

RTO Insider

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

ISSN 2377-8016 : Volume 2021/Issue 25

June 22, 2021

Nevada PUC Calls for Organized Market in West

By Hudson Sangree

In a report on last summer's energy emergencies, the Public Utilities Commission of Nevada (PUCN) said the state was too reliant on imports and CAISO and called for an organized market in the West.

"The West as a region and Nevada as a state need a larger, regional market that integrates multiple utilities, allowing renewable generating resources to balance across large geographic areas," said the report, released June 15. "A predictable, reliable Western transmission system is critical to ensuring electric reliability in the region."

The report on Nevada's supply problems was yet another signal that Western entities may need to form or join one or more RTOs this decade.

Nevada and Colorado lawmakers passed bills in the past month requiring transmission own-

ers to join an RTO by 2030. (See *Xcel Delays Joining EIM to Examine Options.*) Nevada Gov. Steve Sisolak, who signed his state's measure, plans to convene a Regional Transmission Coordination Task Force to provide advice on joining an RTO. (See related story, *Many Next Steps to Follow Passage of Nevada Energy Bill.*)

The PUCN's report appeared to lend support to the effort. It detailed the results of an investigation begun last August, days after Nevada experienced energy emergencies during a severe Western heat wave.

Continued on page 16

Study Shows RTO Could Save West \$2B Yearly by 2030 (p.17)

SPP CEO Pitches WECC on Western Benefits (p.19)

Many Next Steps to Follow Passage of Nevada Energy Bill (p.20)

FERC Sets Federal-State Taskforce to Spur New Tx States Encouraged to 'Volunteer' Funding

By Rich Heidorn Jr.

FERC announced Thursday it will create a task force with state regulators to spur increased transmission development to deliver renewable power, reduce congestion and improve reliability (AD21-15).

The task force, which will include all five FERC commissioners and 10 state regulators appointed by the National Association of Regulatory Utility Commissioners, is expected to hold its first meeting in the fall.

FERC Chair Richard Glick said the group

Continued on page 11

SEPA/EPRI H2POWER CONFERENCE



Clockwise from top left: Smart Electric Power Alliance CEO Julia Hamm; Daniel Brooks, Electric Power Research Institute; Joe Hoagland, Tennessee Valley Authority; Neha Rustagi, Department of Energy; and Mitsubishi Power Americas CEO Paul Browning | SEPA/EPRI

Regulating the New 'Hydrogen Economy' (p.3)

Utilities Mull Opportunities in Hydrogen (p.7)

Technical, Cost Challenges Noted on Hydrogen Deployment (p.5)

Mitsubishi Exec Sees Cheap Green Hydrogen Within a Decade (p.9)

Also in this issue:



CAISO Issues Warning of Resource Deficiency (p.23)



Texans' Conservation Keeps ERCOT Grid Stable (p.27)



MOPR Talk Highlight of ISO-NE Consumer Group Meeting (p.29)



MISO Leadership Says Tx Expansion, Market Redefinition 'Not Optional' (p.34)



FERC Issues Show-cause Order on PJM Parameter-limited Offers (p.43)

©2021 RTO Insider LLC

10837 Deborah Drive ■ Potomac, MD 20854 ■ (301) 299-0375 ■ info@rtoinsider.com

■ rtoinsider.com ■

RTO Insider

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

Editorial

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

Deputy Editor / Daily	Deputy Editor / Enterprise
<u>Michael Brooks</u> 301-922-7687	<u>Robert Mullin</u> 503-715-6901

Art Director
Mitchell Parizer 718-613-9388

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

MidAtlantic Bureau Chief
K Kaufmann 202-494-4386

Midwest Bureau Chief
John Funk 216-316-5413

Associate Editor
Shawn McFarland 570-856-6738

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

CAISO/West Correspondent
Hudson Sangree 916-747-3595

ISO-NE Correspondent
Jason York 860-977-7830

MISO Correspondent
Amanda Durish Cook 810-288-1847

NYISO Correspondent
Michael Kuser 802-681-5581

PJM Correspondent
Michael Yoder 717-344-4989

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

NERC/ERO Correspondent
Holden Mann 205-370-7844

Sales & Marketing

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

Account Manager
Kathy Henderson 301-928-1639

Account Manager
Phaedra Welker 773-456-4353

Marketing Director
Margo Thomas 480-694-9341

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

2021 Annual Subscription Rates:

Plan	Price
Newsletter PDF Only	\$1,520
Newsletter PDF Plus Web	\$2,000

See additional details and our Subscriber Agreement at rtoinsider.com.

In this week's issue

SEPA/EPRI H2Power Conference

Regulating the New 'Hydrogen Economy'.....	3
Technical, Cost Challenges Noted on Hydrogen Deployment.....	5
Utilities Mull Opportunities in Hydrogen.....	7
Mitsubishi Exec Sees Cheap Green Hydrogen Within a Decade.....	9

FERC/Federal

FERC Sets Federal-State Taskforce to Spur New Tx.....	1
FERC Reverses State Opt-out on DR – for Now.....	10
Bills Dangle Generous Tax Credits for Renewables.....	13

CAISO/West

Nevada PUC Calls for Organized Market in West.....	1
FERC Offers Guidance on Exceeding Western Price Caps.....	14
Study Shows RTO Could Save West \$2B Yearly by 2030.....	17
SPP CEO Pitches WECC on Western Benefits.....	19
Many Next Steps to Follow Passage of Nevada Energy Bill.....	20
Klamath Hydro License Transfer Approved.....	22
CAISO Issues Warning of Resource Deficiency.....	23

ERCOT

Abbott Taps OPUC's Cobos to Fill out PUC.....	24
Fixing the Texas Grid – Maybe.....	25
Texans' Conservation Keeps ERCOT Grid Stable.....	27

ISO-NE

MOPR Talk Highlight of ISO-NE Consumer Group Meeting.....	29
Tx, Environmental Justice Front and Center at EBA Northeast.....	30
ISO-NE Planning Advisory Committee Briefs.....	31
Plan to Oust Maine's IOUs Gains Momentum.....	32
Overheard at 170th NE Electricity Restructuring Roundtable.....	33

MISO

MISO Board of Directors Briefs.....	36
FERC Accepts Documents in MISO TOs' Self-fund Selection.....	37
Members Explore MISO's Role in Environmental Justice.....	38

NYISO

Con Edison CEO Sees Company Future in Clean Energy.....	39
FERC Denies Citizen's Complaint over Indian Point Closure.....	40
FERC OKs Settlement on NY Public Policy Tx Line.....	41
NYISO Discusses FERC Order 2222 Compliance.....	42

PJM

FERC Issues Show-cause Order on PJM Parameter-limited Offers.....	43
NJ Lawmakers Siting Local Override for Offshore Wind Transmission.....	44
PJM MRC/MC Preview.....	45

SPP

FERC Opens 206 Proceeding Against Tri-State.....	46
FERC Rejects SPP's Cost-allocation Waiver Proposal.....	47
SPP Accrues Another \$13.25M in M2M Settlements.....	48

Briefs

Company Briefs.....	49
Federal Briefs.....	49
State Briefs.....	50

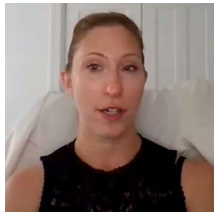
NetZero Insider is now live!
 See p.35 for this week's coverage.

SEPA/EPRI H2Power Conference

Regulating the New ‘Hydrogen Economy’

By Rich Heidorn Jr.

If a new “hydrogen economy” is the key to reaching net-zero emissions, what rules will apply and who will enforce them?



Sandra Safro, K&L Gates | SEPA/EPRI

Sandra Safro, coordinator of the oil, gas and resources practice group for K&L Gates, says there would be advantages to having FERC regulate pipelines carrying hydrogen, which are likely to be mixed with natural gas, at least initially.

The Natural Gas Act gives FERC jurisdiction over regulation of natural gas transportation

in interstate pipelines — natural gas defined as “either natural gas unmixed, or any mixture of natural and artificial gas.”

“FERC has defined natural gas as that produced from a well, and artificial gas has been defined on a case-by-case basis generally referring to those that have been produced from non-oil sources, including coal or landfill gas,” Safro told the Smart Electric Power Alliance (SEPA) and Electric Power Research Institute (EPRI) *H2Power conference* last week. “This does create the potential that FERC could interpret artificial gas to include hydrogen and thus bring at least hydrogen blended with natural gas under its jurisdiction, which would help enable use of the existing interstate natural gas pipelines to transport hydrogen.”

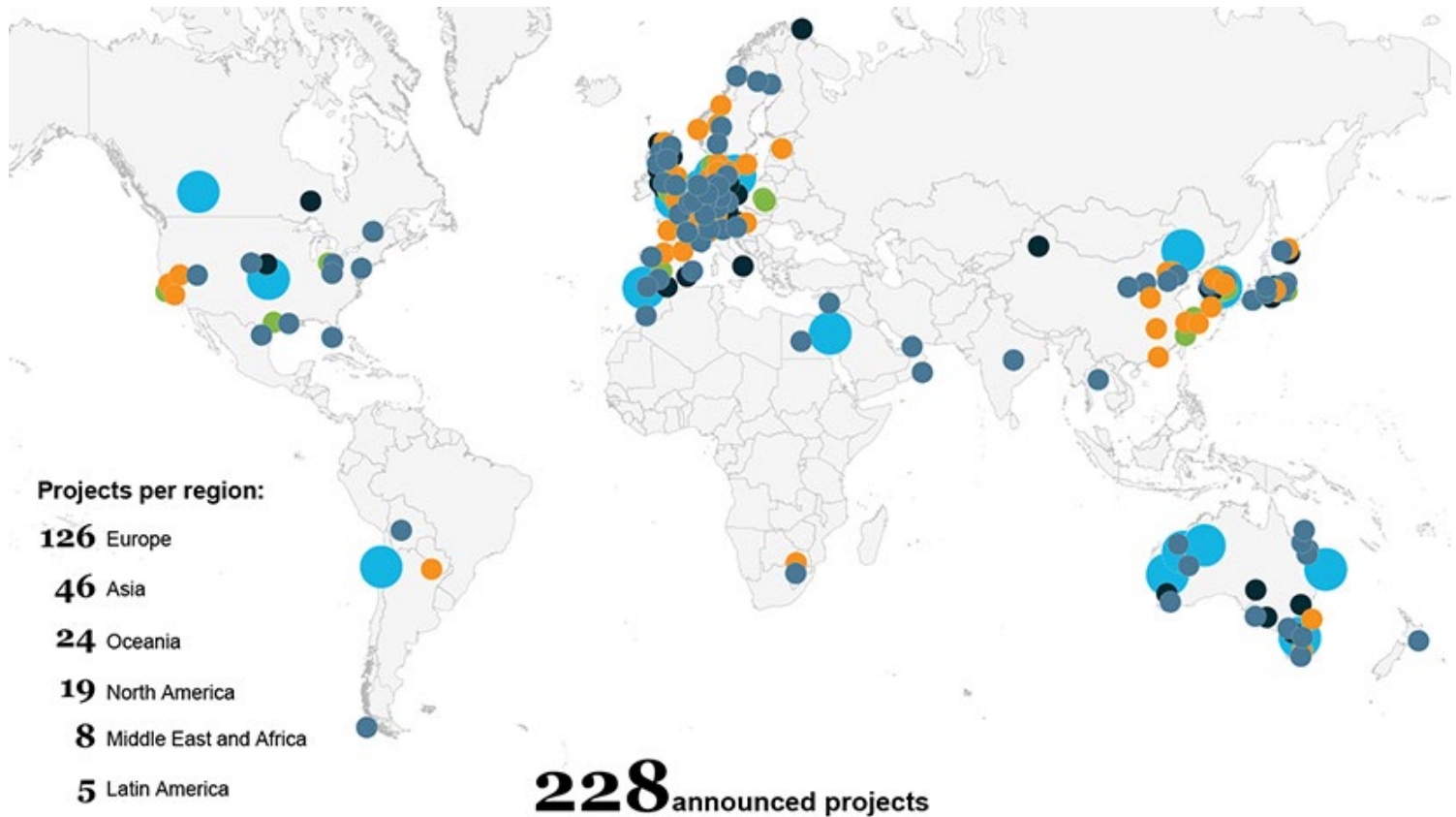
If new interstate pipelines are needed for

hydrogen, FERC’s authority over the siting and construction of interstate gas lines would preempt state authority.

But the commission lacks authority over interstate oil pipelines, meaning those pipeline developers must obtain certificates from each state they cross through. “So as we look at the development of a hydrogen economy ... there are advantages to the approach of having FERC regulate the siting and construction,” she said.

Using Existing Gas Infrastructure

Kimberly Denbow, managing director of security and operations for the American Gas Association, said it makes sense to repurpose natural gas pipelines to carry hydrogen.



17
Giga-scale production: renewable H₂ projects >1GW and low-carbon H₂ projects >200 kt p.a.

90
Large-scale industrial usage: refinery, ammonia, power, methanol, steel, and industry feedstock

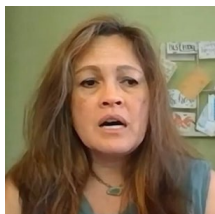
53
Transport: trains, ships, trucks, cars and other hydrogen mobility applications

45
Integrated H₂ economy: cross-industry, and projects with different types of end-uses

23
Infrastructure projects: H₂ distribution, transportation, conversion, and storage

Global hydrogen projects as of 2021 | *Hydrogen Council, McKinsey & Co.*

SEPA/EPRI H2Power Conference



Kimberly Denbow,
American Gas Association | SEPA/EPRI

“Why not find solutions that team hydrogen and natural gas rather than entirely ditching one infrastructure to build another?” she asked. “I just don’t see how the destruction or decommissioning of an existing infrastructure that could be repurposed is

of any benefit to any environmental goal.”

Denbow also said natural gas should remain in the energy mix to provide resilience to the system.

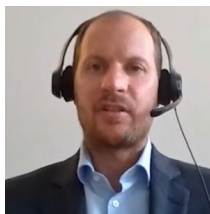
Researchers are exploring how different mixes of hydrogen and natural gas would impact pipeline safety. “Hydrogen is a different size molecule than ... methane and so it’s going to have different impacts on different types of pipeline material,” she said.

Current research is looking at mixes of 10 to 20% hydrogen, Denbow added. “Based upon what I’ve been seeing so far, 100% hydrogen — I don’t know if that’s going to be possible.”

Winning Public Support

Safro said the fact that hydrogen is aiding in decarbonization doesn’t mean that building hydrogen pipelines will be immune from political opposition.

“To some extent, those NIMBY [not in my backyard] issues are still going to be present,” she said. “But I think that there is a lot that the hydrogen industry can do to educate the public and educate stakeholders that can help with



John Lochner,
NYSERDA | SEPA/EPRI

some of those ‘social license to operate’ issues.”

John Lochner, vice president of innovation for the New York State Energy Research and Development Authority (NYSERDA), said an inclusive stakeholder process will be essential.

He noted that the state’s Climate Leadership and Community Protection Act (CLCPA) requires New York officials to consider disadvantaged communities and an “equitable transition” to decarbonization.

“It’s really become important to ... broaden our stakeholder outreach and ensure that we’re getting many voices to the table and thinking long and hard about a number of different pathways to success,” he said. “None of us sitting here today can be sure about what the right pathway is.”

Lochner said he was impressed by the work of University of Hawaii at Manoa’s Laboratory for Advanced Visualization & Applications (LAVA), which created scenarios allowing stakeholder groups to see what it means to choose more solar or more wind on the islands “and what that meant for agricultural land use, and other tradeoffs. [It] really helped stakeholders understand — in a way that perhaps multi-100-page regulatory documents don’t — what it means to go one direction or another.”

Gas Quality Specifications

Safro said another question regulators will have to answer is regarding gas quality

specifications.

“There are a few interstate gas pipelines in the U.S. that include hydrogen in their gas quality specs today, but none that would allow the quantities of hydrogen in the gas stream that would be necessary for a hydrogen economy at scale,” she said.

Updating gas quality specifications can be a lengthy and complicated process, as demonstrated in the early 2000s, when the U.S. was importing liquefied natural gas. “These were lengthy proceedings, and they included many, many stakeholders. But we did ultimately get there, and I am optimistic that we could get there for hydrogen too,” she said.

Demonstration projects will provide guidance on what kinds of regulations will be required and how agencies overseeing hydrogen should coordinate their efforts.

“We have to look at the regulations that we already have on the books, because there is hydrogen production in the U.S. today, just not at scale,” she said. “I think there probably has to be a fair amount of communication between FERC, the RTOs and ISOs, the [Department of Transportation’s] Pipeline and Hazardous Materials Safety Administration (PHMSA), and probably a number of other federal agencies whose jurisdiction is going to be implicated.”

FERC has no jurisdiction over pipeline safety or security, but its review of applications for construction and operation of interstate natural gas pipelines ensures that applicants certify that they will comply with Department of Transportation safety standards.

“PHMSA would have jurisdiction over the transportation of hydrogen by pipeline and perhaps hydrogen as a hazardous material, as well,” Safro said. “EPA and OSHA also have regulations that relate to hydrogen when it’s on site, particularly in a liquid form. I think a lot of the regulations that are on the books do a good job of addressing the issues. But I do think that there are areas where we may see regulations need to evolve to adapt to a hydrogen economy at scale.” ■



Hydrogen pipelines on the Gulf Coast | Congressional Research Service

SEPA/EPRI H2Power Conference

Technical, Cost Challenges Noted on Hydrogen Deployment

By Rich Heidom Jr.

Making the dream of a hydrogen economy reality will require additional technical advances to overcome resource constraints and reduce costs, speakers told the Smart Electric Power Alliance and Electric Power Research Institute's H2Power conference last week.



Jigar Shah, DOE Loan Programs Office | SEPA/EPRI

tute's H2Power conference last week.

Jigar Shah, director of the Department of Energy's Loan Programs Office, said cost reductions won't come until efforts move beyond research and development to deployment.

"R&D is essential, and we continue to do more of it at the Department of Energy," he said. "But you cannot continue to keep doing R&D and expecting the very first deployment to be cheap. And so the first deployments have to happen. And then the second deployment ... and every cumulative doubling, gets you this cost reduction curve."



Xiaoting Wang, BloombergNEF | SEPA/EPRI

Xiaoting Wang, an analyst for BloombergNEF, is also impatient for demonstration-scale projects. "Although the technology now still has a lot of space to improve, we think now it is a time to get subsidies from the govern-

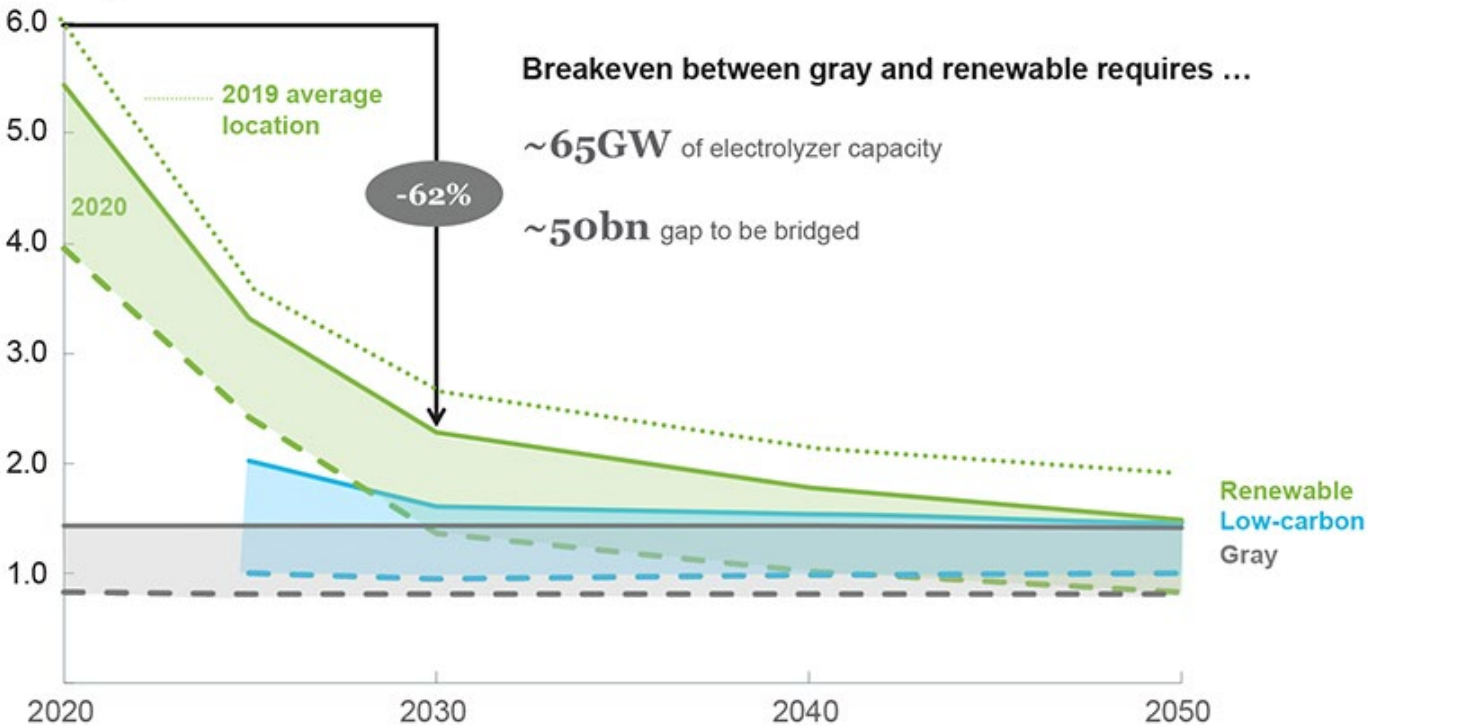
ment ... to trigger some demo projects or large-scale [projects], because that will give the first challenge for equipment manufacturers to use automatic manufacturing. Why? Because if the order is very tiny, it does not justify using automatic manufacture, [and it] will not trigger the first round of cost reduction."

Getting to Economies of Scale

Katherine Ayers, vice president of research and development for *Nel Hydrogen US* (OTCMKTS:NLLSY), said achieving economies of scale for electrolysis doesn't require gigawatt-scale projects.

"Most of these multi-megawatt scale electrolyzers have thousands of cells in them. And so you can get to pretty good numbers from a

Production cost of hydrogen USD/kg



Renewable hydrogen

- Dedicated renewable/electrolyzer system
- Fully flexible production
- Scale up of renewable hydrogen production
- Additional costs to reach end supply price

Low-carbon hydrogen

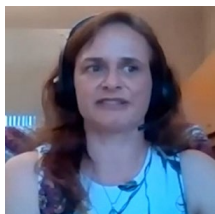
- Development of CO₂ pipelines and at-scale sites
- Scale-up of low-carbon hydrogen production
- Scale-up of CCS outside of hydrogen production

Key assumptions

- Gas price 2.6–6.8 USD/Mmbtu
- LCOE USD/MWh 25–73 (2020), 13–37 (2030) and 7–25 (2050)

Hydrogen production costs by pathway | Hydrogen Council, McKinsey & Co.

SEPA/EPRI H2Power Conference



Katherine Ayers, Nel Hydrogen U.S. | SEPA/EPRI

manufacturing standpoint,” she said.

“I do think that it’s important to ... gain experience from some demonstrations to help grease the skids on that. But I think that there’s so many opportunities for electrolysis to

serve some of these markets that one of them is going to happen, and it’s going to help the whole space.”

Water, Catalyst Constraints

Some skeptics have questioned the water demands of hydrogen production. Others note that it requires precious metals such as platinum as a catalyst.

Ayers said precious metals “are certainly an area of concern. But we also see many pathways to reduce those [through] manufacturing advancements” to reduce catalyst costs.

The cost of water is less of a concern, she said. “It’s certainly something that has to be considered when you’re implementing a unit because these require high-purity water. But typically, the cost of the water purification — even if you have to desalinate — it is not a huge portion of the cost.

“We have electrolysis units in places like Saudi Arabia, where water is certainly scarce,” she continued. “And if you look at electrolysis, even though it’s using water as the feed source versus some other energy technologies, it’s actually not that high in its usage.”

Shah agreed that water use should not be a hindrance to hydrogen’s growth.

“One of the largest users of water in the West is cooling towers for thermal power plants. So they’re already using a lot of water at coal power plants. The total amount of water they’re talking about using here is substantially less than the evaporation losses that are already occurring within the existing coal footprint.”

Transporting Electrons vs. Hydrogen

Another question is how to integrate hydrogen production in the electricity supply chain. Ayers acknowledged challenges with transporting and storing hydrogen.

Nel *announced* last month it had received an order for its containerized 2-MW polymer electrolyte membrane (PEM) electrolyzer that will be part of the green hydrogen infrastructure for a fleet of 46 Hyundai trucks in Switzerland.

