizes energy and ancillary services?

- Does the proposal result in economic or environmental “leakage,” allowing production to shift to more costly generators in other states, without regard to their carbon emissions? How does the proposal address such leakage?

A Marker

Chatterjee said the proposal is a “marker signaling that this commission encourages efforts” to introduce carbon pricing in RTO/ISO markets.

“When it comes to our markets, fuel-neutral carbon pricing stands in stark contrast to other state policy tools, like subsidies, which can amount to hidden costs that degrade market efficiency and skew price signals, ultimately hurting the consumer,” he said. Glick and the chairman have battled over the commission’s orders setting price floors on capacity resources that receive subsidies, including over PJM’s expanded minimum offer price rule (MOPR), which was the subject of a compliance order Thursday. (See related story, [FERC Acts on PJM MOPR Filing](#).)

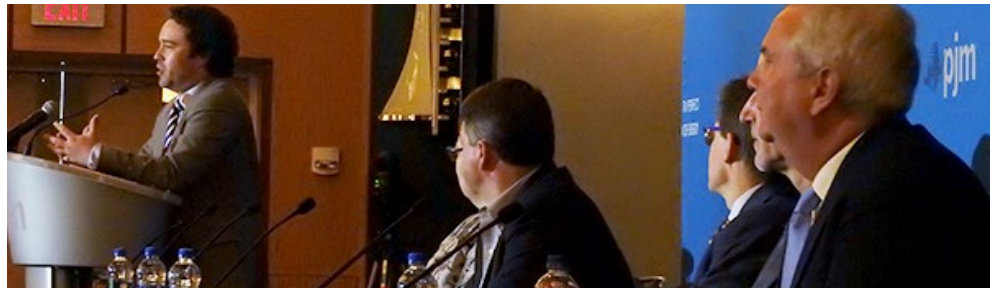
“If states continue to pursue carbon pricing ... they should have confidence that those proposals will be not be a dead letter on our doorstep, confidence that we recognize the benefits that such proposals, if properly designed, could bring to our markets, and confidence that we will bring our pragmatic, market-based lens to this conversation,” Chatterjee continued.

He cautioned that FERC would not take proactive action to set a carbon price, however. “I’ll say it again: The FPA does not give us authority to act as an environmental regulator. We have neither the expertise nor the authority to drive emissions policy in this space. So that is not the objective here today.”

The chairman praised Glick for working with him “to find common ground. It enabled this commission to provide bipartisan leadership and bring clarity to a difficult issue. That’s so crucial here where a broad set of voices have called on us to do just that.”

Danly: ‘Better to Wait’

“It’s better to wait to be in receipt of a plan rather than to issue this kind of a policy statement when we haven’t actually seen the kinds of programs that could be developed or proposed,” Danly said. “It’s certainly premature to opine on jurisdictional questions when we are denied the benefit of actually seeing details of what might be proposed.”



Michael Borgatti of Gabel Associates moderates a 2019 panel discussing carbon pricing possibilities in PJM. | © RTO Insider

He said he concurred in part “because the substance of the policy statement really boils down to little more than an affirmation that utilities still enjoy the rights to file under Section 205 to propose tariff provisions.”

Danly noted that he also dissented on Order 2222 over similar concerns. “There I questioned the commission’s seizure of authority at the expense of the states and advocated that ‘we should allow the RTOs and ISOs ... to develop their own DER programs in the first instance.’ Then the question of the commission’s jurisdiction will be ripe.” (See [FERC Opens RTO Markets to DER Aggregation](#).)

“Without seeing a proposal,” Danly wrote, “the commission predetermines that any such proposal will be within the commission’s jurisdiction and ‘would not in any way diminish state authority.’ That may well turn out to be true, but I would have waited until we had an actual 205 filing before us rather than pre-judging the issue based on unstated assumptions about how such programs might work. It is easy to imagine any number of RTO/ISO carbon-pricing proposals that would violate the Federal Power Act by impermissibly invading the authorities reserved to the states. This policy statement is not, as the majority’s order characterizes it ‘another example of the type of “program of cooperative federalism” that the court noted with approval in *EPSA*.’ There is no program. This is instead a non binding, blanket dismissal of potential jurisdictional concerns.”

Chatterjee and Glick rejected that characterization. “We are proposing a framework for applying our jurisdiction, not ‘pre-judging’ particular matters or pre-emptively ‘dismiss[ing] ... potential jurisdictional concerns.”

Reaction

The American Wind Energy Association and the Electric Power Supply Association — two of the [organizations that urged](#) the commission in April to hold the technical conference — were quick to applaud the commission’s action. (See

[IPPs, Renewable Groups Seek FERC Carbon Pricing Conference](#).)

“An overwhelming consensus emerged at the [FERC technical] conference that carbon pricing in markets is a powerful and cost-effective tool to drive down emissions and achieve state policy goals while preserving the benefits of competition. The policy statement reflects this consensus,” said Amy Farrell, AWEA’s senior vice president for government and public affairs.

“We are pleased to see that FERC is continuing to dig into the challenging but important issue of carbon pricing and seeking to meaningfully advance the conversation,” EPSA CEO Todd Snitchler said. “EPSA supports market-based tools including an [economy-wide or regional price on carbon](#) that would allow all power providers to compete to reduce emissions at the least cost to consumers while meeting reliability needs.”

“This is a constructive signal but has no immediate applicability since it was not adopted as official policy,” said the American Council on Renewable Energy, which was also among the groups seeking the conference. “Unfortunately, however, FERC acted with more force with regard to a compliance filing from wholesale power market operator PJM Interconnection on FERC’s minimum offer price rule order, which imposes new costs on ratepayers to subsidize fossil generation at the expense of more cost-effective renewable power.”

“While we’ll need to see future orders on compliance to determine the precise severity of this action, renewable energy investment decisions in the Mid-Atlantic region are already impacted by the MOPR, and preferential treatment for fossil fuel generators will only grow in subsequent auctions as costs for renewable power continue to decline,” added ACORE CEO Gregory Wetstone. “These policies take us in the wrong direction from where we need to be to address our climate imperatives and grow the renewable energy economy, and are being challenged in court by ACORE and allied groups.” ■

FERC/Federal News



FERC Proposes Updating PURPA Regs for Fuel Cells

By Michael Brooks and Rich Heidom Jr.

FERC on Thursday proposed to include solid oxide fuel cells (SOFCs), a technology commercialized in the last decade, as qualifying cogeneration facilities under the Public Utility Regulatory Policies Act of 1978 (*RM21-2, RM20-20*).

The commission's Notice of Proposed Rulemaking would amend its regulations to add the on-site reformation process of SOFCs as "useful thermal energy output" under PURPA.

FERC issued the proposal in response to a *petition* from SOFC manufacturer Bloom Energy in August. The company said it was not seeking to force electric utilities to buy its output at avoided-cost rates. Rather, it wants to take advantage of PURPA's provisions reducing barriers to entry for new technologies, including exemptions from regulation under the Public Utility Holding Company Act of 2005, exemptions from some Federal Power Act provisions governing rates and financial organization, and access to interconnection.

"It is in Bloom's commercial interest to sell to willing buyers, be they commercial customers, electric utilities or others," said the company, which said it has about 600 installed systems, averaging 600 kW each.

In response to Congress' 2005 PURPA amendments, FERC adopted the "fundamental use test," which 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.

Under that test, "even though a Bloom installation would satisfy the proposed definition of 'useful thermal energy output,' it would meet the other requirements for certification ... only if it did not seek to sell at avoided-costs rates," the company said.

Bloom did not respond to a request for comment on how PURPA status could aid its technology, which it has sold to tech companies such as Apple, AT&T and PayPal to provide backup power for data centers.

The company, which has never generated a profit in 19 years of operation, disclosed early this year that it would be restating its prior

four years' financial statements to reduce revenue by \$192.1 million through Sept. 30, 2019. In an *article* in February, Forbes reported that the company had raised \$1.7 billion of capital, "some of which was raised on the back of false statements."

Power Without Combustion

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 (H₂O) while producing electricity.

SOFC systems that take in natural gas generate hydrogen and electricity by using the steam to reform, or separate, the methane (CH₄). "As a consequence, hydrogen-rich fuel enters the anode side of the fuel cell. Simultaneously, ambient air enters the cathode side of the fuel cell," the company explained. "The hydrogen on the anode attracts oxygen ions from the cathode. The resulting electrochemical reaction produces electricity, plus the heat and steam that is used to continue the reformation of natural gas into fuel."

Innovation Anticipated

The commission noted that in enacting PURPA, Congress did not limit its definition of cogeneration to the combined heat and power technologies in existence at the time. "Due to innovation and development in the last decade, solid oxide fuel cell systems with integrated natural gas reformation equipment are now a viable option for efficient electric energy cogeneration, furthering PURPA's goal of encouraging the innovation and development of cogeneration facilities," it said.

SOFCs can reform multiple fuel types, such as propane or gasoline, to produce their hydrogen fuel. The fuel cells contemplated by FERC's proposal specifically reform methane on-site.

"If the natural gas reformation equipment were instead located off-site, then waste heat (in the form of steam) from the electricity production by the solid oxide fuel cell would not be available to aid the reformation process to fuel the cell," the commission said. "In this off-site reformation scenario, we would expect the external reformation process to require additional natural gas to be burned to create

steam so that the remainder of the input natural gas could be reformed into hydrogen. This would be inefficient, and inconsistent with Congress's goal in enacting PURPA."

Supporters, Opponents

The Edison Electric Institute *opposed* Bloom's petition, arguing that the language of PURPA stipulates that the byproduct energy from cogeneration QFs "must be primarily used for industrial, commercial heating or cooling purposes."

Meanwhile, Democratic Sens. Dianne Feinstein (Calif.), Chris Coons (Del.) and Sheldon Whitehouse (R.I.) *wrote* in support of the petition. "To meet our clean energy goals, reduce risks of climate-induced disasters and create microgrid-enabled systems, a host of new energy efficient technologies are needed," they wrote. "If combined heat and power meets the broad standards of a qualifying facility, we believe it is only appropriate that newer, more modern technologies, such as fuel cells, be designated as qualifying facilities as well."

Comments on the NOPR are due 30 days from its publication in the *Federal Register*.

According to the *Department of Energy*, 95% of the hydrogen produced in the U.S. is made by natural gas reforming in large central plants. It is mostly used for industrial purposes, such as refining petroleum, treating metals, producing fertilizer and processing foods, according to FERC. When the carbon that is emitted from the methane reformation process is captured and stored, the hydrogen produced is called "blue hydrogen."

Last month, DOE *announced* \$34 million in funding for 12 small-scale SOFC projects. ■



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

CAISO/West News

Leadership Changes Continue at CAISO

New COO Position Created, Two VPs Retiring

By Hudson Sangree

The changes at the top of CAISO's executive ladder that began last month with the installation of CEO Elliot Mainzer continued last week, as the ISO announced a new chief operating officer and the retirement of two veteran vice presidents.



Mark Rothleder, CAISO | © RTO Insider

Mark Rothleder, who has been with CAISO since its founding in 1997, will take the newly created No. 2 position as COO under Mainzer, who replaced Steve Berberich. (See [CAISO Retiring, Incoming CEOs Field Questions.](#))

Rothleder currently serves as the ISO's vice president of market policy and performance, a job in which he warned of potential summer shortfalls long before they occurred in August and September as California shifted from its reliance on natural gas to wind and solar. (See [CAISO, CPUC Warn of 'Reliability Emergency'](#).) Previously, a suite of *vice presidents*, including Rothleder, reported directly to the CEO.

Mainzer said in a news release that he looks

forward to teaming up with Rothleder to "meet the company's strategic goal of enabling a reliable transition to a clean energy grid."

"Mark has been with the ISO since its inception, giving him immense and deep knowledge of our organization and the industry," Mainzer said in the statement. "I know Mark will do an outstanding job in his new role as COO."

Rothleder is the ISO's longest-serving employee and previously held positions as executive director of market analysis and development, principal market developer and director of market operations.

"Since joining the ISO 23 years ago, Rothleder has worked extensively on implementing and integrating the approved market rules for California's competitive wholesale energy and reserves markets," the ISO said.

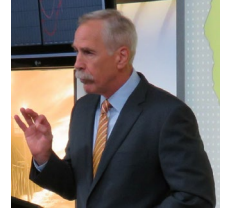


Petar Ristanovic, CAISO | CAISO

CAISO also said that Petar Ristanovic, vice president of technology, and Eric Schmitt, vice president of operations, are retiring at the end of the year.

Ristanovic, who has more than 35 years

of experience in the electric industry, came to CAISO from Siemens Energy Automation, where he served as global innovation manager. Previously he worked at the University of Belgrade's Nikola Tesla Institute of Electrical Engineering, developing and implementing advanced power system applications.



Eric Schmitt, CAISO | © RTO Insider

Schmitt, who also has more than 35 years of experience, oversees California's bulk electric system operations, real-time engineering and market services. Before joining the ISO in 2011, he served as senior vice president at Science Applications International Corp. in Tysons, Va.

"Petar and Eric represent the gold standard in the energy industry, and both were instrumental in shaping the California ISO into the pioneering, modern power grid and electricity market of today," Mainzer said.

CAISO has not announced plans to replace them and did not respond to an inquiry by press time. ■

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CAISO/West News

Can California Meet Its EV Mandates?

CEC Approves \$260M to Boost State's Goal of 100% ZEV Sales by 2035

By Hudson Sangree

The California Energy Commission last week added another \$260 million for electric vehicle charging infrastructure to the state's planned \$2.5 billion investment in transportation electrification over the next decade. Questions remain, however, about whether the state can install enough chargers, sell enough EVs and build sufficient generation, storage and transmission capacity to meet its ambitious goals.

Former Gov. Jerry Brown set a goal in 2018 of putting 5 million zero-emission vehicles (ZEVs) on the road by 2030; Gov. Gavin Newsom issued an *order* Sept. 23 requiring all new passenger cars sold in California to be emissions-free by 2035. (See [Calif. to Halt Gas-powered Auto Sales by 2035.](#))

The funding that the CEC unanimously approved Wednesday is part of its 2020-2023 update to its Clean Transportation Program. "I'm pretty excited about this investment plan, and I think it really aligns well with the governor's executive order to set a course for 100% zero-emissions vehicles in the next 15 to 25

years," Commissioner Patty Monahan said.

California currently has more than 725,000 electric vehicles and accounts for half of the nation's EV sales, yet it remains far from Brown's 5 million target, let alone meeting Newsom's mandate.

1M+ Chargers

At Wednesday's CEC meeting, Patrick Brecht, manager of the Clean Transportation Program, told commissioners that California still needs to install about 188,500 level 2 chargers in the next five years to reach the 250,000 that Brown ordered the state to install in public settings, workplaces and apartment complexes by 2025.

State agencies have allocated funding for about two-thirds of the chargers, including \$1 billion for investor-owned utilities to install charging infrastructure and \$800,000 from a settlement with Volkswagen over its diesel-emissions scandal. That still leaves a funding gap for nearly 67,000 units, Brecht said.

Closing the funding gap could leave the state



California Gov. Gavin Newsom ordered all new cars sold to be zero-emission vehicles by 2035. | © RTO Insider

with less than a quarter of the more than 1 million public chargers it may need to achieve its ZEV ambitions, according to the National Renewable Energy Laboratory (NREL).

In August, NREL research engineer Eric Wood told the CEC that if the state has 5 million EVs by 2030, it will need up to 1.15 million charging spots, including as many as 300,000 level 2 chargers for apartments, 358,000 chargers at workplaces and 413,000 chargers in locations such as shopping centers and movie theaters. (See [California Needs Huge Number of EV Chargers.](#))

Additionally, NREL estimates that millions of future EV owners will likely need to purchase fast chargers for their homes.

Selling enough EVs also remains a problem. Automakers need to double the pace of EV sales to deliver 5 million by 2030, the California Air Resources Board (CARB), which regulates vehicle emissions, told the CEC in August.

At the time, five weeks before Newsom's order, CARB presented a scenario in which all vehicles sold in the state would be EVs or plug-in hybrid vehicles by 2035, calling it an unlikely "extreme sales trajectory."

'You Can't Even Keep the Lights On'

Procuring sufficient electricity to meet charging demand may be another obstacle to Newsom's order.

California experienced energy emergencies in August and September, and CAISO anticipates



| EVgo

CAISO/West News



capacity shortfalls through summer 2023. The state is waiting for hundreds of thousands of megawatts of battery storage to come online in the coming years as it attempts to transition from its reliance on natural gas to wind and solar generation.

Load-serving entities are required to serve retail customers with 100% carbon-free energy by 2045 under Senate Bill 100.

After the governor’s order, EPA Administrator Andrew Wheeler wrote to Newsom questioning his decision.

“Your state is already struggling to maintain reliable electricity for today’s demands,” Wheeler said. “California’s record of rolling blackouts – unprecedented in size and scope – coupled with recent requests to neighboring states for power begs the question of how you expect to run an electric car fleet that will come with significant increases in electricity demand when you can’t even keep the lights on today.”

Others have expressed concerns about whether California can supply enough energy to charge so many EVs.

The U.S. Department of Energy asked its Pacific Northwest National Laboratory (PNNL) to study the impacts of a large influx of EVs on the bulk electric system.

In October 2019, PNNL staff scientist Michael Kintner-Meyer presented preliminary findings at Infocast’s EVs and the Grid forum in Los Angeles. Kintner-Meyer said EV owners could either soak up the state’s abundant solar power in the daytime by charging at work or further strain the grid by charging their vehicles at home during peak demand in the late afternoon and early evening.

The shortages in August and September occurred in the early evening hours. CAISO calls

the period the net demand peak time, when solar drops offline but demand remains high during heat waves. That time, around 7 p.m. in summer, is also called the neck of the duck in California’s “duck curve” load profile.

“Early-morning charging is beneficial for [California’s] duck curve, [but] coming home and plugging in for California is really detrimental,” Kintner-Meyer said at the Infocast summit.

In its *final report* released in July 2020, the PNNL team said the Western Interconnection likely will have sufficient resources to accommodate 9 million EVs by 2028 even if most people charge their cars immediately after getting home from work.

The study assumes normal operating conditions including weather – not the extreme heat events the West experienced in August and September.

Natural gas plants throughout the West, plus battery storage in California and hydropower in the Northwest, can probably provide sufficient energy under normal conditions to meet the additional peak demand from EVs, the authors found.

Transmission constraints into California, however, could prevent load centers such as Southern California from meeting EVs’ additional demand, the report said.

“At the maximum number of [light-duty vehicles], the authors found transmission congestion to be the limiting factor, which means that there are some available power plants in the WECC, but the electric power could not be delivered to the load centers because of transmission limitations,” it said. “The largest transmission congestions were in California.”

Constraints on transmission pathways into California played a role in the August and Sep-

tember shortages, CAISO found. (See *CAISO Says Constrained Tx Contributed to Blackouts.*)

Solar ‘Overbuild’ Needed

While the NPPL study said solar plus batteries could meet EV charging demand, CAISO leaders have warned that far more renewable generating capacity in addition to the current excess solar may be needed to charge batteries to meet evening peaks.

After the August blackouts, then-CAISO CEO Steve Berberich said that to avoid outages, the state needs 12,000 MW of battery storage and an “overbuild” of solar and wind generation to charge them. California currently has 200 MW of battery storage.

Resource planning, Berberich said, “must be reformed so that every hour of the year is properly resourced.”

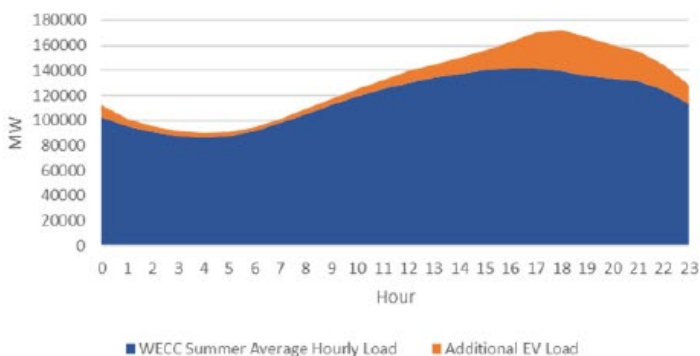
CAISO spokeswoman Anne Gonzales said the trio of organizations responsible for grid planning must still determine what upgrades Gov. Newsom’s order will require.