“Electricity is not that easy to transport either,” she said. “We just had visitors the other day that were looking at our megawatt system and seeing the giant copper cables that have to go to the system in order to power it and the little, tiny hydrogen hose that comes off of it with the megawatt worth of hydrogen. So, you really have to look at how those two things play against each other and not discount the cost of transporting electrons either.”

International Efforts

Cutting the cost of producing hydrogen will not depend solely on U.S. efforts. Ayers said several countries have already committed to gigawatts of hydrogen projects over the next decade.

“There’s huge amounts of activity going on in Europe, largely actually spurred by the pan-



Containerized PEM electrolyzer | Nel Hydrogen

demic and a desire to use hydrogen as a way to help stimulate the economy as they come out of that. I think that’s really going to help drive these supply chain” improvements, she said.

“Hydrogen from electrolysis is really at a tipping point. And what that means is that competition is also increasing rapidly. So we’re seeing a lot of other companies catching up to what we’re doing here in the U.S., particularly in the PEM area, where I think there’s a lot of technology development happening. One of the things that we’re concerned about is making sure that the U.S. remains competitive in these markets — not just for the electrolysis piece, but also for this ... installation experience that’s already going on in places like Europe and China. We’re going to have to learn ourselves as well.” ■

Solar + Storage
DIGITAL SUMMIT
July 14-15

REGISTER NOW

inter solar
NORTH AMERICA

ENERGY STORAGE
NORTH AMERICA

Save your 10 to 1
odds for Vegas.

You never want to chance too much in this market.

RTO Insider. Stay informed.



Grid Evolution
Summit

July 27-28, 2021 | Virtual

REGISTER NOW

SEPA/EPRI H2Power Conference

Utilities Mull Opportunities in Hydrogen

By Rich Heidom Jr.

Hydrogen offers big opportunities for utilities, but it will require a cultural change for them to take advantage, says Nick Irvin, Southern Co.'s (NYSE:SO) director of research and development for strategy, advanced nuclear and crosscutting technology.



Nick Irvin, Southern Co. | SEPA/EPRI

"We are an industry that likes our stable, risk-adjusted returns," he told the Smart

Electric Power Alliance and Electric Power Research Institute's H2Power conference last week.

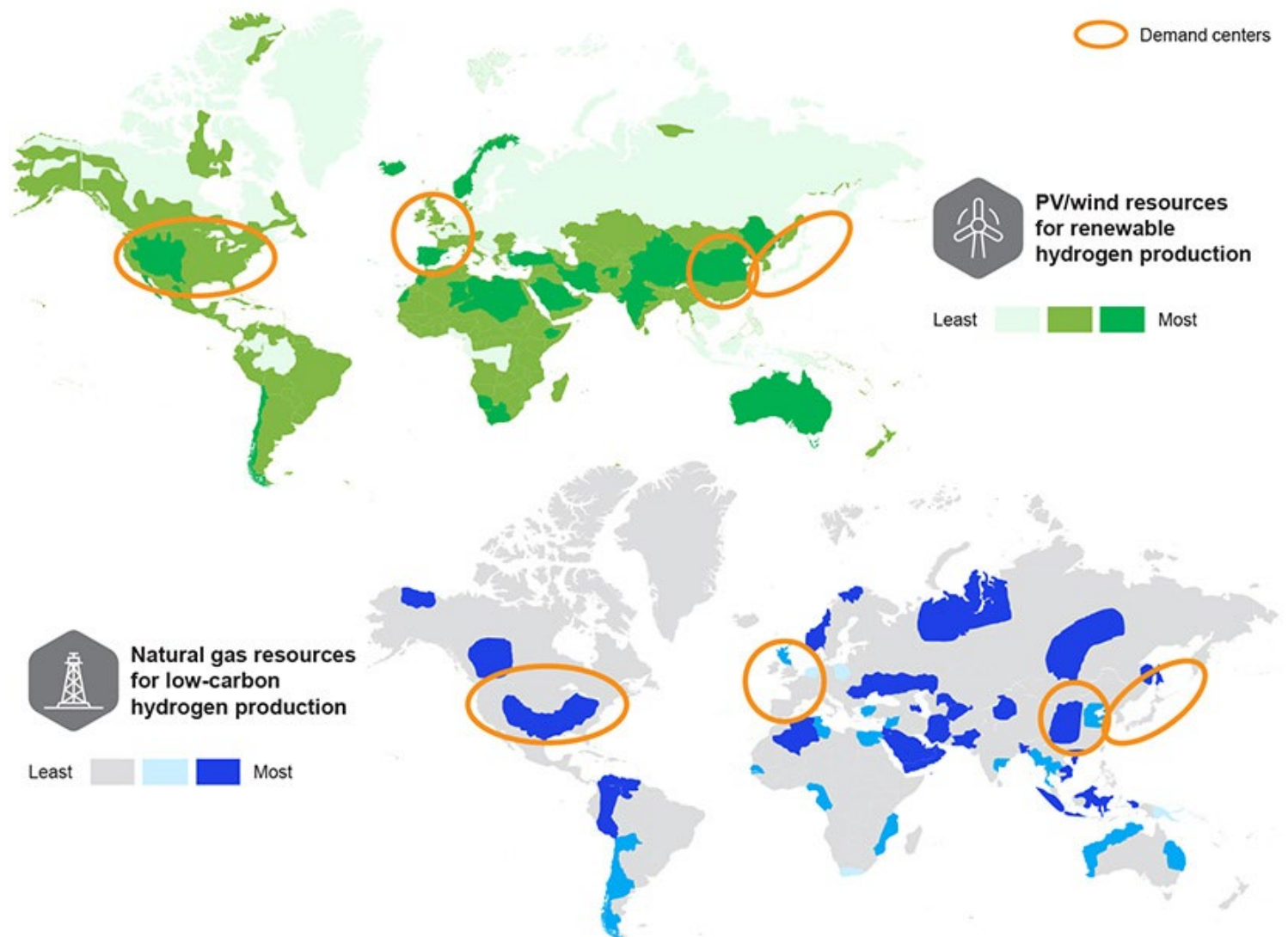
Irvin said he's looking at how hydrogen infrastructure can serve multiple functions and classes of customers.

"Once I've made the molecule, I can divert it ... either into transportation fuel, back into grid support services, or for use on-site for backup generation or for resiliency. That stacked value chain, where everyone is sharing in both the investment and the value proposition ... is the Venn diagram that says, 'Hey, we as a utility should be able to move into that space,'" he said. "If we can get the prices right and the economics right in deployment, I think it's a great

tool for us to move out into this lower-carbon future."

In the near term, Irvin said it will be difficult to make hydrogen cheap enough to compete with natural gas at bulk scale. "So what we're trying to do is look for opportunities for hydrogen to play in markets where it can be competitive in the near term ... and look at those systems as opportunities to learn the lessons you need to know — as pilots for how you scale to things like gas turbine operations."

Katherine Ayers, vice president of research and development for Nel Hydrogen US, said hydrogen is still in the demonstration phase for utilities. "What we're seeing is utilities



Distribution of global hydrogen resources and demand centers | Hydrogen Council, McKinsey & Co.

SEPA/EPRI H2Power Conference

starting to do projects at the megawatt scale, but they're first of a kind. ... A lot of them are subsidized by different governments."

Daryl Wilson, executive director of the *Hydrogen Council*, said his group is tracking more than 300 megawatt-scale projects around the world. "Eighty percent of those are in Asia, China and Australia," he said. "And in those areas, absolutely, the utility sector is very involved. So companies like Uniper [OTCMKTS:UNPRF] and RWE [FRA:RWE] in Germany – so many players are now looking to hydrogen from the utility sector in Europe."



Daryl Wilson, Hydrogen Council | SEPA/EPRI

Does Efficiency Matter?

Irvin said the use of zero-marginal-cost renewable energy sources to produce hydrogen is counterintuitive to his training as an engineer, where he was schooled to focus on efficiency.

"I think you have to ask yourself the question of: How much does efficiency matter in that future? ... How do you optimize the capital deployment?" he asked. "I think customer choice and backward compatibility to enable the customer to be as ... useful and flexible and independent and autonomous as they want to be in everything that they do on a daily basis has really got to be the ultimate goal."

Ayers said hydrogen's value in transportation is less about efficiency than about how well it meets customers' needs.

"Where [hydrogen fuel cells were initially] more passenger vehicle-focused, there's been a realization that heavy-duty vehicles are maybe in an easier, earlier business case and an area where the battery doesn't compete quite as well. So from that perspective, they're looking at durability.

"It's how far can your [vehicle] go?" she added. "Efficiency is not the only variable to look at."

Distributed Hydrogen Production

John Lochner, vice president of innovation for the New York State Energy Research and Development Authority (NYSERDA), said hydrogen could continue utilities' current business model as a "plug and play" opportunity while also serving as an "enabler" of distributed microgrids.

"We continue to plan and assess and fund ... re-

search and development and demonstrations," he said. "What might be the opportunity to deploy hydrogen in the current infrastructure? What might it look like to have a distributed hydrogen infrastructure without the pipes? What are the costs? What are the timelines? How does it help us meet our decarbonization goals? I'm not sure we have good answers yet."

Local hydrogen production could produce economic development benefits, he said.

"I consider hydrogen as having the potential to be a Swiss Army knife with decarbonization. It could be used in transport-heavy industry [and] HVAC for large buildings, particularly down here in New York City. We have lots of [large] buildings ... where electrification is more costly and more complicated. ... There are many possibilities that are enabled by a lot of the research being done by the Department of Energy and by NYSERDA."

DOE Looking for Inefficiencies in Electric Market

Jigar Shah, director of DOE's Loan Programs Office, also sees decentralized production of hydrogen in the future.

He said DOE is seeking ways to use hydrogen to address inefficiencies in the electricity mar-

ket, such as renewable energy curtailments and negative power prices. Electrolyzers will initially be large facilities because of the need to incorporate liquefaction to move hydrogen around the country.

"But I think over time as the costs come down, you'll start to see a very decentralized hydrogen production grid with electrolyzer technologies, and a lot of the electrolyzers will act as reverse peaker plants. Today, peaker plants with natural gas are turned on when electricity prices go above [about] 4 cents/kWh [\$40/MWh]. In the future, these hydrogen electrolyzers will be turned on every time electricity prices fall below \$15/MWh – 1.5 cents/kWh. They can use up all the extra electricity capacity in the grid, and thereby dramatically reducing the cost of transmission and distribution."

Hydrogen also could change the siting of energy-intensive industrial plants, he said. "Part of the reason why we make aluminum in the places that we make it is because that's where the cheap hydropower is. When you think about where cheap wind and solar exists today, that is where we're going to be making chemicals in the future." ■



Members of the Hydrogen Council | Hydrogen Council

SEPA/EPRI H2Power Conference

Mitsubishi Exec Sees Cheap Green Hydrogen Within a Decade

No Path to Net Zero without Hydrogen, Industry Panel Agrees

By Rich Heidorn Jr.



Mitsubishi Power Americas CEO Paul Browning | SEPA/EPRI

Green hydrogen produced with renewable power will be cheaper than blue hydrogen produced from methane with carbon capture within a decade, Paul Browning, CEO of Mitsubishi Power Americas predicted last week.

“Right now green hydrogen is more expensive than blue hydrogen, but we and many others believe the cost of green hydrogen is going to come down rapidly in the next seven years or so and actually be below the price of blue hydrogen,” Browning told the H2 Power conference sponsored by the Smart Electric Power Alliance (SEPA) and the Electric Power Research Institute (EPRI). “... We plan to get there this decade. It’s not the distant future.”

The current cost of blue hydrogen is about \$1.50/kg.

Mitsubishi, known for its gas turbines, is betting its future on hydrogen, Browning said, because there’s no way to get to net zero greenhouse gas emissions by 2050 without it.

“Right now with the technologies that we see in front of us, we don’t see a way to get to net zero without hydrogen. We don’t know what new technologies are coming down the pike, and so there’s always the chance that some new long-duration energy storage technology or some new low-carbon fuel technology will come in that will supplant the need for either green or blue hydrogen going forward,” he said, during a panel discussion moderated by SEPA CEO Julia Hamm.

The year 2050 “is a long time from now,” he said. “But if you believe we’re headed to net zero in 2050, then you really have to believe in hydrogen. So, we’re all in. We’re planning on building the underground infrastructure — both salt dome storage and hydrogen pipelines — to ... bring green and blue hydrogen to our customers throughout North America.”

Earlier this month the Department of Energy announced its first “Earthshot” project, which seeks to reduce the cost of green hydrogen by 80% to \$1/kg by 2030. (See [Granholm Announces R&D into Green Hydrogen as 1st ‘Energy Earthshot.’](#))

Eric Miller, senior adviser at DOE’s Hydrogen and Fuel Cell Technologies Office, cited studies showing hydrogen could help reduce GHG emissions by up to 25% when used in heavy-duty transportation and industrial applications such as steel and chemical production.

“If you look at ammonia alone in the chemical sector, it accounts for up to 5% of the CO₂ emissions globally. By transitioning to a clean hydrogen alternative, we can cut that by 90%.” Steel emissions could be cut by 30-40%, he said.



Joe Hoagland, Tennessee Valley Authority | SEPA/EPRI

Joe Hoagland, vice president of innovation and research for the Tennessee Valley Authority, agreed that hydrogen will be part of the net zero solution.

“But I don’t think it’s the only solution. I think at the end of the day it’s going to be all of the

above. You’re going to need things like new nuclear [and] solar to produce green hydrogen,” he said. “I think by 2050 we can get there, but we’re going to have to use everything we’ve got and everything we’ve got has got to get to scale.”

Daniel Brooks, vice president of integrated grid and energy systems for EPRI, said hydrogen could be a boon for utilities by providing large-scale storage to aid grid reliability and absorb excess renewables while also providing a new source of electric demand.

Hoagland said that prospect is exciting. “Hydrogen production allows us the ability to better utilize all the other resources we’ve got on the system, which will help to reduce their carbon footprint, increase their efficiency, and reduce the cost.

“At the same time, it gives us the opportunity to sell something. We can either use hydrogen ourselves directly or we can put hydrogen out into the transportation system or other parts of the economy,” he added. “I will say it’s a bit of a challenge for a utility. Generally we like to make electricity. So, this is going to require some rethinking.”

Mitsubishi is building an 840-MW project with Intermountain Power that will initially burn 30% green hydrogen and 70% natural gas, transitioning to 100% green hydrogen

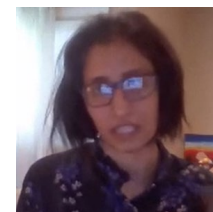
over time.

It also signed a 10-year joint development *agreement* with Entergy with two projects planned: a 22-MW electrolysis demonstration project at an Entergy plant using Mitsubishi gas turbines and a 1.2 GW storage project in Texas.

“Entergy has the good fortune of sitting on top of the world’s largest existing infrastructure of hydrogen because hydrogen is used at the Gulf Coast to desulphurize motor fuels. They’re sitting on top of two existing hydrogen salt domes ... and 1,100 miles of existing pipelines.”

In North Dakota, Browning said, the company will build the world’s largest blue hydrogen hub. “And we think we’re going to be able to create blue hydrogen for less than \$1/kg.”

It is also working on a project with a goal of delivering green hydrogen to the Los Angeles basin at \$1.50/kg “with the idea of decarbonizing the city of Los Angeles.”



Neha Rustagi, Department of Energy | SEPA/EPRI

Neha Rustagi, a DOE technology manager, said a high capacity factor “is one of the most crucial things to achieving low-cost hydrogen. So, scenarios where you do have abundant solar and wind are where I think optimal deployment”

would occur.

Because of the predictions of reduced-cost green hydrogen, Browning said, some of his customers are asking whether they want to invest in blue hydrogen or leapfrog it for green.

“If you start today talking about putting one of these projects in the ground, you’re probably talking about a 2025-2026 COD [commercial operation date]. So, if it takes us seven years to get to cost parity between green and blue ... then in COD space we’re already there,” he said. “On the other hand, if you’re in North Dakota and you’ve got a lot of natural gas available and you don’t have a huge amount of renewables on your grid and you don’t think you’re going to need long duration storage for a little while, maybe in North Dakota you start blue and you stay blue.” ■

FERC/Federal News



FERC Reverses State Opt-out on DR — for Now

By Michael Brooks

FERC on Thursday announced that it would reconsider Order 2222-A, the latest episode in the commission's debate on whether it should allow states to prevent demand response resources from participating in RTO/ISO markets ([RM18-9-003](#), [RM21-14](#)).

In issuing Order 2222 in September 2020, FERC ordered RTOs and ISOs to open their markets to distributed energy resource aggregations. With March's Order 2222-A, the commission clarified that a DR resource could participate in an aggregation that included at least one other type of DER, even if the DR resource was in a state that chose to opt out of Order 719. That order, issued in 2008, allowed states to block DR aggregations from participating in wholesale markets. (See [FERC Limits State 'Opt Out' on DR](#).)

But at its open meeting Thursday, FERC set aside 2222-A. Chair Richard Glick opened the meeting by saying he was convinced by arguments in rehearing requests and by Commissioner Mark Christie "that we should not be

putting the cart before the horse."

"These issues are best considered holistically and in the context of" its Notice of Inquiry into whether it should rescind Order 719, he said.

Additionally, FERC extended the deadline for comments in the NOI, which irked Commissioner Neil Chatterjee. Though he concurred with Thursday's order, he urged "the commission to eliminate this outdated and anticompetitive policy, an action I believe is necessary to fully unleash the power of DER and allow consumers to realize all the benefits demand response resources can provide in DER aggregations."

The order also provided clarification that "payment of full LMP in the energy market to behind-the-meter distributed energy resources participating as demand response resources in distributed energy resource aggregations does not constitute double counting, so long as the requirements of Order No. 745, including the net benefits test, are satisfied."

Christie concurred in part and dissented in part, saying "I would have voted against Order

No. 2222 had I been a member of the commission at that time, and I did vote against Order No. 2222-A."

In the latter order, Christie said the majority has sided "against the consumers who for years to come will almost surely pay billions of dollars for grid expenditures likely to be rate-based in the name of 'Order 2222 compliance.'"

"To ameliorate at least some of the damaging effects caused by Order Nos. 2222 and 2222-A, I would authorize states and other RERRAs the right to exercise an opt-out from the requirements of those orders, if not permanently then at least for some period of years to enable them better to prepare for the impacts on retail customers and distribution grids they now face," Christie added.

Commissioner James Danly issued a separate concurrence to "highlight that even if the commission is correct that it has jurisdiction over distributed energy resource aggregations — including those 'aggregations' comprised of a single resource — the commission still should have chosen not to exercise such jurisdiction in Order No. 2222." ■



| Shutterstock

FERC/Federal News



FERC Sets Federal-State Taskforce to Spur New Tx States Encouraged to 'Volunteer' Funding

Continued from page 1

would seek to improve current approaches to transmission planning, cost allocation and generator interconnections.

"It is difficult to imagine an effective transmission planning approach or a cost allocation mechanism without meaningful input from state regulators," said Glick, who also noted the states' authority over transmission siting. "This commission wants to encourage creative approaches to transmission cost allocation and planning to facilitate additional investments in the grid."

NARUC President Paul Kjellander, who also heads Idaho Public Utilities Commission, called the task force "a much-needed opportunity for state and federal regulators to work collaboratively on transmission issues that affect all stakeholders.

"Our shared authority over how to plan and pay for transmission infrastructure and the rapid pace of the energy transition have made such collaboration an imperative for all of us," Kjellander said in a statement

FERC also issued a policy statement clarifying that neither the Federal Power Act nor commission regulations prevent states from signing voluntary agreements to plan and pay for transmission projects that are not being developed under Order 1000 (PL21-2). The statement essentially reiterates FERC's approval of PJM's "state agreement" approach under Order 1000, which New Jersey regulators are pursuing to build transmission to deliver 7,500 MW of offshore wind to the grid. (See [New Jersey Seeks OSW Transmission Ideas.](#))

The two actions are a recognition of the frustration over Order 1000's failure to produce any interregional transmission projects since it was issued in 2011.

The task force order said that the shared jurisdiction over transmission makes it a topic "ripe for greater federal-state coordination and cooperation.

"We believe that a formal structure to jointly explore transmission-related issues is important in order to secure the benefits that transmission can provide," FERC said.

FERC asked NARUC to make its nominations within 30 days and that it appoint two representatives from each of NARUC's *five regions*,



Transmission lines near Folsom, Calif. | © RTO Insider LLC

"recognizing that transmission-related issues may be viewed differently not only within, but also among different parts of the country." The state representatives will serve no more than three one-year terms.

The task force will hold "multiple" formal meetings a year, which will be open to the public. Although not all states will be represented on the task force at any one time, FERC said all state commissions will be invited to suggest agenda topics, and the task force may convene regional meetings with participation by all commissions in the region.

Staff from FERC, NARUC and the state commissions will support the group.

The order said the task force may consider issues including:

- solutions to obstacles inhibiting planning and development of transmission needed to achieve federal and state policy goals;
- potential reforms to FERC rules on planning and cost allocation;
- ways to speed the interconnection of new resources; and
- ways to ensure that transmission investment is cost effective, "including approaches to enhance transparency and improve oversight of transmission investment including, potentially, through enhanced federal-state coordination."

The policy statement addressed voluntary

agreements among two or more states, states and public utility transmission providers, or multiple transmission providers. FERC said such agreements "may allow state-prioritized transmission facilities to be planned and built more quickly than would comparable facilities that are planned through the regional transmission planning process(es). Nevertheless, we are concerned that confusion regarding the relationship between voluntary agreements and commission rules and regulations may be deterring such agreements."

"We clarify that voluntary agreements are not categorically precluded by the Federal Power Act (FPA) or the commission's existing rules and regulations, and encourage interested parties considering the use of such agreements to consult with commission staff," FERC said. "To the extent that states, public utility transmission providers, or other stakeholders believe that the relevant tariffs impose barriers to voluntary agreements, the commission is open to filings to remove or otherwise address those barriers."

The statement quoted from FERC's order approving PJM's state agreement approach, which the commission said supplemented and did "not conflict or otherwise replace" PJM's Order 1000 process to consider transmission needs driven by public policy requirements.

Cutting the 'Gordian Knot'

FERC's actions were welcomed by renewable energy advocates.

FERC/Federal News



Gregory Wetstone, CEO of the American Council on Renewable Energy, said the policy statement “constructively clarifies that states wishing to cut the Gordian knot of transmission planning and cost allocation are able to do so.

“These two actions are down payments on the substantial transmission policy reforms we hope to see later this year,” he continued. “States are important partners in this work, and reforming transmission planning and cost allocation would be the most impactful thing the commission could do to accelerate the deployment of renewable power necessary to tackle our climate challenge.”

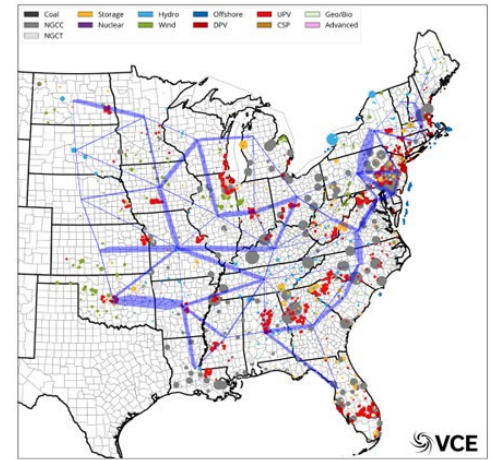
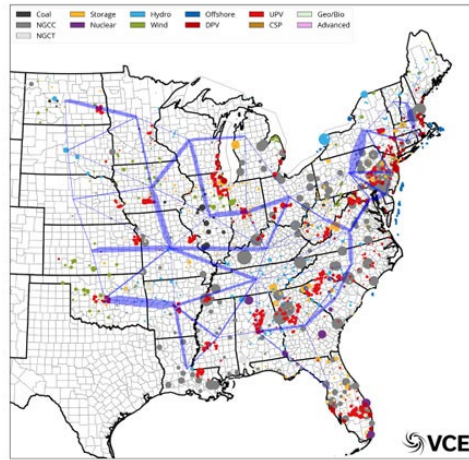
Sean Gallagher, vice president of state and regulatory affairs for the Solar Energy Industries Association, said the U.S. must add hundreds of gigawatts of solar power and energy storage capacity to reach President Biden’s 100% clean electricity goal. “We must also find a way to connect this load to the grid and deliver it to customers that want access to solar and storage,” he said.

Rob Gramlich, executive director of Americans for a Clean Energy Grid, called the actions “an important first step towards comprehensive reform.”

Earlier this month, Gramlich noted, the governors of Michigan, Illinois, Minnesota and Wisconsin sent a joint letter to MISO CEO John Bear saying the RTO’s long-range transmission planning process “is urgently needed to allow carbon-free and low-cost electricity to flow across the region” while maintaining reliability.