“The governor’s order requiring new vehicles to be zero-emission beginning in 2035 will require a high level of analysis and collaboration among state agencies, load-serving entities and stakeholders,” Gonzales said in an email.

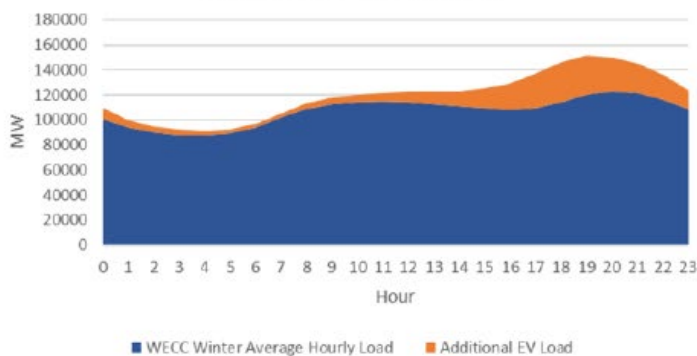
The California Public Utilities Commission assesses capacity needs and orders procurement by IOUs. The CEC forecasts long-term energy demand. And CAISO incorporates the information into its transmission planning process.

“We will continue our coordination with the state to ensure that these needs are factored into load forecasting and resource planning decisions, and then considered in transmission planning,” she said. ■

2028 WECC Average Summer Daily Load Profile with 24 Million EV (HHND)



2028 WECC Average Winter Daily Load Profile with 24 Million EV (HHND)



Charts from the DOE study show increased EV demand for WECC in summer and winter. | PNNL

CAISO/West News

CAISO Fund Distributions Cleared by FERC

FERC on Thursday approved CAISO's procedure for distributing more than \$2 million in penalty proceeds and nonrefundable interconnection study deposits to its members (ER20-2604).

CAISO's Tariff requires it to collect penalties for violations of its rules of conduct and deposit them in an interest-bearing trust account. At the end of each calendar year, CAISO distributes the proceeds, with accrued interest, to eligible market participants based on a formula that factors in the pro rata share of the grid management charge paid to the ISO by each participant. The Tariff also requires CAISO to seek FERC's approval for any disbursements of penalty proceeds, which totaled \$622,500 in 2019.

"The methodology in CAISO's proposal is consistent with relevant provisions in its Tariff for allocating and distributing penalty proceeds to scheduling coordinators," FERC found.

CAISO had also petitioned FERC for permission to distribute \$1,452,574.98 in nonrefundable interconnection study funds for projects interconnecting to Southern Cali-



CAISO headquarters in Folsom, Calif. | © RTO Insider

fornia Edison's distribution system. The ISO noted the funds would be allocated to market participants without accounting for whether a participant had been assessed a financial penalty over the course of the year.

FERC determined that the methodologies in CAISO's proposal were consistent with its Tariff. The commission concluded that "our decision to grant the petition is consistent with

the commission's disposition of prior CAISO filings where it proposed to distribute forfeited interconnection study funds with interest ... without accounting for whether or not a scheduling coordinator had been assessed a financial penalty under section 37 or Tariff during the relevant calendar year." ■

— Robert Mullin

FERC Partly Reverses Ruling on PG&E Tx Rates



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In a 142-page ruling Thursday, FERC partly affirmed an administrative law judge's decision on Pacific Gas and Electric's proposed increases to its transmission rates, reversing the judge on the utility's cost of long-term debt and other issues (ER16-2320).

The commission directed further briefing on PG&E's return on equity and told the utility to recalculate its tariff rates based on the ROE and other factors.

PG&E filed its 18th revised transmission owner tariff in July 2016, which was followed by numerous objections. After an evidentiary hearing, the judge ruled in October 2018 on 11 disputed categories including ROE, capital structure and depreciation rates.

The judge found PG&E's forecasted cost of long-term debt to be unreasonable, ordering it be reduced, and lowered its ROE from a proposed 10.4% to 9.13%, which the company said was too low and objecting parties said was too high. ■

— Hudson Sangree

CAISO/West News

FERC Sides with PSCo in Co-op Dispute

By Robert Mullin

A set of longstanding agreements do not obligate Xcel Energy's Colorado utility subsidiary to provide an electric cooperative with priority firm transmission service to deliver energy from two third-party suppliers, FERC affirmed Thursday (EL20-14-001).

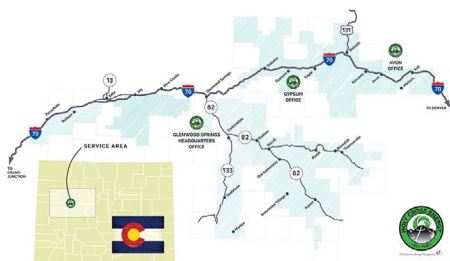
The commission's ruling on rehearing stemmed from a dispute between Xcel's Public Service Company of Colorado (PSCo) subsidiary and Glenwood Springs-based Holy Cross Electric Association, a co-op that serves about 55,000 customers in Eagle, Pitkin, Garfield, Mesa and Gunnison counties.

Holy Cross entered into two power purchase agreements with the Arriba (wind) and Hunter (solar) projects and asked PSCo to provide it with firm transmission service to deliver the contracted energy under a grandfathered transmission agreement between the companies — and not under PSCo's Open Access Transmission Tariff.

In December 2019, PSCo asked FERC to rule that Holy Cross' requests are not permitted under the companies' power supply agreement, transmission integration and equalization (TIE) agreement, or operating agreement for economy — or non-firm — energy purchased by the co-op.

The power supply agreement stipulates that Holy Cross will purchase its full requirements from PSCo but that it may purchase economy energy from third-party suppliers. The TIE agreement lays out the terms under which PSCo and Holy Cross have agreed to operate their respective transmission networks as one system, with PSCo serving as the operator. The operating agreement sets out the procedures for scheduling and accounting for economy energy purchased by Holy Cross.

On March 31, FERC ruled that Holy Cross was not entitled to firm transmission service



Holy Cross Electric serves 55,000 customers in western Colorado. | Holy Cross Electric

from PSCo under the agreements, concluding that the co-op's capacity on the integrated system is limited to its load ratio share and that the additional firm service would exceed that share. The commission also pointed out that PSCo is not obligated to treat economy energy purchases as firm deliveries entitled to NERC's highest curtailment priority.

On April 30, Holy Cross filed a request for rehearing and a conditional request for clarification of the March order. The co-op contended that the TIE agreement is governed by Colorado law, which holds that "written contracts that are complete and free from ambiguity will be found to express the intention of the parties and will be enforced according to their plain language." Holy Cross added that Colorado legal precedent holds that, in contract disputes, parol evidence (that is, oral evidence from outside the actual contract) is only permitted when a contract is ambiguous, and that "a contract's silence does not necessarily invite the introduction of parol evidence to clarify intent."

Holy Cross contended that FERC's March order provided no evidence that the TIE agreement is ambiguous, and it challenged the commission for using the power supply and operating agreements as parol evidence to interpret the TIE agreement, which it argued is separate from the other two agreements.

The co-op also contended "that the load ratio share capacity entitlement under the TIE agreement cannot reasonably be construed as limited to Holy Cross' purchases from PSCo because the 'detailed and unambiguous wording' of the TIE agreement shows that Holy Cross' 'load ratio share capacity rights are a function of its native load and not any specific Holy Cross resource, including the power supply agreement,'" FERC noted.

'Untenable'

The commission brushed aside that argument, calling it "untenable." The issue at hand, the commission said, "is whether Holy Cross is entitled to firm transmission service for certain third-party purchases, which requires an analysis of the TIE agreement, power supply agreement and the operating agreement." The commission had properly considered the rights of both parties under the three agreements without resorting to use of parol evidence, it said.

"In interpreting the term 'load ratio share' under the TIE agreement, the commission appropriately cited the definition in section 1.9 of

that agreement, which references the method for calculating load ratio share in Appendix A, provision 6, to conclude that Holy Cross' load ratio share is based on its requirements demands," FERC wrote. "The commission did not look to any agreement other than the TIE agreement in interpreting the term 'load ratio share'; nor did the commission look outside the TIE agreement to determine Holy Cross' transmission capacity entitlement under the TIE agreement."

While the TIE agreement lays out Holy Cross' transmission entitlement, it does not address the question of whether the co-op's request for additional firm service fits within that entitlement, the commission said. To make that determination, FERC examined the power supply agreement, which requires Holy Cross to purchase its full requirements from PSCo with exceptions made for economy energy.

"That Holy Cross is currently required to purchase its full requirements from PSCo is based on Holy Cross' obligations under the power supply agreement and is not, as Holy Cross contends, an interpretation of the term 'load ratio share' under the TIE agreement," FERC said. "Rather, given that Holy Cross' load ratio share of the integrated transmission system is based on its requirements demands, and it is currently required by the power supply agreement to purchase its full requirements from PSCo, it necessarily follows that Holy Cross' firm transmission capacity entitlement is being used to serve the full requirements of Holy Cross' load, and that 'for Holy Cross to obtain firm transmission service to receive power from the Arriba and Hunter projects, Holy Cross would require transmission capacity that is in excess of its load ratio share of the capacity of the integrated system."

The commission additionally rebuffed Holy Cross' contention that the March order prevents the co-op from using its rights under the TIE agreement on a basis comparable to PSCo. Holy Cross argued that the TIE agreement embodies FERC's "golden rule" of comparability, which prohibits either party from making "adverse distinctions" about the other party's use of an integrated transmission network.

"This argument ... incorrectly presumes that the TIE agreement is the equivalent of an open access transmission tariff, which it is not," the commission said. "As PSCo explained in its petition, the TIE agreement is a grandfathered transmission service agreement that predates Order No. 888." ■

ERCOT News



ERCOT Board of Directors Briefs

Board Approves 2 Sets of Price Corrections

ERCOT staff last week promised to reduce price corrections before asking the Board of Directors to approve a pair of them for two unrelated events.

“Our goal is always to have zero errors,” Kenan Ögelman, ERCOT’s vice president of commercial operations, told directors during their meeting Oct. 13. “We’re kind of redoubling our efforts to get to that point, because errors that lead to price corrections are disruptive.”

Ögelman said a staff monitoring group will review system design changes, “the last line of defense to make sure we’ve got this right,” and staff will ensure business practices are in line with industry best practices. Manual processes will go through a “more rigorous change-control process” and external data will be validated, he said.

ERCOT will also work with stakeholders to reduce price-correction requests to the board by “better defining ‘significance,’” the only threshold for determining which market errors require board-approved corrections. Ögelman said staff will likely bring to the board protocol language that tightens the threshold on what level of errors require price corrections in the future.

“We know how disruptive changes to the day-ahead market might be,” he said.

At issue are two unrelated events that affected

25 operating days. A staffer incorrectly applied dynamic ratings to three transmission transformers in the system model that affected 21 day-ahead operating days and one real-time operating day. Another modeling error affected three operating days in August. (See “Staff Promise Action to Reduce Errors Causing Price Corrections,” *ERCOT Technical Advisory Comm. Briefs: Sept. 23, 2020.*)

The board unanimously approved all of the price corrections, agreeing with staff’s recommendation that the prices had been “significantly affected by an error.”

“If we want to change the policy on a forward basis, that’s fine,” said Oncor’s Mark Carpenter, representing the Investor-Owned Utilities segment. “There’s no reason to go against ERCOT’s recommendation.”

Unaffiliated Director Peter Cramton agreed with the need for a strong policy, saying price corrections are not good, but that “the reality is there will be errors occasionally.”

“Think about glassware. There are times you drop the glass and it shatters into a million pieces. Too bad, but the reaction shouldn’t be, ‘Let’s reassemble the glass.’ No, you clean it up,” Cramton said. “The reality is, you can’t turn the clock back ... minimize the presentation of the broken glass on the floor to the board.”

Directors Reject DC Tie Appeal

The board rejected an appeal of a previous revision to the Planning Guide clarifying that the

transmission planning analysis will assume DC tie flows are curtailed when necessary to meet reliability criteria (*PGRRO77*). (See “TAC Adds 10 Change Requests to List,” *ERCOT Technical Advisory Comm. Briefs: Sept. 23, 2020.*)

Rainbow Energy Marketing’s Shams Siddiqi appealed the decision for fairness and equity reasons, saying DC tie loads pay more than their fair share of transmission cost of service (TCOS) charges. The current \$23/MWh TCOS for exports during summer off-peak hours is a significant barrier to exporting energy and suppresses the market’s opportunity to address the allocation of sunk costs, he said.

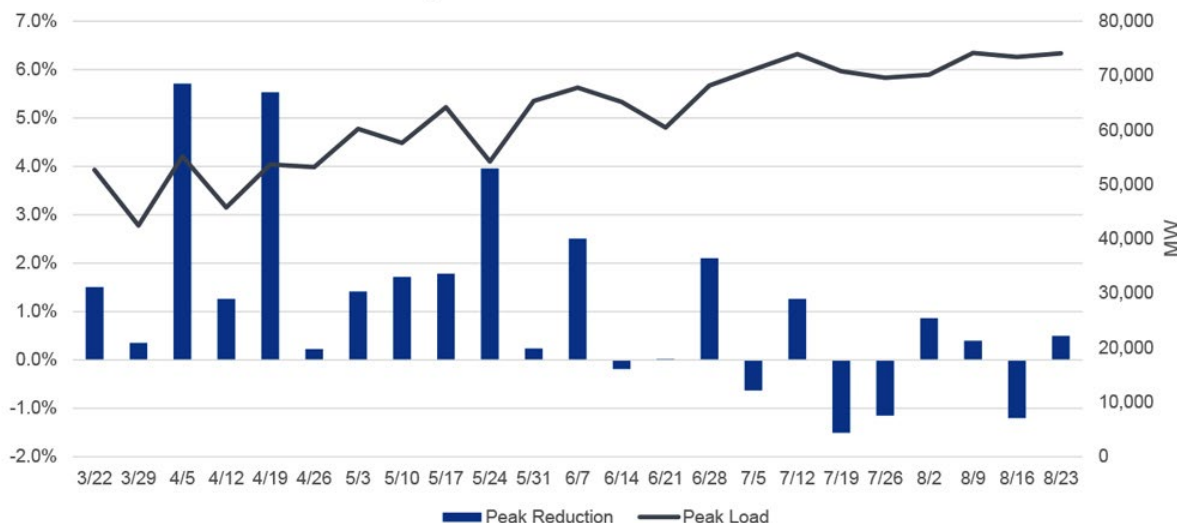
“This only makes sense if DC tie load is not allocated any TCOS,” Siddiqi said.

The directors were unswayed and voted unanimously to reject the appeal.

The board also unanimously approved a Nodal Protocol revision request (NPRR) and an Other Binding Document revision request (OBDRR) brought forward by the Technical Advisory Committee:

- **NPRR984:** changes the number of emergency response service standard contract terms from three to four per program year to align the terms with typical seasonal conditions and improve ERS’ procurement.
- **OBDRR023:** revises ERS’ procurement methodology to match NPRR984’s protocol changes.

Weekly Peak Reduction and Actual Load



Demand in ERCOT’s footprint has returned to normal since the COVID-19 shutdowns began. | ERCOT

ERCOT News



Summer Demand Short of Record Peak

ERCOT sailed through the summer without setting a new systemwide peak or declaring energy emergency alerts, staff *said*, despite Texas undergoing its seventh-hottest summer on record since 1895.

The grid operator reached its peak of 74.4 GW on Aug. 13, falling short of its pre-summer expectations of 75.2 GW and its all-time mark of 74.8 GW, set last August. The grid did set a new peak for July when demand hit 74.3 GW on July 13.

Dan Woodfin, senior director of system operations, said the pandemic's effects on demand were most noticeable in April, but demand had returned to normal by the end of summer.

The Texas grid operator had about 4 GW of additional installed wind capacity and 2.1 GW of additional solar capacity going into the summer than it did in 2019. Wind energy accounted for 23.3% of its fuel mix in June but dropped down to 15.8% in August, as typically occurs.

The Independent Market Monitor's executive director, Carrie Bivens, said real-time settlement prices peaked at nearly \$120/MWh in August. The operating reserve demand curve, which provides a price adder during tight conditions, was responsible for about 9% of the increase. Real-time prices stayed below \$30/MWh in June and July, she said.

Con Ed CEO Nominated to Board

Former Consolidated Edison CEO Craig Ivey has been nominated for the third vacant seat on the ERCOT board, Chair Craven Crowell said. His nomination will be presented to members during their virtual annual meeting in December.

Members in June approved the nominations of Michigan Public Service Commission Chair Sally Talberg and retired ISO-NE General Counsel Ray Hepper to the board. The selections must also be approved by the Texas Public Utility Commission. (See "Members Approve Unaffiliated Directors' Noms, Bylaw Amendments," *ERCOT Briefs: Week of July 6, 2020*.)

"Chair Crowell has told me several times [that] getting this done was the job he really wanted to complete before leaving ... to put us in good stead for the future," ERCOT CEO Bill Magness said.

Crowell is stepping away from the board in January after eight years at its helm.

Near Unanimous Consent Agenda

The board came close to unanimously approving its consent agenda, which included seven NPRRs and a system change request. The city of Dallas' Nick Fehrenbach, representing the Consumers segment, voted against NPRR1038.

- **NPRR999**: revises protocol language on DC tie schedules and creates a section related to ramp limitations on DC ties. It is intended to clarify that when ERCOT determines system conditions show insufficient ramp capability to meet the sum of all DC ties' scheduled ramp, it will curtail schedules on a last-in, first-out basis. Before curtailing DC tie schedules, ERCOT, with enough time, may request one or more qualified scheduling entities to voluntarily resubmit e-tags with an adjusted ramp duration.
- **NPRR1027**: removes gray-boxed language from the protocols related to **NPRR702** (Flexible Accounts, Payment of Invoices, and Disposition of Interest on Cash Collateral) following the elimination of prepay accounts.

- **NPRR1033**: specifies that ERCOT does not have an obligation to pay interest on former market participants' cash collateral balances upon its determination that financial security is no longer needed to cover the terminated participant's potential future obligations.
- **NPRR1035**: requires ERCOT to publish all DC tie schedules 60 days after the operating day.
- **NPRR1036**: clarifies some processes associated with late payments and payment breaches and aligns protocol language on market participants' registration and qualification with language in the standard form market participant agreements.
- **NPRR1037**: corrects switchable generation resources' (SWGRs) settlement when instructed to switch from a non-ERCOT control area to the ERCOT control area.
- **NPRR1038**: establishes a limited exemption from reactive power requirements for some energy storage resources (ESRs). The exemption is available only to an ESR that achieved initial synchronization before Dec. 16, 2019, and applies only to the extent the resource is unable to comply with the reactive power requirements when it is charging. To qualify, the ESR's operator must submit a notarized attestation to ERCOT that says the ESR would be unable to comply with the requirements without making physical or software changes.
- **SCR811**: adds a predicted five-minute solar ramp to the resource-limit calculator's formula for calculating the generation-to-be-dispatched value. The solar ramp rate will be calculated from the intra-hour PV power forecast and the short-term PV power forecast. ■

— Tom Kleckner

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ERCOT News



Texas Public Utility Commission Briefs

PUC Approves El Paso Electric Gas Plant

Texas regulators last week approved El Paso Electric's request to build a gas-fired generator that has drawn opposition from the city and local environmentalists.

During its open meeting Friday, the Texas Public Utility Commission *amended* a certificate of convenience and necessity for an additional generating unit at EPE's Newman Generating Station at a cost of \$157.6 million. The unit, with a nameplate capacity of 228 MW, will allow the utility to retire three older gas-fired units, with a total capacity of 196 MW, that date back to the Eisenhower administration (50277).

Based on its load forecasts, expected generation retirements and reserve margin criteria, EPE said it will need additional capacity with about 50 MW of daily cycling ability by 2022 and 320 MW by 2023. The utility plans to supplement the plant with three power purchase agreements for solar power, storage and solar-plus storage.

The project also needs approval from the New Mexico Public Regulation Commission, which is expected to take up the matter in November. EPE serves Las Cruces and other portions of the state.

The city *contends* that the new unit is a financial risk during an uncertain time and would increase customer bills. Environmental groups say EPE has overlooked less costly and risky alternatives, given new state law in New Mexico that requires the utility to supply 100% of its power to the state's customers from carbon-free sources by 2045.

Small Munis' Appeal Rejected

The PUC rejected eight small municipal utilities' appeal of ERCOT's definition of transmission operator, saying the grid operator's Board of Directors was right to scuttle the measure (48366).

"I think the ERCOT board handled this correctly," Commissioner Arthur D'Andrea said.

The Small Public Power Group (SPPG) — comprising utilities for the cities of Bartlett, Bridgeport, Farmersville, Goldsmith, Hearne, Robstown, Sanger and Seymour — was appealing the 2018 defeat of a proposed change to ERCOT's Nodal Operating Guide that would have required every transmission or distribution service provider to either register as a TOP or designate a representative on its behalf.



EPE's Newman Generating Station | El Paso Electric

The SPPG developed the revision request in 2015 to settle the noncompliant status of municipally owned utilities with loads of 9 to 21 MW. (See "Small Public Power Group's Appeal Again Meets Defeat," *ERCOT Board of Directors Briefs*: April 10, 2018.)

Denton Utility Called in for Rate Case

The commission *ordered* Denton Municipal Utility (DME) to file a rate case by November 2021 as it provided notice it will conduct an inquiry into the reasonableness of the municipality's wholesale transmission rates.

The action came after a staff review of the 2019 year-end earnings reports (50655).

Staff recommended the PUC require the rate case based on DME's 28.05% rate of return, the 15 years it has been since a review of the utility's wholesale transmission costs and revenues, and the city's growth in revenue and rate-base levels during that time.

"The city has been overearning significantly and has been for a while," PUC Chair DeAnn Walker said.

Terry Naulty, DME's assistant general manager, said the utility's population in 2005 was 60% of what it is now (142,000, based on U.S. Census projections). The growth has required DME to upgrade its mostly 69-kV infrastructure to 138 kV, he said.

"Denton believes its investments in the ERCOT transmission grid, which were predominately made from 2014 to 2019, were prudently necessary," Naulty said. "They avoided congestion expense to not only Denton, but the regional [cooperatives] as well."

In other actions, the commission:

- approved Entergy Texas' request to amend its distribution cost recovery factor revenue requirement to \$19.5 million (50714) and its application to adjust its 2021 energy efficiency cost recovery factor (EECRF) to \$9.4 million (50803);
- consented to CenterPoint Energy's request to adjust its 2021 EECRF to \$48.8 million (50908); and
- signed off on staff's settlement with Mozart Wind, requiring the generator to pay a \$48,000 administrative fee. Mozart was dinged for failing to maintain its voltage within 2% of its voltage set point while operating at less than its maximum reactive capability for 783 operating hours (51050). ■

— Tom Kleckner



DeAnn Walker leads the Texas PUC's Oct. 16 open meeting. | Texas PUC

ISO-NE News

States Demand 'Central Role' in ISO-NE Market Design

'Lack of Transparency' Criticized

Continued from page 1

convene a "collaborative process" with states and other stakeholders in 2021 to consider changes to its mission statement and governance structure "to achieve greater transparency around decision-making, a needed focus on consumer cost concerns and support for states' energy and environmental laws."

It noted that the RTO's mission statement, contained in its *Tariff*, "has no explicit relationship to or recognition of the need for consumer cost-consciousness."

It also criticized the makeup of ISO-NE's Joint Nominating Committee, which selects the RTO's board members. The committee comprises seven incumbent board members, six market participants — one from each of NEPOOL's sectors — and only one shared vote for the six New England states.

"This one-vote-for-six-state governments may have been comfortable in the late 1990s, when regional planning and markets had relatively marginal interaction with the requirements of state laws," NESCOE said. "Today, it merits a relook."

The statement includes repeated references to the RTO's "lack of transparency," which it says "undermines public confidence" in the organization. Neither ISO-NE board meetings nor NEPOOL stakeholder meetings are open to the public.

States and stakeholders only see "exceptionally high-level summaries of board discussions provided by ISO-NE management. This results

in an unacceptable constraint on facilitating independent insight and review by stakeholders about what data, material and other resources the board considers in developing its guidance to management and how it balances divergent interests in their decision-making."

NESCOE said the states and stakeholders should use the months before 2021 to consider best governance practices of other grid operators, but it added that the states "welcome any immediate actions by ISO-NE to address these or other governance issues that are within its discretion to provide greater transparency and accountability."

While the boards of PJM and NYISO also meet privately, NEPOOL is the only RTO/ISO stakeholder body in the U.S. whose meetings are not open to the public.

ISO-NE spokesman Matt Kakley said in a statement to *RTO Insider* that "we have reviewed the NESCOE vision statement and look forward to speaking with the states on these issues."

The states and NESCOE will hold a series of online technical conferences this fall that will be open to the public to discuss the vision statement and solicit input. "The states intend to report to their respective governors in the first quarter of 2021 on findings and recommendations for action steps to advance this vision," NESCOE said.

Market Design, Transmission Planning

NESCOE said the region needs a new "market framework" that meets states' decarbonization mandates and maintains resource adequacy at the lowest cost using market-based mecha-

nisms. It also must accommodate states' long-term contracts for clean energy resources, integrate distribution-level resources efficiently and give states "the central role" in designing the market.

On Thursday, FERC proposed a policy statement inviting states to introduce carbon pricing in wholesale electricity markets. (See related story, *FERC: Send Us Your Carbon Pricing Plans*.)

The states acknowledged the ongoing discussions around potential market changes, such as the proposed Forward Clean Energy Market (FCEM), which it said "may be one way" to support clean generation resources to meet their carbon-reduction laws.

New England ratepayers have seen escalating transmission charges — rising from \$869 million in 2008 to \$2.4 billion in 2019 — and will need to fund additional infrastructure to deliver onshore and offshore wind energy to load centers and facilitate distributed energy resources, NESCOE said.

It called for "a comprehensive long-term regional transmission planning process," saying the RTO "currently does not conduct a routine transmission planning process that helps to inform all stakeholders of the amount and type of transmission infrastructure needed to cost-effectively integrate clean energy resources and DERs."


It also recommended the RTO develop "multiple future resource scenarios (e.g., three to four) as the basis for assessing future regional transmission needs [using] identified time frames (e.g., 2030, 2040 and 2050)." ■



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ISO-NE News

New England Governors Call for RTO Reform

ISO-NE Market Design, Transmission Planning, Governance Criticized

By Jason York

The governors of Connecticut, Maine, Massachusetts, Rhode Island and Vermont released a *joint statement* Wednesday calling for reforms to ISO-NE, saying the RTO is frustrating their efforts to reduce economy-wide greenhouse gas emissions.

“Here in Rhode Island, we’re committed to reducing our greenhouse gas emissions and decarbonizing our future. I’m proud that we’re on track to achieving 100% renewable energy by 2030,” Rhode Island Gov. Gina Raimondo (D) said. But “in order to meet our shared clean energy goals and aggressively combat climate change, it’s clear we need to take a regional approach.”

The statement — signed by Raimondo, Con-

necticut Gov. Ned Lamont (D), Maine Gov. Janet Mills (D), Massachusetts Gov. Charlie Baker (R) and Vermont Gov. Phil Scott (R) — calls for reforms to ISO-NE’s market designs, transmission planning process and governance. New Hampshire Gov. Christopher Sununu (R) did not join in the statement.

A document outlining specific areas for reform will be released this week through the New England States Committee on Electricity (NESCOE).

The governors said ISO-NE’s market design is “misaligned” with the states’ clean energy mandates and “fails to recognize the full value of our states’ ratepayer-funded investments in clean energy resources.”

They also said it lacks “a proactive transmission planning approach” to facilitate the increase in

renewable and distributed resources.

Finally, they criticized the RTO’s governance structure, saying it “is not transparent to the states and customers it serves, with a mission that is not responsive to states’ legal mandates and policy priorities.” Unlike the other FERC-regulated grid operators, meetings of New England’s stakeholders, run by NEPOOL, are closed to the public.

“We have received the governors’ statement and look forward to engaging with the states and our stakeholders on these issues,” ISO-NE spokesman Matt Kakley said in response. “ISO New England, the New England states and market participants have a long history of working together to tackle the challenges facing the power system, and we expect that to continue.

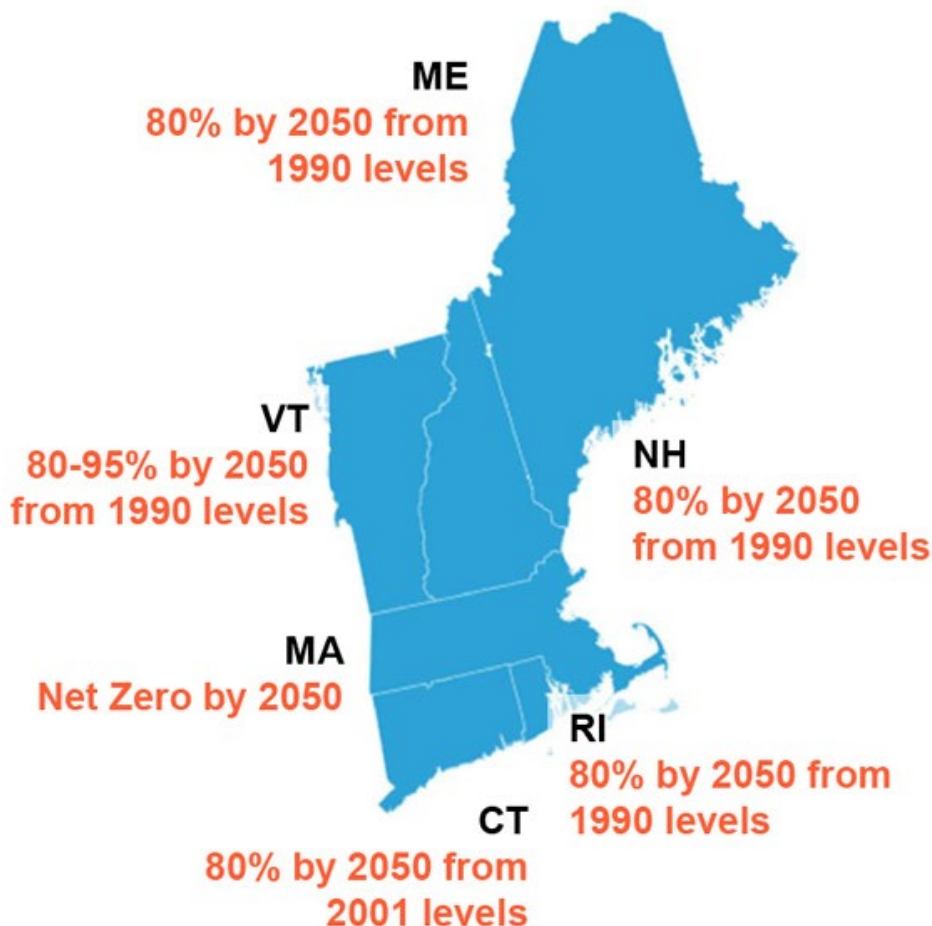
“Maintaining reliable, competitively priced electricity through the clean energy transition will require broad collaboration, and the common vision of the New England governors will play an important role in the discussions currently underway on the future of the grid. We appreciate the New England governors sharing their regional vision to achieve a shared clean energy future and reaching out to ISO New England to help them achieve their goals.”

The governors’ statement is the latest evidence of increasing frustration by the states. (See *Dykes Calls out ISO-NE, FERC on Carbon Pricing.*)

Their attack on ISO-NE’s market design is also an implicit criticism of FERC’s regulation, which state officials say have hamstrung the ability of state-subsidized resources to compete in the capacity market. In March, ISO-NE CEO Gordan van Welie responded to criticism by several members of New England’s U.S. Senate delegation by backing carbon pricing but saying state officials need to signal their support before the RTO could act. (See *ISO-NE: States Must Lead on Carbon Pricing.*)

Each of the governors weighed in with their concerns.

“When Connecticut deregulated our electricity sector, we were promised competition, lower risk for ratepayers, more affordable electricity and a system that respects and accommodates our clean energy mandates,” Lamont said. “What we got is a system that has actively hindered our efforts to decarbonize the grid and imposed burdensome costs on



Mid-century economy-wide GHG emission reduction targets in New England | E3/EFI

ISO-NE News



Connecticut ratepayers to fix market design failures. Working together with our neighboring states, I'm committed to achieving a regional electricity grid that provides the affordable, clean and reliable electricity that Connecticut families and businesses deserve."

Added Mills: "It is far past time that New England reforms how its electric grid is managed. The wholesale electricity markets must advance and support clean energy laws and policies, as the states demand decarbonization and markets and consumers support more renewables. ISO New England must keep pace with state priorities, and it must be more transparent and accountable in its decision-making,

broadening its focus to include consumer and environment concerns as well as reliability and cost."

Baker said: "To meet to our administration's goal of net-zero emissions in Massachusetts by 2050, the commonwealth needs a regional electricity system that can support the delivery of clean, affordable and reliable energy to residents and businesses. My administration looks forward to working with our partner states, ISO New England and stakeholders to build a more transparent, modern and cost-effective power system that will allow New England states to meet our ambitious climate change and clean energy goals while creating a better

future for our residents."

Scott concluded: "I've long said our work to address climate change can and must also work to make energy more affordable for Vermonters, so I'm pleased to be a part of this regional approach to achieving both of these priorities. With a strategic, multistate approach, we can have a greater impact on both climate change mitigation and energy affordability."

The five states said they will convene open and accessible forums to ensure that all interested stakeholders have an opportunity to participate in further refinement of the principles of the shared NESCOE document. ■



In this photo from 2015, clockwise from bottom left: Meredith Hatfield, director of the New Hampshire Office of Energy and Planning; Massachusetts Gov. Charlie Baker; former Vermont Gov. Peter Shumlin (hidden); Rhode Island Gov. Gina Raimondo; former Connecticut Gov. Dannel P. Malloy; and former Maine Gov. Paul LePage | Rhode Island Gov. Gina Raimondo

ISO-NE News

Governors' Call for ISO-NE Reforms Draws Support

By Jason York

When the governors of Connecticut, Maine, Massachusetts, Rhode Island and Vermont released a *joint statement* Wednesday calling for reforms to ISO-NE, it read less like an olive branch and more like a precursor to a seismic shift in relations between the states and the RTO.

The governors said they “require” changes to market design, transmission planning and RTO governance, which they said are stunting their efforts to reduce economy-wide greenhouse gas emissions. The New England States Committee on Electricity (NESCOE) will specify the reforms in a soon-to-be-released document. (See related story, *New England Governors Call for RTO Reform*.)



Theodore Paradise, Anbaric | © RTO Insider

“I think it’s clear that the governors are saying what’s happening right now can’t and won’t persist. ‘We will change it,’” said Theodore Paradise, senior vice president of transmission strategy and counsel at Anbaric. “Let’s try to work

together to change it; but sort of the next step — hidden or embedded in this language — is ‘we will get there, one way or the other.’ This is really not an optional conversation or a request. This is more of a directive of what we as a region are going to do.”

Katie Dykes, commissioner of Connecticut’s Department of Energy and Environmental Protection, said, “The best path for us is one that centers on coordination and cooperation with our neighboring states,” and the governors’ statement speaks with “a unified voice” about what states expect from the RTO in the future.

Dykes said the federal government “unfortunately” has taken a step back on climate change leadership, leaving New England states on “the front line for combating climate change.”

“It’s very important that states have appropriate involvement in the design of market-based



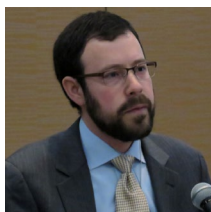
Connecticut DEEP Commissioner Katie Dykes | © RTO Insider



ISO-NE control room | ISO-NE

mechanisms to achieve our decarbonization policies,” Dykes said. She added that “ratepayers are being saddled with duplicative costs. We have a market design that is actively preventing our state from getting credit for clean energy resources that we have had to procure outside of this market because the market is not designed to incentivize investment in the resources that we need. It’s inefficient. It’s unnecessarily costly. It cannot continue.”

Dykes said the nonpublic NEPOOL stakeholder process needs to be open to state lawmakers so that “very knowledgeable folks who participate in the NEPOOL discussions engage with some of the policymakers at the state level who have concerns and preferences around what our grid should look like and what value should be provided for our ratepayers.”



Ari Peskoe | © RTO Insider

Ari Peskoe, director of the Harvard Electricity Law Initiative, said the statement was “a long time coming.”

“It was good to see a real strong statement from the governors about what they do want to see and what they think the future of the sector should look like,” Peskoe said. “I thought that was a real positive step forward that five governors were willing to sign on to this.”

As for New Hampshire not being a signatory,

Peskoe said it “is the clear laggard state in terms of clean energy ambitions” and that Republican Gov. Christopher Sununu “has, at best, been lukewarm on clean energy.” The five other governors lead states with “aggressive, clean energy targets.”

“What I’ve seen from NESCOE in the past was wanting to reach consensus before issuing any sort of statement, and that had the effect of weakening the group’s ambitions,” Peskoe said. “I thought it was interesting that this time [NESCOE] decided they weren’t going to wait for New Hampshire to call for the regional clean energy solution.”

Advanced Energy Economy Director Caitlin Marquis, whose work in part focuses on ISO-NE, said she is “cautiously optimistic that this is a positive development, and that the ISO will be similarly willing to work constructively with the states to address some of the concerns.”

Marquis added that there is a carrot-and-stick aspect to it.

“I think it’s an ask that the ISO engage and the states get a bigger role,” Marquis said. “If they’re able to come to some alignment on the concerns the states have on clean energy, there could be a constructive path forward there. I think the New England states have been clear that they don’t have an issue with a carbon price but want an economy-wide solution. There are some specific concerns with an ISO carbon price, and I do think there’s frustration that that message has not gotten through.” ■

ISO-NE News

Overheard at 2020 NECA Legislative Update

The COVID-19 pandemic upended legislative business across New England in 2020, though state legislatures still managed to advance significant legislation to transform the region's energy industry.

At its annual legislative update last week, the Northeast Energy and Commerce Association reviewed recent developments and issues to watch next year, including climate change, evolving technologies, consumer impacts and the results of the upcoming elections.

Here are some insights from around New England.

Connecticut

Gov. Ned Lamont (D) signed the *Take Back Our Grid Act*, which had bipartisan support in both the House of Representatives and Senate and creates a performance-based system for utilities like Eversource Energy to protect consumers during long-term outages. The bill also calls for the Department of Energy and Environmental Protection to produce a study by Jan. 15, 2021, on whether the state should

continue its participation in the wholesale energy markets administered by ISO-NE. Five New England governors, including Lamont, last week signed a joint statement calling for reform at the RTO. (See related story, *New England Governors Call for RTO Reform*.)

Kevin Penders, policy adviser at Preti Strategies and former general counsel for Massachusetts Department of Public Utilities, said the study is a reflection of the frustration that Connecticut has over its struggles to implement its clean energy policies within the RTO's markets.

Meeting the targets within ISO-NE "has been a real challenge," Penders said. "Connecticut is taking a really open position that they don't feel like [the RTO] is taking their needs seriously."