Chatterjee Recuses

Commissioner Neil Chatterjee, whose term expires June 30, did not participate in either



Transmission expansion (2030) under a strong carbon/high solar deployment (left) and strong carbon/high wind deployment | Americans for a Clean Energy Grid

the task force order or the policy statement. He also did not participate in two other orders Thursday, one of which approved a settlement between CAISO and Greenleaf Energy Unit 2 (ER20-1947-003) resolving issues over Greenleaf’s provision of reliability must run service. The second order addressed requests for rehearing of the commission’s March 18 order denying a petition by NextEra Energy (NYSE:NEE), Evergy (NYSE:EVRG), American Electric Power (NASDAQ:AEP), Exelon (NASDAQ:EXC) and Xcel Energy (NASDAQ:XEL) for a declaratory order regarding affiliation and passive interests (EL21-14-001).

Chatterjee’s office did not respond to a request for comment on why he did not participate.

Although his term expires at the end of the month, Chatterjee could serve through the end of the year if no one is confirmed to re-

place him before then.

But Chatterjee’s comments at the open meeting suggest that he may be actively looking for a new job in the industry, which could force recusals. He acknowledged his time at the commission is “winding down” but said he had not determined when his last day will be. “I commit to being as transparent as possible when I do make that decision,” he said. “In the meantime, I plan to stay constructive and remain active in the commission’s important work.”

It was Chatterjee who programmed the hold music that played on FERC’s audio connection before the meeting began. He said technology limitations reduced the playlist he had selected to a three-song loop, but said the full playlist included Johnny Paycheck’s “Take This Job and Shove It.”

“You all can read what you want into that,” he joked. ■

Register Today!

IPF 21

BUSINESS NETWORK FOR OFFSHORE WIND

2021ipf.com

BUSINESS NETWORK for OFFSHORE WIND

Save your obstacle courses for weekend Mud Runs.

Getting the information you need shouldn't wear you out.

RTO Insider. Stay informed.

NARUC Summer Policy Summit

July 18-21, 2021 Denver, Colorado

A Hybrid Meeting

General Sessions

- Monday** | Connecting the Dots: Riding Above the Commercialization Valley of Death • Black Sky: Are We Ready?
- Tuesday** | Are Microgrids Ready For Prime Time? • Grid Data: Valuable or Vulnerable?
- Wednesday** | COVID in the Rearview Mirror: Lessons for the Future

#NARUCSummer21 • naruc.org

FERC/Federal News



Bills Dangle Generous Tax Credits for Renewables

By Jennifer Delony

Congressional advisers say that legislation that provides stability for federal tax credits is key to unlocking renewable energy growth through 2030.

“It’s our position that tax credits are an essential component of [meeting the President’s climate goals] and that generosity and the long-term nature of the credits are an essential component of that,” Alice Lin, budget and tax policy adviser for the U.S. House Ways and Means Committee, said last week during the American Council on Renewable Energy (ACORE) Finance *Forum*.

The GREEN Act of 2021 (*H.R.848*) currently before the Ways and Means Committee provides for five-year extensions of the current investment tax credit (ITC) at the full 30% value and the production tax credit (PTC) at the current phaseout level of 60%. Another bill – the Clean Energy for America Act (*CEAA*) – before the U.S. Senate Committee on Finance contains a similar goal but approaches it through emissions-based provisions. It allows zero-emission facilities to choose a PTC of 2.5 cents/kWh or ITC at the full 30% value.

“Returning [tax credits] to their full value is a low-hanging-fruit type of approach that we can take to really drive deployment,” Bobby Andres, senior policy adviser for the Senate Finance Committee, said.

In addition, President Biden’s recently released budget proposal would extend the ITC

and PTC through 2031. (See *Clean Energy Wins, Fossil Fuels Lose in Biden Budget*.)

“We all agree that the start and stop on clean energy tax credits is not really helping anyone, and it’s making us less competitive, so that’s why we want to create long-term certainty so that energy companies can actually get projects built, which is what the [President’s] plan is about,” Candace Vahlsing, associate director of climate, energy, environment and science at the U.S. Office of Management and Budget, said.

Legislators, however, see tax credit extensions as one tool among many that will be necessary to expand renewables at the requisite pace and scale.

The GREEN Act and CEAA also include a direct pay function designed to overcome market realities, such as the pandemic, that have negatively affected the tax equity market.

“Tax equity is going to be stressed, and one thing that I think is celebrated among all of these proposals is a recognition that a direct payment option is going to be helpful for the people trying to build out the clean energy economy,” ACORE COO Bill Parsons said.

Unlike the current tax equity structure, direct pay allows developers to treat tax credits like a payment on their tax returns, eliminating any connection to tax liability.

CEAA allows taxpayers to receive 100% of the ITC or PTC value as direct payment, while the GREEN Act is currently at 85%.

“As we have come into this political moment ... I think we have increasingly found that direct pay is a pivotal piece of the puzzle in order to ensure that as we make investments ... we are not constrained by any limits upon the market to ensure that we meet our climate goals,” Lin said.

Storage and Transmission

The GREEN Act and CEAA have a 30% ITC for free-standing energy storage. In addition, the CEAA includes a 30% transmission ITC that is not in the GREEN Act. Another bill, the Electric Power Infrastructure Improvement Act (*S.1016/HR2406*) also has a 30% transmission ITC for projects above 275 kV and capacity of at least 500 MW.

The tax credit for transmission is relatively new and likely will evolve, according to Andres.

“It is not going to solve all the issues we have with transmission deployment, but it’s something we feel is additive and useful,” he said.

A similar credit could be added to the GREEN Act, Lin said.

“We are looking very closely at the same ways to ensure that [transmission] is targeted, and we are very interested in the potential of helping to unlock the true potential for renewables,” she said.

Clean Energy Standard

The pathway to passage of a clean energy standard is not clear, but work is underway to make it happen.

How tax credits interact with a federal standard is “going to be an important piece of the debate going forward,” Andres said.

The CLEAN Future Act (*H.R.1512*) would require 100% of U.S. electricity to be zero-emission by 2035.

It passed out of the House Energy and Commerce Committee, but the Senate has a “more complicated dynamic on a clean energy standard,” ACORE CEO Gregory Wetstone said.

There is a growing movement to pass a standard through the budget reconciliation process.

“In the end, it’s going to be up to the parliamentarian to rule on what fits there and up to our allies in the Senate to craft a version of the clean energy standard that is budget-based and can pass that test,” he said. (See *100% Clean Power by 2035 Needs Energy Standard with a Twist.*) ■



Proposals to build stable renewable energy tax credits for projects like the Willow Creek Wind farm would allow renewables to develop at the pace needed to meet the Biden administration’s climate goals. | Ørsted U.S.

CAISO/West News

FERC Offers Guidance on Exceeding Western Price Caps

By Robert Mullin

FERC on Thursday issued guidance to Western electricity sellers on how and when to seek exceptions for sales that exceed the region's \$1,000/MWh soft offer and price caps.

The commission was responding to concerns arising from last summer's heat wave, when prices reached above the WECC-area soft caps that FERC adopted nearly two decades ago in response to the runaway wholesale prices of the Western energy crisis of 2000-2001.

"To address the effects of the Western energy crisis, the commission identified a number of structural reforms and market rule changes that were necessary for a robust, stable, and competitive bulk power market in California and the West," the commission wrote in Thursday's order (*ER21-40, et al.*).

Beginning in November 2000, the commission implemented "several coordinated price mitigation efforts, including offer/price cap measures in CAISO and the Western spot markets," it explained.

"In doing so, the commission cited the interdependence among prices in CAISO's organized spot markets and the prices in the bilateral spot markets in California and the rest of the West, emphasizing, for example, that price mitigation in the two markets should eliminate incentives for 'megawatt laundering,' where a supplier schedules supply out of CAISO and then reimports that power to avoid a mitigated price," the commission wrote.

In July 2002, after CAISO proposed a comprehensive market redesign, the commission set a \$250/MWh offer cap for the CAISO market and a \$250/MWh soft price cap for Western spot market sales. The commission at the time said that, along with other mitigation measures, the soft caps represented a "careful balance" of the need to incentivize the market entry of new resources while protecting the markets from potential abuse.

In a later order, FERC clarified that the cap was a soft cap and that offers and prices exceeding the cap would be subject to justification and refund.

"In establishing the cap, as well as in the three previous instances when sellers have filed justifications, the commission has declined to define the justification required or predetermine the specific types of documentation a seller might provide, explaining that the commission cannot anticipate all the possible reasons a seller may exceed the offer cap," FERC wrote Thursday.

FERC increased the cap to \$1,000/MWh in April 2011, reaffirming its thinking around the interdependency between the CAISO and Western bilateral markets. In complying with FERC Order 831, CAISO this past March raised its hard offer cap to \$2,000/MWh under scarcity conditions, but it still requires cost-based incremental offers above \$1,000/MWh to be verified in order to set the marginal clearing price or be eligible for recovery. The WECC-area soft price cap remains in place.

Summer Prices Heat up

The impetus behind Thursday's order was the extended heat wave in the West last August, when tight supplies prompted rolling blackouts in CAISO and energy emergency alerts in 11 other balancing authority areas, including six BAAs that issued Stage 3 alerts. (See *CAISO Says Constrained Tx Contributed to Blackouts.*) During the event, Western prices repeatedly jumped above the \$1,000/MWh soft cap, later requiring sellers to file with FERC to justify the cost of their sales. The commission said the transactions generally fell into four categories:

- physical forwards, in which physical power changes hands at a fixed price;
- physical index transactions, in which power changes hands at a price that floats around an index;
- financial transactions that are used as a hedge and in which no physical power is delivered; and
- sleeve transactions, where one party acts as an intermediary to facilitate a sale between two counterparties.

FERC said that the sellers' justification filings for exceeding the cap "typically include a report containing descriptions of the weather event and of sales made (sometimes including a narrative of how the sale was arranged (e.g., via phone call) to illustrate agreement between both parties), and tables enumerating the individual sales, counterparties, energy quantity and price. Filing parties also indicate whether



© RTO Insider LLC

CAISO/West News

they bought energy or acted as net buyers.”

The commission said that some sellers requested a waiver of the requirement to provide cost data. Tucson Electric Power justified its request by saying its “generation costs were not the determining factor in the wholesale prices at issue and would not inform the commission’s consideration of these issues.”

“In justifying sales above the WECC soft price cap for the first three types of transactions, filing parties primarily rely upon two arguments: that sales reflected the prevailing market conditions, and that the sales are protected under the *Mobile-Sierra* doctrine,” the commission said.

Frameworks

Given last summer’s developments and the potential for a repeat weather-driven price spikes this summer, FERC said “we find that it is appropriate to provide additional information on approaches a seller could take to justify sales in excess of the WECC soft price cap.” Its guidance is based on — but “not limited to” — three frameworks:

- a production cost-based framework in which a seller demonstrates that sales exceeding the cap can be justified by evidence of costs

associated with the production of electricity. The seller would show that its actual short-run marginal cost of production exceeded the cap through documentation of fuel and operation and maintenance costs.

- an index-based framework in which a seller relies on a price index to justify exceeding the cap. A seller need not have based its sale on an index to use this framework, but it must reference an index at a specific trading hub, explain the relevance of that hub to the transaction and show that the hub met the conditions for adequate liquidity according to FERC’s standards. “To rely on a specific hub, it will be necessary for sellers, in their justification filings, to demonstrate their ability to transact near those hubs during the time periods in which the prices of those published indices were above \$1,000/MWh,” the commission said.
- an opportunity cost framework in which a seller justifies a price based a demonstration of opportunity costs, which the commission said it has “long recognized” as a “legitimate component” of reasonable rates. FERC has generally recognized opportunity costs that are either “locational” (the opportunity to sell into other markets) or intertemporal (demonstrating limits on starts, operating

hours and energy over a specific time frame). “Invoking the opportunity cost framework requires evidence of alternative sales options, including details on the timing, location, quantity and likely price of the alternative sale,” the commission wrote. It would also require evidence that the seller could actually deliver the energy at the time and place specified.

For sleeve transactions, in which the nominal fee that a third party typically collects to facilitate the trade causes the final price to exceed the cap, FERC said a justification filing should include an explanation of the transaction, as well as supporting documentation of the purchase, nominal fee and subsequent sale. Filings for sleeve transactions in which the underlying price exceeds the cap must rely on one of frameworks provided by FERC.

Thursday’s order also clarified that sellers in financial transactions are not required to submit justification filings because those transactions, which do not involve delivery of physical electricity, are not subject to the WECC soft cap.

The commissions also provided any parties with pending justification filings an additional 30 days to amend their filings in response to the new guidance. ■

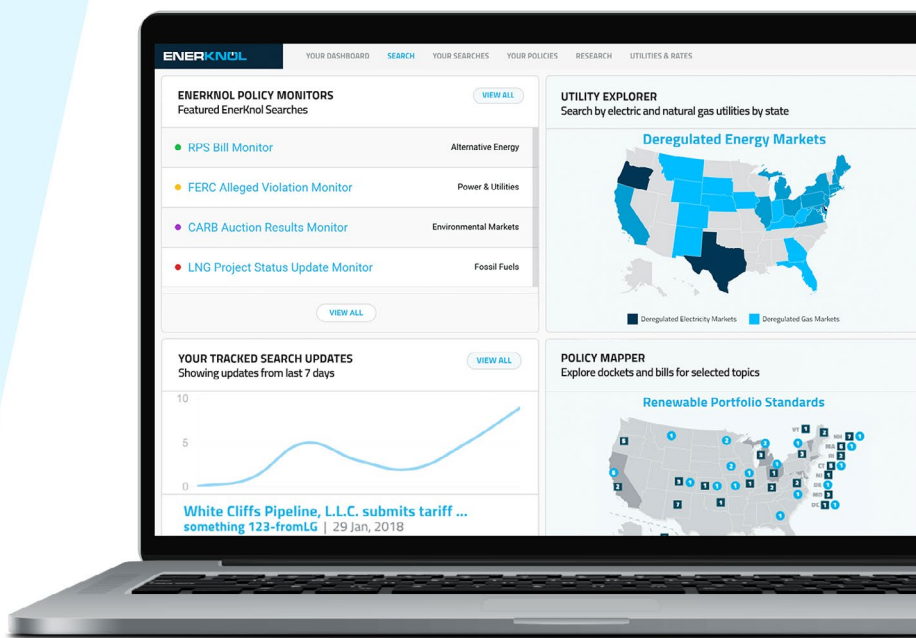
ENERKNOL

Our users don't have FOMO.

Don't miss out on real-time regulatory and legislative updates with EnerKnol, the comprehensive platform of US Energy Policy data.

START DISCOVERING TODAY

BEGIN YOUR FREE 7-DAY TRIAL AT ENERKNOL.COM



20+ Million Filings at Your Fingertips • One-Click Tracking
Automated Real-time Updates • Proprietary Research

ENERKNOL.COM

CAISO/West News

Nevada PUC Calls for Organized Market in West

Continued from page 1

In neighboring California, CAISO called for load shedding Aug. 14-15, prompting rotating outages. (See *CAISO Issues Final Report on August Blackouts*.)

Nevada's crisis arrived three days later, on Aug. 18, when NV Energy and other load-serving entities faced emergencies because of "insufficient generation and transmission capacity to meet peak demand," the PUCN wrote.

NV Energy's reliability coordinator, CAISO-led RC West, declared a level 3 emergency on the afternoon of Aug. 18 as Las Vegas hit a record-high temperature of 114 degrees Fahrenheit. The utility bought energy to compensate, but much of it was not delivered, the report said.

"For a 10-hour period on Aug. 18, 2020, NV Energy procured 19,760 MWh of energy through bilateral contracts with third-party entities," the PUCN said. "However, during this period, only approximately 13,639 MWh of energy were delivered to NV Energy.

"For the [6 p.m.] hour ... NV Energy's most critical period ... [the utility] procured over 2,000 MWh of wholesale market energy through bilateral agreements to be delivered but only received approximately 864 MWh of energy, resulting in 1,243 MWh (59%) of undelivered energy," it said.

NV Energy avoided rolling blackouts that day only because of conservation efforts and by accessing operating reserves through an agreement with the Northwest Power Pool, the report said.

Investigation and Findings

The PUCN opened its investigation of the events Aug. 26, resulting in last week's report. It identified issues that contributed to the emergencies, including the state's over-reliance on increasingly constrained imports.

"Over the prior five years, Nevada's resource planning process has focused on cost-saving opportunities for ratepayers by finding prudent NV Energy's actions to fulfill an increasing amount of its supply needs in the Western market," it said. "At the same time, a number of areas of [WECC] faced growing resource constraint. As retirements of large generating stations continue and are replaced by generating resources with dissimilar generating characteristics, some regions in the WECC are growing more dependent on seasonal or



NV Energy, the main transmission owner in Nevada, could benefit from being in an RTO, the PUCN said. | © RTO Insider LLC

intraday imports."

In March, WECC's assessment of Western resource adequacy found Nevada was among the regions in which imports are essential to ensure reliability during summer peaks. The PUCN took note of that and called for planning upgrades. (See *RA at Risk in NWPP-Central, WECC Finds*.)

"Today, Nevada often exports solar generation and relies on imports from neighboring states like California, Arizona and Oregon to meet peak demand, particularly during the evening when solar generation is unavailable," the report said. Resource planning "must become more granular and move beyond the borders of Nevada and lengthen its focus to assess regional market risks."

CAISO in Crosshairs

The report also critiqued Nevada's dependence on CAISO, a possible contender to lead a Western RTO.

"CAISO is not a Western regional planning entity; it was structured to meet California's electricity needs," it said. "However, because the CAISO is the only liquid market in the West, all trades between balancing authorities

or utilities are either bilateral transactions or traded volumes in the CAISO markets."

Under the system, Nevada utilities contract for "firm" imports, but a "downstream buyer has no way of distinguishing between a ... contract backed by a portfolio of physical generation owned by the seller and a 'firm' contract backed by day-ahead purchases in the CAISO markets."

As in August, the result can be imports that do not materialize, the report said.

NV Energy proposed a short-term fix in procurement changes that "recognize the risk of Nevada's reliance on market resources that are sourced from or wheeled through the CAISO and, therefore, propose procurement of energy at higher targets for reliability purposes," the report said.

It noted that "NV Energy has issued requests for proposals for non-CAISO-sourced energy, but because the CAISO is the largest and only liquid market in the western United States, NV Energy currently relies on the CAISO wholesale energy market for a portion of its resource adequacy to provide reliable electric service to Nevadans." ■

CAISO/West News

Study Shows RTO Could Save West \$2B Yearly by 2030

By Robert Mullin

The development of a single RTO covering the entire U.S. portion of the Western Interconnection could save the region \$2 billion a year in energy costs by 2030, according to findings from a state-led study funded by the U.S. Department of Energy.

The study also found that a full Western RTO would be more effective at reducing renewable resource curtailments and CO₂ emissions than under other configurations in which the region is broken up into two separate markets.

Initiated by Utah Gov. Spencer Cox's Office of Energy Development in collaboration with state energy offices in Colorado, Idaho and

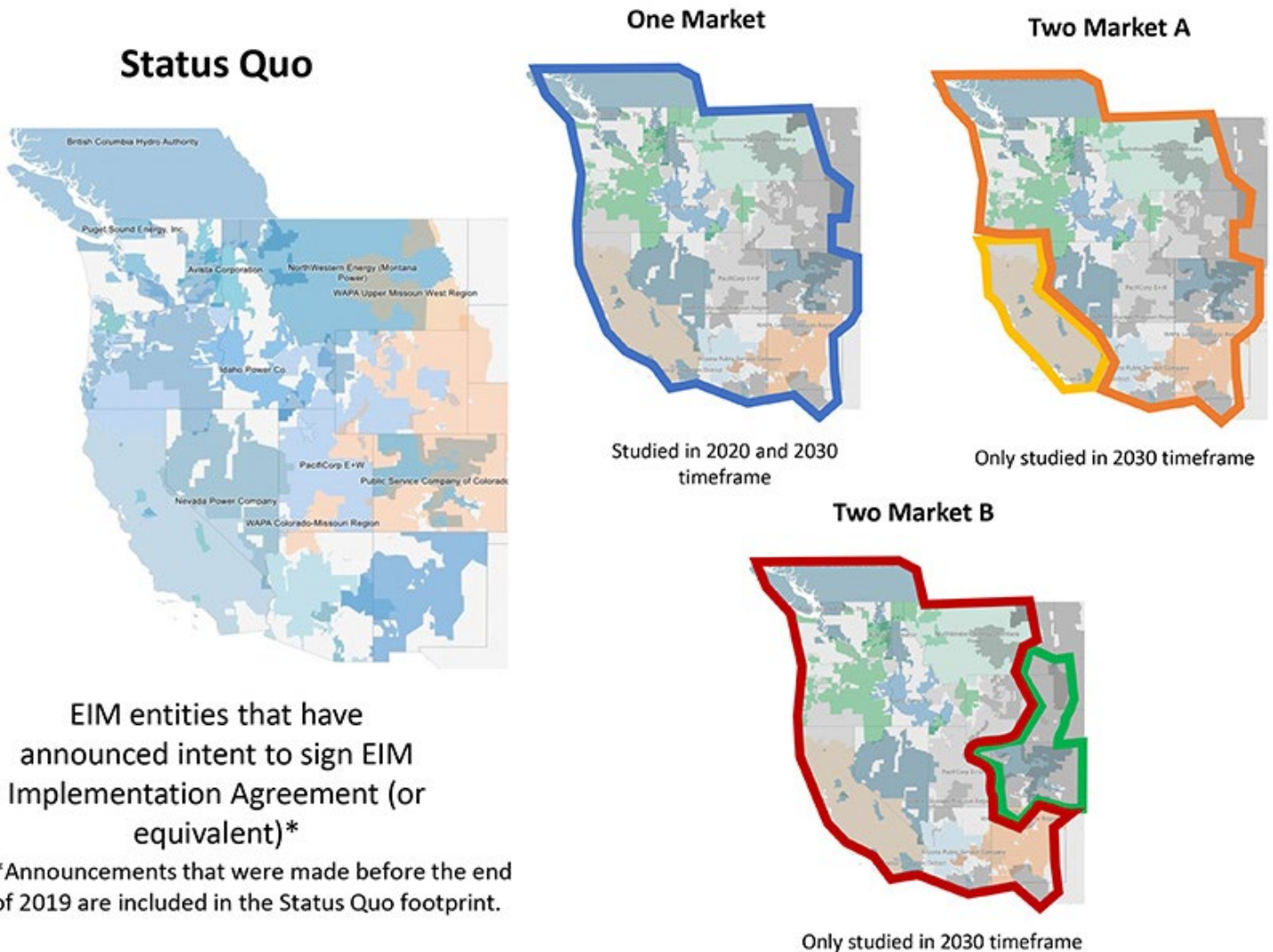
Montana, the study is part of broader effort to analyze the impacts of different electricity market configurations on the West. States in the region have historically been reluctant to adopt a fully organized market but have largely embraced the half-measure of having their utilities join CAISO's Western Energy Imbalance Market.

In November, the study group released findings that indicated that a single RTO could save the West \$1.2 billion annually under a 2020 market scenario. (See *Study: Western RTO Could Yield \$1.2B in Yearly Savings.*)

The more recent findings look ahead to examine the potential economic outcomes of various "market constructs" that could prevail in the West by 2030. To do that, the study

overlays those constructs on four potential market footprints:

- Status Quo, in which the only formal market in the West is an EIM that consists of all members that were participating in or had committed to join the market by late 2019. In this scenario, balancing authority area boundaries are retained and there is distributed control of the transmission system.
- One Market, in which the entire U.S. portion of the Western Interconnection is participating in a single market (either an RTO or day-ahead market, depending on the scenario).
- Two Market A, in which CAISO fails to expand its footprint while the rest of the



The state-led study examined four potential market configurations for the West in 2030. | Utah Office of Energy Development and S&P Global Market Intelligence

CAISO/West News



U.S. portion of the Western Interconnection forms a separate market. In this scenario, California utilities that are not currently part of CAISO are assumed to be participating in a market with the ISO.

- Two Market B, in which California and most of the U.S. portion of the Western Interconnection participate in one market, while the area covered by the Mountain West Transmission Group (MWTG) becomes its own market. (The MWTG halted its work on exploring the development of a market in 2018 when Xcel Energy pulled out of the effort.)

“None of the analysis is really dependent on what entity is operating one of these given markets,” Keegan Moyer, principal with study author Energy Strategies, said in presenting the findings during a webinar Thursday. “So, in terms of what the model sees and the cost estimating that we did for the administrative costs for these markets, it’s agnostic on who would actually be providing these market services.”

Bigger Footprint is Better

The study’s first scenario assumes that the EIM’s current real-time market (the Status Quo in the study) expands to include day-ahead trading. In that scenario, the region

realizes an additional \$47 million in annual adjusted production cost saving and \$529 million in capacity savings, for a total gross yearly benefit of \$576 million by 2030. While Washington (\$163 million) and California (\$143 million) claim the biggest shares, gross benefits are positive from every state. Inclusion of day-ahead trading in the EIM also reduces system emissions and renewable curtailments by 0.3% and 6%, respectively.