Penders added that Connecticut might feel that it has "leverage" because of "the size of its generation base or the size of its load" and "certainly that inherent frustration between state goals and regional procurement is what's driving that study," he said.

"Connecticut is taking a really open position that they don't feel like [the RTO] is taking their needs seriously."

—Kevin Penders, Preti Strategies

Massachusetts

The Massachusetts House of Representatives and Senate voted to stay in session through Jan. 5, 2021, because of the coronavirus crisis. Penders said lawmakers reviewed more than 250 pieces of legislation on a wide range of energy topics, including carbon emissions,



Clockwise from bottom left: Margaret Neves, POWER Engineers; Madeleine Mineau, Clean Energy NH; Kevin Penders, Preti Strategies; and Dan Hendrick, Clearway Energy Group | NECA

ISO-NE News



climate change, offshore wind and natural gas safety measures, among others.

Penders said both chambers passed bills, but the House took a “kitchen sink” approach. Its bill contained robust changes to deploy environmental justice community protections, pilot programs for renewable natural gas and geothermal deployment, electric vehicle charging stations and the institution of safety oversight of the natural gas distribution industry.

There is also an “exceptional amount of pressure,” according to Penders, to move a net-zero emissions bill forward.

“Everyone’s in agreement with the vision. Now we just have actually to get the wording and alignment for passage,” Penders said. “The reality of the situation is there is an inordinate amount of pressure on both the House and the Senate to get something to the governor before New Year’s Eve so that they can implement the policy goals that are envisioned.”

New Hampshire

Madeleine Mineau, executive director of Clean Energy NH, said the Democrat-controlled House of Representatives and Senate in New Hampshire passed “a lot of clean energy legislation” that was ultimately vetoed by Republican Gov. Chris Sununu.

Legislative work was suspended from mid-March through mid-July, except for a few remote committee work sessions or executive sessions. Mineau said “partisan bickering” led to some clean energy bills in the House dying because of a two-thirds vote requirement to extend deadlines on legislation. Bills on expanding renewable portfolio standard goals and investing Regional Greenhouse Gas Initiative revenues into energy efficiency also

met with Sununu vetoes. A special session to attempt to override Sununu’s vetoes failed to overturn any of them.

Maine

Dan Hendrick, head of external affairs for the east region for Clearway Energy Group, said Maine lawmakers have discussed creating a nonprofit utility owned by consumers and cutting Central Maine Power and Versant Power out. The COVID-19 pandemic has slowed down such legislation, but Hendrick said action via a future ballot referendum could move it forward. Looking toward 2021, Hendrick added that lawmakers and Gov. Janet Mills (D) appear open to additional procurement opportunities for large-scale renewables.

“We’re at a really exciting time in Maine right now, with a governor and legislature that are very oriented toward climate and clean energy progress,” Hendrick said. “Just thinking where we were several years ago under the previous administration ... it’s exciting to be where we are.”

Vermont

The *Global Warming Solutions Act* became law after the Vermont House of Representatives and Senate voted to override the veto of Gov. Phil Scott (R). The legislation requires the state to reduce greenhouse gas emissions to 26% below 2005 levels by 2025. Emissions would need to be 40% below 1990 levels by 2030 and 80% below by 2050. If the government fails to meet these goals, individuals can sue the state to force compliance.

“I think the goal of [the law] was really to put some teeth behind some of their greenhouse gas-reduction goals,” Mineau said.

“Vermont has had some great goals, but

they’ve had mixed results on actually achieving them or moving toward reducing those emissions,” Mineau added. “It is challenging. They’re trying to put a stick along with the carrot to have some consequences if they’re not making the progress they’re expecting.”

Decarbonizing the Thermal Sector

When asked about the best chance of success for decarbonizing the thermal sector, Mineau said it has to be a combination of solutions, especially in New Hampshire and Maine.

“It’s a huge undertaking to decarbonize the thermal sector here in New Hampshire. We’re still extremely reliant on fuel oil; same in Maine,” Mineau said. “We need to use what we can, where we can. We do have some areas of natural gas distribution, and some of our natural gas utilities are very interested in switching to renewable natural gas and hydrogen and mixing those approaches, and that may make sense where current distribution exists.”

Mineau said heat pumps also “make a lot of sense” in rural areas. New Hampshire is one of the few states with renewable thermal as part of its RPS, mostly achieved through centralized modern wood heat with emissions controls.

Penders added that Massachusetts has a similar situation, and “there is no one-size-fits-all solution.”

“So if it’s a combination of renewable assets, a combination of heat pumps, and ... they’re ready to run through the existing systems, then that mix really needs to be something that can be targeted for anyone’s available use now,” Penders said. “But along with that, it needs to be done in a way that doesn’t create heating winners and losers.” ■

— Jason York

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MISO News

MISO Winds down MTEP 20 Planning, Focuses on 2021

By Amanda Durish Cook

MISO is wrapping up its 2020 Transmission Expansion Plan ([MTEP 20](#)) with an eye on next year's planning cycle that contains more aggressive renewable energy predictions.

MTEP 20 includes 514 projects costing slightly more than \$4 billion. The most expensive project remains Ameren's new Massac substation in Southern Illinois and the conversion of the nearby Joppa station from 230 kV to 345 kV, at an estimated cost of \$112.4 million.

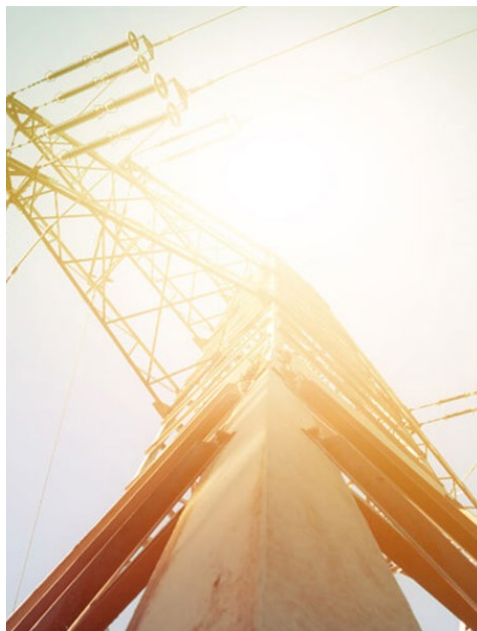
"At this time of the year, we're ending MTEP 20 and starting MTEP 21," planning engineer Scott Goodwin told stakeholders during a Planning Subcommittee meeting Oct. 13.

MISO has closed the request deadline for special targeted study requests to be conducted under MTEP 21.

The Environmental Groups sector has [requested](#) the grid operator conduct two studies examining footprint changes if either LG&E and KU Energy or Memphis Light, Gas and Water join MISO within the next five years.

Transmission owners oppose the request. "We didn't think MTEP is the place to evaluate new members. It's about evaluating transmission projects," Entergy's Yarrow Etheredge said.

Goodwin said MISO will begin scheduling MTEP 21 subregional planning meetings to



| NRG Energy

discuss project needs. The RTO will also soon release MTEP 21 economic models that draw on its new, 20-year futures scenarios, economic planner Nickolas Przybilla added.

MISO continues to establish resource expansion location estimates under the three 20-year MTEP 21 futures. (See [MISO Foresees Massive Shift to Renewables by 2040](#).)

The grid operator is relying on a combination of integrated resource plans and utilities' public carbon-reduction commitments to predict resource siting under the new planning futures.

"It's both the media and IRPs," MISO Planning Manager Tony Hunziker said during a Planning Advisory Committee conference call Wednesday. "It's recognizing that sometimes a press release precedes plans and also recognizing that not all utilities have to file integrated resource plans."

Hunziker said MISO is drawing on the National Renewable Energy Laboratory's [Annual Technology Baselines](#) to help predict when generation technologies are increasingly adopted.

MISO's Future I expects solar expansion on par with the footprint's current amount of wind generation. In Future II, the RTO foresees energy storage and electrification beginning to join solar on center stage. By Future III, electrification and storage take a consequential role in supply and demand, while wind and natural gas generation each taking a 30% share of the energy mix. Future III also assumes 50% renewable energy use.

Some stakeholders said MISO should not simply take utilities' target announcements at face value and should rely on something more concrete to make future generation assumptions.

"I just don't think we have evidence that utilities waffle a lot. I don't think we have a record like that," Clean Grid Alliance's Natalie McIntire said. "When utilities make announcements, they tend to be well thought out."

States, cities and utilities in the MISO footprint are fast piling up carbon-reduction goals.

Michigan is the latest state to announce a carbon-neutrality goal. Gov. Gretchen Whitmer late last month said the state will [meet](#) a net-zero emissions goal by 2050, if not sooner. The [announcement](#) late last month will likely cause utilities to rethink their IRPs.

[Ameren](#) and [Entergy](#) have also committed to

carbon neutrality by 2050.

Queue Timeline Cutbacks Still in the Works

To reach those targets, MISO must make headway on the 106 GW of mostly renewable generation in its generator interconnection queue's 705 projects.

The mammoth queue is down from a record 756 projects, totaling 113 GW, in August. MISO said about 20 interconnection customers in its South and West planning regions failed to provide proof of site control and were forced to withdraw projects.

To speed up queue processing, the grid operator plans to whittle down the three-part definitive planning phase and generation interconnection agreement negotiations from more than 500 days to a calendar year. (See [Record Number of Entrants Line up for MISO Queue](#).)

MISO engineer Miles Larson said the RTO plans to cut about 140 total days from queue processing so it can catch up on projects and bring the four planning regions' studies into the same queue-cycle year. MISO is currently [processing](#) queue cycles dating back to 2017.

"We continue to see an overwhelming support for reducing the [generation interconnection process] timeline," Larson said during an Interconnection Process Working Group conference call Oct. 12.

MISO wants GIA negotiations and execution pared from about 150 day to 100 days. That means some negotiations will simultaneously occur as staff wrap up final network upgrade studies.

Larson said MISO wants to arrive at a "repeatable and sustainable" process to keep the queue humming.

"The closer we can get our process to 365 days, the closer we get to aligning the DPP study process with the MTEP study process," he said, referencing MISO's plan to better match MTEP planning with network upgrades necessary for interconnections.

Larson said that for the cutbacks to stick, interconnection customers need to ready their generation projects as much as possible before entering the queue.

"MISO alone cannot reach the reduction goal," he said. "In order to succeed in this effort, every entity needs to identify internal efficiency opportunities." ■

MISO News

MISO Outlines Early Long-term Tx Plan Details

By Amanda Durish Cook

MISO released details last week on its recently announced long-term transmission plan, saying its rapidly evolving generation portfolio signals a need for transmission tailored to handle the fleet of the future. (See [MISO Ready for Intensive Transmission Planning](#).)

“First and foremost, I would call this a transmission planning study. ... What we’re looking for are transmission needs to facilitate the efficient use of new resources,” Senior Manager of System Planning Coordination Jarred Miland told stakeholders during a Planning Advisory Committee meeting Wednesday.

Miland said MISO faces “significant grid and stability issues” if it doesn’t seek out transmission investments. With more inverter-based generation, the grid operator expects more erratic dispatch patterns and regional energy transfers to increase and become less predictable.

He said MISO will investigate long-term project contenders’ reliability, economic and resource adequacy benefits across multiple annual cycles of its Transmission Expansion Plan (MTEP).

“We’re looking at everything holistically,” Miland said.

Staff intends to present “robust business cases” for every project it advances for approval, Miland said. He added that previous findings under MISO’s [Resource Availability and Need](#)



Jarred Miland, MISO | © RTO Insider

initiative, ongoing [Renewable Integration Impact Assessments](#) and new planning futures will feed into the long-range study.

Some stakeholders said transmission buildouts under a long-range plan would allow renewable generation to connect at lower costs. They asked if MISO was courting a chicken-or-egg scenario where transmission projects encourage renewable generation investment over other generation types.

“I think transmission is agnostic. We are looking at what the world is telling us. Look at the generation interconnection queue [and] state targets,” Miland said. “The grid is not evolving 30 years from now. It’s evolving now.”

Some stakeholders argued that MISO needs to draft Tariff language or business practices that lay out a long-range transmission study process.

“I don’t know if I see the need to put this in our Tariff. It’s our charge to do transmission planning,” Miland said.

Mississippi Public Service Commission counsel David Carr disagreed, saying that MISO has established manuals on subregional planning and generator interconnection studies.

Miland pointed out that the RTO’s market-congestion planning studies aren’t laid out in the Tariff or business practice manuals. But he added that MISO could consider some revisions.

“MISO has full authority to do planning, and we need them to do planning for the grid of the future,” the Sustainable FERC Project’s Lauren Azar said.

“FERC expects MISO and other RTOs to do this kind of planning,” agreed Clean Grid Alliance’s Natalie McIntire.

“It takes 10 years to build a transmission project, so we don’t want to be looking five years ... out and then miss the boat,” Miland said. “If we are nearsighted, and we keep looking five years out, we have the potential to wind up with a system that’s not as efficient as it could be.”

Stakeholders also pressed staff on the projects’ names. Projects in the grid operator’s last long-term planning package in 2011 were called Multi-Value Projects.

Miland said the projects’ cost allocation could lend them their names. “That cost-allocation effort may very well produce a new category.”

“It takes 10 years to build a transmission project, so we don’t want to be looking five years out ... and then miss the boat. If we are nearsighted, and we keep looking five years out, we have the potential to wind up with a system that’s not as efficient as it could be.”

—Jarred Miland, MISO

The first MTEP 21 long-range projects are possible at the end of next year. “If that happens, we may very well be looking at our existing Tariff for cost allocation,” Miland said. “Cost allocation takes a significant amount of time to develop and get FERC approval.”

Miland said he expects the first cost allocation discussions with stakeholders to begin by the end of this year.

While the long-term plan’s goal is to move away from “just-in-time projects,” Miland said, any projects uncovered during the course of MTEP 21 would probably only focus on 10 to 20 years into the future. Longer-term projects would most likely arrive in later MTEPs under a different cost allocation, he said.

“This long-range transmission plan is a big apple. We can’t bite it all at once,” Miland said.

MISO will initially focus its efforts geographically, Miland said, paying special attention first to needs in its West and Central regions and the Midwest-to-South interface.

McIntire asked that the first project approvals lay out a “cost-effective foundation” for other long-term project approvals to build on.

“We’re on the same wavelength,” Miland said. ■

MISO News

FERC Walks Back Part of Affected-system Order

By Amanda Durish Cook

FERC has reconsidered an aspect of recent orders calling for more transparency into how RTOs analyze each other's systems during interconnection studies.

The commission on Thursday walked back a portion of an earlier ruling, saying MISO, SPP and PJM don't have to rely on one another's dispatch assumptions to carry out an affected-system study (ER20-942-001, ER20-938-002).

FERC ruled last September that the RTOs' joint operating agreements do not provide enough clarity on how they handle generator interconnection studies along their seams. The commission in June ordered joint compliance filings to provide clearer descriptions of affected-system studies carried out for interconnecting generation. (See *FERC Orders More Detail in Affected Systems Compliance.*)

The commission in June found that an affected-system study using different dispatch assumptions than a project's host RTO may result in unjust and unreasonable rates through network upgrade cost assignments.

But on Thursday, FERC said it was too hasty in directing the use of another RTO's dispatch assumptions in affected-system studies. It even flipped its stance and said that if the RTOs were to use one another's fuel-based dispatch assumptions in study modeling, the results might produce unreasonable rates.

"Upon reconsideration, we are persuaded by the arguments raised on rehearing that the commission should not have directed



| MISO

the affected-system RTO to use the dispatch assumptions of the host RTO when it conducts affected-system studies," FERC said.

It agreed with MISO, SPP and PJM that an RTO's study process is too complicated to simply cut and paste dispatch assumptions.

"Each RTO's fuel-based dispatch assumptions are an integrated component of their larger

interconnection and planning models, and more specifically, their corresponding base cases, which are different for each RTO, and in some cases use different load assumptions. We agree with [MISO, SPP and PJM] that these fuel-based dispatch assumptions are not logically severable from the framework in which they were developed, and in many cases, are not compatible with the affected-system RTO's processes," the commission said. ■

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MISO News

MISO, SPP Regulators Eye Seams Finish Line

Liaison Committee Prioritizing Recommendations to Improve Coordination

MISO and SPP state regulators appear intent on completing their work to improve the RTOs' interregional coordination before 2021 arrives.

The Seams Liaison Committee (SLC), comprising regulators from the Organization of MISO States and SPP's Regional State Committee, met virtually and briefly Oct. 12, deciding to develop a decision matrix to help them prioritize the various recommendations offered up for their consideration.

Admitting he may have had "reckless optimism about wrapping up at the end of the year," Arkansas' Ted Thomas, SLC co-chair along with Texas' DeAnn Walker, said the matrix should "do good," given the difficulty of holding in-depth discussions over the internet.

"The joy of virtual meetings," he said.

Thomas, Walker and OMS Executive Director Marcus Hawkins will work together on the decision matrix. They hope to have a workable format that they can discuss with the full RSC and OMS on Oct. 26 and 29, respectively.



SLC Chair Ted Thomas | © RTO Insider

Walker said she wanted to have an "orderly way" to step through the recommendations made by the RTOs' market monitors. That came into clearer focus, she said, as Hawkins went through a list of recommendations and the grid operators' responses. (See *MISO, SPP Respond to Monitors' Studies*.)

SPP *responded* to recommendations for coordinated transaction scheduling, interface pricing and the MISO Independent Market Monitor's

report on market-to-market (M2M) coordination. Staff added clarifying remarks and noted which recommendations are included in SPP's 2020 Market Roadmap.

MISO *detailed* its responses to the same recommendations, noting whether they have been included in its Integrated Roadmap or the IMM's 2019 State of the Market report. ■

— Tom Kleckner

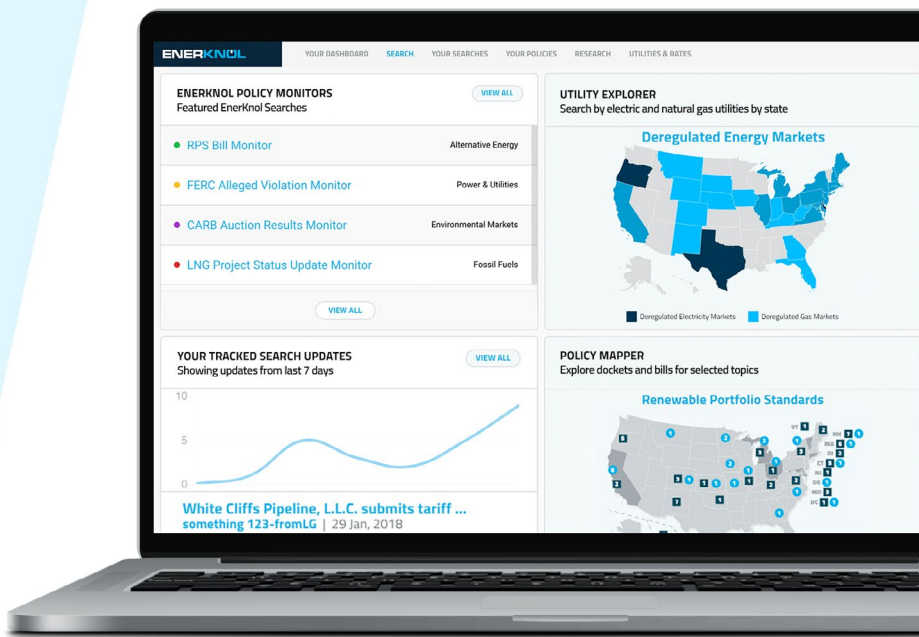
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MISO News

FERC Rules 8 Years of MISO Resettlements Unnecessary

By Amanda Durish Cook

FERC has allowed MISO to avoid eight years of resettlement work on certain manual dispatches dating back to early 2009.

The commission last week did not act on MISO's longstanding Tariff violation. The grid operator may have miscalculated on some make-whole payments to resources that were manually dispatched from January 2009 to May 2018 ([ER18-1611](#)).

Commissioner James Danly concurred with the decision while castigating FERC's multiple other waiver approvals.

MISO said that during a 2018 quality check, it discovered that its settlement system was not technically handling manual redispatch as outlined in its Tariff. It said its software was setting dispatch instructions to a specific level, rather than a range of acceptable dispatch levels as described in the Tariff. The RTO also said its software was checking for economic dispatch statuses in both the day-ahead and real-time markets, when its Tariff does not require such a check for economic status in the day-ahead market.

The financial fallout from the eight-year inconsistency totaled just \$1.6 million, or \$200,000 annually, MISO said. The grid operator said manual redispatch was necessary in a little more than 1% of all make-whole payment hours since 2009.

MISO also said its Independent Market Monitor did not find any generators "intentionally making inflexible offers ... to gain excess margins from the system during intervals that a resource was manually redispatched."

FERC said that while the discrepancy amounted to a nearly decadelong Tariff violation, the amounts were too small to be reopened, calling resettlement counter to public interest.

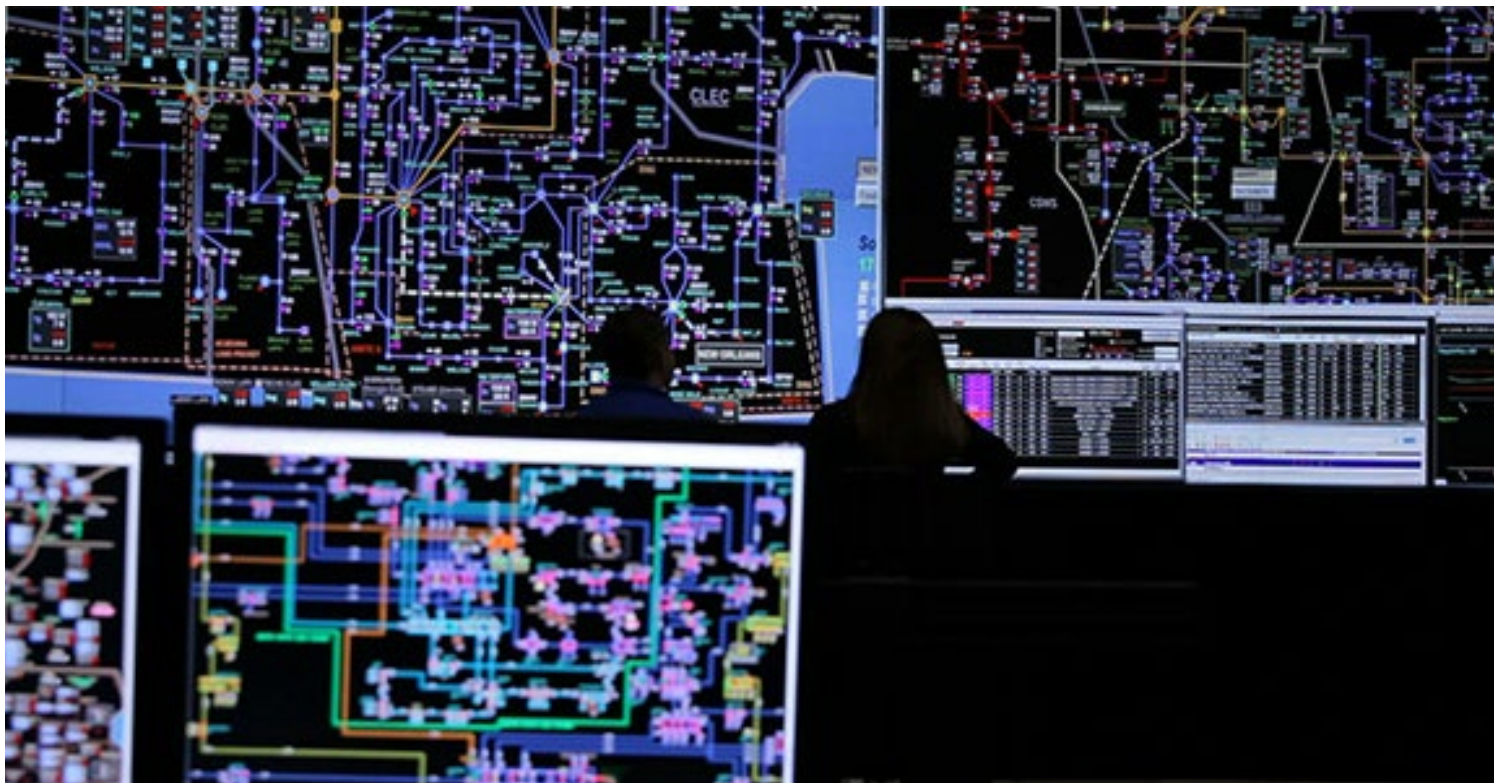
"We agree with MISO that, based on the circumstances here, market resettlement and refunds are not an appropriate remedy," FERC said. "We are persuaded that, to the extent resettlement of the market transactions at issue would be feasible, requiring such resettlement and associated refunds could create inequitable results by unfairly punishing market participants that followed MISO manual redispatch instructions and could undermine confidence in market outcomes."

The commission cited its "broad authority" to determine remedies for Tariff violations. It also said that because it was not directing resettlement or refunds, it was not required to address MISO's waiver of its Tariff during the discrepancy.

Danly said he agreed with the decision, unlike the nine waiver approvals *issued* during FERC's open meeting Thursday. He said that in this instance, FERC did not exceed its legal authority by granting a backdated waiver that could violate the filed-rate doctrine and rules prohibiting retroactive ratemaking. Instead, he said, the commission confirmed the violation between settlement software and Tariff language and disregarded the request for waiver.

"I agree with this holding. In my view, this is the approach we should take in all situations where a utility has violated its own tariff," Danly said, noting MISO's "relatively small error and the extreme difficulty in resettling bills back to 2009 support this decision."

Danly also said FERC should have first denied MISO's waiver request, then made the finding that the RTO violated its Tariff to keep the commission's decision-making process uniform and orderly. ■



MISO control room | MISO

NYISO News

NYPSC OKs NYPA Project, 'Priority' Tx Criteria

By Michael Kuser

The New York Public Service Commission on Thursday designated the New York Power Authority's (NYPA) \$1 billion Northern New York (NNY) transmission line as a high priority for meeting the state's renewable energy goals and adopted criteria for identifying other such "priority transmission projects" (PTPs) (20-E-0197).

The commission's order bypassed NYISO's public policy transmission planning process, referring the project straight to NYPA for development and construction in accordance with the Accelerated Renewable Energy Growth and Community Protection Act of 2020.

"Today, we are adopting well designed new rules to specifically expedite transmission investments that unbottle existing and new renewables ... [and] the first investment under these new rules, NYPA's Northern New York project, will complete a critical link in our upstate grid and unbottle at least 950 to 1,500 MW of renewable energy sources," PSC Chair John B. Rhodes said.

The NNY project has an estimated cost of \$1.05 billion, extrapolated from NYPA's calculation that it would yield \$99 million in production cost savings of per year. Based on production cost savings alone, the project has

a positive 1.0 benefit/cost ratio, NYPA says.

The commission amended Department of Public Service staff's proposed criteria, taking for example, the first three and bundling them into one criterion for designating a PTP: "the transmission investment's potential for unbottling existing renewable generation, as well as projects that are in the NYISO interconnection process, for delivery to load centers in the state, thereby reducing the amount of new generation that must be constructed to meet the CLCPA targets."

The state's Climate Leadership and Community Protection Act (CLCPA) requires that 70% of electricity generation come from renewable resources by 2030, and that generation be 100% carbon-free by 2040.

One key factor in expediting the project's approval and bypassing the NYISO planning cycle was that its presumed earlier in-service date would result in benefits that would otherwise be lost forever, the commission said.

NYPA said the project will upgrade approximately 200 miles of 230-kV lines to establish a continuous 345-kV path and expand the deliverability of renewable generation from northern and western New York to load centers, while compounding the benefits from the Segment A and B projects already underway.

(See NYISO Board Selects 2 AC Public Policy Tx Projects.)

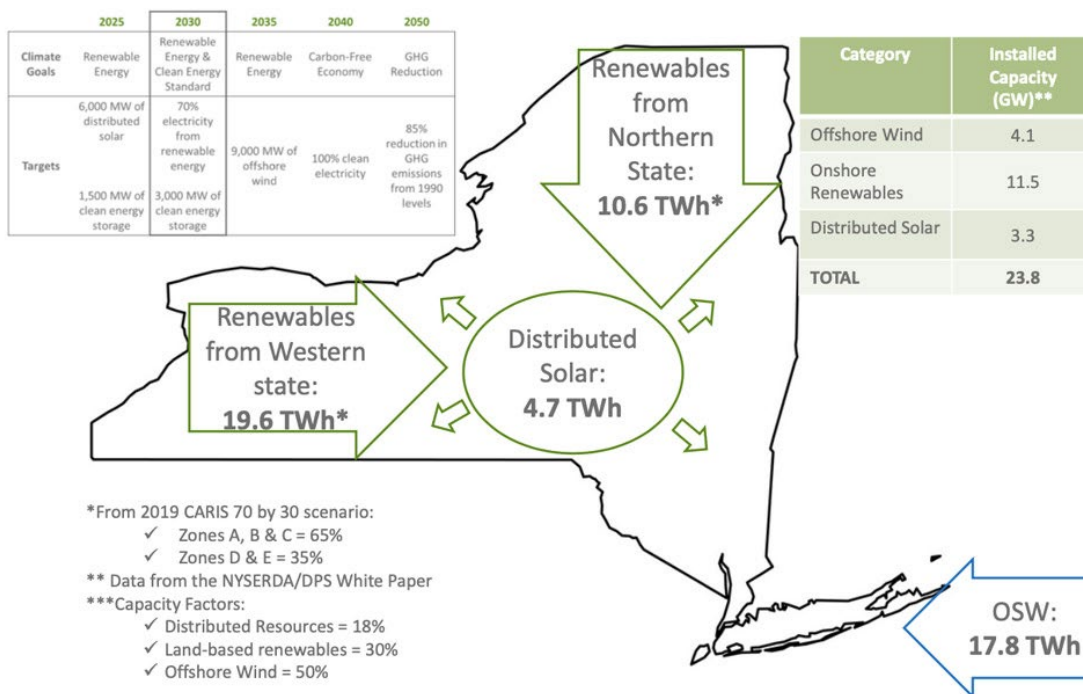
Watch the Guidrails

The State Legislature provided guiderails for the prioritization task by recognizing two project implementation mechanisms, the commission said. While all projects that are ultimately included in the plan will be necessary to meet the CLCPA objectives, the act distinguishes one category of projects as "needed expeditiously," while other necessary projects may be referred to NYISO's established public policy transmission planning process.

"The folks that participated and gave comments in this proceeding were generally supportive, right?" Commissioner Diane Burman asked. "Anbaric was supportive of the staff criteria; [the Natural Resources Defense Council] and Alliance for Clean Energy New York [ACE NY] submitted comments supporting it. ... For me, we also need to be mindful that the ISO process is a good one, [to which] we should be complementary in this process dealing with transmission investments."

Use of the PTP designation outside of the NYISO process should be "few and far between," Burman said.

Multiple Intervenors (MI), a coalition of large industrial, commercial and institutional energy



Avangrid used this slide at a technical conference Oct. 9 to show New York state policy goals and future resources. | Avangrid

NYISO News



customers, submitted [comments](#) pointing out that a PTP designation amounts to a choice to bypass the existing NYISO planning process and its associated benefits to customers, including its competitive construct, a high level of transparency, cost caps and an equitable cost allocation methodology. MI asserted that, in contrast, the PTP designation process is not competitive, does not involve evaluation of alternative solutions, is not fully transparent and does not include consumer protections.

In its [comments](#), NYISO asked the PSC to designate priority transmission projects “in tandem” with the ISO’s public policy planning process, which has been used successfully to develop transmission in response to needs identified by the commission, including the Western New York and AC Transmission projects. The ISO also said it has taken recent steps to streamline its process, which can now be completed in approximately 18 months.

“We take notice of the fact that the NYISO only recently initiated the 2020 public policy planning cycle, under which it would be several months before NYPA could even submit the NNY project for evaluation,” the commission said in the order. “We conclude that this factual circumstance supports the finding that the NNY project is likely to be placed in-service earlier than a comparable project selected by the NYISO would be, even though the petition does not provide a specific in-service date.”

“The Northern New York project, which may be new to certain folks on the commission, is not a new project,” Commissioner John Howard said. “It has been sitting on the drawing boards for some time in different iterations, and consensus projects like that with clear economic and environmental benefits are easy to do. I think this process becomes much more difficult going forward as we design transmission infrastructure for projects that have yet to become reality, and how we allocate those costs becomes much more difficult.”

NYPA estimates the project will allow the state to annually avoid more than 1.2 million tons of CO₂ emissions and approximately 160 tons of NO_x emissions from downstate emissions sources. It should also provide more than \$447 million in annual congestion savings upstate.

Climate Change Financial Risk, Modifying CES

The PSC also initiated a proceeding to consider requiring New York’s major utilities to disclose what risks climate change poses to their companies, investors and customers going forward ([20-M-0499](#)).

“For utilities with significant assets and changing physical infrastructure needs, increased transparency of climate-related financial risks would allow better planning and investment consistent with New York’s climate goal of a carbon-neutral economy by 2050,” the commission said.

The state’s largest electric and gas utilities have more than \$52 billion in capital and in the past year raised \$6.2 billion through debt issuances, the commission said.

The PSC also modified the state’s Clean Energy Standard (CES) to align it with the CLCPA, as indicated in a June white paper ([15-E-0302](#)), specifically adopting the 70% by 2030 target and expanding the renewable energy procurement programs of the New York State Energy Research and Development Authority (NYSERDA).

The commission said that average annual Tier 1 procurement targets of approximately 4,500 GWh per year over 2021-2026 “provide sufficient certainty to investors that will allow effective planning and other market-based activities to develop.” It therefore declined “to adopt minimum or maximum gigawatt-hour requirements for each solicitation, instead allowing NYSEDA to adjust annual procurement targets based on its annual review of the latest market data.”

The order also authorized NYSEDA to solicit enough offshore wind energy to meet the CLCPA target of 9 GW by 2035 and created a new methodology for extending Tier 1 renewable energy eligibility to renewable energy facilities that undergo repowering. It additionally created a competitive five-year Tier 2 program under the CES to preserve existing renewable baseline generation, as well as a new Tier 4 large-scale renewable program to value environmental attributes associated with renewable energy delivered into New York City that will be in addition to annual Tier 1 procurement targets.

The commission said its action will ensure that the state’s renewable energy programs provide substantial benefits for disadvantaged communities, including low- to moderate-income customers.

Dissent and Caution

Commissioner Burman delivered the only vote against the measure and called it an overly prescriptive “tortured exercise ... that seems to chill how technologies ... may work together with other renewable sources in a way that may actually help.”

While developers want regulatory certainty and NYSEDA needs flexibility to conduct important solicitations, “my concern is that we have solicitations and [requests for proposals] throughout the state ... and we need to look much more carefully at the guardrails that need to be in place to ensure that we are doing this in a responsible and fiscally accountable way,” Burman said.

She also doubted that NYSEDA had enough qualified staff to oversee such complicated programs.

“We may have to look at hiring some outside entity to help us ensure the proper implementation of these solicitations,” she said. “What makes me deeply pause is that due to the complexities of some of NYPA’s contracts, they were unable to satisfy the entirety of their allocated ZEC [zero-emission credit] obligation, and therefore a few of the [load-serving entities] have ceased offering service in New York, and NYSEDA has amassed a ZEC-collection deficit of approximately \$34 million and now is seeking to recover those funds. I just find that unacceptable.”

Commissioner Howard said he was uncertain the state will be able to finance all its clean energy programs completely through customer bills. He was also uncertain about the role of FERC “and their ability to stymie some of our initiatives.”

The newest commissioner also found it “ironic that environmental advocates or any other advocates for clean energy also decry any increases in utility bills for customers. It is yet to be seen if we can continue to do it the way we’re doing it. I look forward to a new era when we have a more progressive nature of how we capitalize our new energy future.”

The commission also [approved](#) a build-ready program for NYSEDA, which will focus on developing properties that are fundamentally different from those that private developers would typically consider for investment.

The PSC accepted NYSEDA’s “rules of engagement” regarding the agency’s work with site owners and private developers, rules designed to mitigate any competition with private developers.

The commission said it “declines to adopt the ACE NY proposal to create a formal mechanism whereby developers can propose potential build-ready sites to NYSEDA as doing so would add additional complexity to the site selection process and does not appear to be necessary at this time.” ■

NYISO News

FERC Reaffirms NY Storage Mitigation as Glick Dissents

By Michael Kuser

FERC on Thursday declined to rehear its February order approving a NYISO proposal to apply buyer-side mitigation to energy storage resources (ESRs). The 2-1 ruling expanded on the previous order and drew another sharp dissent from Commissioner Richard Glick, the lone Democrat on the commission ([EL19-86-001](#)).

The commission continued to find that the New York Public Service Commission and the New York State Energy Research and Development Authority “failed to show that applying buyer-side market power mitigation [BSM] to electric storage resources in NYISO is unjust and unreasonable or unduly discriminatory or preferential” and asserted “that such mitigation does not inappropriately intrude on New York’s jurisdiction.”

Chairman Neil Chatterjee and Commissioner James Danly said the complainants failed to show that applying BSM to new electric storage resources offering into the NYISO capacity market is unjust or inconsistent with FERC Order 841.

They further said the commission’s denial of the requested exemption reflected reasoned decision-making based on substantial record evidence, including economic theory, and relied on the opinion of the NYISO’s Market Monitoring Unit that storage resources have the ability to suppress capacity prices absent appropriate mitigation.

“We continue to find that applying buyer-side market power mitigation to electric storage

resources will protect the integrity of competition in the wholesale capacity market against unreasonable price distortions and cost shifts caused by out-of-market state support,” the order said.

Glick said the commission “once again perverts buyer-side market power mitigation into a series of unnecessary and unreasoned obstacles to New York’s efforts to shape the resource mix.” It failed to justify the continued use of BSM measures against individual storage resources and explain its differing approaches to issuing exemptions from mitigation for different types of resources, he said.

“All told, today’s order aptly illustrates what a mess buyer-side market power mitigation has become in New York,” Glick said.

Free Markets

The commission said that under-mitigation of uneconomic entry can suppress capacity prices, over-mitigation discourages new entry, and that both extremes jeopardize long-term consumer interests.

Applying BSM to storage resources will protect the integrity of competition in the capacity market against unreasonable price distortions and cost shifts caused by out-of-market state support, the commission said, disagreeing with New York Transmission Owners’ contention that the commission presumed that storage resources participate in the capacity market on an aggregate basis.

“Rather, the commission was concerned with the combined effect that individual subsidized storage resources would have on clearing

prices,” it said, noting that BSM “rules may change over time to protect the integrity of the capacity market.”

The commission also said it had not “conflated lower prices resulting from normal supply and demand (competition) with artificial downward price manipulation or ... made any finding regarding the *per se* exercise of market power. ... ESRs that receive out-of-market support are not competing on an equal basis with those resources that do not receive similar out-of-market support.”

Glick said the ruling was illogical; instead of promoting true competition, the commission’s approach to buyer-side market power “has degenerated into a scheme for propping up prices, protecting incumbent generators and impeding state clean energy policies.”

Although the specifics of the mitigation regimes vary among the Eastern RTOs, they all generally force new entrants to bid at or above an administratively determined estimate of what a new resource “should” cost, while existing resources are permitted to bid at a lower level, Glick said.