A second scenario compares day-ahead markets under the One Market and Two Market B footprints, finding that the annual benefits of the former configuration (\$681 million) exceed those of the latter (\$435 million) by \$247 million. The study indicates that, because of increased load diversity, all Western states would see greater benefits from a day-ahead market construct that includes California than one that excludes the state. However, emissions and curtailments would be similar under both configurations, the study showed.

In a third scenario, the study stacks a West-wide day-ahead market against a full Western RTO that consolidates the region’s existing 39 BAAs into one, centralizing transmission planning and cost allocation as well as market operations. The study finds that, with \$2 billion in savings, an RTO would yield nearly triple the

benefits of the day-ahead market, reducing production and capacity costs by an additional \$599 million and \$718 million, respectively. When measured against the Status Quo, an RTO would also reduce renewable curtailments by 43%, versus 9% for the West-wide day-ahead market, resulting in 2.3 million tons of additional CO₂ emissions reductions.

Washington again takes the lion’s share of the annual benefits at \$351 million, followed by California (\$319 million), Oregon (\$148 million) and Arizona (\$136 million). All states see benefits, though, with the smallest shares going to the least populous states.

The study also finds that by 2030, capacity savings (because of load diversity) should account for 65% of the RTO’s gross benefits, increasing from a 35% share under 2020 conditions. In contrast, operational savings are expected to decrease as load is increasingly served by zero-marginal-cost resources that offset the fuel and operational expenses that constitute dispatch savings.

“The study, I think, supports the thesis that bigger markets generally perform better. We saw higher gross benefits when we had larger footprints and more comprehensive market services. Those tend to maximize benefits for the most Western states,” Moyer said. ■

2030 One Market RTO Annual Benefits

State	APC Benefit (\$M)	Capacity Benefit (\$M)	Total Benefit (\$M)	
AZ	\$59	\$117	\$176	
CA	\$288	\$190	\$478	
CO	\$62	\$98	\$160	
ID	(\$8)	\$88	\$80	
MT	\$10	\$36	\$46	
NM	\$43	\$70	\$113	
NV	(\$5)	\$50	\$45	
OR	\$80	\$127	\$207	
UT	\$43	\$56	\$99	
WA	\$102	\$449	\$552	Estimated Ongoing Cost
WY	\$19	\$23	\$43	
TOTAL	\$694	\$1,305	\$1,998	\$187-513

CAISO/West News

SPP CEO Pitches WECC on Western Benefits

Sugg Says SPP Has a Better Governance Model for New RTO

By Hudson Sangree

SPP CEO Barbara Sugg briefed WECC's Board of Directors last week on the RTO's efforts in the Western Interconnection and potential benefits for stakeholders there, including full membership in SPP's proposed RTO West.



SPP CEO Barbara Sugg | © RTO Insider LLC

SPP operates as a reliability coordinator in parts of the West and is helping the Northwest Power Pool develop a multistate resource adequacy program that it hopes to administer, Sugg said.

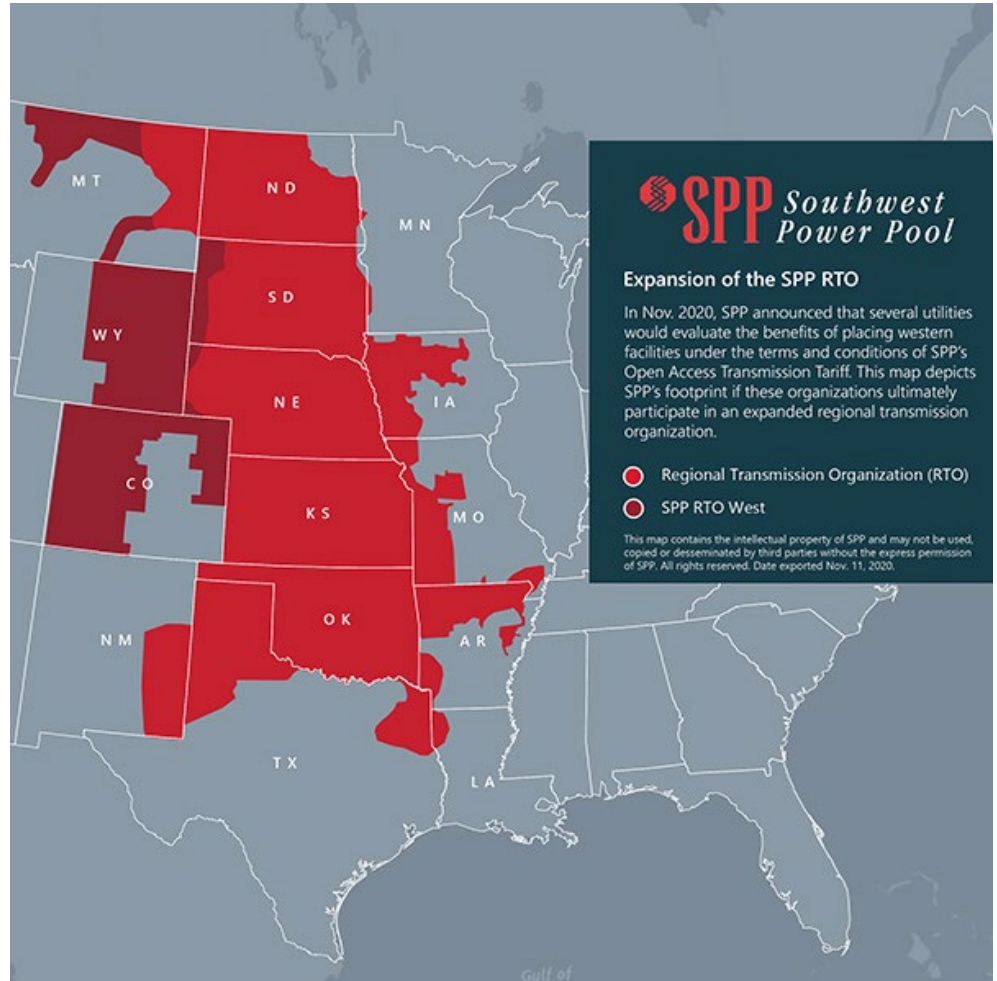
Earlier this year, SPP started its Western Energy Imbalance Service (WEIS) to compete with CAISO's Western Energy Imbalance Market (EIM), and WEIS members have expressed interest in joining a Western RTO led by SPP, she said.

"Those entities that join the WEIS are very interested in full RTO membership," she said, naming Basin Electric Power Cooperative, Deseret Power Electric Cooperative, the Municipal Energy Agency of Nebraska, Tri-State Generation and Transmission Association, the Western Area Power Administration's Upper Great Plains West and Rocky Mountain regions, and the Colorado River Storage Project. (See [6th Western Utility Interested in SPP Membership](#).)

More recently, Colorado Springs Utilities (CSU) decided to drop its plans to join CAISO's EIM and instead join the WEIS. CSU's decision prompted much-larger Xcel Energy to reconsider its plan to join the EIM. Both moves followed the Colorado legislature's passage of Senate Bill 72, which requires the state's transmission owners to join an RTO by 2030. (See [Xcel Delays Joining EIM to Examine Options](#).)

WEIS participants have all signed letters of investigation aimed at joining an SPP-led Western RTO, she said.

SPP is "looking at consolidating those balancing authorities in the West ... into a separate balancing authority, so SPP would then operate two BAs," one in the Eastern Interconnection and another in the Western Interconnection, Sugg said. The proposed RTO West would provide a day-ahead market and



SPP's RTO West would expand the grid operator's 14-state footprint. | SPP

regional transmission planning and consolidate multiple transmission tariffs into a single tariff, she said.

SPP's Appeal

Past attempts to form a Western RTO have failed, but Colorado's measure and a similar law in Nevada could spur new efforts. (See related story, [Many Next Steps to Follow Passage of Nevada Energy Bill](#).)

Stakeholders often mention CAISO and SPP as candidates to lead one or more new RTOs, but CAISO attracts criticism for being California-centric. The state's governor appoints its Board of Governors, and the State Legislature dictates its policies. Entities in other Western states have been loath to join a CAISO-led RTO under those conditions, and California lawmakers have been unwilling to lose control

of the ISO by opening its governance structure.

SPP's more inclusive governance model could prove appealing to Western entities "largely because of the stakeholder process, because of the opportunity to engage and have a voice and be able to influence [decisions]," Sugg said.

The process is "very appealing to our stakeholders, and they will fight feverishly to maintain it," she said. "It's a very robust, inclusive stakeholder process that ensures everyone has a meaningful say. Our stakeholders are able to engage in committees and working group task forces and advisory groups ... and those groups have a tremendous influence on board decisions.

"We feel like that's what makes people want to do business with SPP," instead of CAISO, she said. ■

CAISO/West News

Many Next Steps to Follow Passage of Nevada Energy Bill

By Elaine Goodman

The Nevada governor's office will soon be inviting interested parties to apply for a seat on a new task force that will advise the governor and lawmakers on bringing the state into a regional transmission organization.

The Regional Transmission Coordination Task Force is the product of *Senate Bill 448*, a wide ranging energy bill that Gov. Steve Sisolak signed into law on June 10.

The bill, by Sen. Chris Brooks (D), has many provisions that will be implemented in stages. One of the initial steps will be the formation of the task force, to be facilitated by the Governor's Office of Energy (GOE).

GOE Director David Bobzien said the governor's office will post a notice, likely over the summer, inviting applicants to serve on the task force. The group will have about 20 members representing an array of interests. (See list of task force membership below.)

The governor will appoint the task force members, who will not be paid. The group will meet at least twice a year. Its first report will be due by Nov. 30, 2022.

"We do anticipate there's going to be a lot of interest," Bobzien told *RTO Insider*.

The task force will help address issues such as the potential costs and benefits of joining or creating an RTO.

The group will look at policies to help bring transmission providers into an RTO by Jan. 1, 2030. Under SB448, the Public Utilities Commission of Nevada (PUCN) will require every transmission provider in the state to join an RTO by that date, although waivers will be possible.

Sept. 1 Deadline

While the task force is getting organized, the state's electric utility, NV Energy, faces a Sept. 1 deadline for two key filings required by SB448.

The utility must file a plan with PUCN by Sept. 1 to build its Greenlink North transmission line. The project would connect northwest and northeast Nevada and form a triangle with the existing One Nevada transmission line and Greenlink West, a project that NV Energy received approval to build in March. (See *Regulators Greenlight NV Energy's Greenlink West*.)

PUCN then will have 165 days to approve the plan. The goal is to have Greenlink North placed into service by Dec. 31, 2028.

Although PUCN in March approved conceptual designs, permitting and land acquisition for Greenlink North, Brooks said SB448 adds certainty that construction of the project will be approved.

"This shortens the time frame," Brooks told *RTO Insider*. "That was the whole point — to expedite the process."

And the increased certainty around Greenlink may spur other transmission projects, he said.



Surrounded by union members, Nevada Gov. Steve Sisolak signed SB448 into law on June 10. The bill's sponsor, Sen. Chris Brooks, is standing to the governor's left. | Nevada Office of the Governor

CAISO/West News

“That just opens up a lot more opportunities for other transmission developers,” Brooks said.

Sept. 1 is also the deadline for NV Energy to submit a plan for \$100 million in electric vehicle charging infrastructure.

The plan, which will cover January 2022 to December 2024, will include investments in the following programs:

- an interstate corridor charging depot program;
- a public agency EV charging program;
- a charging program for transit vehicles and school buses;
- an urban charging program, geared toward drivers who can’t charge their EVs at home or at work; and
- an outdoor recreation and tourism charging program.

At least 40% of spending in the plan must go toward investments made in or benefitting historically underserved communities.

NV Energy supported SB448.

“Senate Bill 448 will transform Nevada’s clean energy landscape, create thousands of good paying jobs, and ensure Nevada’s underserved and low-income communities benefit from this energy transformation,” NV Energy spokesperson Jennifer Schuricht said on Friday.

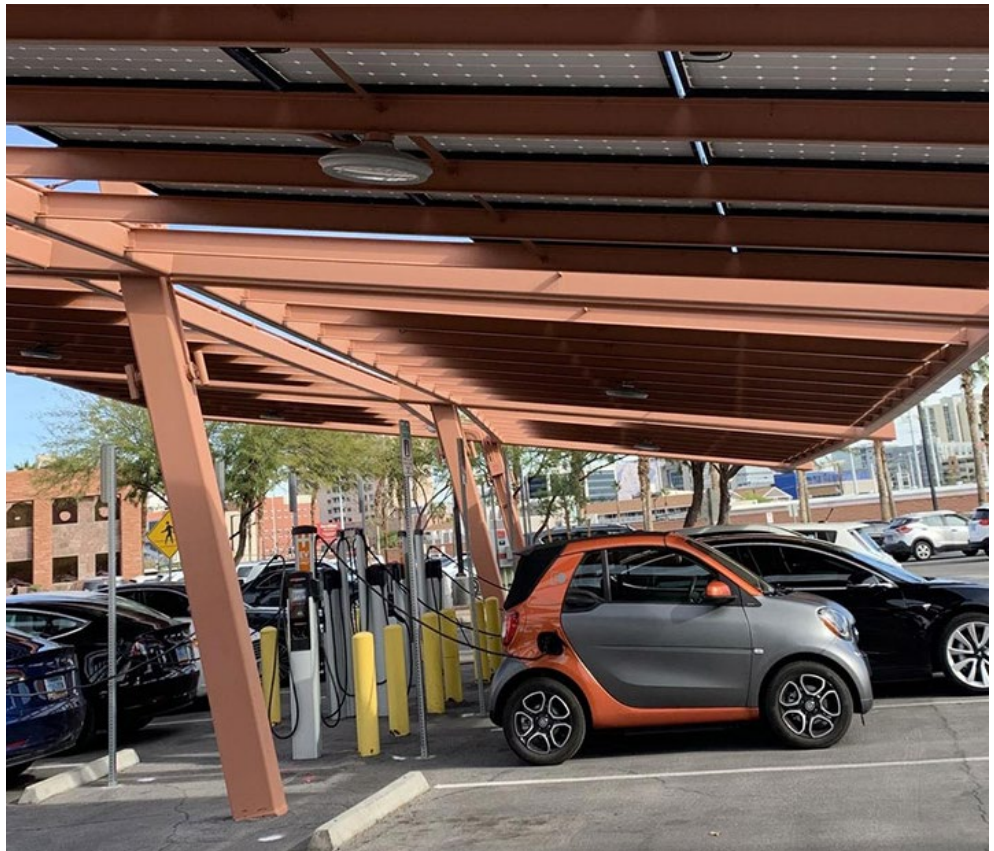
Rate Rider Revived

The Nevada legislature in 2013 established a program called the Economic Development Electric Rate Rider, which gave eligible businesses discounts on their electric bills for a number of years. The program’s purpose was to attract new commercial and industrial businesses to Nevada.

The program closed to new participants at the end of 2017, with about half of its 50 MW of capacity remaining. SB448 reopens the program, setting a new deadline of Dec. 31, 2024, for businesses to apply.

The Governor’s Office of Economic Development is in the process of developing guidance on how to implement the program, according to GOED spokesperson Greg Bortolin.

SB448 will also expand the Renewable Energy Tax Abatement (RETA) program that gives tax breaks to renewable energy generation projects. The bill will clarify that the tax break is also available to energy storage projects, or hybrid projects consisting of renewable gener-



SB448 provides \$100 million for new EV charging infrastructure throughout the state. | NRDC

ation and storage.

Bobzien expects rulemaking to start this summer for the expansion of RETA.

Task Force Membership

Nevada’s governor will appoint members of the Regional Transmission Coordination Task Force and choose a chairperson for the panel. Other seats on the task force will be filled with representatives of the following:

- an electric utility serving densely populated counties
- an organization that represents rural electric cooperatives and municipally owned electric utilities in the state
- the Colorado River Commission
- a transmission line development company
- the large-scale solar energy industry
- the geothermal energy industry
- a data center business
- the mining industry
- gaming and resort businesses

- a labor organization
- an environmental organization
- the Nevada Indian Commission representative
- the Governor’s Office of Energy
- the Governor’s Office of Economic Development
- the Nevada state Senate: two members nominated by the Senate Majority Leader, including at least one minority-party member
- the state Assembly: two members nominated by the Assembly speaker, including at least one minority-party member
- the general public (up to three members)

In addition, the task force will include the following non-voting members:

- a PUCN representative and
- a representative of the Bureau of Consumer Protection in the Attorney General’s Office. ■

CAISO/West News

Klamath Hydro License Transfer Approved

By Robert Mullin

Concluding a process that began more than 15 years ago, FERC last week approved the transfer of the 169-MW Klamath Hydroelectric Project's license from PacifiCorp to a group of parties that will decommission the series of eight dams that straddle the border between California and Oregon (P-2082-062).

The parties assuming the license include the states of California and Oregon, and the Klamath River Renewal Corp. (KRRC), comprising the Yurok and Karuk tribes and area farmers, ranchers, fisherman and environmental groups. All were party to the 2010 Klamath Hydroelectric Settlement Agreement (KHSAs), which imposed a set of interim environmental measures and funding obligations on PacifiCorp ahead of the targeted 2020 decommissioning date of the project.

PacifiCorp decided to remove four of the dams in 2004 following a long-running dispute over water rights and the health of salmon runs in the Klamath Basin. Before the project's license was set to expire in 2006, the utility filed a proposal with FERC to relicense the three upper dams while decommissioning four lower dams considered too costly to modernize.

Since then, the project has operated under a series of annual interim licenses while approval of the broader license sat in limbo, largely because of PacifiCorp's own efforts.

In 2016, a subset of the KHSAs parties signed an amended agreement that would transfer the licenses for the four dams to the newly formed KRRC. Two years later, FERC approved PacifiCorp's request to split the lower dams into a separate license, but it declined to rule on transferring the license until the KRRC could prove that it was capable of managing decommissioning.

"Transferring a project to a newly formed entity for the sole purpose of decommissioning and dam removal raises unique public interest concerns, specifically whether the transferee will have the legal, technical and financial capacity to safely remove project facilities and adequately restore project lands," FERC said in the ruling.

FERC overcame those concerns in last week's ruling because, under the new license agreement, KRRC's decommissioning efforts would now be backed by California and Oregon.

"The applicants explain that under their



FERC has approved transfer of the license for the Klamath Hydroelectric Project from PacifiCorp to the Klamath River Renewal Corp. and the states of California and Oregon. | California State Water Resources Control Board

current proposal, if transfer and surrender are both approved, decommissioning efforts would not rest solely with the renewal corporation. The states, as co-licensees, would provide additional experience related to large public infrastructure projects, including experience overseeing dam removal and operating projects subject to the commission's jurisdiction," the commission wrote.

FERC also pointed out that PacifiCorp and the states had agreed to establish a \$45 million contingency fund to cover cost overruns for a decommissioning process estimated to cost about \$450 million.

The commission dismissed an argument by the county of Siskiyou, Calif., that the KRRC is a "shell corporation" only set up to shield PacifiCorp and the states from liability associated with dam removal. The county also contended that PacifiCorp should be required to remain on as a co-licensee because of its "knowledge, competence and safety track record."

FERC clarified that as co-licensee, the states will not be shielded from liability.

"With the states as co-licensees, we do not believe the public interest requires that PacifiCorp remain a co-licensee. Nor do we find that the renewal corporation is merely a 'shell corporation.' The renewal corporation is a California nonprofit corporation in good standing; its articles of incorporation explicitly

provide for implementation of the amended settlement agreement; and its bylaws describe the day-to-day management responsibilities of the renewal corporation as licensee," FERC wrote.

The commission also rejected the contention of some commenters who questioned whether the states are qualified to be co-licensees and have the experience or expertise to perform decommissioning. These commenters pointed to the February 2017 failure of the main spillway of the Oroville Dam, operated by the California Department of Water Resources, saying it was the result of "gross mismanagement" and that reconstruction suffered large cost overruns. (See [Report: Regulatory Failure Caused Oroville Incident.](#))

"Actions by one California agency have no bearing on the issues here, in a case involving the states of California and Oregon, the renewal corporation and a number of other parties," FERC said. "In any case, following the Oroville Dam incident, California DWR worked closely with commission staff, complied with commission directives and bore the extensive costs associated with the required remediation.

"The commenters do not demonstrate that the states lack the legal, technical or financial resources to serve as co-licensees here," the commission said. ■

CAISO/West News

CAISO Issues Warning of Resource Deficiency

Supply Tightens During Triple-digit Heat Wave in California, Southwest

By Hudson Sangree

CAISO issued a grid warning Thursday after generators tripped offline during a record-breaking heat wave across the Southwest and much of California.

“CAISO is forecasting a resources deficiency with all available resources in use or forecasted to be in use for the specified time period,” the ISO said in its warning notice. The warning was for 7 to 9 p.m., after solar dropped offline but demand from air conditioning remained high.

COO Mark Rothleder said “a couple of resources” totaling about 1,100 MW experienced forced outages earlier in the day but that 600 MW of resources unexpectedly came online, for a net loss of 500 MW.

The warning meant the ISO might have had to dip into its planning reserves, which the California Public Utilities Commission increased from 15% to 17.5% this year in anticipation of strained grid conditions. It allowed the grid operator to activate demand response programs to lower consumption and to call on neighboring balancing authority areas, including the Los Angeles Department of Power and Water, for emergency assistance of energy, Rothleder said in a call with reporters.

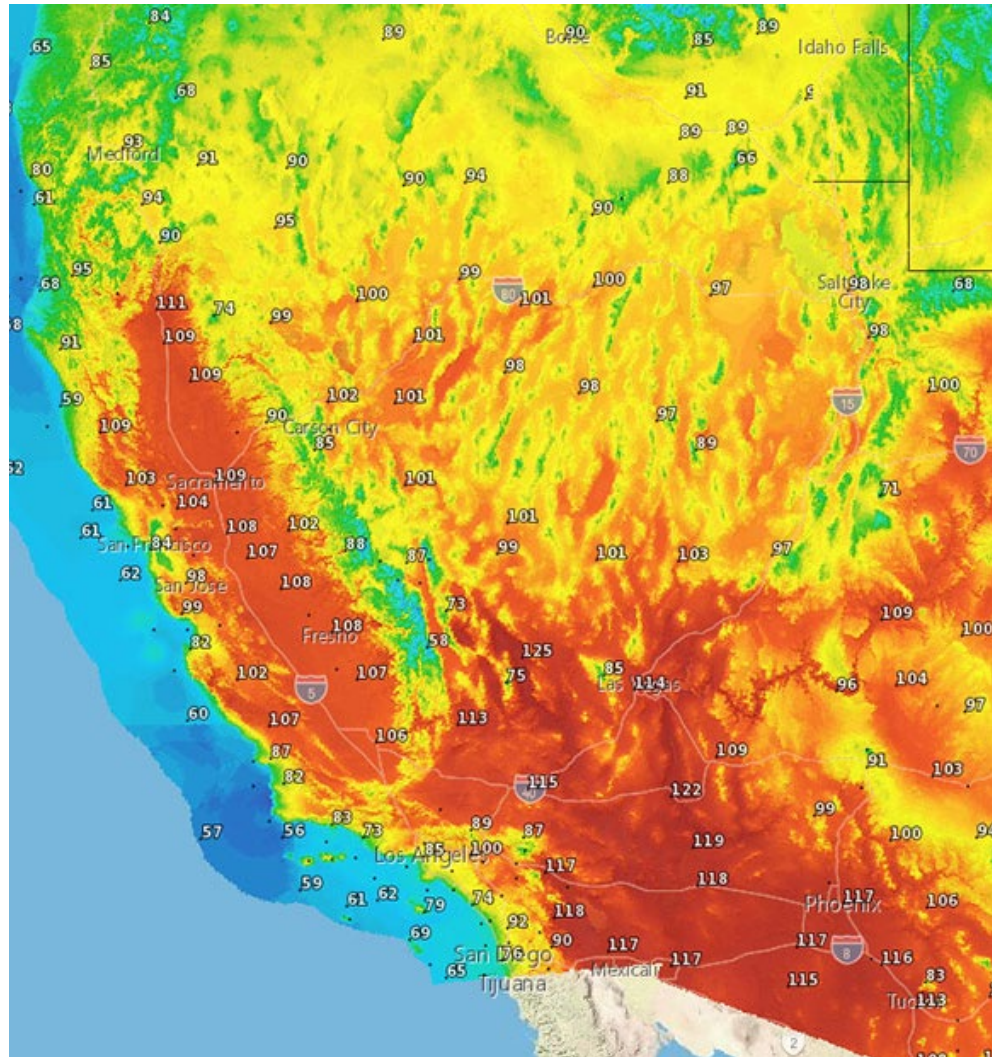
“At this point everything is looking good with those additional tools ... and so we are expecting that we will be able to make it through the evening peak and net-peak hours without having to resort to further emergency efforts or any kind of power outages,” he said.

That’s assuming nothing changes to alter supply and demand, he added. The next step after a warning is for the ISO to declare a Stage 1 energy emergency. Neither step has been taken since last September’s energy emergencies under similar weather and system conditions.

CAISO forecast peak demand at more than 42 GW on Thursday. It said it had more than 52 GW of available capacity.

The additional capacity would help, CAISO said in its system conditions [bulletin](#) for Thursday. The current heat wave is more limited than those in August and September, which also affected the Pacific Northwest. Temperatures in Seattle and Portland, Ore., were relatively moderate last week.

The early-season heat wave arrived sooner



This week's Western heat wave has broken temperature records across the Southwest. | NOAA/NWS

than expected.

After rolling blackouts last August and close calls in September, CAISO and the CPUC spent much of the past year instituting measures to avoid shortfalls this summer, including adopting market rule changes. (See [CAISO Summer Measures Get FERC Approval](#).)

Hundreds of megawatts of additional battery storage are slated to come online this summer, but much of it has not been connected yet.

To prepare for the current heat wave, the ISO restricted grid maintenance this week and issued flex alerts calling for customers to conserve energy.

Temperatures hit 117 degrees Fahrenheit in

Phoenix and 120 in Palm Springs, Calif., on Thursday, breaking records for the date, the National Weather Service said. Other cities that set triple-digit temperature records this week included Tucson, Ariz., Billings, Mont., and Albuquerque, N.M.

“The hottest day of the week is expected today, with excessive heat warnings and heat advisories in effect throughout the state, and record-breaking temperatures forecast in parts of the state and the Southwest U.S.,” CAISO said in its bulletin. “While the power grid operator is not anticipating rotating power outages, it has issued a Flex Alert for 5 to 10 p.m. today, Thursday, June 17, due to high heat increasing stress on the grid in the late afternoon.” ■

ERCOT News



Abbott Taps OPUC's Cobos to Fill out PUC

By Tom Kleckner

Texas Gov. Greg Abbott on Thursday *appointed* Lori Cobos, chief executive and public counsel for the Office of Public Utility Counsel (OPUC), to the Public Utility Commission for a term that expires in less than three months.

Cobos' appointment fills out the current commission, which has completely turned over since February's winter storm nearly flattened the ERCOT grid. The previous three commissioners all resigned under political and public pressure in March. (See *D'Andrea Resigns from Texas Commission.*)

Because her appointment comes between legislative sessions, she can begin serving without Senate confirmation once she is sworn in and completes her training. She will sit beside Chairman Peter Lake and Commissioner Will

McAdams before her term expires Sept. 1.

Abbott on Friday signed a *bill* that expands the PUC to five commissioners and requires two of them to be "well informed and qualified in the field of public utilities and utility regulation."

Cobos has led the OPUC, which represents residential and small commercial consumers' interests in state utility proceedings, since April 2019. The organization has been credited with helping achieve more than \$1.3 billion in utility bill savings before the PUC during her tenure, including an agency record of almost \$1.2 billion in 2020.

"I know that she will draw upon her wealth of experience and knowledge to faithfully serve the people of Texas," Abbott said in a statement. "Throughout her career, Lori has gleaned valuable experience in the power and utility industries. Her most recent leadership



Lori Cobos | Texas State Directory

role at OPUC makes her a perfect choice for the Public Utility Commission."

Cobos has more than 17 years of experience in the Texas electric power industry and previously served in several senior-level positions at the PUC. She advised two PUC commissioners and served as assistant counsel to the commission's executive director and senior policy analyst in the policy development division. Cobos has also been an in-house counsel for ERCOT.

Cobos will give up a voting position on the grid operator's board that is allocated to the OPUC. The PUC chair serves as a non-voting representative on the board.

She received her law degree from Texas Tech University, and her master's in public administration and bachelor's in business administration from Sul Ross State University. ■



As the Texas commission's newest member, Lori Cobos will soon have her picture joining those of her predecessors. | © RTO Insider LLC

2021 THE TEXAS ENERGY SYSTEM AT THE CROSSROADS: Lessons in the Wake of Major Storms

JULY 15, 2021

The University of Texas
AT&T Hotel and Conference Center
Austin, TX

GCPA
Gulf Coast Power Association

SAVE THE DATES!
GCPA Fall Conference
We're Going LIVE!

GCPA 2021
AT&T CONFERENCE CENTER
AUSTIN, TX

SEP 21ST - SEP 22ND REGISTRATION OPENS IN JULY

WATCH FOR YOUR EMAIL IN JULY FOR REGISTRATION DETAILS

Save your obstacle courses for weekend Mud Runs.

Getting the information you need shouldn't wear you out.
RTO Insider. Stay informed.

ERCOT News



Fixing the Texas Grid – Maybe

Insiders Wait to Gauge Impact of New Laws; Investors not Fazed by Changes

By K Kaufmann and Tom Kleckner

Kevin Gresham and Beth Garza are not overly concerned with ERCOT's conservation call issued on June 14 in the wake of unexpected outages at several thermal generation plants in the state. (See [Generation Outages Force ERCOT Conservation Alert](#).)

Summertime heat and calls for conservation are not unusual in Texas, said Gresham, senior vice president of government affairs at RWE Renewables America and also a member of the ERCOT Board of Directors. Speaking at the American Council on Renewable Energy Finance Forum on Wednesday, Gresham said what makes the current appeal different is that it has come earlier in the season than expected and public concern about any outages is higher following the state's dayslong blackouts in February.

Another difference: Summertime peaks are more transitory, said Garza, former director of ERCOT's Independent Market Monitor. "It gets hot in the late afternoon, then builds to a peak, and then the sun will set; it will get cooler," she said. "Winter is different. It gets cold, stays cold and nighttime gets colder, and you have competition for natural gas.

"It's time for ERCOT to think about winter differently than summer and its different emergency procedures. You need more notice; you have to take actions earlier in the winter," said Garza, now a senior fellow at the R Street Institute, a nonprofit policy research organization.

The past and present ERCOT insiders were at the Finance Forum for a frank conversation on the causes and lessons learned from the February outages and whether Texas Senate Bills 2 and 3, signed into law last week by Gov. Greg Abbott, would provide the technical and regulatory fixes needed to prevent future repeats.

Garza quickly nailed down three causes of the February blackouts. First, she said, was the lack of winterization across the power system – not only with transmission and generation facilities, but with homes, transportation and natural gas. Other contributing factors were the "dysfunctional" codependence of the electricity and natural gas industries, and "unbridled" reliance on markets during a clear emergency in which they were ineffective.



At the ACORE Finance Forum on Wednesday (clockwise from upper left), Greg Wetstone, ACORE; Kevin Gresham, RWE; and Beth Garza, R Street Institute. | ACORE

Electricity and natural gas "don't communicate if the two industries work on different time frames, with different expectations, but somehow [they] are dependent on each other," she said.

Words vs. Electrons

Both Garza and Gresham are taking a wait-and-see approach to the new legislation that came after February's severe winter weather left hundreds dead and an estimated 4.5 million customers without power across the state. (See [Texas Legislators Finish Work on Electricity Market – for Now](#).)

Gresham noted that SB3 directs the Texas Public Utility Commission to "determine whether or not ERCOT is procuring appropriate ancillary services and allocating them in the right way. So basically, the decision making has shifted venues."

Stakeholders and advocates, such as ACORE, will "have to have the same level of representation and engagement," Gresham said.

ACORE took part in industry efforts to oppose provisions in SB3 and other legislation that would have shifted the costs of ancillary services exclusively onto the state's renewable resources. While the language was removed, the targeting of renewables could now be "moving to the regulatory round with rulemakings," Gresham said. "There are going to be

several that the Public Utility Commission is going to have to take up. The industry and its supporters need to be involved."

Garza believes the laws will catalyze change, whether good or bad. "It is what it is, and we need to go forward with it," she said.

SB3 could improve communication between the electricity and natural gas sectors, she said. The law mandates that critical gas facilities be mapped and registered with utility providers to prevent a repeat of the dayslong outages. It also creates a new statewide emergency alert system and brings together electric and natural gas regulators and market participants in a new energy subcommittee.

While requiring generation and transmission to be weatherized, the law limits natural gas weatherization to facilities that regulators consider "critical," with penalties capped at \$1 million a day.

"Continual service of electricity is a physical phenomenon; legislation is words written on paper," Garza said. "Writing words is not going to necessarily directly affect the physical phenomenon. It takes time to get rules in place."

Changes at the ERCOT board and the PUC could add more uncertainty and delay to that process. Following the February outages, seven ERCOT board members and all three PUC commissioners resigned. Abbott has since

ERCOT News



named two new commissioners.

Going forward, SB2 will slim down the ERCOT board from 16 members to 11 and directs that most of the members be appointed by politicians. Previously, a search committee picked five independent directors (those seats have been eliminated) with market segment members electing their representatives.

Another bill, SB2154, would expand the PUC from three members to five and only require two commissioners to be “well informed and qualified in the field of public utilities and utility regulation.” The bill is still sitting on Abbott’s desk.

Dispatchable vs. Renewable

Considering lessons learned — or perhaps to be learned — ACORE CEO Gregory Wetstone brought up a question discussed at length after the February outages: Should Texas expand its regional connections with other grid operators to allow the state to tap into extra power during emergencies?

Garza said her stock answer to that question is “maybe.”

“We wouldn’t build more capacity just to save ERCOT in the wintertime,” she said. “I think the opportunity to build bigger interregional connections is more fueled on the opportunity to sell our vast renewable resources elsewhere,” such as the West Coast, as neighboring SPP already has plenty of wind.

Gresham said the current need is to upgrade or build out the grid to relieve congestion caused by the state’s growing population and economy. “We’re not designing the transmis-

sion grid for the past 10 years,” he said. “We’re trying to do it for the next 10, 20, 30, 40 years, which is the life of the investment. That’s a totally different way of looking at it.”

Gresham said the February outages also triggered “a debate here in Texas over dispatchable versus renewable generation, as [if] dispatchable was always exactly what it should be: you put fuel in, and you get X amount. That’s not always the case.”

Output can be affected by weather conditions or a plant’s operational issues, he said. “Those are the types of things grid operators deal with every day,” he said. “As we move forward in a policy sense, people need to recognize and understand that.”

Investors not Fazed by ERCOT

A separate panel during the forum agreed that developers will continue to invest in ERCOT, as evidenced by the 30 GW of renewable energy currently on the ground and with more on the way.

“Twenty thousand megawatts of renewables over the last 10 years ... I don’t see that slowing down,” said Peter Freed, Facebook energy strategy manager. “ERCOT remains one of the most affordable markets in the country.”

For now, Facebook is focused on the “meat-and-potatoes regulatory work” taking place inside ERCOT and the PUC. The grid operator’s new board must be in place by Sept. 1, but the commission’s charge to ensure ancillary services are appropriately allocated is expected to last into 2022.

“We’re keeping a very close eye on market



Matthew T Rader, CC BY-SA 4.0, via Wikimedia Commons

reforms at Texas to see how the market operates,” Freed said. “Anyone who’s been in the ERCOT market for a long time is comfortable with those high prices in the summer, though not necessarily in June. There are a lot of things that market participants are thinking about coming into summer and the concurrent regulatory process that’s going to be a big part of the next year, at least.”

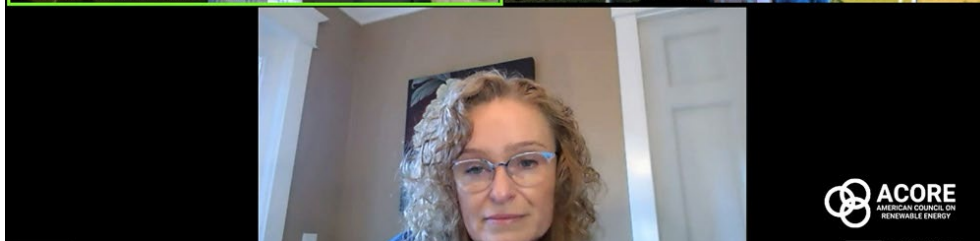
Legislators and regulators have declined to take action on ERCOT’s \$9,000/MWh cap for energy prices, which produced more than \$47 billion in market transactions during the winter storm and sent some participants into bankruptcy.

Marathon Capital’s Joan Hutchinson said that the price cap — limited by rule to \$2,000/MWh for the rest of the year after February — and the lack of a capacity market produced different results during the winter storm than would have happened in other grid operators.

“The \$9,000 cap certainly makes it more impactful, but all these transactions were entered into by willing buyers and willing sellers and financiers. This was not a risk people were unaware of,” Hutchinson said.

“The key was really whether you were producing at the time. If you were selling at \$9,000 or whatever your node price was, you were doing great,” Wells Fargo’s Jordan Newman said. “The problem was, so many generators were unable to produce at the time.”

“The price wasn’t volatile if you generated anything,” Hutchinson said, agreeing with Newman. ■



Wells Fargo’s Jordan Newman (upper left) makes a point during a panel discussion on post-Texas risk management with moderator Chris Gladbach, McDermott Will & Emery, and Joan Hutchinson, Marathon Capital. | ACORE

ERCOT News



Texans' Conservation Keeps ERCOT Grid Stable

Conservation Call Raises Ghosts of Recent Tight Conditions

By Tom Kleckner

The week began for ERCOT with a call for conservation on June 14 as unusually warm weather — even for Texas in June — and unexpected thermal generation outages threatened the state's grid.

It ended quietly Friday evening when the grid operator, without fanfare, resumed normal operations.

In between, Texans spooked by ERCOT's near collapse following the February winter storm and a Level 1 energy emergency alert in April reduced their consumption just enough to avoid further disaster.

Addressing the Public Utility Commission during an open meeting last Thursday, Woody Rickerson, ERCOT's vice president of grid planning and operations, thanked Texans for doing their part.

"I think [conservation has] shown to be a very effective tool," Rickerson said. "We've seen good response all week. Because of those actions, we've kept the grid in a very reliable state. Conservation gives us a tool to balance the load side of the equation."

During the open meeting, Commissioners Peter Lake and Will McAdams repeatedly referred to a "confluence of events" that led to the conservation notice. With 9.1 GW of thermal resources offline at one point (three times above normal), wind resources coming in below forecast and above-normal temperatures driving record demand, ERCOT on June 14 was forced to ask customers to reduce their usage through Friday. (See [Generation Outages Force ERCOT Conservation Alert](#).)

Staff were projecting a peak demand of 73 GW when ERCOT issued the conservation alert, but demand peaked at 69.9 GW on June 14 before dropping off. The grid operator still recorded 10 peaks above the previous record of 69.1 GW through Thursday.

"Yesterday is proof that simple conservation measures really do make a difference," interim CEO Brad Jones said in a [press release](#) June 15.

The confluence of events, coming on the heels of the February disaster and another conservation call in April, again made ERCOT a subject of social media memes and the butt of national jokes. Late night comedian Stephen Colbert, emphasizing the "electric reliability"



ERCOT's Warren Lasher explains the ISO's use of historical data in its resource-adequacy projections. | Texas PUC

part of the ERCOT name, likened it to the fictional Sobriety Council of New Orleans.

"It's kind of a misnomer," Colbert said as his live audience laughed.

During the week, Amarillo and Texarkana both [trumpeted](#) the fact they are not part of the ERCOT grid. "We're not getting our power from ERCOT," KMJ's Michael Rivera [wrote](#).

Both cities are in SPP's Texas footprint. The 14-state RTO [declared](#) a resource alert June 14-16 because of outages, high energy use and other factors, but it did not ask for public action.

Texas Gov. Greg Abbott, who said "everything that needed to be done was done to fix the power grid in Texas" when he publicly signed legislation into law June 8, was noticeably quiet during the week. (See [Abbott Signs Texas Grid Legislation into Law](#).)

The #AbbottFailedTexas hashtag [trended on Twitter](#) before the governor, saying the ERCOT grid "is better today than it's ever been," broke his silence during a June 16 event to announce the state would build a crowd-funded wall on its Mexican border.

"The governor is over-optimistic," Texas energy

consultant Alison Silverstein said in an email. "As the past week has illustrated, ERCOT's generation fleet is not yet ready for the hot summer weather we know lies ahead, and ERCOT doesn't yet have a solid grasp on generation outage scheduling."

ERCOT told the PUC on Thursday that it is still investigating why so much thermal generation was out of service. About 10 GW of thermal and renewable generation was still offline Friday when the alert expired.

"That's an unusual number of forced outages of thermal units," Rickerson told the PUC. "People need to understand those are mechanical failures that are occurring. They're not planned."

The commissioners queried Carrie Bivens, ERCOT's Independent Market Monitor, as to whether there was any evidence of market manipulation. She assured them that the IMM is studying the event, just as it would any market event.

"We have tools and we have things we look at to determine whether there's any evidence of physical withholding," Bivens said. Any behavior that is a violation, Bivens told *RTO Insider*, would be referred to the commission

ERCOT News



for “potential enforcement.”

She reminded Lake and McAdams that the incentives for market manipulation are lower than normal because ERCOT’s systemwide offer cap has been reduced by rule from \$9,000/MWh to \$2,000/MWh. Prices peaked at \$2,045.75/MWh in the Texas Panhandle on June 14 and reached only \$605.74/MWh in ERCOT’s congested West zone on June 15 before falling to their normal \$25 to \$30 range.

“It’s a big risk to take, to try and effectuate [market manipulation] and you’re not going to get as much profit out of your fleet than you would with a \$9,000 cap,” Bivens said. “I don’t think the conditions are necessarily ripe from that perspective.”

Noting the mechanical failures have “put us in a tight spot,” the commissioners are considering waiving ERCOT’s 60-day confidentiality period for making generation outages public. Lake said he would file a memo capturing his thoughts before Thursday’s open meeting.

“I think that that needs to be looked at,” McAdams said. “I want both the public and the legislature to understand that when forced outages occur ... there are financial penalties. However, peer pressure is a real deal. Public eyes on these individual events may have a benefit.”

The commissioners noted several private companies already scrape grid operators’ market data for sale to market participants. Bloomberg on Friday [named](#) the four largest plants behind the thermal outages: Luminant’s Comanche Peak nuclear plant, knocked offline by a transformer fire on June 7 by [back to full power](#) on Saturday; Talen Energy’s Barney Davis plant; and NRG Energy’s Limestone and W.A. Parish plants.

Bivens told the PUC she wouldn’t have “strong



Carrie Bivens, ERCOT IMM | Texas PUC



Social media users made ERCOT the subject of a frequent meme. | @TheServerStore1 via Twitter

concerns with one-off exposures” but indicated a need for some period of confidentiality. Beth Garza, Bivens’ predecessor at the IMM and now a senior fellow at R Street Institute, agreed.

“Competitive markets are most effective when market participants are focused on the costs and capabilities of their own resources,” she told *RTO Insider*, noting the delay of unit-specific availability information was a “regulatory compromise.”

“I support it as an effective general practice,” she said. “However, I would also support the ability for ERCOT to make generator availability data public immediately in the aftermath of predefined events.”

Silverstein was less optimistic, saying she doubted generators would “want the PUC to expedite public release of generator performance data.”

“The answer isn’t to do more of what’s failed us twice this year alone, but to develop additional

resource options including much-expanded energy efficiency and dispatchable demand response,” she said.

“There is a lot on the table that gives the commission a lot of different tools to address issues that come up. I’m just concerned about how those changes get implemented,” said attorney Michael Jewell, whose firm represents market participants before the state.

In the meantime, ERCOT will continue to tighten its load and weather forecasts and improve its outage-scheduling practices, not to mention continue to integrate more renewables than any other grid operator — all on top of incorporating the legislative measures passed on by lawmakers.

“As our grid changes, we need to be able to change our processes and tools and even people to meet demand on the grid,” Rickerson said. The grid “doesn’t look like it did 15 years ago. It makes sense not to operate it like we did 15 years ago.” ■

ISO-NE News

MOPR Talk Highlight of ISO-NE Consumer Group Meeting

By Jason York

New England Power Generators Association President Dan Dolan said Thursday that his group is “a longstanding supporter” of the minimum offer price rule (MOPR) even as the NEPOOL Markets Committee began *formal work* last week to remove it from the Forward Capacity Market.

States want to remove the MOPR to eliminate what they see as a barrier to participate in the capacity market for their subsidized resources. But *according* to ISO-NE, the MOPR’s removal could also cause “greater uncertainty” for existing and new unsponsored resources.

That translates to greater financial risk. Left unaddressed, it potentially has two unintended consequences: the failure of the wholesale market to clear new entry when required and inefficient retirements if capacity prices from markets structured to be competitive are subject to persistent downward pressure from the entry of sponsored resources.

Speaking at the ISO-NE Consumer Liaison Group meeting Thursday, Dolan said the MOPR “is an important element of the marketplace overall,” though “there is a capacity value — that should and must be recognized — in the market of state-contracted resources.”

When the market evolved, Dolan said, the compromise was the Competitive Auctions with Sponsored Policy Resources (CASPR) mechanism, which has not worked in a “fast-enough manner” to bring sponsored resources into the market, nor has it effectively matched the exit and retirement of some of the existing resources.

Dolan said “two fundamental elements” must be incorporated into the next evolution of the market.

“The first is an analysis of what is the reliability situation of the market,” he said. “Now, part of that is what happens if MOPR goes away from a price and an operations standpoint? I think it is more pointedly about what are some of the flaws and cracks that exist in the market that the absence of MOPR will shine a brighter spotlight on.”

Dolan said the reliability analysis that ISO-NE and NEPOOL started last year “has to be sped up fairly dramatically” as market changes “expose those cracks a little bit more directly.”

He said the second element is to have the

market incorporate the fundamental policies “driving the states to push more contracts and more fixed charges on a retail bill right now.” Dolan said decarbonization is the most prominent single policy across New England.

“While I am a firm believer that putting a meaningful price on carbon is the best, most efficient way to drive that investment in both new and existing resources, it’s not the only one,” Dolan said. “We’re hopeful that as we make this big transition to a post-MOPR world, it provides further acceleration and momentum to also better link and incorporate the state policies into the market.”

Dolan said that would create a sustainable market design that supports investment in new technologies while maintaining reliability and a stable investment environment.

Graceful Retirements

Pete Fuller of Autumn Lane Energy Consulting said when the ISO-NE markets were set up, “nobody outside of a very small minority” thought of carbon emissions, climate change or other environmental aspects.

“The markets were set up based on the technologies we understood at the time, with a goal of maintaining reliability at lowest practical costs,” Fuller said. “Now we have a new objective that the states are injecting into the energy equation.”

The markets have not caught up, and nobody has figured out whether a carbon price or another mechanism will help the markets, Fuller said, adding that it is not simply a technical problem.

“There’s a lot of legal and political aspects to this because FERC has appropriate and, I think, pretty clear authority over liability and costs, but not so clear authority or ability to do anything on the emissions side. That’s been the realm of the states.”

That leads to many questions in the “gray area,” Fuller said, such as whether ISO-NE and NEPOOL stakeholders can create a consolidated market or set of markets that maintain reliability at the lowest cost and meet emissions targets. As states accelerate their renewable energy objectives, it creates a different investment path, which created tension with the MOPR, he said. Fuller said the structure should “perpetuate itself” on a trajectory toward “a decarbonized decentralized system that really does meet the cost and



ISO-NE headquarters in Holyoke, Mass. | ISO-NE

reliability goals.”

Erin Camp of Synapse Energy Economics said some in the industry assume that removing the MOPR will further deflate capacity prices. He noted that, at its June 9 meeting, the Markets Committee held a discussion about improving the retirement signal.

At that meeting, FirstLight’s Tom Kaslow *highlighted* that restoring a meaningful retirement signal is fundamental to efficient market function and achieving state policy goals. The benefits include climate-aligned reliability where market rules encourage efficient retirements to support outcomes that attract and retain resources needed to meet state policy objectives and the balancing resources required to integrate them.

“Right now, we have more supply than we currently need, and that keeps capacity prices at a record-low level,” Camp said. “Interestingly, despite those record-low levels, we haven’t seen the retirements that we should be.”

Camp said there might not be a need for a new mechanism to replace the MOPR but a way to enable and improve the way existing resources can retire.

“It’s hard to be a complete predictor of the future, but the markets are fairly uncertain, and we won’t know exactly the impact of removing MOPR until we get there,” Camp said. “We could take the same stance as we did with CASPR. We let it sit. We let it operate as it was designed for a few years to see if it would do what it intended to do before we decided to take further action. That is an approach that could make sense here to see what happens after you remove the MOPR, combined with the enabling resources to be able to exit the market successfully.” ■

ISO-NE News

Tx, Environmental Justice Front and Center at EBA Northeast

By Jason York

Former FERC Chair Jon Wellinghoff last week said that four elements must be in place for the Biden administration to reach its stated goal of decarbonizing the electric grid by 2035.