The more the commission interferes with state public policies under the pretext of mitigating buyer-side market power, the more it will force states to choose between their public policy priorities and the benefits of the wholesale markets that the commission has spent the last two decades fostering, Glick said.

“New York provides the perfect example, as the Public Service Commission has begun a proceeding to consider ‘taking back’ from NYISO the responsibility for ensuring resource adequacy,” Glick said.

He noted that numerous states are considering leaving the other Eastern RTOs’ capacity markets, which also have rules that hinder states’ exercise of their resource decision-making authority.

“We got to this point largely because of the commission’s misguided belief that it must ‘protect’ capacity markets from the influence of state public policies,” Glick said. “And the end result will be profoundly inefficient, no matter how many times my colleagues use the words ‘market’ and ‘competition.’ ... It is becoming increasingly clear that, unless something changes, the commission’s effort to ‘protect’ NYISO’s capacity market may ultimately be what dooms it.” ■



Workers enter a container-size energy storage unit in New York. | NY-BEST

PJM News



FERC Accepts PJM 5-minute Pricing Revisions

By Michael Yoder

FERC last week accepted PJM’s proposed Tariff revisions on five-minute pricing to resolve inaccuracy and dispatch misalignment issues.

In its order issued Oct. 13, the commission determined that PJM’s revisions were “just and reasonable enhancements to its pricing and dispatch methodologies” (ER20-2573). The RTO had calculated current prices based on a future dispatch interval, which FERC said contributed to a misalignment between pricing and dispatch.

PJM’s proposed short-term fixes revise the locational price calculator (LPC) to use the reference real-time security-constrained economic dispatch (RT SCED) case for the same target time. For example, the LPC would calculate prices for the interval from 11:55 a.m. to 12 p.m. using the RT SCED solution for a 12 p.m. target time.

Resource offers, parameters and ancillary service assignments would be inputs to the RT SCED cases. Offers for 11 a.m. to 12 p.m. would be effective through 12 p.m., with offers for 12 to 1 p.m. used for the dispatch target time of 12:05 through 1 p.m.

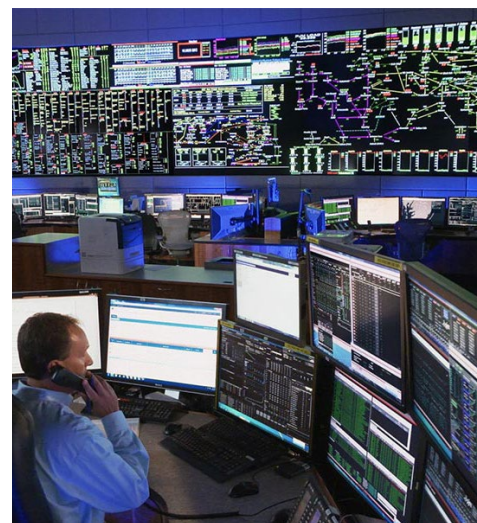
The commission said it agreed with PJM that the proposal to modify the LPC pricing pro-

gram to use the approved RT SCED dispatch case for the same target time will better align pricing and dispatch intervals.

“Specifically, we find that PJM’s proposal will more accurately ensure that prices appropriately reflect the costs of the marginal resources consistent with the future timing of the dispatch instructions they receive,” the commission said.

In April 2019, the commission ordered PJM and NYISO to revise their tariffs to allow fast-start resources to set clearing prices, contending the current rules were not just and reasonable. (See *FERC Orders Fast-start Rules for NYISO, PJM.*) PJM submitted a compliance filing in July 2019 that the Independent Market Monitor, state commissions and consumer advocates argued didn’t provide clear evidence that it would implement fast-start pricing correctly. Those commenters noted that PJM uses a different market interval to compute dispatch instructions and calculate prices.

FERC delayed PJM’s follow-up fast-start compliance filing in January, giving the RTO until July to make a filing as members continued working on the issue in the stakeholder process. (See *FERC Stalls PJM Fast-start Compliance Filing.*) After attempting to craft a joint proposal in response to FERC’s January ruling, PJM and the Monitor told the Market Implementation



PJM control room | PJM

Committee in April they were unable to agree on implementation timing. (See *PJM, IMM at Odds on 5-Minute Dispatch, Pricing Rules.*)

Several months of heated debate led to members endorsing short-term fixes aligning the LPC to use the reference RT SCED case for the same target time at the June MIC meeting. (See *PJM 5-Minute Dispatch Proposal Endorsed.*)

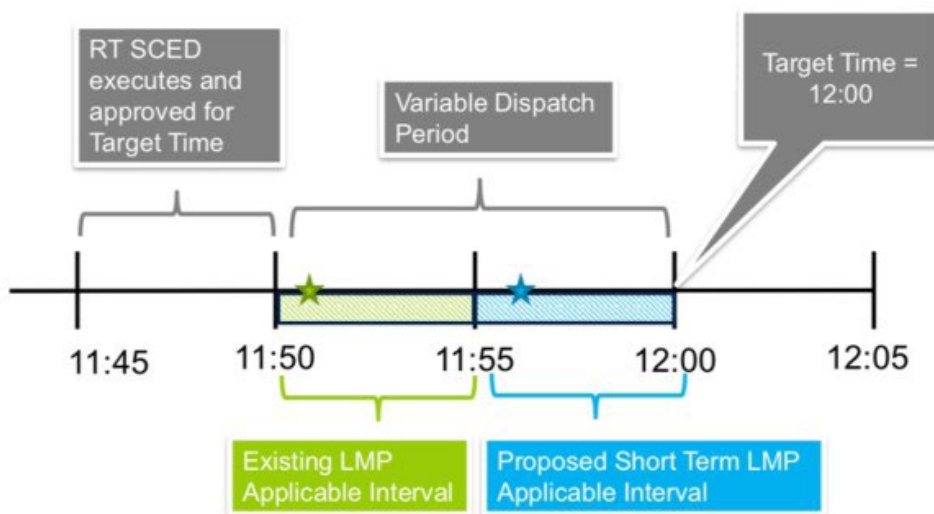
Stakeholders officially endorsed the Tariff changes in an unusual unanimous sector-weighted vote at the Markets and Reliability Committee’s July 23 meeting while encouraging PJM to continue to pursue both intermediate and long-term changes. (See *PJM Stakeholders OK 5-Minute Dispatch Proposal.*)

In last week’s order, FERC rejected the Monitor’s arguments that PJM’s proposal “creates a systematic delay between the dispatch signal and pricing that undermines the incentive to follow dispatch” and that this mismatch “occurs for any price fluctuations due to changes in load or transmission constraints, not just shortages.”

“PJM’s proposal would better align calculated prices that determine real-time, five-minute settlements for generators with the timing of when they are expected to achieve their indicated dispatch levels,” the commission said.

FERC encouraged PJM to continue to work with stakeholders on long-term reforms in its efforts to address the pricing and dispatch misalignment.

The Tariff revisions took effect on Thursday. Approval of the PJM’s fast-start proposal is still pending. ■



- ★ Existing LPC case execution time
- ★ Proposed LPC case execution time

PJM’s accepted plan for short-term fixes to its fast-start pricing | PJM

PJM News



FERC Acts on PJM MOPR Filing

Reverses Position on State Default Service Auctions

By Michael Yoder and Rich Heidorn Jr.

FERC on Thursday approved most of PJM's compliance filing on its expanded minimum offer price rule (MOPR) while reversing its position on state-directed default service auctions ([EL16-49-003, et al.](#)).

The commission said it agreed with PJM and commenters to exclude "independently evaluated, non-discriminatory, fuel-neutral, competitive state-directed default service auctions from application of the expanded MOPR."

"Based on the record in this proceeding, we find that competitive and non-discriminatory state-directed default service auctions — i.e., those state-directed default service auctions that qualify to be excluded from the definition of state subsidy under PJM's proposal — do not require mitigation at this time."

The commission also rejected PJM's proposed revisions to the market seller offer cap as beyond the scope of the compliance proceeding.

In March, PJM made a 683-page filing proposing Tariff revisions in response to FERC's December order expanding the MOPR to new and existing state-subsidized resources. The order included exceptions for existing demand response, energy efficiency, self-supply and resources receiving payments under renewable portfolio standards. In June, PJM submitted proposed additional Tariff revisions to comply with the commission's April 16 order on rehearing.

More than two dozen companies and coalitions had filed responses to PJM's compliance filing, taking issue with the RTO on auction timing, floor prices, unit-specific rules and self-supply exemptions. (See [Commenters Weigh in on PJM MOPR Compliance Filing.](#))

Glick Dissents

The order was supported by Chairman Neil Chatterjee and Commissioner James Danly, both Republicans, while Democrat Richard Glick issued a six-page dissent.

"At this point, there is not that much left to say," Glick wrote. "This proceeding has been one of the commission's all-time worst, both in the baffling decisions it reached and the bumbling way in which it got there. Today's order only digs the hole deeper."

Glick said he was relieved that the commission



FERC Chairman Neil Chatterjee | © RTO Insider

had reversed its treatment of state default service auctions, calling its original position "a harebrained idea."

"Even parties that have cheered on the commission's general MOPR zealotry have balked at applying MOPRs to default service auctions," he noted.

But he said the commission's limited rehearing may be moot because of its suggestion that New Jersey's default service auction would constitute a state subsidy based on the possibility that the auction winners would have to comply with the state's renewable portfolio standard.

"The commission's discussion of the [New Jersey] auction provides every reason to believe that the grant of rehearing on state default service auctions will end up being almost meaningless. Several other PJM states' descriptions of their default service auctions also mention renewable portfolio standards or similar programs applying to entities that provide default service. Taken seriously, the commission's discussion of the [New Jersey] auction would seem to suggest that payments from those other states' auctions would also trigger the MOPR."

Glick predicted "the PJM MOPR saga will ultimately be remembered as a model case of egregious commission overreach. The majority has taken MOPRs, already a controversial topic, and thoroughly weaponized them as a tool for increasing prices and stifling state efforts to promote clean energy. The result is an unsustainable construct that will eventually

collapse under its own weight. The commission's contortions on default service auctions and its failure to address the most important questions implicated by today's order are just the latest indicator of that inevitable result. At this point, the only real question remaining is how much damage the commission's arrogant approach to the states will do in the meantime."

Chatterjee Defends Ruling

Chatterjee insisted the ruling was a "market protective reform."

"I'm proud of the actions the commission has taken to protect the integrity of the PJM capacity market," Chatterjee said. "Markets are, in my view, simply the best way to pave the way towards our energy future."

He said that when renewable resources and new technologies are given the chance to compete, they can thrive in the marketplace, but there has to be transparent and efficient markets as a baseline. He said creating a baseline is the "core aim" of the MOPR.

Here is a summary of the commission's 162-page order.

Resources Subject to the Expanded MOPR

FERC accepted PJM's proposed Tariff revisions to apply the MOPR to any capacity resource that receives or is entitled to receive a state subsidy.

It accepted PJM's position that sellers involved in bilateral transactions should be permitted

PJM News



to choose the competitive exemption in cases where the rights and obligations of multiple off-takers are in equal shares. “Consistent with the directives of the December 2019 order, we reiterate that only the portion of the resource receiving a state subsidy will be subject to mitigation,” FERC said.

It also accepted PJM’s proposal regarding resources not subject to the must-offer requirement. “We disagree with the Market Monitor that the entire capacity of such a resource must be offered into each auction, including incremental auctions, to maintain its status as an existing resource, because the rehearing order did not require that,” FERC said.

The commission also rejected the Monitor’s argument regarding fixed resource requirement (FRR) resources, approving PJM’s proposal that resources in FRR capacity plans will not lose their status as cleared capacity resources with state subsidies solely because they participate in such a plan instead of the Base Residual Auction (BRA) for a given auction.

Definition of State Subsidy

FERC accepted PJM’s proposed definition of state subsidy, which incorporated the commission’s definition. The commission rejected the Environmental Defense Fund’s complaint that the definition is vague and does not put market participants on notice of what is considered a state subsidy, calling it “essentially an out-of-time rehearing request of the December 2019 order,” which defined state subsidy.

General Industrial Development and Local Siting Support

The commission accepted PJM’s proposal to exclude generic industrial development and local siting support from what is considered a state subsidy, rejecting a proposal by Dominion Energy. “Dominion incorrectly suggests that any subsidy that is widely available would be exempt, regardless of whether it met the criteria for general industrial development or local siting support subsidies laid out in the December 2019 order,” FERC said. “The December 2019 order, as reiterated in the rehearing order, found that only payments which were designed to provide an incentive or promote general industrial development in an area or siting facilities in one locality over another are exempt.”

Bilateral Contracts with Self-supply

PJM’s proposal to exclude from the MOPR some voluntary bilateral contracts entered into by self-supply entities also won FERC’s approval.

“The PJM MOPR saga will ultimately be remembered as a model case of egregious commission overreach. The majority has taken MOPRs, already a controversial topic, and thoroughly weaponized them as a tool for increasing prices and stifling state efforts to promote clean energy.”

—FERC Commissioner
Richard Glick

“We agree that, where the otherwise unsubsidized resource contracts with a self-supply entity and the transaction meets the requirements under PJM’s proposal, the unsubsidized seller does not have the ability to enter into a contract below cost, nor would the unsubsidized resource have guaranteed cost recovery if it offered the capacity into the market below cost,” FERC wrote.

The commission rejected a proposal by American Electric Power and the Organization of PJM States Inc. (OPSI) to include an exemption for all bilateral transactions as “unnecessary.”

“The commission expressly found in the December 2019 order that private, voluntary bilateral transactions did not need to be mitigated.”

It also disagreed with the contention by some intervenors that energy-only bilateral sales to self-supply entities cannot convey a state subsidy. “Rather, if an energy-only bilateral contract entered into by a self-supply entity meets the requirements set forth in PJM’s proposal, then that contract is excluded from the definition of state subsidy. Otherwise, as the



FERC Commissioner Richard Glick | © RTO Insider

rehearing order found, the expanded MOPR applies to bilateral contracts entered into by self-supply entities. The record provides no basis for generally distinguishing bilateral contracts for energy from other bilateral contracts entered into by self-supply.”

It also rejected requests to require PJM to allow a competitive exemption for self-supply transactions that are shown to be competitive or that the RTO and the Monitor review self-supply contracts and determine whether the contract conveys a subsidy.

“If a state-subsidized resource is truly competitive, the resource can use the resource-specific exception to offer less than the default offer price floor, thereby permitting resources to show they are truly participating competitively and protect market integrity,” FERC said.

FRR Revenue

FERC approved PJM’s proposal that any revenue for providing capacity as part of an FRR capacity plan or through bilateral transactions with FRR entities will not be considered a state subsidy.

It disagreed with the Monitor’s contention that any FRR revenue should be considered a subsidy even if it does not meet the definition.

Market Seller Offer Cap Provisions

FERC rejected PJM’s proposed revisions to the market seller offer cap, saying the cap has “never been a subject of this [Federal Power Act] Section 206 proceeding.”

“Neither the December 2019 order nor the rehearing order directed changes to the market seller offer cap provisions or found that sellers should be able to offer above the default market seller offer cap without a resource-specific

PJM News



review, as currently required by the Tariff.”

The commission said it understood PJM’s concern that sellers may be left without a valid offer under potentially conflicting Tariff provisions when the default or resource-specific offer price floor for a resource is higher than the cap for such a resource. “In such a circumstance, we find that the resource should submit an offer using the resource-specific review process,” FERC said.

Self-supply Exemption

FERC accepted PJM’s proposal regarding the self-supply exemption. It rejected a request for clarification by Southern Maryland Electric Cooperative, saying “an executed bilateral contract alone is not one of the eligibility criteria for the exemption.”

RPS Exemption

The December order, as modified by the rehearing order, directed PJM to include an exemption for renewable resources receiving support from state-mandated or state-sponsored RPS programs.

PJM’s proposed RPS exemption was accepted in part, with the commission requesting a modification directing the RTO to modify Tariff language related to eligibility for exemptions to state that “a capacity resource may qualify for the exemption if it is the subject of an interconnection service agreement that is executed by the interconnection customer on or before Dec. 19, 2019.”

DR/EE/Storage Exemption

FERC directed PJM in the December order to include a DR, energy efficiency and storage resource exemption that would meet at least one of three criteria to be eligible: have successfully cleared an annual or incremental capacity auction prior to Dec. 19, 2019; have completed registration on or before Dec. 19, 2019; or have a measurement and verification plan approved by PJM for the resource on or before Dec. 19, 2019.

The commission mostly accepted PJM’s proposal, directing further compliance on the RTO’s proposal regarding utility-based residential load curtailment programs. FERC directed PJM to remove a parenthetical statement “(or for utility-based residential load curtailment program, based on the total number of participating customers)” from Attachment DD, section 5.14(h)(7)(a).

“The rehearing order requires aggregators and curtailment service providers (CSPs) to be considered to have previously cleared a capac-



Rich Glick
@RichGlickFERC

There’s not much left to say on today’s @PJMinterconnect #MOPR order. This proceeding has been one of @FERC’s all-time worst, both in the baffling decisions it reached & the bumbling way in which it got there. 1/3

10:45 AM · Oct 15, 2020 · Twitter Web App

8 Retweets 7 Quote Tweets 14 Likes



Rich Glick @RichGlickFERC · 5h
Replying to @RichGlickFERC

Today’s order only digs the hole deeper, as @FERC effectively doubles down on its harebrained attempt to #MOPR state default service auctions. 2/3

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3

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Rich Glick @RichGlickFERC · 5h

The @PJMinterconnect #MOPR saga is a clear case of @FERC overreach that has thoroughly weaponized #MOPR to increasing prices & stifle state efforts to promote clean energy. It will eventually collapse under its own weight. The only question is when. 3/3

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11



| Richard Glick via Twitter

ity auction only if all the individual resources within the offer have cleared a capacity auction either on their own (i.e., individually) or as part of an offer from an aggregator or CSP,” the commission said.

Competitive Exemption

The December order directed PJM to include a competitive exemption for both new and existing resources, other than new gas-fired resources, that certify to the RTO that they will forego any state subsidies. The rehearing order further clarified that the competitive exemption is available to state-subsidized resources “receiving or entitled to receive a state subsidy that certify they will forego the state subsidy,” noting that all resources seeking to use the competitive exemption must certify whether or not they receive, or are entitled to receive, a state subsidy.

FERC ordered PJM to submit an additional compliance filing, directing the RTO to modify its proposal regarding the gaming provisions that dictate “under what circumstances a resource that elects the competitive exemption and then accepts a state subsidy will forfeit its capacity revenue.”

The commission also rejected PJM’s proposal that, going forward, any capacity resource that cleared an auction before it received or became entitled to receive a state subsidy shall be deemed a cleared capacity resource with state subsidy, rather than a new capacity resource with state subsidy.

Default Offer Price Floors

FERC approved PJM’s proposed gross cost of new entry (CONE) values except for the energy efficiency value, which it deferred to a

PJM News



separate proceeding on reserves, in which the commission found the RTO's methodology for calculating the energy and ancillary services offset (E&AS) unjust and unreasonable (EL19-58). A compliance filing that includes a new proposal for EE gross CONE in that docket is pending before the commission.

FERC accepted PJM's proposed gross avoidable-cost rate (ACR) values and its proposal to adjust the Tariff-stated gross CONE values for combustion turbine and combined cycle resources annually using the applicable Bureau of Labor Statistics Composite Index.

The commission accepted in part, and rejected in part, PJM's proposal regarding default offer price floors for generation-backed DR. Specifically, FERC accepted PJM's proposed gross CONE and ACR values for generation-backed DR diesel resources but rejected the RTO's proposal to use those values for other types of behind-the-meter generation because it was not consistent with prior orders.

"We have already found that behind-the-meter generators should have the same costs as front-of-meter generators of the same type," the commission said. "The rehearing order found that behind-the-meter generators should not receive special treatment and that parties failed to present evidence why a specific type of generator should have fundamentally different going-forward or construction costs depending on whether it exists behind or in front of the meter."

Resources not Subject to the Must-offer Requirement

FERC directed PJM in the December order to propose default offer price floors for all other types of resources that participate in the capacity market, with the rehearing order clarifying specifically that the RTO should propose default offer price floors for seasonal resources.

The commission approved PJM's proposal that the offer price floor should be applied regardless of the actual sell offer quantity or the resource's status as a seasonal Capacity Performance resource, for both the default offer price floors and the resource-specific offer price floors.

"We agree with PJM to base the offer price floor on the capacity resource's full capacity capability ensures cost recovery, and no more, for each megawatt-day offered and cleared," the commission said.

The December order directed PJM to maintain the "resource-specific exception," expanding

it to cover existing and new state-subsidized resources of all resource types and to permit "any resource that can justify an offer lower than the default offer price floor to submit such offers for review."

PJM proposed two options for sellers seeking the resource-specific exception: an offer that considers only costs related to participating in the capacity market and meeting a capacity commitment, and an offer that considers all costs and permissible revenues.

"The first option is not consistent with the rehearing order, which found that behind-the-meter resources should not be treated differently solely because they are behind-the-meter and directed that all resources of a particular technology type should be treated the same," the commission said, approving the second option.

Certification

PJM proposed that each seller inform the RTO whether its resource is state-subsidized during the pre-auction registration process. It included provisions that the information must be provided no later than 120 days prior to the annual capacity auction for each seller other than DR and EE resources, which would have a 30-day deadline.

The commission accepted PJM's certification proposal in part, approving the RTO's proposed deadlines, but created a stipulation that if any changes in a state subsidy status occurs within 30 days of the auction, sellers will have five days to notify the RTO of the change.

Fraud or Material Misrepresentations

PJM proposed that if it or the Monitor suspects "misrepresentation or omission in the relevant certification," either entity may request additional information to be provided within five business days.

The commission accepted PJM's proposal and declined to direct the RTO to remove Tariff references describing the Monitor's role as "advice and input."

"Contrary to the Market Monitor's contention, stating that the Market Monitor will provide advice and input to PJM does not mean that the Market Monitor's role as independent evaluator is diminished or change the fundamental roles between PJM and the Market Monitor related to the capacity market," the commission said.

Waiver Request and Auction Schedule

The December order directed PJM to provide revised dates and timelines for the BRA asso-

ciated with delivery year 2022/2023 (2019) and related incremental auctions, along with revised dates and timelines for the BRA associated with delivery year 2023/24 and related incremental auctions, as necessary.

The commission granted PJM's waiver allowing the pre-auction process to begin two weeks after FERC issued the order, with the next annual capacity auction to be conducted in six and a half months.

Replacement Capacity

The rehearing order clarified that capacity from state-subsidized resources cannot serve as replacement capacity "bilaterally procured to fulfill a capacity commitment for an unsubsidized resource."

The commission determined that it's not consistent with prior orders to allow a state-subsidized resource to evade the MOPR through a bilateral transaction, regardless of the term of the transaction. The order acknowledged PJM's concern that the change "would inhibit the ability for capacity market sellers of jointly owned resources to replace resources within their own portfolios."

But the order said the modified provision that removed the phrases "short term" and "one year or less" from Attachment DD section 4.6(e) was just and reasonable and followed the Monitor's position that this provision should extend to replacement capacity within portfolios as well.

"It is not consistent with the prior orders, or just and reasonable, to allow a supplier to game the expanded MOPR by switching the capacity obligations within its portfolio to alternative resources," the commission said.

The commission accepted only the proposed changes to existing Attachment DD section 5.14(h), which are related to the replacement rate, and accepted PJM's proposal to change the name of the section to "Minimum Offer Price Rule for Certain New Generation Capacity Resources that are not Capacity Resources with State Subsidy." All other changes in the section were rejected as being outside of the scope of the filing.

The rehearing order clarified that the December order did not direct any changes to PJM's pre-existing MOPR and that the RTO's compliance filing "should not contain any substantive changes to that section unrelated to the replacement rate." But the rehearing order explained that state-subsidized resources should be subject to the MOPR regardless of their location with respect to the expanded MOPR. ■

PJM News



Competitive Power Ventures Sold to Israeli Co.

By Rich Heidom Jr.

Global Infrastructure Partners announced last week that it will sell generation developer and operator Competitive Power Ventures (CPV) to Tel Aviv-based OPC Energy and Israeli institutional investors. Terms were not announced.

Maryland-based CPV, which develops natural gas and renewable power generation, is one of about 40 portfolio companies owned by GIP, which invests in the energy, transportation and water/waste sectors internationally.

The sale would include all of CPV's 5.3 GW of generation in the U.S., as well as its development pipeline and asset management business, which operates more than 10.6 GW of fossil and renewable generation in nine states for 13 owner groups.

Incorporated in 2010 as the first private electricity company in Israel, OPC generated about 5% of that nation's electricity in 2018. It will own 70% of CPV and serve as general partner, with the remainder owned by three Israeli institutional investors: Clal Insurance Enterprise Holdings (12.75% interest), Migdal Insurance and Financial Holdings (12.75%) and Poalim Capital Markets (4.5%).

Pending regulatory approval, closing of the sale is expected in early 2021.

OPC said it plans to invest "significant capital" in CPV to fund future growth, with a focus on renewable and combined cycle gas generation. It said CPV's leadership team will remain intact. "OPC has long recognized the potential in the U.S. electricity market," OPC CEO Giora Almogi said in a statement Oct. 13.

Founded in 1990, CPV was acquired by GIP five years ago.

"We look forward to the opportunities created by our new partnership with OPC, which positions us well for our next phase of growth during a pivotal time as the U.S. transitions toward greener and lower-emitting generating resources," CPV CEO Gary Lambert said in a statement. "I am grateful to Global Infrastructure Partners for its confidence in CPV over the past five years, providing not only access to capital but credible execution and operations expertise that helped guide us through a significant growth period."

Tom Rumsey, CPV's senior vice president of external and regulatory affairs, told *RTO Insider* the company will continue to pursue natural gas generation investments as well as renewables.

"We are very focused on reducing carbon emissions from the power sector, but policy must align with technological capability," he said. "As we've seen in California, without dispatchable power to augment and facilitate the growth of renewables, reliability is difficult, if not impossible, to maintain. Highly efficient and operationally flexible natural gas resources are exceptional partners to today's renewable technologies, specifically wind and solar. We have very aggressive development programs for both."

Portfolio

CPV's portfolio includes an 805-MW combined cycle plant in Connecticut and three combined cycle plants totaling 2,500 MW in PJM. A fourth, the *CPV Three Rivers Energy Center*,

a 1,250-MW combined cycle plant in Grundy County, Ill., southwest of Chicago, is under development.

CPV, GE Energy Financial Services, Osaka Gas USA, Axiom Infrastructure and Harrison Street announced the financial closing on Three Rivers in August. The \$1.3 billion plant is expected to commence operations in 2023.

CPV is also developing a 100-MW solar project in Pennsylvania and a 50-MW solar farm in Massachusetts.

The company attracted some undesirable attention in 2016 over its development of the Valley Energy Center, a 680-MW combined cycle plant in Orange County, N.Y., when Peter Galbraith Kelly Jr., then the company's head of external affairs and government relations, was indicted in a federal bribery case involving two former aides of Gov. Andrew Cuomo. (See *Competitive Power Ventures Lobbyist, Former Cuomo Aides Named in Bribery Indictment*.)

Kelly was sentenced in October 2018 to 14 months in federal prison after pleading guilty to creating a \$90,000/year "low-show" job at CPV for the wife of Joseph Percoco, then Cuomo's executive deputy secretary. Percoco received a six-year sentence.

Kelly pleaded guilty to defrauding CPV by falsely claiming that Percoco had obtained state ethics approval for his wife to work at the company. She was paid \$285,000 over the course of three years through a consultant in an effort to hide the payments, according to trial testimony. Kelly also made sure that Percoco's wife's photograph and full name were not included in promotional materials for CPV. ■



Most of CPV's generating capacity is in PJM. | *Competitive Power Ventures*

SPP News

SPP MOPC Briefs

Stakeholders Endorse \$532M 10-year ITP Assessment

SPP stakeholders last week endorsed a 10-year assessment of reliability and economic transmission projects that will likely continue to struggle to stay abreast of wind energy development.

“Actual wind in the ground outstrips our projections almost every time,” ITC Holdings’ Alan Myers, who chairs the Economic Studies Working Group responsible for the study, said during the Markets and Operations Policy Committee meeting, held Oct. 13 to 14.

The 2020 Integrated Transmission Planning (ITP) study comprises 54 projects at an estimated cost of \$532 million, with a projected 4.0- to 5.2-to-1 benefit-to-cost ratio. The portfolio includes 92 miles of 345-kV transmission lines and 141 miles of rebuilt high-voltage infrastructure.

The two-year assessment’s business-as-usual reference case future projects 26 GW of wind energy by 2025 and 28 GW by 2030. The more aggressive “emerging technologies” future foresees 30 GW of wind by 2025 and 33 GW by 2030.

Meanwhile, SPP had 26.7 GW of registered wind capacity as of Sept. 1 and expects to have 29.7 GW in service by 2022.

“We are getting better. The projections for this study are a little further out,” Myers said. “You can draw the conclusion that we could have added more wind than we did.”

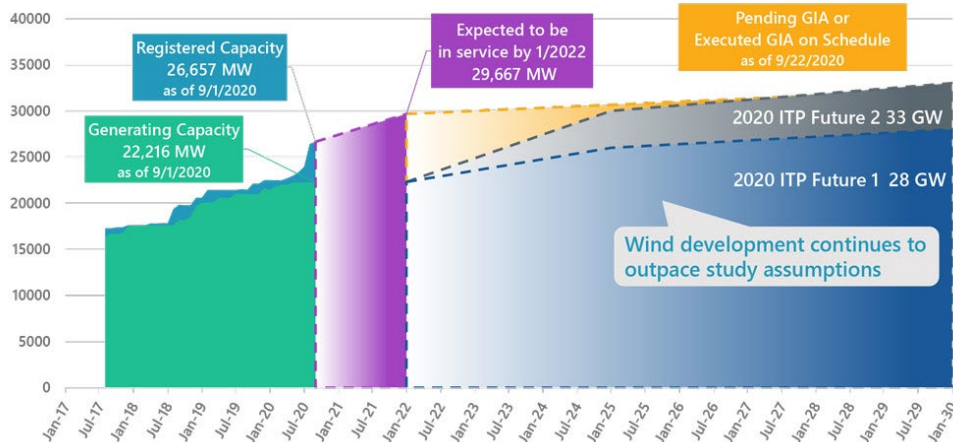
“If you look at ITPs in the past, most of the [reference case] Year 10 assumptions came to reality in two years,” SPP Director of System Planning Casey Cathey said. “Our wind assumptions ... are becoming a reality a lot faster than Year 10.”

Casey called the ITP portfolio “fairly strong,” citing its B/C ratio. The study also took into account fossil fuel retirements and a 4- to 9-GW increase in solar generation.

The ITP assessment drew the usual criticism from transmission owners wary of building more 40-year facilities on top of the \$10 billion or so in recently constructed SPP infrastructure.

“One of the questions we’ve asked for a long time is at what point do you quit building? At what point do you quit asking customers to be paying for these facilities?” Oklahoma Gas &

PROJECTED VS. ACTUAL WIND



Wind energy's growth in the SPP footprint continues to outpace projections. | SPP

Electric’s Greg McAuley asked. “We question the long-term viability of those benefits. We have no idea what the industry will look like in 40 years, much less in 10 years. The right transmission needs to be built. It’s these economic projects that we have the most concern about because those costs don’t go away.”

“These 40-year investments we’re making are actually fixed costs to the customers,” Golden Spread Electric Cooperative’s Mike Wise said. “SPP is showing variable costs with the B/C ratios. We’re trying to say the fixed costs are substantially risky because 40 years of fixed costs reduce some variable costs. Enough is enough. You can go broke to save money.”

The TOs approved the ITP study by a 12-2 margin, with three abstentions, as the measure passed with 88% overall approval.

Center Stage for Electric Storage Proposals

Members began to address the footprint’s growing wave of energy storage resources (ESRs) by endorsing six recommendations from a white paper calling for SPP to capitalize on ESRs’ flexibility, reliability and economic benefits by developing cost-recovery mechanisms and determining whether they are used as generation and/or transmission assets. (See *SPP Planning Approach to Battery Storage*.)

“And many more to come,” said Evergy’s Allen Klassen, chair of the Operating Reliability Working Group (ORWG), referencing the document’s 37 proposals.

The ORWG worked with the Supply Adequacy

Working Group (SAWG) in agreeing with the white paper’s recommendation to support use of the available effective load-carrying capability (ELCC) for ESR accreditation. The groups also urged adopting a four-hour minimum duration for capacity accreditation and no additional real-time ESR availability criteria.

Both recommendations passed unanimously. However, the two groups were unable to agree on the number of ESRs that can be aggregated in a resource adequacy portfolio. The ORWG recommended a maximum ESR participation limitation for each load-responsible entity, based on load and resource capacity calculations, while the SAWG argued against a participation limit “at this time.”



Natasha Henderson, Golden Spread | © RTO Insider

“We don’t feel the need to take action right now until we see the penetration and how batteries are used,” said Golden Spread’s Natasha Henderson, the SAWG’s chair. “We just don’t think we have the data to know what that limit is right now.”

SPP COO Lanny Nickell said staff will work on a scope document for a task force that further studies the issue related to FERC Order 2222. Staff have already suggested a name for the task force: The 2x4.

Separately, the SAWG produced a white paper proposing a methodology for prioritizing and allocating the available ELCC from capacity-qualifying ESRs in SPP. The group contracted

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an outside consultant to analyze an ESR's capacity credit on the SPP system using ELCC and capacity value and two dispatch strategies: preserving reliability and economic arbitrage. The study also evaluated the capacity credit of batteries using two-, four-, six- and eight-hour equipment.

The MOPC also approved a Market Working Group (MWG) proposal for modeling and controlling ESRs' hybrid configurations, passing the measure against a single opposing vote.

The MWG and other stakeholders and staff chose a market storage resource (MSR) model among three other alternatives. The MSR market-registration model was created for FERC *Order 841*, which directed RTOs and ISOs to eliminate barriers to ESR participation in their markets. The model allows generating and storage resources to be represented as a single resource in the market model with one set of offers.

"To the market, it looks like one resource," SPP's Gary Cate said. "The less resources the market-clearing engine has in its matrix, the less time it takes to solve. This model could apply more broadly to anything that has storage."

The ESRs will still be modeled separately for reliability purposes, with offer parameters consisting of all those associated with MSRs. A single offer curve would be submitted, but SPP said this could prove challenging for mitigated offer-curve development because the generating costs represent a blended opportunity cost of injecting and/or self-charging. Staff said the MSR option will allow market participants to manage the co-located resources' interactions as long as their total injection or withdrawal meet the combined dispatch.

Cate said SPP has looked at how other RTOs are addressing battery storage "because everyone is going through this at the same time." (See [RTOs/ISOs File FERC Order 841 Compliance Plans.](#))

The committee also endorsed:

- the Regional Tariff Working Group (RTWG) and MWG's recommendation that transmission-only ESRs should not pay transmission service and/or ancillary charges related to their charging activity. Stakeholders said this would put ESRs on the same level with other transmission assets providing similar services for which they do not pay service charges.
- An ORWG *white paper* that urges development of a policy requiring fast-responding ESR owners and operators to clearly define the resource's ramping capability during the

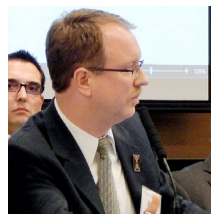
registration process; the definition of acceptable response-rate ranges for each ancillary service and ensure coordination of energy deployment across all participating resources; and governing policies that require resources to perform within their registered capability as dispatched by SPP. The MWG will take the lead on the work.

Interconnection Improvements

A cross-functional MOPC stakeholder group directed to develop policies creating a balance between energy resource interconnection service (ERIS), network resource interconnection service (NRIS), generator-interconnection products and long-term firm transmission service secured approval for a 72-page *white paper* and a recommendation to replace NRIS with a new capacity resource interconnection service (CRIS).

The NRIS/ERIS Deliverability Task Force (NEDTF) said CRIS would add deliverability to the existing NRIS product and provide a clearer distinction between the two services.

CRIS provides capacity deliverability from a single resource to any load within a control area, balancing authority or other designated region that contains more than a single load. NRIS provides the interconnection customer with a sufficient interconnection that allows the generator to qualify as a designated network resource on the transmission provider's system without additional network upgrades.



Rob Janssen, Dogwood Energy | © RTO Insider

NEDTF Chair Rob Janssen, with Dogwood Energy, said the task force, which evolved from a Holistic Integrated Tariff Team (HITT) recommendation, engaged with several other working groups, gaining generally favorable feedback. He said there was general agreement that larger deliverability areas are preferable.

The NEDTF received a little bit more pushback on its proposal to tighten thresholds for mitigating ERIS system impacts, picking up on *work* by a previous task force. The proposed revision request would address stakeholder conclusions that too many unmitigated constraints lead to undesirable effects in the SPP market.

Committee members expressed concern over the \$400,000 cost, but staff noted most congestion studies require building a generation and portfolio modeling system. In the end, the MOPC gave the threshold-tightening recom-

mendation against just four opposing votes.

Members also endorsed the NEDTF's white paper, which Janssen said would "lay the foundation" for whatever work will follow.

More White Papers Approved

The MOPC overwhelmingly signed off on several white papers related to the HITT's recommendations:

- the Transmission Work Group's *paper* documenting modifications to Tariff Attachment AQ limiting its application to new load, revisions to loads and load retirements that need to be addressed outside of the ITP because of timing or some other "significant" reason. The paper, approved unanimously, was produced to increase transparency and shorten the turnaround time to facilitate load growth.
- a joint *report* from the ORWG and MWG demonstrating the economic benefits of topology optimization by using existing transmission assets to increase grid flexibility and efficiency. According to the report, while transmission elements are traditionally viewed as static elements, their topology reconfigurations may provide a means to reliably reroute power around congested facilities without causing additional burden on the system.
- The ORWG and MWG also produced a second *white paper* on economic outage coordination that was part of the consent agenda. The paper explored other RTOs' outage coordination processes and criteria thresholds before concluding SPP will need to invest time and money fully integrating and streamlining the process to take full advantage of the economic benefits.

Staff will use the white papers to develop policy and Tariff language to implement the changes.

\$91M Increase for NPPD's R-Project

Members approved a nearly \$91 million increase for Nebraska Public Power District's *R-Project*, raising the controversial 345-kV initiative's price tag to \$463.4 million. The measure passed with 83.5% approval.

NPPD warned the Project Cost Working Group in September that it expected the project to be out of bandwidth in the near term. The publicly owned utility has already sunk \$100 million into the project and said its original estimate "significantly underestimated" the environmental cost, which was based on typical environmental tasks in previous efforts.

SPP News



The project comprises 225 miles of 345-kV transmission line running through the environmentally sensitive Nebraska Sandhills and two new substations. It was approved as part of the ITP 10-year assessment in 2012 and received a notification to construct with conditions the following year.

In June, a federal district judge *revoked a federal permit* that would have allowed NPPD to kill or severely disturb the endangered American burying beetle during construction. The utility has said the ruling will delay but not stop the project, which has a 2024 in-service date.

Several TOs called for the project to be suspended and re-evaluated over cost concerns. That motion failed with only 30% approval.

“Is this still the right project?” asked Bill Grant, of Xcel Energy’s Southwestern Public Service. “This has been re-baselined several times, and I have huge concerns we’re not doing our due diligence. I have to ask whether this project is prudent or not.”

“This is a significant overrun here, and it’s been going on for a long time. At some point, we have to take another look at it,” McAuley said. “That’s why those of us who build transmission are very cautious. There’s always uncertainty. You can wind up in this situation four or five years down the road, but it’s too late. Customers are already paying for it.”