The list includes *more RTOs* (including in the Southeast and West), integration of transmission planning with the interconnection queue, national transmission planning — and an entity to oversee that planning.

Speaking at the annual meeting of the Energy Bar Association's Northeast Chapter, Wellinghoff joined state officials from Connecticut, Massachusetts, New Jersey and New York to discuss present and future transmission planning needs to reach a carbon-free electric grid.

Abe Silverman, general counsel for the New Jersey Board of Public Utilities, said that “we need to take transmission planning seriously like we intend to meet our clean energy targets.”

“New Jersey is just one state,” Silverman said. “We’re relatively small, we have very robust clean energy ambitions, but we shouldn’t have to be the ones spearheading what really is a national priority.”

Katie Dykes, commissioner of Connecticut’s Department of Energy and Environmental Protection, said that transmission is an essential and urgent topic. To reach decarbonization goals, she said it is vital to evaluate transmission as a resource to ensure the best use of existing assets while making needed transmission upgrades for offshore and onshore wind located far from load centers in New England. Dykes added that the grid’s topology requires reconfiguration to achieve full integration

of distributed and behind-the-meter energy resources.

Judy Chang, undersecretary of energy in the Massachusetts Executive Office of Energy and Environmental Affairs, said there has been “a lot” of transmission investment in New England, “yet we don’t have a system that can absorb and integrate the clean energy resources that we need going forward.” Chang said the Biden administration’s goal of 30 GW of offshore wind means that “we can’t afford to develop this grid onshore and offshore in a piecemeal way.”

Energy for Environmental Justice

With the transition to cleaner resources, environmental justice has become an increasingly important subject in the energy industry. Crystal Pruitt, deputy director of the Office of Clean Energy Equity for the New Jersey Board of Public Utilities, created her office from scratch in the summer of 2020.

“I have a large task — so does my staff — integrating equity issues into energy issues because it’s not something that’s normally thought of hand-in-hand,” Pruitt said.

Pruitt said that in the process of discussing the policy implications of New Jersey’s 100% clean energy by 2050 target set by the Murphy administration, it became apparent the state could not ignore certain energy equity and environmental justice components.

“If any plans to have 100% clean energy were to be successful, discussions could not overlook the fact that there are communities, specifically Black and Brown communities, that have not been able to participate in the same clean energy programs or energy efficiency programs as their white neighbors,” Pruitt said.

Pruitt said equity is “not necessarily parity,” but about engaging communities historically kept out of the conversation, including people of color, low-income earners and non-English speakers.

“These people have not been left behind by accident,” Pruitt said.

Charles Lee, senior policy adviser for environmental justice at the Environmental Protection Agency, said he has been working on environmental justice issues since the 1980s, so “these are not new issues” and action is “long overdue.”

“We need to address the kind of systemic barriers to achieving truly healthy and sustainable communities,” Lee said.

Clements’ Keynote

In an opening keynote speech, FERC Commissioner Allison Clements referenced a Princeton University *study* that said reaching net-zero emissions by 2050 will require high-voltage transmission capacity to expand 60% by 2030 and triple through 2050 to connect wind and solar facilities with demand. The total capital investment necessary, according to the study, is \$360 billion through 2030 and \$2.4 trillion by midcentury.

Clements concedes that transmission upgrades are “wildly expensive,” but that FERC should not “stick our heads in the sand.”

“There’s going to be a sea of change in the amount of transmission that is going to be coming through, and we have to figure out how to best protect customers,” Clements said. “That requires a forward-looking approach to planning and review.”

Clements said that FERC Chair Richard Glick supports having states seated at the transmission planning table but added that “massive interregional transmission lines” require a whole-of-government approach, not just the commission’s efforts to “improve, reform and encourage” the planning process and cooperation. For example, while Clements thinks OSW development in Massachusetts and New York is “exciting,” she worries “a little bit” about the speed of interconnection.

“We will reach a point at which there’s a lot of investment required. We’ll get over some number of megawatts where we’ll run out of headroom on the onshore side, and we’ll have to figure how to support continuing [OSW] development,” Clements said. ■



| Central Main Power

ISO-NE News

ISO-NE Planning Advisory Committee Briefs

Eversource Outlines Rebuilding, Replacement Projects

Eversource Energy put forward a pair of transmission projects to the ISO-NE Planning Advisory Committee on Wednesday, including *one* in Connecticut to replace several lattice towers that are nearly 100 years old.

Line 690 is a 69-kV line that spans 1.87 miles from the Salisbury 21J substation in Northwest Connecticut to the New York border and consists of 11 lattice towers installed in 1926 that are among the oldest on the utility's system, according to Eversource's Chris Soderman.

Inspections revealed significant foundation damage, hardware rust and broken bells. Engineering analysis indicated that the current structures could not support the weight of reconductoring because of hardware rust, missing bolts, bent members and deteriorated metal at the structures' base. The replacement for the conductor is 20% heavier.

Soderman said Eversource would rebuild 1.59 miles of Line 690 with 10 single-circuit lattice tower structures with single-circuit steel monopole structures. The utility will also replace conductors and shield wire. One lattice tower and 0.28 miles of conductors will remain in place until a future project to replace them is coordinated with Central Hudson Gas and Electric in New York. Line 690 will continue at 69 kV but configured for future operation at 115 kV. The project's estimated cost is \$11 million, with an in-service date in the second quarter of 2022.

The *second* effort is an addition to a *December 2019 project*. It identifies four additional projects based on recent inspections of 115-kV and 230-kV wood poles in Connecticut, Massachusetts and New Hampshire, plus a modified 2019 project, which ultimately replaced 208 structures.

Inspections show systemwide degradation, and replacing the structures resolves multiple structural and hardware issues. System data and recent hardware failures show a need for shield wire replacements. The existing shield wire consists of outdated industry materials with associated replacement hardware that is now obsolete. Replacing it allows for updated hardware, continued line shielding and increased communication and reliability throughout the system. All replacements and upgrades will be designed to meet current design criteria.



| Eversource Energy

The proposed in-service dates range from the third quarter of 2021 to the fourth quarter of 2022 at an estimated \$65 million.

Regional System Plan Updates

Kannan Sreenivasachar, ISO-NE's technical manager for transmission planning, *updated* the PAC on the Regional System Plan, which details power system needs and resource and transmission facilities needed to maintain the grid's reliability over a 10-year horizon. According to its *tariff*, the RTO must develop an RSP at least once every three years.

Among the highlights of the transmission project list were three significant downward cost estimate changes from the last *update* in March:

- A reduction of \$14.6 million on the Seafood Way 115-kV substation in South Boston, Mass., reflects approved pool transmission facility (PTF) costs.
- Seacoast New Hampshire Solution will cost \$12 million less to mirror updated PTF costs.
- The Rhode Island portion of Eastern CT 2029 saw its price tag drop \$8.9 million following the removal of asset condition costs from the total estimated costs.

One project since March in Massachusetts was also canceled — installation of a 115-kV breaker at the North Oxford substation and segmentation of the V-174 line — saving an estimated \$3 million, as it is no longer needed.

Sreenivasachar added that Greater Boston-Central was the only project to change to in-service status after resolving thermal overloads.

The asset condition list featured eight new projects at an estimated \$157.3 million, and 13 projects moved to in-service status.

Preliminary Results from Tx Planning Pilot Study

ISO-NE's Dan Schwarting, Andrew Kniska and Meenakshi Saravanan *presented* preliminary results from the RTO's "Transmission Planning for the Clean Energy Transition" pilot study, which tested grid performance assumptions under high renewable penetration scenarios and quantified the tradeoffs between transmission investment and less system flexibility. The results could also inform future transmission needs assessments.

The goal was to identify the overall trend of system behavior and reliability concerns as more renewables are brought online, not to determine exact needs or potential upgrades. Thus, base cases represented a likely dispatch for a given condition rather than stressing any specific portion of the system through generator outages.

Some of the takeaways include:

- Steady-state N-1 qualitative results showed marginally high voltages in Maine attributable to increased wind in Scenario 1. In addition, increased solar in Scenario 3 led to lower amounts of synchronous generation online, reducing voltage control.
- Steady-state N-1-1 qualitative results for three minimum load scenarios had high voltages in Connecticut (1 and 3) and Maine (1-3), with more wind and solar leading to less synchronous generation online, reducing voltage control.

ISO-NE said it would provide more precise detail in future presentations and reports, but likely not at a typical Needs Assessment level. ■

— Jason York

ISO-NE News

Plan to Oust Maine's IOUs Gains Momentum

Bill Passes Legislature, but Governor Voices Concerns

By Jennifer Delony

A bill that would allow Maine to replace its two investor-owned utilities with a consumer-owned nonprofit passed both houses of the state legislature last week despite the concerns of Democratic Gov. Janet Mills.

Maine's House of Representatives passed An Act to Create Pine Tree Power Company (LD 1708) 76-64 on Tuesday, and the Senate passed it 19-16 the next day.

The legislation would initiate a process to create Pine Tree and direct it to acquire all utility facilities in the state through the right of eminent domain, effectively replacing Central Maine Power and Versant Power.

Proponents of the bill say that the foreign ownership model of CMP and Versant is not delivering reliable service, low rates or superior customer service. CMP is owned by Spain-based Iberdrola via Avangrid (NYSE: AGR), while Versant is a subsidiary of Calgary, Canada-based ENMAX.

If Gov. Janet Mills signs the bill, the proposal would go to voters in November.

Prior to the House and Senate votes, however, Mills' office sent a memo to legislators calling on them to "conduct more research and analysis before putting a stamp of approval on this version of the proposal."

In the memo dated June 14, Mills' office outlined specific concerns about the proposed utility's governance and the effect the changeover would have on Maine's progress

on climate change.

Seven of the 11 members of the Pine Tree board would be elected as representatives of groups of Maine districts, but Mills is uncomfortable with that governance structure.

"The bill contains no assurance that the seven members of the board will share the legislature's goals on climate change, reliability and rates, nor are the members required to have any expertise in finances, energy or utilities," the memo said.

Mills also believes that the acquisition of assets from "unwilling sellers" would delay the work of addressing climate change in the state.

But the bill does require the board to report to the legislature on specific objectives, including meeting the state's climate change goals, according to a June 16 *response* to the memo by Rep. Seth Berry (D).

"No single obstacle to our effort to decarbonize over the last two years has been greater than our investor-owned utilities," he said, adding that a consumer-owned provider is a proven model for decarbonization.

Consumer-owned utilities serve "all six of the nation's first six communities to reach 100% clean electricity," he said.

Mills also sees the proposal as a risk to current property tax revenues from utility ratepayers, estimated at \$90 million.

"Although the bill says that the new entity will make 'payments in lieu of taxes,' as a tax exempt 'body corporate and politic,' it is doubtful that



Gov. Janet Mills is concerned that Maine's efforts to decarbonize through projects like this solar array in Augusta could be derailed by a plan to dismantle the state's two investor-owned utilities. | *Dirigo Solar*

the governing entity could be required to make any such payments," the memo said.

Barry, however, agreed that property taxes are "crucial," and said the bill "requires that all current and future property taxes, as paid for in our rates, are continued."

Based on the House and Senate roll calls, the bill's supporters currently do not have the votes necessary to override a veto by Mills. ■

WEEKLY VIRTUAL PRESENTATIONS

NECA
NORTHEAST ENERGY AND COMMERCE ASSOCIATION
Bringing a World of Energy Experience Together

Wednesday
WEBINARS
with **Q&A**

12 NOON-1:30 PM (ET)

Save your 10 to 1 odds for Vegas.

You never want to chance too much in this market.

RTO Insider. Stay informed.

JUNE 22
ZOOM WEBINAR

PLANNING THE GRID OF THE FUTURE

SPEAKERS

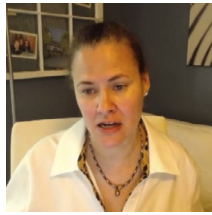
ROB WOOD: The Nature Conservancy
DOUG SCOTT: Great Plains Institute
KAY AIKIN: Introspective Systems
MARISSA PASLICK-GILLET: CT PURA
IAN BURNES: Efficiency Maine Trust

E2TECH

ISO-NE News

Overheard at 170th NE Electricity Restructuring Roundtable

More than 425 people registered for Raab Associates' 170th New England Electricity Restructuring Roundtable last week to hear a panel discussion about the role of utility regulation in decarbonizing the region, in addition to a keynote speech from Acting Assistant Secretary of Energy Kelly Speakes-Backman.



Kelly Speakes-Backman, Department of Energy | Raab Associates

Here is some of what we heard during the virtual event hosted by Boston law firm Foley Hoag.

Advanced Metering Infrastructure Emerges as Priority for Grid Modernization

Massachusetts has been working on adopting advanced metering infrastructure (AMI) for almost a decade, but new improvements in metering technology have created consumer-friendly features that increase access through devices such as smartphones.

The state's Department of Public Utilities (DPU) is looking into opportunities for a "more traditional investment" in AMI to support grid modernization, instead of a program that serves as a pilot, Chairman Matthew Nelson said.

Utilities in Massachusetts are required to file their grid modernization plans to the DPU on July 1, and Nelson said they must "take advantage of advancements in metering technology."

AMI is an integrated system of smart meters, communication networks and data management systems that allows utilities to measure electricity use automatically and remotely, connect or disconnect service, monitor voltage and communicate with customers. Because of AMI's remote functionality, the technology also allows utilities to offer new time-based rates that encourage customers to reduce peak demand and manage energy consumption and costs.

National Grid, one of the utilities in Massachusetts, had previously submitted a plan for AMI in Rhode Island but subsequently sold its business there to PPL Corp. in Pennsylvania.

The Central Maine Power Company has implemented an early AMI system. Phil Bartlett, chair of the Maine Public Utilities Commission, said the agency is assessing any changes that are needed to the system.

"As people invest in EVs, this is the optimal time to implement time-use rates," Bartlett said.

Maine is working on developing time-use rates, Bartlett said, but the commission doesn't want to impose them on the public until it has more information about how the system in Southern Maine is going.

The DPU in Massachusetts is also being cautious in rolling out time-use rates for residents, despite its success with time-use rates on the retail supplier side, Nelson said. The agency would deploy AMI to all customers, including municipal aggregators.

"To replicate that on the residential side has to be done very carefully," Nelson said. "We don't want to artificially raise rates if we aren't seeing a reduction in peak demand."

A report on AMI from the Department of Energy in 2016 found that over a three-year period, 19 AMI projects saved \$316 million in operations and management costs, or \$16.6 million per project. The AMI technology also saved an estimated 15,160 tons of carbon dioxide emissions.

But Marissa Gillett, chair of Connecticut's Public Utilities Regulatory Authority, said her agency is also taking a cautious approach.

"Any time we ask customers to change their behavior, we need to have a grasp on what they need to change and how," Gillett said at the panel. "But [time-use rates] are not off the table in Connecticut."

Northeast Expected 'Epicenter' of OSW Development

Speakes-Backman said that President Biden's clean-energy goals put the United States on an "irreversible path" to achieving a decarbonized power sector by 2035 and net-zero emissions economywide no later than 2050.

"This is the most ambitious climate strategy our nation has ever had, and we have no time to waste to get it into play," said Speakes-Backman, who works in the Office of Energy Efficiency and Renewable Energy.

She said her office's FY2022 budget request of \$4.73 billion focuses on energy efficiency, sustainable transportation and renewable power, notably offshore wind.

"The fastest and most cost-effective way we know to decarbonize the economy is to first prioritize the transition to a carbon-free power sector," Speakes-Backman said. "We need to integrate more renewable energy generation onto the grid while still ensuring that it's reli-

able and secure."

The Biden Administration has a stated goal to build 30 GW of OSW by 2030. Speakes-Backman said projects like the *recently approved* Vineyard Wind I have the Northeast poised to be "the epicenter of near-term OSW development in the U.S."

Connecticut, Massachusetts and Rhode Island have procured OSW to support their clean-energy goals decarbonization targets. Speakes-Backman said that the Gulf of Maine could be used to support the deployment of next-generation floating wind technologies.

"The waters are too deep for traditional fixed-bottom foundations to be economical, so we're leading efforts to design, test, and demonstrate floating foundations to harness OSW in these deep-water areas, which account for about 60% of our OSW resources across the country."

Speakes-Backman said floating OSW technology is "nascent," and there are many "opportunities to improve."

From a research and development perspective, Speakes-Backman said her office has been working with the University of Maine on a proposed OSW demonstration project using semi-submersible concrete floating foundations developed by the university. There is also a new partnership with Atkins Global to demonstrate floating OSW technology previously used by offshore oil and gas, with a plan for installation at one of the Mayflower Winds lease areas south of Martha's Vineyard and Nantucket. Additionally, there is support for several projects at the National Offshore Wind Research and Development Consortium, a public-private endeavor to address technological barriers and lower OSW costs and risks.

When asked how to mitigate the potential costs to ratepayers for major investments in transmission to meet OSW goals in New England, which could hamper electrification efforts, Speakes-Backman said that any work done now would drive down future costs.

"First, let's examine the supposition that renewable power is so much more expensive than other traditional resources, as the costs are coming down quickly," Speakes-Backman said. "The work that we're doing is really to bring those costs down even further. Also, the investment that the federal government is doing to help states, or that we are looking to do in FY22, will help to suppress the costs." ■

— Emily Hayes and Jason York

MISO News

MISO Leadership Says Tx Expansion, Market Redefinition ‘not Optional’

By Amanda Durish Cook

MISO leadership at the RTO’s Board Week this month said that resource adequacy reforms and dramatic transmission expansion are necessary to the footprint’s future reliability.

“Right now, we’re seeing the electric industry changing in big and exciting ways,” Erica Stillson, of MISO’s business operations division, said at the Board of Directors’ Markets Committee meeting June 15.

Stillson said aging baseload generation being swapped for cleaner and more distributed generation has increased transmission congestion. Even if MISO is resource-secure into the future, the footprint doesn’t have sufficient transmission to transport supply, she said.

The need to act on both a resource adequacy redesign and long-range transmission planning is “not optional,” Stillson said. Reliability hazards are growing outside of summer months, which used to be traditionally the riskiest. MISO must review winterization standards and share more analytics with market participants, she said.

Stillson also said new emergency pricing, a seasonal capacity auction and stricter capacity resource accreditation — all projects already in the works — should help. (See [MISO: Wintry Weather Vindicates RA Changes](#).)

“Modifying accreditation is never truly done,” she added.

MISO Executive Director of Market Operations Shawn McFarlane said capacity auction and accreditation changes will drive capacity prices up in future years. He said MISO probably wouldn’t see the likes of this year’s 1 cent/MW-day clearing prices in MISO South again.

At the Advisory Committee on Wednesday, stakeholders again asked for more analysis results from MISO to justify a seasonal auction.

“We don’t deny that MISO is experiencing a shift in loss-of-load risk, but we haven’t seen how a seasonal capacity auction will help that,” Clean Grid Alliance’s Natalie McIntire said, adding that the RTO’s proposal might leave some operational challenges unaddressed.

Independent Market Monitor David Patton said MISO’s leniency in its accreditation proposal will render it ineffective against improving resource availability. The grid operator has tweaked its proposal to include availability during non-risky hours in addition to risky hours as the basis for accreditation. (See [MISO Softens Capacity Accreditation Proposal](#).)

“MISO’s current accreditation in the face of pushback from stakeholders ... is not going to be something that solves the problem,” Patton said. “Accreditation is one of these areas where

you’re not going to make members happy.”

Stillson said MISO must also rethink how it trains its control room operators to manage a transformed grid. She said the RTO’s large control room screens that display real-time information, in use for the past 15 years, need to be upgraded to keep pace with a rapidly changing fleet and furnish operators more data. “The old system is cumbersome, inefficient and sometimes manual.”

Director Barbara Krumsiek pointed out that MISO will “always be dependent on the human element, shift operators and leadership, especially during times of stress.”

Executive Director of Systems Operations Renuka Chatterjee also acknowledged that MISO will always rely to some extent on human decision-making, just as airplanes will always be manned by human pilots “even if the plane can fly itself.”

Tx Development

In MISO’s most conservative transmission planning estimate, the footprint will add about 121 GW in new generation by 2040.

At a meeting of the board’s System Planning Committee on June 15, Executive Director of System Planning Aubrey Johnson said MISO will need to build interchangeable transmission lines that can handle higher HVDC voltages. He also said MISO will need to employ more power flow controls, like phase angle regulators and static synchronous series compensators.

Vice President of System Planning Jennifer Curran said that by September, MISO planners would have an idea of which long-term projects would be included in the 2021 Transmission Expansion Plan (MTEP 21). MISO planners have repeatedly said that unlike the long-term expansion package in 2011, this portfolio would be pieced together through multiple annual MTEP cycles.

Curran said the first set of models MISO released in its long-range transmission plan are the most complex the RTO has ever attempted.

WPPI Energy’s Steve Leovy and WEC Energy Group’s Chris Plante criticized MISO for not being upfront enough about the analyses it’s performing under the long-range plan.

“If MISO needs to spend \$30 [billion] to \$100 billion, so be it, but stakeholders need visibility into this process,” Plante told the board.



| NextEra Energy

MISO News

But several other stakeholders invoked separate letters to MISO from Midwestern states and the city of New Orleans urging the RTO to get a jump on long-term infrastructure planning. Arkansas, Iowa, Michigan, Minnesota and Iowa have all encouraged MISO to splurge on long-term transmission projects.

Early Summer Emergency

McFarlane said summer is already off to a rocky start with an early heat wave that spawned a brief maximum generation emergency on June 10. He said many market participants were still wrapping up spring maintenance outages when the hot spell struck.

MISO must declare a maximum generation emergency to access some of its 14 GW in load-modifying resources. Lately the grid operator's market staff have said that they want to reorder emergency steps so they don't have to declare an emergency before accessing LMRs.

"We really shouldn't be surprised when we have to take that action," McFarlane said. "I want to emphasize that we called on resources that are part of our planning processes."

He said MISO ultimately asked for about 2.5 GW in load reduction and received about 5 GW more than that.

"Unfortunately, during these emergencies, our crystal ball isn't very good," McFarlane said, adding that MISO isn't notified of how much in imports it stands to receive.

McFarlane said the emergency wasn't a function of volatile renewable generation, but unavailable conventional resources through planned and unplanned outages.

Beyond early June, spring was relatively quiet, McFarlane said.

Patton said energy prices were up 40% from last spring because of a year-over-year jump in natural gas prices. The spring also brought a "remarkable level of congestion," more than doubling up last spring's, mostly because of higher wind generation in the footprint. "It's just becoming increasingly difficult to get wind out of the North when output is high," he said.

To better manage congestion, MISO should adopt dynamic line ratings, Patton said. He said wind tends to blow harder when air tempera-

tures are lower, making the use of grid-enhancing technologies (GETs) ideal to transport more wind power.

"It will unlock a lot of transmission that we don't make full use of," he said.

Had MISO had GETs in place, it could have saved about \$30 million in congestion costs over the quarter, Patton said.

"We're heading to something like \$2 billion in congestion this year," Patton said, acknowledging that MISO has work ahead of it before it can use adjusted ratings in the day-ahead market.

Transmission Owners sector delegate Stacy Herbert said TOs believe that the Monitor's saving estimates are overstated.

OMS President and North Dakota Public Service Commission Chair Julie Fedorchak called for more transparency into TOs' ratings and calculation methods.

"A lack of transparency in this area has impeded progress," she said of implementing GETs. ■

NetZero Insider

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



NetZero Insider is live!

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

NATIONAL/FEDERAL

US Must Watch European OSW Supply Chain Constraints, Analyst Says

Small Reactors Can Compete on Cost, PNNL Study Finds

DOE Wants U.S. Lithium Battery Supply Chain in Place by 2030

Granholm Pitches DOE Budget to Senate Energy Committee

Penn State Takes First Place in Collegiate Wind Competition

MIDATLANTIC

Lawmakers Back Putting NJ's Clean Energy Plan Into Law

MIDWEST

Illinois Senate Deadlocked on Pritzker Green Deal

Mich. Legislators Expect Quick Action On EV Charging Bills

NORTHEAST

Mass. Must Involve Public in Energy Transition, Expert Says

Transportation and Climate Initiative Finalizes Model Rule

Mass. Clean Peak Energy Standard Off to 'Slow Start,' Experts Say

Mass. Residents Think Regulators Can Improve Public Engagement

Mass. Efficiency Program Draft Plan Should Be Scrapped, Senator Says

Mass. Officials Hear Call for Gas Utility Rate Reform

Bill to Bolster Community Solar in NY Heads to Governor's Desk t

NY Developers, Enviro Oppose New Net Metering Charges

SOUTHEAST

NC Republicans Roll out Bill to Close Coal Plants, Add Renewables

North Carolina Panel Calls for Joining RGGI

WEST

Hawaii PUC OKs DR Stopgap to Address Coal Plant Closure

Calif. Truck Buyers Jump at \$84M in Clean Incentives

Trio of Climate Bills Headed to Gov. Polis

MISO News

MISO Board of Directors Briefs

MISO CEO Addresses Industry Change

MISO CEO John Bear said the collision of more frequent severe weather events and the pace of resource portfolio change necessitate expensive operating and infrastructure changes.