SPP staff said several generator interconnection agreements are dependent on the project, which has been framed as enabling renewable power, reducing congestion and strengthening system reliability.

“We have to continue to honor the [transmission] service in those agreements,” said Antoine Lucas, SPP’s vice president of engineering.

“The assumptions on this line going in are not the same as they were years ago,” said Advanced Power Alliance’s Steve Gaw, noting the project was originally approved as a reliability solution. “To evaluate and further delay this project has the potential to significantly increase costs.”

Carias Governs Last Meeting as Chair

MOPC members honored their chair, NextEra Energy Resources’ Holly Carias, with a virtual happy hour following the end of her two-year term and treated her to a parade of compliments.

“I couldn’t have done it without the entire membership. We had some challenges with COVID, but I think we responded pretty well,” she said. The full committee met virtually three

times during the year, aided by staff’s development of an efficient e-voting system.

SPP COO Lanny Nickell, the committee’s staff secretary, noted that it will soon complete a structural reorganization of its stakeholder groups, an effort that began shortly after Carias took the gavel in January 2019.

“Holly led the group with poise and tact,” SPP Board of Directors Chairman Larry Altenbauer said.

Evergy’s Denise Buffington, who served as Carias’ vice chair, shared an *Albert Einstein quote* translated from the original German: “Life is like riding a bicycle. To keep your balance, you must keep moving.”

Carias will continue as MOPC chair until November. She is leaving NextEra for Avangrid Renewables, where she will be vice president of origination. Buffington will serve as acting chair for the remainder of the term, which ends Dec. 31.

“We’re not [an SPP] member, but hopefully we will be soon,” Carias said.

Avangrid Renewables is a subsidiary of Spain’s Iberdrola Group, a renewable energy pioneer with more than 32 GW of projects spread across a dozen countries. Portland, Ore.-based Avangrid has more than 7.3 GW of wind and solar generation in more than 20 states.

Some Byway Costs to be Allocated Regionally

The MOPC endorsed the RTWG’s recommendation to implement previously approved language that creates a narrow process through which costs for transmission projects between 100 and 300 kV primarily used to move power out of the local transmission pricing zones can be fully allocated prospectively on a region-wide basis.

TOs opposed the measure (*RTWG RR422*) over what they said was a shift of byway cost responsibility from wind-rich areas to others. The change cleared TOs by 10-5 but enjoyed a 31-7 approval from transmission users in gaining an overall approval of 72.12%.

The board and the Regional State Committee both approved the white paper in July. (See “Board OKs 4 HITT Recommendations,” *SPP Board of Directors/MC Briefs: July 28, 2020.*)

The MOPC’s consent agenda, which passed unanimously, included nine additional revision requests:

- *ESWG RR403*: updates the ITP manual

language to support current capabilities, as software revisions prevent building models on historic time periods.

- *MWG RR420*: adds clarifying language to ensure SPP’s fast-start pricing practices are in FERC compliance. (See “Directs Further Compliance Filing on Fast-start Resources,” *FERC OKs 2 Changes from SPP’s HITT Work.*)
- *MWG RR421*: removes registration provisions requiring energy storage resources to provide certification that its participation in the market is not precluded by the relevant electric retail regulatory authority, as required to FERC to be in compliance. (See *RTOs Move Closer to Full Order 841 Implementation.*)
- *MWG RR425*: adjusts the day-ahead make-whole payment charge type’s calculations and changes the real-time out-of-merit charge type and the reliability unit commitment make-whole payment calculations.
- *PCWG RR415*: clarifies and updates existing language in Business Practice 7060 (Notification to Construct and Project Cost-Estimating Processes).
- *RTWG RR423*: removes expired or terminated grandfathered agreements from a Tariff attachment’s index and updates any termination dates that have changed or any changes in buying or selling party terminology.
- *SAWG RR412*: allows both new and upgraded capacity from existing generators to be treated equally in qualifying as accredited capacity during the first peak season that each is available, thereby preserving the members’ expected generation investment value.
- *TWG/ESWG RR427*: removes some of the detailed project proposal form’s requirements to reduce its size and scope.
- *Staff RR416*: brings more accurate reporting and communication of RRs. Clarifies when an RR exploder is required to be used; requires summaries and notices of FERC rulings on RRs; and adds a section that documents the purpose of what is to be included in the RR master list.

The consent agenda also included approval of a \$14.67 million increase above the \$32.46 million original estimate for Empire District and Evergy Kansas Central’s 161-kV rebuild in eastern Kansas; an additional 161/69-kV transformer for Apex Clean Energy’s Jayhawk Wind project in eastern Kansas; scope revisions for the MOPC’s reorganized stakeholder groups; and the 2019-2020 annual violation relaxation limits *report*. ■

— Tom Kleckner

Company Briefs

Alliance to Save Energy Names New President



The Alliance to Save Energy last week announced it

has selected Paula Glover to become the organization's new president. She will assume the role on Jan. 4, 2021, and succeed Clay Nesler, who has served as interim president since last fall.

With more than 25 years of experience in the energy industry, Glover currently serves as president and CEO of the American Association of Blacks in Energy. As president since 2013, she leads a 2,000-member association with 40 chapters nationwide, overseeing the organization's strategic plan, business development and policy positions.

More: [Alliance to Save Energy](#)

American Gas Association Names New Chair



The American Gas Association's Board of Directors last week voted unanimously to name **David Anderson** the chair of the board for 2021. He will succeed Dominion Energy COO Diane Leopold.

"I am humbled by the opportunity to lead the American Gas Association and be a voice for our 180 million customers nationwide in the conversation about affordable, reliable

energy," Anderson said.

Anderson is the president and CEO of NW Natural, which provides natural gas service to approximately 2.5 million people in Oregon and Southwest Washington.

More: [American Gas Association](#)

EV Startup Arrival Putting \$46M 'Microfactory' in SC

Arrival, a U.K.-based electric vehicle startup that is preparing to make electric delivery trucks for UPS, said last week it is investing \$46 million in a small-scale "microfactory" in South Carolina to make as many as 1,000 battery-powered buses per year.

Arrival aims to be a leading provider of electric trucks and buses as demand for emission-free vehicles expands. The company says its commercial vans will cost the same as conventional models running on diesel or gasoline and its buses will be the most affordable on the market.

More: [Forbes](#)

GE Targets Carbon Neutrality by 2030



General Electric last week said it aims to be carbon-neutral at its more than 1,000 factories and facilities worldwide by 2030. Accomplishing its goal will mean

offsetting the 2.39 million metric tons of carbon dioxide produced by the company's operations in 2019.

The challenge comes from negating the

emissions from its 7,700 gas turbines installed at power plants worldwide. GE omits emissions produced by gas-fired turbines at customers' facilities from its annual environmental reports. Such plants are substantial contributors to global carbon emissions. GE jet engines run on fossil fuels as well. The company said it is in discussions with its customers, suppliers and others about reducing emissions in their industries.

More: [Bloomberg Green](#)

Xcel Receives Grant for Hydrogen Pilot Project



Xcel Energy was awarded a \$10.5 million

grant from the U.S. Department of Energy last week to build a pilot hydrogen plant at one of its two Minnesota nuclear facilities.

The plant would use an electric current to separate water into hydrogen and oxygen, a process known as electrolysis. Xcel will employ "high-temperature" electrolysis by using steam from its nuclear power production. By using steam to heat water, less electricity is needed than with low-temperature electrolysis — cutting the process's costs and making it more energy efficient. The electricity will also be provided by the power plant.

The company plans to do engineering and planning work on the pilot through next year, with construction expected to start in 2022. It is projected to come online in 2023.

More: [Star Tribune](#)

Federal Briefs

DOE Grants \$65M for 'Smart' Homes



Secretary of Energy **Dan Brouillette** last week said the department will hand out up to \$65 million in federal grants to expand testing of "grid-interactive," efficient buildings.

The department's Connected Communities program supports technology that lets homes and buildings interact directly with each other and the

grid. Homes that can automatically adjust temperature settings during the day, for example, save energy while helping utilities meet power demand more efficiently.

Homes and commercial buildings account for 74% of the nation's electricity use. The industry accounts for one-third of U.S. carbon emissions, while buildings account for another third. New sensors, controls and analytics, coupled with advances in science, can help make them more efficient and cut emissions.

More: [The Charlotte Observer](#)

DOE Contributes \$7M to EV Cybersecurity Project

The Dream Team, a Michigan-based cybersecurity company, will receive \$7 million in funding from the Energy Department to develop infrastructure that protects the grid from cyberattacks while electric vehicles are charging.

The concern is that a hacker or a virus-infected vehicle could damage the grid by accessing chargers. Dream Team will seek to integrate technology into the charging systems to protect the grid.

The department's Office of Energy Efficiency and Renewable Energy is contributing a \$4.7 million grant that is supplemented by a \$2.3 million industry match contribution. Partners in the project include DTE Energy, NextEnergy, the University of Michigan Dearborn and Wayne State University.

More: [The Detroit News](#)

EPA Shuffles Science Advisory Board



EPA last week said it had shuffled around advisers on its Science Advisory Board, which is meant to serve as an outside sounding board on the agency's actions.

The list of new appointees includes academics and state environmental and health officials. But it also adds Kenneth Mundt to chair a chemicals subcommittee. Mundt, who was listed as someone "not to pick" by the Union of Concerned Scientists, has a history of working to discredit science on the harms of tobacco, hexavalent chromium, formaldehyde and chloroprene, all of which have been linked with various types of cancer.

John Graham, who was appointed to the board in 2017, will be its new chair alongside his role as a professor of environmental affairs at Indiana University. Graham, who was also listed as someone not to pick by the union, has opposed various rules that were opposed by automakers.

More: [The Hill](#)

FERC Approves Black Hills PPA

FERC last week approved an uncontested settlement addressing a 60-MW power purchase agreement between two Black Hills Corp. subsidiaries.

Under the letter order Thursday, Black Hills

Wyoming will continue to deliver 60 MW of baseload capacity and energy from its Wygen 1 power plant to Cheyenne Light, Fuel and Power. The new agreement commences Jan. 1, 2022, and will continue for 11 years, replacing the existing PPA. Black Hills Wyoming is a generation subsidiary of Black Hills, and Cheyenne Light is a utility subsidiary.

The commission found the settlement resolved all issues set for hearing and to be in the public interest. It directed Black Hills Wyoming to make a compliance filing with a revised market-based rate tariff and the Wygen I settlement PPA within 30 days.

More: [ER19-2529](#)

IEA: Solar to be the 'King of Electricity'

In the central scenario of its annual World Energy Outlook released last week, the International Energy Agency said renewables are expected to overtake coal as the primary source of producing electricity globally by 2025.

The agency predicts the combined share of solar PV and wind in global generation to rise to almost 30% in 2030 from 8% in 2019, with PV capacity growing by an average 12% a year. It attributed maturing technology and support mechanisms to cutting costs for major projects.

"I see solar becoming the new king of the world's electricity markets," IEA Executive Director Fatih Birol said. "Based on today's policy settings, it is on track to set new records for deployment every year after 2022."

More: [Reuters](#)

Judge Tosses Land Management Plans After Ousting Pendley

Montana-based District Judge **Brian Morris**



last week threw out land management plans in the state and criticized the Department of the Interior for "novel and last-ditch legal arguments" regarding William Perry Pendley and his removal as acting director of the

Bureau of Land Management.

Morris' decision invalidates three land management plans Pendley supervised in Montana, including one that would have opened 617,500 acres of land to resource extraction. It is the second major decision in the case after Morris determined Pendley had violated federal vacancy laws by serving unlawfully for 424 days through a series of temporary orders. He gave the department 10 days to justify why the court should not throw out many of the decisions Pendley made during his tenure.

"Any exclusive function of the BLM director performed by Pendley is invalid," Morris wrote.

More: [The Hill](#)

Methane Emissions up in 2020

Global visible methane emissions jumped 32% through the first eight months of 2020 as compared to the same period in 2019, according to a report from Kayrros, which analyzes methane leaks through satellite imagery.

The U.S., Russia, Algeria, Turkmenistan, Iran and Iraq were the largest contributors, according to the analysis. Although the U.S. is a leading contributor, EPA rescinded regulations on methane emissions in August. Figures grew higher in oil and gas hot spots such as Algeria, Russia and Turkmenistan, where emissions jumped by more than 40%.

More: [The Hill](#)

State Briefs

ARIZONA

ACC Votes to Increase Utility Efficiency Standards



The Corporation Commission last week voted 4-1 to increase efficiency standards for utilities.

With the approval, utilities

will have to implement enough energy-efficiency measures by 2030 to equal 35% of their 2020 peak demand. The new rule also includes interim requirements to ensure utilities are working toward that annually. The current standard requires utilities to use efficiency measures to meet 22% of their energy demand.

In other news, commissioners needed more time to form a proposal regarding the state's

overall renewable or clean-energy standard, which requires electric utilities to get 15% of their power from renewable sources by 2025. Rather than increase the percentage, commissioners are moving toward a requirement that would make utilities reduce their carbon emissions over a certain time frame.

More: [The Arizona Republic](#)

ILLINOIS

ICC Approves Dakota Access Pipeline Expansion

The Commerce Commission last week approved an expansion for the Dakota Access oil pipeline, the largest pipeline running out of North Dakota's Bakken shale basin, and in turn rejected bids by environmental groups to block the project.

The ICC said additional pumping stations and equipment needed for the pipeline's capacity to be nearly doubled to 1.1 million barrels per day are necessary and would promote the security and convenience of the public.

Environmental groups including Save Our Illinois Land and the Sierra Club, who opposed the expansion, told the ICC that the oil price downturn caused by the COVID-19 pandemic reduced the need for the expansion.

More: [Reuters](#)

Lawsuit May Halt DeWitt County Wind Farm



A lawsuit opposing the development of Enel Energy's 66-turbine

Alta Farms II industrial wind complex in northwest DeWitt County was filed last week on behalf of 69 constituents.

The county board's two advisory boards, the Regional Planning Commission and the Zoning Board of Appeals, were presented with 54 hours of testimony from residents and experts. Both groups voted not to recommend approval of the special use permit application, which the board granted via a 6-5 vote in July.

Depending on the results of the lawsuit, construction of the wind farm could begin next spring, though several procedural steps remain before the project can get underway.

More: [Herald & Review](#)

KENTUCKY

Gov. Beshear Announces \$8.5M in Bus Funding



Gov. **Andy Beshear** and other state leaders last week announced \$8.5 million in transportation funding to replace about 170 buses with cleaner emission buses in areas challenged with meeting

federal air quality standards.

The Transit Authority of River City, the Transit Authority of Northern Kentucky, Lexington and the Owensboro Transit System will each be awarded some of the money to replace older buses. The funds are part of \$20.3 million awarded to the state under the Volkswagen Environmental Mitigation Trust.

An additional \$3 million from the Volkswagen settlement is being allocated to zero-emission vehicle equipment, with the Transportation Cabinet recommending 75% of those funds go toward purchasing DC fast-charging stations. The remaining 25% will be used for level 2 charging stations at state parks, municipal government locations and other places of interest.

More: [WMKY](#)

NEW MEXICO

4 Solar+Storage Projects to Replace San Juan Generating Station

Public Service Company of New Mexico (PNM) last week said it will move forward with four solar-plus-storage projects to replace the lost capacity of the 847-MW coal-fired San Juan Generating Station in June 2022.

The four projects will be in Farmington, the same town as San Juan. They comprise 650 MW of solar generation and 300 MW of accompanying energy storage. Two of the projects have already been approved by the Public Regulation Commission: the 300/150-MW Arroyo Solar and the 50/20-MW Jicarilla Solar I.

PNM is pushing for approval of the other two projects: the 200/100-MW San Juan Solar 1 and the 100/30-MW 201LC 8m. The company hopes it can get approval before Dec. 4 so it can begin construction in January.

More: [pv magazine](#)

OREGON

PGE Closes Boardman Coal Plant



Portland General Electric last week announced it has permanently

closed its Boardman coal-fired power plant 20 years ahead of schedule.

The Boardman plant was the last coal-fired plant still operating in the state. The company said the closure will eliminate about 2 million tons of greenhouse gas emissions a

year. Much of the power will be replaced by hydropower from dams through agreements with Bonneville Power Administration, Washington's Douglas County PUD and other suppliers.

PGE's power mix was roughly 15% coal-fired power before the Boardman closure. That number will drop to zero by 2035 because of a state mandate making utilities eliminate coal-fired power imports from other states.

More: [Oregon Public Broadcasting](#)

TEXAS

El Paso Opposes Newman Generating Station

The El Paso City Council voted unanimously last week to reaffirm its opposition to El Paso Electric's application to add a 228-MW natural gas-fired generator to the Newman Station.

According to filings, the Newman plant would require an additional \$18.6 million in rate revenue that could potentially result in an average increase of \$1.45/month for residential customers. Additionally, the project could add additional costs because of legislation that would require the utility to supply 100% carbon-free power by 2045, which would reduce the generator's economic value and increase ratepayer costs.

More: [KTSM](#)

SWEPSCO Seeks 15% Rate Increase



Southwestern Electric Power Co. (SWEPSCO) last week said it is seeking a 15% rate hike that would take effect in January 2022.

SWEPSCO submitted a request to the Public Utility Commission for a net annual increase of \$90.2 million in its non-fuel base rates. For a residential customer using 1,000 kWh/month, the change would result in an increase of almost \$16/month.

The company said the request includes investments in generation, transmission and distribution facilities, additional funds for vegetation management, along with increased operations and maintenance costs.

More: [Longview News-Journal](#)

VIRGINIA

Dominion, Appalachian Power to Expand Energy Storage

Appalachian Power and Dominion En-



ergy last week announced a public-private partnership with

InvestSWVA that aims to expand renewable and storage technologies and attract industry prospects to the state.

Dominion Energy Virginia President Ed Baine said that with the greater proliferation of renewables, energy storage expansion will be a vital component in providing stability to the grid and supporting customer's needs.

The partnership also includes the Appalachian School of Law, Mountain Empire Community College and the Southwest Virginia Energy Research and Development Authority. As Dominion increases its wind footprint in the state, it is evaluating the potential for a pumped storage facility while Appalachian researches storage improvements for customers to attract new business and industry to the region.

More: [Virginia Business](#)

Offshore Wind Project Completes Final Step

Dominion Energy announced last week that its 12-MW Coastal Virginia Offshore Wind pilot project has completed the final stage of



testing and is ready for commercial service. The next step for the two-turbine project is submitting final documentation to the U.S. Bureau of Ocean Energy Management to complete its technical review, which is expected to be completed by the end of the year.

Company officials said the turbines will remain operational during the review process. The project is the only one permitted under BOEM and will be the first fully operational wind power generation facility in U.S. federal waters.

Dominion will apply the permitting, design, installation and operational experience from the pilot project to its proposed 2,600-MW commercial project. The project, which is the largest announced offshore wind project in North America, is on track to commence construction in 2024.

More: [WAVY](#)

WYOMING

PSC Finds PacifiCorp's IRP Deficient



WYOMING PUBLIC SERVICE COMMISSION

After a year of investigating, the Public

Service Commission last week said PacifiCorp's 2019 integrated resource plan was "deficient" after the company announced it would invest in renewable energy and close down several coal-fired power plants.

Chairwoman Kara Fornstrom said PacifiCorp's plan failed to consider the "devastating" local and state economic consequences of retiring some of its coal fleet early and asked the utility to include an "economic impact assessment" in future plans. The PSC did not render a decision on whether it would accept the plan but will announce it at a future hearing.

Under the utility's plan issued last year, two-thirds of its national coal fleet would be retired by 2030, including units at Naughton, Jim Bridger and Dave Johnston. In turn, the company would invest in renewable energy, battery storage and transmission infrastructure.

More: [Casper Star-Tribune](#)

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