“It’s clear that the tools and processes that have worked well for us for many years are no longer adequate in the future,” Bear said at the Board of Directors’ meeting Thursday. “We do have some time, but it’s less time than some may think. ... The future is a lot closer than any of us think, and it’s coming faster at us than ever before.”

Warnings from MISO leadership about the need for market redefinition and new transmission paths is a familiar refrain this year.

Electrification will transition MISO into a winter peaking system with steeper peaks, Bear said, adding that February’s winter storm illustrated that generation needs to be more available.

Bear also brought up the near-daily, headline-grabbing cybersecurity events lately and said MISO must better secure its system.

“Reliability is the outcome of many years of forward preparation,” he said.

MISO will likely work with the Organization of MISO States, Bear said, to recalibrate their annual resource adequacy survey. Bear said the summer peak is no longer an appropriate measuring stick for year-round reliability. This year’s OMS-MISO survey, released this month, indicated a slight uptick in future supply. (See [2021 OMS-MISO Resource Adequacy Survey Shows Less Cause for Concern.](#))

Bear also said MISO is working on how it will track carbon emissions on a footprint-wide or zonal basis. He said members have approached the RTO about keeping tabs on emissions. Currently, more than 95% of MISO members have carbon-reduction goals.

MISO CFO: Expect Spending Increases

MISO is underbudget so far in 2021, but CFO Melissa Brown doesn’t expect it to last.

Brown said MISO is \$1.6 million — or about 1.7% — below budget, stemming in part from technological upgrades that had to be deferred because of supply chain issues.

“I think we’re all aware of the shortages on the heels of COVID,” Brown said.



MISO's Carmel headquarters | © RTO Insider LLC

MISO expects to finish the year slightly over its \$271 million base expense budget because of unbudgeted legal fees stemming from the February storm and higher telecommunication expenses, she said.

In the longer term, MISO forecasts it will face a 4.9% annual increase to its base operating costs from 2022-2026. Over the past three years, the RTO experienced a 3.5% average growth rate on actual costs. The rise in costs could translate into an additional \$14.7 million in spending in each of the next five years.

Bear said MISO must work harder in the coming years to control costs, given expensive market renovations, control room upgrades, more extreme weather events, stepped-up cybersecurity and transmission expansion efforts.

MISO Director Todd Raba assured stakeholders that executives and the board are aware of looming costs and will do their best to

contain them.

Board Promises More Stakeholder Interaction

In response to stakeholder calls for more access to the board, Chair Phyllis Currie suggested an additional meeting during future MISO Board Weeks.

She proposed an additional two-hour Monday afternoon session reserved solely for dialogue with stakeholders. She asked stakeholders for their thoughts on an additional meeting.

“We’re looking forward to going back to in-person meetings. And when we do that, the board is going to make a concerted effort to be ... more available in an informal way,” Currie told stakeholders at the Advisory Committee’s meeting Wednesday.

— Amanda Durish Cook

MISO News

FERC Accepts Documents in MISO TOs' Self-fund Selection

By Amanda Durish Cook

MISO has successfully filed its first revised interconnection agreements since FERC reinstated transmission owners' rights to self-fund network upgrades.

The commission on Thursday accepted amended documents stemming from the development of wind farms and natural gas generation – and rejected another that didn't fall within the effective period.

FERC in late 2019 decided that generator interconnection agreements struck between June 24, 2015, and Aug. 31, 2018, should be revised to allow TOs the option to have first crack at initial funding of network upgrades, rather than interconnection customers. Since then, some MISO wind developers have been refusing to sign facilities service agreements between themselves, TOs and the RTO in protest. (See [More Unexecuted FSAs in MISO Self-funding Squabble](#).)

MISO is refileing various past agreements for TOs that want the chance to finance network upgrades themselves.

The commission accepted new facilities service and multiparty facilities construction agree-

ments among MISO, interconnection customer Northern States Power, and TOs Otter Tail Power and Montana-Dakota Utilities ([ER20-2322](#)). The retooled agreement is associated with the Dakota Range I and II wind farms and the \$9 million in network upgrades needed to connect it.

However, FERC said language stipulating the TOs return collected invoices to Northern States is unjust and ordered MISO to correct it. The commission said Otter Tail's amended facilities construction agreement explicitly states that it will refund invoices collected for the upgrades, while MDU's separate agreement is missing the same refund promise.

FERC also accepted a refile of a circa-2017 agreement between Northern States as both interconnection customer and TO for the conversion of its Black Dog Generating Station from coal- to gas-fired ([ER20-2364](#)). Because the July 7, 2020, effective date is about a week later than MISO originally requested, the commission directed the RTO to recalculate the net book value of the about \$400,000 in network upgrades in order to refund Northern States' development arm.

Finally, FERC shut down an attempted refile between interconnection customer Great

River Energy and Otter Tail over a \$2.3 million upgrade in North Dakota necessary for a 50-MW wind farm and subsequent expansion by another 49 MW ([ER20-2352](#)).

FERC said Otter Tail was attempting to take over upgrade financing when the projects' agreements predated the June 24, 2015, through Aug. 31, 2018, time frame. It blocked the amended agreements.

"The commission has previously found that the terms of a tariff that should apply are the terms in the tariff that are effective and on file on the date that the interconnection agreement is executed or initially filed unexecuted with the commission. As a result of this finding, the commission has declined to modify network upgrade funding terms from interconnection agreements that predate revisions to the relevant tariff provisions," FERC said.

After some digging, the commission found mention of the first 50-MW development in 2008's Electric Quarterly Reports. FERC also said it found a 2011 amended interconnection to upsize the project in its own archives. The last amended agreement commission staff found on the project was filed unexecuted May 18, 2015. ■



Dakota Range I and II construction | Xcel Energy

MISO News

Members Explore MISO's Role in Environmental Justice

By Amanda Durish Cook

In a MISO first, members and leadership probed what environmental justice means in its 15-state footprint and what role the RTO can play in ensuring more equitable grid impacts.

Speaking at the Advisory Committee's meeting Wednesday, Indiana Utility Regulatory Commissioner Sarah Freeman said multiple sectors are beginning to grapple with how to make sure no community bears a disproportionate share of the harmful effects of energy and industrial production.

EDF Renewables' Adam Sokolski, representing the Independent Power Producers sector, said it's long overdue for energy companies to build infrastructure with environmental justice in mind.

But it's still unclear what MISO's role could be in supporting environmental justice, Board of Directors Chair Phyllis Currie said. "We are not on the front line of interacting with the end-use customers."

Multiple stakeholders said MISO could open more avenues of participation and outreach.

"It's not possible to have a full conversation on this topic without involving the communities that are involved," Union of Concerned Scientists' James Gignac pointed out.

Gignac's colleague Sam Gomberg said at last month's committee meeting that a discussion on environmental justice would ring hollow unless MISO members and the board either speak with impacted members of an environmentally disadvantaged community before a discussion, or invite them to a meeting.

Director H.B. "Trip" Doggett asked how MISO members would engage with the public.

Gignac asked that MISO create an environmental justice and equity initiative and bring impacted communities into stakeholder discussions.

Transmission-Dependent Utilities sector representative Kevin Van Oirschot, of Consumers Energy, also suggested MISO could do more to include underserved populations in its stakeholder process.

Public Consumer Advocates sector representative Christina Baker said MISO's current policy of having two public consumer advocates on the AC is a good start. She suggested that the RTO select a board member with a background in public advocacy.

The Natural Resources Defense Council's Elizabeth Toba Pearlman said MISO could ask itself if its stakeholder community is representative of the general public. "Even if MISO isn't tasked with the engagement of the end-use customer, I think there's value to [it]

reaching out."

Director Barbara Krumsiek noted PricewaterhouseCoopers' recently announced hiring spree, where it will add 100,000 employees over the next five years to focus on inequality, climate change, pandemic fallout and technological disruption.

Other stakeholders said grid planning is often too siloed a process to maintain cohesive environmental justice goals across utilities, generation developers, transmission owners and state regulators. Some said environmental justice is largely a matter for state and local governments and the regulators who make transmission and generation siting decisions.

Freeman said MISO could keep tabs on members' environmental justice efforts and note regions that might be lacking.

Manitoba Hydro's Audrey Penner noted that in her province, it's law that her company consult with First Nations tribes before embarking on a project. She said Manitoba Hydro considers how to undo or mitigate past harms in project planning.

Sokolski said stateside, a bright spot is MISO's transitional period of "retire and rebuild" — which is giving members opportunities to replace polluting, conventional generation with cleaner generation — contemplates impacts to marginalized communities. ■



DTE Energy closed its 358-MW River Rouge coal-fired plant near Detroit at the end of May | Bridgepointe

NYISO News

Con Edison CEO Sees Company Future in Clean Energy

By Michael Kuser



Con Edison CEO
Timothy Cawley | OEP

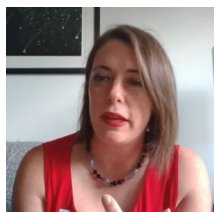
Con Edison is staking its future on clean, emissions-free energy, going “all-in” on electric vehicles, energy efficiency and storage, CEO Timothy Cawley said last week.

“Our transition to this clean energy future,

that’s what’s going to mark the next few decades for us,” Cawley said. “We know that’s our path forward, so to the extent that certain change culturally is hard, our team has rallied around this and feels good about it.”

Con Edison is the largest investor-owned utility in New York, and its clean energy division is the second-largest solar energy producer in the U.S., he said.

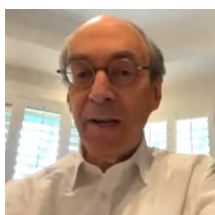
Cawley made his remarks in an interview with Julie Tighe, president of the New York League of Conservation Voters (NYLCV), an event hosted by D.C.-based think tank Our Energy Policy (OEP).



Julie Tighe, NYLCV
| OEP

System Adequacy

US Grid Company CEO Jacob Worenklein, also an OEP board member, kicked off the Q&A portion of the event by asking whether Con Edison’s transmission and distribution system is adequate for electrifying the bulk of transportation in New York City, including cars, buses and trucks.



US Grid Company
CEO Jacob Worenklein
| OEP

“I’m thinking particularly about the Public Service Commission having turned down what I thought was a modest request by Con Ed a couple of years ago for some increase in transmission/distribution investment authority,” Worenklein said.

The PSC in April approved \$800 million in cost recovery by Con Edison for three transmission projects needed for reliability in 2023 and 2025 because of the retirement or unavailability of nearly 400 MW of peaker plants. (See

[NYPSC OKs \\$800 Million Tx Cost Recovery for Con Ed.](#))

Transport and electrification of heating will also add tremendous demand on the grid, Cawley said.

“We are much more granular and specific about including line items for EVs and building heating into our forecasts over the years. So it won’t happen overnight, but we can’t build this stuff overnight either, so we’re going to carefully plan it,” Cawley said.

And the most successful deployment at scale for EVs includes some level of time-of-use rates that encourage people to charge during optimal periods for the grid, he said.

“If you park in a garage ... in the outer boroughs or in Westchester or in Orange and Rockland [service territory], you might set a timer and say come on at midnight and charge through 5:00 a.m.,” Cawley said. “Our systems will have a lot of room for a lot of years at that time of day, so effectively we’re getting greater use out of the existing system if we get them to charge there.”

Con Edison’s SmartCharge New York program rewards owners of light-, medium- and heavy-duty EVs with “off-the-bill” incentives for charging during off-peak hours. (See [NY Utilities Diverge on Managed EV Charging.](#))

On the subject of energy storage, Cawley said the company is using the technology to supplement the grid. Rather than investing heavily to reinforce transmission, the aim is just to shave a few megawatts. Even if storage is expensive on a per-unit basis, in the right application it can be cheaper than the alternative.

“So, we’re putting [storage] in Staten Island, and at Nevin Street in Brooklyn is where we’re doing the EV chargers,” Cawley said. “We’re also partnered with a company, 174 Power Global, and will install with that company the largest storage facility in New York state.”

The PSC this spring heard widespread support, including from NYLCV, for Con Ed’s plans to transform the defunct gas-powered Charles Poletti peaker plant on the East River into a 100-MW energy storage system to be built this year and next. (See “New York Supports Con Ed Project” in [NYPSC Considers Two Utility Storage Petitions.](#))

The company puts carbon sequestration in the same category with green hydrogen as technologies that aren’t at scale yet to be economic, but “all of that is on the table for us,”



Con Edison workers at a solar installation at Peter Cooper Village in Manhattan | Con Edison

Cawley said.

Customer Engagement

Nancy Najarian, a clean energy and sustainability specialist with NAJ Enterprises, asked, “How can citizens partner with utilities to move them faster towards using clean energy?”

“If you have a home that allows for solar installation, we have tremendous uptick in rooftop solar. I think 47,000 of our customers have installed rooftop solar,” which represents about 400 MW, an “important” amount given the utility’s peak load of 13,000 MW, Cawley said.

“But to me what’s more impressive is the broad interest by our customer base and actually doing this 47,000 times across our service territory,” he said, emphasizing that solar installations on New York City Housing Authority buildings help low- and moderate-income residents both join in the clean energy transition and train for related jobs.

An unidentified participant asked about the role of microgrids going forward, specifically in terms of avoiding major outages, facilitating green energy, reducing emissions and fostering economic development.

If a microgrid is “at the right spot under the right circumstances” it can be valuable for grid resiliency, Cawley said.

“One of the things we’ve done with our grid, really post-Superstorm Sandy, is implement devices and switches that allow us to portion off low-lying areas so we can isolate those without isolating large pieces of neighborhoods in the event of really lousy weather and flood conditions,” Cawley said.

Microgrids also can contribute in terms of emissions, depending on what’s fueling them. Solar with battery backup is a good source of emissions reduction, while some other fuels might not be as productive from that standpoint, he said. ■

NYISO News



FERC Denies Citizen's Complaint over Indian Point Closure

By Holden Mann

FERC on Thursday rejected a petition by Connecticut resident George Berka against NERC, the Northeast Power Coordinating Council, New York Gov. Andrew Cuomo, NYISO, Entergy, the New York Public Service Commission and Holtec Decommissioning seeking to prevent the closure of Unit 3 at the Indian Point nuclear power plant ([EL21-61](#)).

Unit 3 was the last operational reactor at Indian Point, having entered service in 1976. Entergy Nuclear, which owned and operated the plant, informed NYISO in November 2017 that it planned to deactivate it on April 30, a year after deactivating Unit 2.

This was several years after Entergy's licenses for both plants expired; according to the [Energy Information Administration](#), the utility had sought a 20-year license renewal but reached an agreement with the state of New York in 2017 to retire them in the face of public concerns about their age and safety, along with "low wholesale electricity prices and increased operating costs." Unit 2 had a nameplate capacity of 1,299 MW, compared to 1,012 for Unit 3. Several natural gas-fired generating facilities have been installed over the last few years to make up the difference.

Berka filed his complaint in March of this year, calling himself a "private citizen concerned about climate change and grid reliability during events of extreme cold in the Northeast." He said he will be "adversely affected by the closure of the Indian Point units" and asked FERC

to order both units be restored to service until at least 2035. He also asked for three immediate temporary injunctions:

- enjoin Holtec from demolishing or otherwise disturbing Unit 2;
- enjoin Entergy from surrendering its operating license for Unit 3; and
- order Entergy to keep Unit 3 operational until the conclusion of the matter.

In addition, Berka suggested that the commission work with other branches of the government to explore "options to nationalize reactors at risk of premature closure."

He claimed standing to file his complaint under Section 306 of the Federal Power Act based on the fact that he is "likely an end-use customer" of Indian Point's energy. Berka said that Indian Point's energy helps to protect him during cold winter weather and extreme weather events because the gas plants that will replace Indian Point have to compete with natural gas demanded for heating while relying on pipelines that are subject to disruption from vandalism or natural events. Those gas units will also generate greenhouse gases that contribute to climate change, further negatively affecting him and other customers, he argued.

The complaint is therefore similar to one filed last year by the advocacy group Californians for Green Nuclear Power (CGNP) that sought to prevent the pending shutdown of the Diablo Canyon Power Plant ([EL21-13](#)). CGNP argued that CAISO, NERC and other respondents ignored likely adverse impacts to the bulk

electric system and the bulk natural gas system from closing the plant. (See [CGNP Fleshes out Diablo Canyon FERC Complaint](#).)

FERC Warned About Gas Bottlenecks

Berka is also not alone in his concern over the effects of Indian Point's closure on reliability of the grid: FERC itself warned of potential natural gas bottlenecks last year because of the closure of Unit 2 in its [2020/2021 Winter Energy Market and Reliability Assessment](#). (See [COVID-19, Weather Drive FERC Winter Outlook](#).) NPCC also noted that NYISO's total installed capacity for this year's summer peak week is expected to be down 1,052 MW from last year, mainly because of Unit 3's retirement. (See [NPCC Predicts Lower Peak in Summer 2021](#).)

But the commission found in its order that the respondents in Berka's complaint, with the exception of NYISO, were not proper subjects for complaints under Section 306, which allows complaints against "any licensee, transmitting utility or public utility" for possible contraventions of the FPA. FERC agreed with Holtec's and Entergy's responsive filings that most of those named by Berka did not fall under any of these categories and therefore dismissed the complaint regarding them — similar to its reasoning for dismissing CGNP's complaint in March. (See [FERC Dismisses Calif. Nuclear Complaint](#).)

As for NYISO, the commission asserted that Berka had "not satisfied his burden" under the FPA, which requires complainants to "show that any rate, charge, classification, rule, regulation, practice or contract is unjust, unreasonable, unduly discriminatory or preferential."

Berka, FERC said, claimed "summarily" that replacing Indian Point with fossil fuel units would increase rates and decrease reliability; however, the commission has previously found this type of "speculative allegation" insufficient to satisfy a complainant's burden. Moreover, Berka did not "identify any relevant reliability standard" or otherwise support his claim that the local and regional power grid would become less reliable because of Indian Point's closure.

Finally, the commission noted that it does not have jurisdiction over Indian Point at all, as the FPA "explicitly exempts" electricity generation facilities from FERC's jurisdiction "unless specifically provided for." As a result, Berka's requested relief "goes beyond the commission's jurisdiction" and, therefore, there are no grounds for FERC to grant it. ■



The Indian Point nuclear power plant in 2007 | [Daniel Case](#), CC BY-3.0, via [Wikimedia Commons](#)

NYISO News

FERC OKs Settlement on NY Public Policy Tx Line

By Michael Kuser

FERC on Thursday approved an uncontested settlement on cost recovery and formula rates for LS Power Grid New York's share of the \$854 million Marcy-New Scotland transmission upgrade project, as well as various return on equity adders (ER20-716-004).

LS Power is developing the 93-mile Marcy-tNew Scotland project, also known as Segment A of NYISO's AC Transmission Projects, in partnership with the New York Power Authority. NYISO selected the project in April 2019 in a competitive solicitation process to address a public policy transmission need approved by the state's Public Service Commission. (See "Yes to Marcy-New Scotland" in *NY PSC OKs Utility Storage Deployment, Cost Recovery*.)

The commission accepted the revised tariff records filed on April 9, granted a waiver to make the changes effective May 27, 2020, and

directed NYISO to make a compliance filing with updated revised tariff records in eTariff format within 61 days.

"We note that the settlement recharacterizes the adder for the RTO-Participation Incentive as a 50 basis-point incentive adder to account for 'benefits to customers, including congestion relief,' the commission said, adding that approval of the settlement "does not constitute approval of, or precedent regarding, any principle or issue in this proceeding."

The commission in May 2020 also granted LS Power a 50 basis-point ROE adder to reflect the risks and challenges associated with development of its portion of the transmission project (ROE Risk Adder).

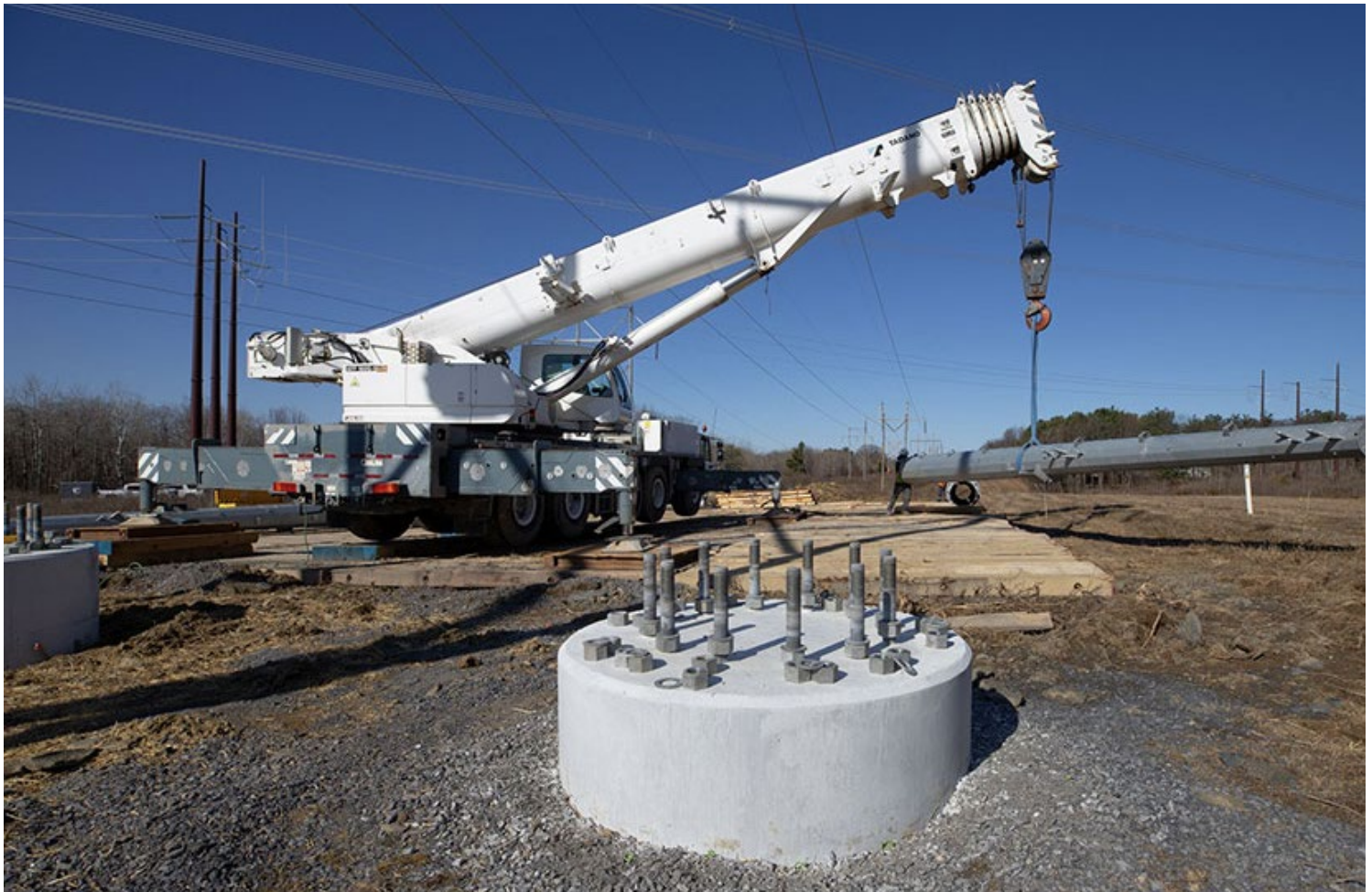
At the time, FERC also granted LS Power's requests for other incentives, including authorization "to create a regulatory asset to capitalize certain costs that would not otherwise be

capitalized" and "to use a hypothetical capital structure, consisting of 47% debt and 53% equity, until the project achieves full commercial operation."

The settlement provides for a base ROE of 9.65% and — in addition to the two 50 basis-point adders — a 100 basis-point adder to be applied to unforeseeable costs greater than 5% of the cost cap, third-party costs, and project development costs.

Planners expect the Marcy-New Scotland project to be in-service in December 2023.

The settling parties include LS Power, NYPA, NYPSC, Municipal Electric Utilities Association of New York, the City of New York and Multiple Intervenors, an unincorporated association of approximately 60 large industrial, commercial and institutional energy consumers with manufacturing and other facilities located throughout the state. ■



A crew in March 2021 raises a transmission pole on the Marcy to New Scotland Transmission Upgrade Project. | NYPA

NYISO News

NYISO Discusses FERC Order 2222 Compliance

By Michael Kuser

NYISO on Thursday discussed its plans to comply with FERC Order 2222 with stakeholders, bringing the issue to the Installed Capacity/Market Issues Working Group ahead of a July 19 compliance filing deadline.

The ISO continues to outpace most of its counterparts, having two years ago proposed a participation model for distributed energy resources and aggregations, which FERC accepted in January 2020, nine months before it directed grid operators to allow DER aggregations to participate in their wholesale electricity markets. (See [NYISO DER Participation Model Gets FERC OK.](#))

“Luckily we are already compliant with most of the aspects of Order 2222,” said Francesco Biancardi, market design specialist in new

resource integration, who [presented](#) the topic.

Nonetheless, NYISO anticipates modest revisions to the existing tariff to prevent double counting of services, one area in which the commission said DER aggregations could appropriately be subject to “narrowly designed restrictions.” The ISO and New York’s investor-owned utilities are working to identify potential retail programs and wholesale revenue streams that may cause double counting.

Needed Updates

Biancardi said NYISO understands stakeholders’ desire for additional information regarding proposed tariff language, including what a utility review of DER aggregations might look like, and will try to provide updates to stakeholders ahead of July 19.

As required by the order, NYISO is develop-

ing a utility review process with the utilities that will enable each transmission owner to review DERs intending to participate in the markets and recommend that the ISO prohibit a particular DER from participating because of distribution-level reliability concerns.

NYISO’s approved DER market design defined a real-time operational coordination procedure to support compliance with related directives. The tariff already directs the ISO and TOs to coordinate “scheduling and dispatch for all generators, demand-side resources and DERs, giving priority to minimizing the magnitude of reliability impacts and to resolving actual impacts over predicted impacts. The ISO has the final authority to determine schedules for resources engaged in dual participation.”

Stakeholders expressed concern about ultimate control, which they said is not clear. The order says the grid operator maintains control of aggregations, but the entity (TO or NYISO) with the larger need will be allowed control of said resources.

NYISO Manager of New Resource Integration James Pigeon recalled discussing the same issue while crafting the DER rules in 2019: “If you have an aggregation and have distribution-level concerns, you have the right to control that resource.”

Michael DeSocio, NYISO director of market design, said that TOs likely will handle DERs on a case-by-case basis because of differing technical aspects for various configurations at various locations.

“We’re not prepared today or in this compliance filing to change the DER participation model that was already approved by FERC, because we know the model will comply with existing reliability standards,” DeSocio said.

The ISO’s compliance filing will include language supporting FERC’s directive that load-serving entities serving less than 4 million MWh of load annually will be required to opt-in to NYISO’s DER program, Biancardi said. In addition, NYISO will amend its tariff to support the 2222 requirement that a DER intending to participate solely via aggregation does not constitute a “first use” of the distribution facility.

In situations with an existing wholesale generator, the new resource will be subject to the NYISO interconnection procedures, and the ISO is now working to amend its interconnection tariff requirements for compliance. ■



| NYSERDA

PJM News



FERC Issues Show-cause Order on PJM Parameter-limited Offers Sides with Monitor on Market Power Concerns

By Michael Yoder

FERC issued a show-cause order to PJM on Thursday, saying that the RTO's tariff appeared to be "unjust and unreasonable" based on the ability of sellers with market power to avoid parameter-limited offers when they should be subject to mitigation ([EL21-78](#)).

The commission said it made its preliminary finding that the tariff is "not adequately mitigating against the potential exercise of market power" based on information in the Independent Market Monitor's [2020 PJM State of the Market Report](#); the Monitor's protests of several market-based rate applications; and a PJM proposal to allow sellers to change their unit-specific parameter limits in real time. The commission rejected the RTO's proposal last month ([ER21-1591](#)).

Offers in PJM's energy market include economic components (price-megawatt pairs, start-up costs and no-load costs) and operating parameters (including notification time, start-up time and minimum run time).

FERC said it was concerned the tariff provisions dictating how PJM determines which offer is least cost are not just and reasonable because the tariff requires the RTO to commit and dispatch resources based on a lowest cost offer rather than selecting the resource offer with the lowest total cost among the parameter-limited offers.

"Sellers may be able to structure their market-based parameter-limited offer strategically to ensure that PJM chooses the market-based offer, which is not subject to parameter limits," the commission said. "This undermines the purpose of parameter-limited offers, which is to ensure sellers are not able to exercise market power through the use of inflexible operating parameters."

The commission also said the tariff appeared to lack provisions governing what happens if a seller is unable to meet its unit-specific parameters in real time. It said the tariff outlines "specific processes for exceptions requested in advance of the real-time market," but it is not clear as to how to "treat sellers who are unable to meet their resource's unit-specific parameters in real time."

"While PJM needs accurate, timely information on resources' operating capabilities, without a clear process for assessing changes to



Chalk Point Generating Station | [Cyndy Sims Parr, CC BY-SA 2.0, via Wikimedia Commons](#)

parameter-limited schedules in real time, PJM's tariff may not adequately mitigate the potential for sellers to submit real-time values to exercise market power," FERC said.

PJM was directed to show cause as to why its tariff remains just and reasonable or explain what tariff changes would fix the commission's concerns within 90 days. Interested stakeholders were instructed to respond within 30 days of PJM's filing.

Monitor Challenge

In its 2020 report, the Monitor said the current implementation of market power mitigation is "not consistent with the purpose of having parameter-limited offers, which is to prevent the use of inflexible parameters to exercise market power."

Analysis done by the Monitor found that resources failing the three-pivotal-supplier (TPS) test in the day-ahead market were mitigated to market-based offers that were "less flexible than their cost-based offers in 30.3% of hours in 2020 during nonemergency conditions and less flexible than their parameter-limited market-based offers in 34.5% of hours in 2020 during emergency conditions."

The IMM recommended that PJM always enforce parameter-limited values by "committing resources only on parameter-limited schedules

when the TPS test is failed or during high load conditions such as cold and hot weather alerts or more severe emergencies."

During FERC's open meeting Thursday, Chair Richard Glick said the Monitor has argued several times in the past that PJM's rules regarding parameter-limited scheduling enables generators with market power to successfully raise costs. Glick said the show-cause order "concludes that well may be the case."

"I'm pleased that we're finally taking a look at this issue," Glick said. "As I have previously said, much of our regulatory framework depends on the existence of competitive markets. That depends on FERC aggressively overseeing the markets to ensure that those who have market power aren't able to disrupt the competitiveness of the market. Today's order is another step in that direction."

Thursday's order was the second time this year that FERC has questioned PJM's protections against market power. In March, the commission ordered PJM to revise its market seller offer cap (MSOC), siding with the arguments made in separate complaints filed in 2019 by the IMM and several consumer advocate groups ([EL19-47](#)). The Monitor said the MSOC has been inflated by the "unreasonable and unsupported" expectation of 30 performance assessment hours annually. (See [FERC Backs PJM IMM on Market Power Claim](#).) ■

PJM News



NJ Lawmakers Back Siting Override for Offshore Wind Transmission

By Hugh Morley

A bill backed by a New Jersey Senate committee June 15 would enable offshore wind developers to site power cables and equipment on public land regardless of local or state government opposition, casting aside the state's vaunted "home rule" tradition in order to meet the threat of climate change.

The bill, [S3926](#), would give a qualified developer the authority to put "wires, conduit lines and associated infrastructure" connecting an offshore wind project with the power grid on public streets, thoroughfares or any public property. "No municipality, county" or state body could prohibit the placement, according to the bill.

In response to concerns expressed before the meeting, the committee inserted an amendment to the bill that would require the wiring and equipment to be underground, except for the connecting equipment, which could be above ground.

The bill also states that if local authorities deny a qualified wind project an easement, right of way or "other real property interests" on public property that is needed for construction of the project, the developer could petition the New Jersey Board of Public Utilities (BPU) for help.

"If the board determines that the requested easement, right of way or other real property interest are reasonably necessary for the construction of the qualified offshore wind project," the BPU can grant those rights to the project, the bill states. The developer must then pay "fair market value" for the property, the bill says.

The legislation drew praise from some stakeholders who say it is needed to prevent New Jersey's clean energy projects getting derailed by bureaucracy, and concern from others that the bill is a heavy-handed response that gives too much power to project developers.

Committee Chairman Bob Smith (D), who co-sponsored the bill with Senate President Stephen Sweeney (D), called it a "pretty powerful bill if you want to get windmills off the New Jersey coast. And it's powerful because it ain't easy to get to do whatever you need to do on the land in New Jersey.

"It's very hard to get this stuff up and running, not just because of the capital costs, but because of so many of the legal impediments as well," he said. The bill "feels a little radical.



| Shutterstock

And here's what's radical about it. We hold it sacred in New Jersey: home rule, mayors [and] the council, the planning boards [and] zoning boards of every town should be the deciders on what happens in their community."

Lawmakers and state officials say that New Jersey's high population density and 130-mile coastline make it particularly vulnerable to the effects of climate change, especially from rising sea levels. But such is the power of local sovereignty that construction projects in New Jersey routinely face opposition from area residents. And the offshore wind proposals are no exception, with opposition from residents of the Jersey Shore and the tourism and fishing industries. (See [NJ's Offshore Wind Project Faces Criticism, Support](#).)

'Railroading Decisions'

The bill drew support from one of the biggest trade groups in the state, the New Jersey Chamber of Commerce, but split the environmental advocacy sector. The New Jersey Sierra Club backed the bill, as did Clean Water Action, saying the far-reaching measures were necessary.

Henry Gajda, public policy director at the New Jersey League of Conservation Voters, an environmental advocacy group, agreed that the legislation is much needed. But he said the organization opposed it, in part because "railroading decisions on permits through the local level sets a very problematic precedent." He suggested that if a permit is not granted, there should be a public hearing into the issues, rather than a BPU ruling.

"We want to see turbines in the water; we just want to make sure that we're not setting any problematic precedents as we go and do that," he said.

The bill, which was introduced on Thursday, arrives as the BPU prepares this month to announce the developer of the state's second

offshore wind project. The agency in 2019 named Ørsted as the developer of the first project, the \$1.6 billion Ocean Wind project that will put 98 wind turbines 15 miles off the Jersey Shore. The agency has two bids for the second project: one submitted by Ørsted, and the other by a joint venture between affiliates of Royal Dutch Shell and EDF. The project is expected to generate 1,200 to 2,400 MW.

The state expects to approve six offshore wind projects by 2035 in an effort to generate 7,500 MW as part of the target to achieve 100% clean energy by 2025.

Urgency Needed

Marc Reimer, project development director for Ørsted's Ocean Wind project, welcomed the bill, saying that state officials "did not anticipate some of the problems that we are dealing with."

"We believe this [bill] is one of the only ways for New Jersey to meet its 7,500 MW offshore wind goal by 2035," he said. "We are quite serious about that."

David Pringle, campaign director for Clean Water Action, agreed, saying, "We can't move far enough, fast enough, on offshore wind." The bill, he said, "removes barriers to offshore wind that need to go."

But Tom Gilbert, campaign director for energy, climate and natural resources for the New Jersey Conservation Foundation, urged the committee to take more time to analyze the bill.

"We fully support responsible development of New Jersey's offshore wind resources, with downsizing," he said. "But as written, we don't believe that this legislation contains adequate safeguards to meet those goals. And it tips the balance of balance too heavily in favor of offshore wind developers by taking away the power of local governments, and even state entities, to have a say regarding appropriate siting of transmission infrastructure."

Responding to Gilbert, Chair Smith said the threat to the environment and to "your children and grandchildren" is too great to delay.

"We've got to get this stuff going," he said. "And putting in more hurdles to it is going to mean that it's going to be later, [and] the later it is, the less the chance that we're going to be able to actually survive as a species. Every once in a while, you've got to go outside the box to try and get the job done." ■

PJM News



PJM MRC/MC Preview

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

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

Markets and Reliability Committee

Consent Agenda (9:05-9:10)

B. The MRC will be asked to *endorse* proposed revisions to *Manual 14B: PJM Region Transmission Planning Process* and *Manual 14F: Competitive Planning Process* conforming to tariff revisions accepted by FERC in December (*ER21-162*). PJM proposed including capacity constraints as inputs to the market efficiency analysis for market efficiency projects in the Regional Transmission Expansion Plan and to clarify when capacity benefits of such projects are calculated. (See "Manual 14F and 14B Updates," *PJM PC/TEAC Briefs: May 11, 2021*.)

Endorsements (9:10-10:10)

1. Interconnection Construction Service Agreement Superseding Language and Automatic Termination Provision (9:10-9:25)

Stakeholders will be asked to *endorse* proposed *tariff* revisions to address concerns associated with the pro forma interconnection construction service agreement's lack of superseding language and current automatic termination provision. PJM said the growing interconnection queue volume has created the need for improvements. (See "ICSA Addressed," *PJM MRC Briefs: May 26, 2021*.)

2. Reserve Price Formation Issue Charge (9:25-10:10)

A. Members will vote on a *problem statement* and *issue charge* presented by Adrien Ford of Old Dominion Electric Cooperative and John Rohrbach, representing Southern Maryland Electric Cooperative, regarding the PJM operating reserve demand curve and transmission constraint penalty factors. The issue charge is designed to consider whether an administrative mechanism, such as a circuit breaker, should be established in PJM's energy market to protect consumers and market participants

from financial impacts resulting from scarcity price signals.

B. Sharon Midgley of Exelon will present an alternative *problem statement* and *issue charge* regarding a scarcity pricing circuit breaker for a vote.

Members Committee

Consent Agenda (12:40-12:45)

B. The MC will be asked to *endorse* proposed *tariff* revisions to address new service requests deficiency review requirements. Members unanimously endorsed the proposed solution and tariff revisions at last month's MRC meeting. (See "New Service Requests Approved," *PJM MRC Briefs: May 26, 2021*.)

C. Stakeholders will be asked to *approve* proposed *Operating Agreement* revisions to address the avoidance of future CIP-014 facilities. The avoidance proposal was approved by an acclamation vote at last month's MRC meeting. (See "CISO Avoidance Endorsed," *PJM MRC Briefs: May 26, 2021*.)

— Michael Yoder

Save your obstacle courses
for weekend Mud Runs.

Getting the information you
need shouldn't wear you out.
RTO Insider. Stay informed.



MACRUC

MACRUC 26th Annual Education Conference

June 27-30, 2021

Nemacolin Woods, Farmington, PA

Register Now!

Onsite & Online Options

SPP News

FERC Opens 206 Proceeding Against Tri-State

Cooperative Slammed for Unclear Exit-fee Calculations

By Tom Kleckner

FERC on Thursday opened a Section 206 proceeding against Tri-State Generation and Transmission Association following member utilities' complaints that the proposed procedural requirements for leaving the cooperative's membership continue to be unjust and unreasonable (EL21-75).

The commission gave Tri-State 30 days to show cause as to why its tariff remains just and reasonable or to explain what revisions it could make to address the identified concerns.

At issue is Tri-State's proposed contract termination payment (CTP) methodology for calculating a member's exit fee. FERC said several members have requested CTP calculations since November, but the cooperative has "so far refused" to provide the calculations.

Seven utility members filed a complaint over the lack of calculations in February. In a docket that is still pending before the commission, Tri-State responded by saying that utility members are entitled to a CTP calculation only upon actually leaving the cooperative (EL21-53).

FERC said Tri-State's tariff does not provide "clear and transparent procedures" for mem-

bers considering termination to obtain CTP calculations or for the cooperative to perform the calculations before the members made their decisions.

"Such a position, which would appear to be unjust and unreasonable, illustrates utility members' inability to receive a CTP calculation pursuant to [required] 'equitable' termination procedures," the commission said.

As part of a 2020 declaratory order that put Tri-State under FERC's jurisdiction, the commission accepted bylaw changes that gave the cooperative's board of directors authority "to prescribe equitable terms and conditions to be applied when a member withdraws from membership." (See "Ruling Permits Tri-State to Become FERC Jurisdictional," *SPP FERC Briefs: Week of March 16, 2020*.)

"However, the terms and conditions under which utility members may exit Tri-State have been a significant and contentious issue" before the association became subject to its jurisdiction, the commission said. It said the cooperative has had more than a year to file just and reasonable procedures governing the exit charges' calculation, but it has failed to do so.

FERC also said the CTP methodology fails to provide for pre-termination calculations or



Tri-State's headquarters in Westminster, Colo. | Tri-State G&T

any rules governing how such calculations are to be performed. It said it was concerned that a tariff rate schedule "may be impermissibly vague" because it lacks detailed procedures governing when and how a utility member may obtain a CTP methodology calculation.

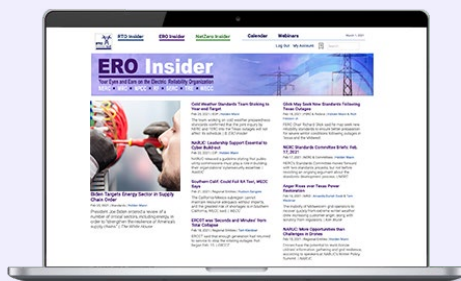
"To date, the tariff has no provisions that explicitly provide for when and how pre-termination calculations should be carried out or any provisions detailing the process for requesting CTP calculations," the commission said.

Tri-State, an SPP member based in Westminster, Colo., provides wholesale power and transmission services to 42 utility member-owners in Colorado, Nebraska, New Mexico and Wyoming. ■

ERO Insider

Your Eyes and Ears on the Electric Reliability Organization
NERC ■ MRO ■ NPCC ■ RF ■ SERC ■ TRE ■ WECC

The latest stories on the Electric Reliability Organization



SERC Warns of Ever-evolving Insider Threat Landscape

E-ISAC Joins Dragos for Data Sharing Initiative

Standards Committee Delays Action on AVR Standard

RTO Insider subscribers have access to two stories each month. Use your RTO Insider credentials to log in at rtoinsider.com/ero

SPP News

FERC Rejects SPP's Cost-allocation Waiver Proposal

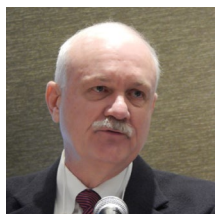
By Tom Kleckner

FERC on June 11 rejected SPP's proposed tariff revision establishing a cost-allocation waiver process through which remaining costs for one or more specific transmission projects with voltage levels between 100 and 300 kV could be fully regionally allocated on a case-by-case basis (ER21-1676).

SPP's proposal would have allowed entities to request a waiver of the highway/byway cost-allocation methodology for a byway facility. However, the commission found that the proposal granted the RTO's Board of Directors too much discretion in allocating costs and did not include clear standards for making decisions.

FERC said that without clear standards limiting the circumstances under which the board will approve waiver requests, "the proposed process creates a risk that the [board] may approve cost allocation waivers where there are limited power flows or benefits to other zones or may reach different cost allocation outcomes on waiver requests that demonstrate similar power flows or benefits to other zones."

"We find that this lack of clear criteria gives the SPP board too much discretion to make decisions with significant cost and rate implications, without assurance that the cost allocation decisions will result in rates that are just and reasonable and not unduly discriminatory or preferential," the commission wrote.



FERC Commissioner Mark Christie filed a separate concurrence with the order. | © RTO Insider LLC

Commissioner Mark Christie concurred in a separate statement, saying SPP's application provided "insufficient detail" with respect to the various roles of stakeholder groups, states and load-serving entities in reviewing the waiver requests.

"Approval of a cost-allocation waiver would

result in costs being reallocated to consumers in states and to LSEs that would not otherwise bear those costs under SPP's existing highway/byway methodology," Christie wrote.

He said it would be helpful and relevant to know whether the process ensures that states and LSEs with consumers benefiting from the cost allocations would be able to "review and



SPP's Board of Directors, pictured meeting in Little Rock, Ark., before the COVID-19 pandemic, would have played a key role in granting waivers for byway transmission facilities. | © RTO Insider LLC

consent/dissent affirmatively to the re-designation and to the new costs that go along with it."

SPP's proposal stems from the Holistic Integrated Tariff Team, which *recommended* evaluation of a narrow process through which specific projects between 100 and 300 kV could be fully allocated regionally. Transmission owners largely opposed the proposal as it wound its way through the stakeholder process, saying it would shift byway cost responsibility from wind-rich areas to others.

Al Tamimi, vice president of transmission planning and policy for Sunflower Electric Power, which is in one of SPP's wind-rich transmission zones, said he was disappointed with FERC's decision.

"We have small system loads and, at the same time, have large penetration of renewables exceeding our load. We have been receiving [notifications to construct] while our system load is flat," he said in an email, saying the NTCs were primarily used for "exporting largely unaffiliated generation from the Sunflower zone to the SPP region."

"The SPP filing provided an appropriate solution to this inequality problem," Tamimi said.

Under SPP's highway/byway methodology, transmission costs are allocated on a voltage threshold basis. Highway facilities, or those above 300 kV, are allocated 100% on regional, postage-stamp basis. Byway facilities, those between 100 and 300 kV, are cost allocated on a regional basis (33%) and to the pricing zone (67%) in which the facilities are located. Facilities at or below 100 kV are fully allocated to the zone in which they are located.

SPP proposed a cost-allocation waiver process for byway facilities in which costs would be allocated 100% to the SPP region if the RTO granted a requested waiver. The grid operator said this would create a narrow review process for entities to demonstrate that certain byway facilities primarily benefit the region instead of a particular zone.

Under the proposed Tariff revisions, entities would request a waiver submit a request for waiver within 180 days after SPP issued the facility's NTC. RTO staff would evaluate the request and make a recommendation to the Regional State Committee and Markets and Operations Policy Committee. The board would then either approve or deny the request. ■

SPP News



SPP Accrues Another \$13.25M in M2M Settlements

By Tom Kleckner

SPP continues to accrue multimillion-dollar settlements from its market-to-market (M2M) process with MISO following the one-time anomaly during the February winter storm.

“We’ve moved on from February,” SPP’s Jack Williamson told the Seams Advisory Group during its conference call Thursday.

Williamson said SPP recorded \$13.25 million in M2M settlements from its seams neighbor in April, pushing its total to \$146.63 million since the two RTOs began the process in March 2014. The settlements have been in SPP’s favor eight of the last nine months, interrupted only by MISO’s record \$51.49 million haul in February.

SPP has totaled \$30.34 million in settlements over the two months since.

Temporary and permanent flowgates were binding for 2,331 hours during April, 750 more hours than the previous month. Three

flowgates, two north and east of Kansas City, accounted for \$8.66 million of SPP’s positive settlements.

The grid operators exchange M2M settlements for redispatch based on the non-monitoring RTO’s market flow in relation to firm flow entitlements. The settlements have been in SPP’s favor 17 of the last 19 months and 56 times in the process’s 74 months.

Joint Queue Study Discusses Cost Allocation

Senior Interregional Coordinator Clint Savoy told the group that the SPP and MISO staffers involved in the RTOs’ joint targeted interconnection queue study have completed an initial draft of potential transmission solutions and a cost/benefit analysis.

Next up: cost-allocation discussions.

Savoy declined to say whether the team has identified any projects so far. He encouraged stakeholders to participate in the team’s next scheduled meeting on July 7.

SPP and MISO leadership have tasked staff with identifying “comprehensive, cost-effective and efficient” upgrade projects, with a focus on projects near their seam that support both organizations’ interconnection processes. (See [MISO, SPP to Conduct Targeted Transmission Study](#).)



Clint Savoy, SPP | @RTO Insider LLC

Savoy also said SPP has reached an emergency energy transactions agreement with Xcel Energy’s Public Service Company of Colorado. He said the agreement is similar to those SPP already has with MISO and Canada’s SaskPower.

Under the agreement, a party must be in a Level 2 or higher energy emergency alert and must formally request the transfer. The final settlement will include an energy portion and a transmission charge. ■



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

Market-to-market payments are once again settling in SPP’s favor. | SPP

Company Briefs

GM to Increase Investment in EVs



GM last week said it will increase its investment in electric vehicles and autonomous vehicle technologies to \$35 billion through 2025, a 75% boost from its initial commitment in early 2020.

The company also said it will build two new battery cell manufacturing plants in the U.S. by mid-decade but did not disclose the locations. GM is currently building battery plants in Ohio and Tennessee.

GM has said its goal is to sell more than 1 million EVs globally by 2025.

More: [Detroit Free Press](#)

Lyft Launches EV Rental Pilot Program in Northern California



Lyft last week said it will launch an electric vehicle rental pilot program for ride-hail drivers in the San

Francisco Bay Area in a partnership with Peninsula Clean Energy.

The program in San Mateo County is scheduled to begin this fall and aims to provide roughly 100 EVs for use on the company's platform.

Peninsula Clean Energy will provide \$500,000 in incentives to ride-hail drivers to ensure the cost of renting an EV is comparable to renting a gas-powered car.

More: [Reuters](#)

S&WB to Switch to Entergy New Orleans

New Orleans Mayor LaToya Cantrell last week announced that the city's Sewerage & Water Board has agreed to switch to Entergy to get its power by 2023.

The \$74 million deal between the utilities will split the cost of switching the S&WB over to Entergy. The plan is to use funds from both utilities, as well as city bonds, to construct a power substation at the S&WB's Carrollton Water Plant that will tie the utility into Entergy's transmission system. The S&WB would keep its turbines as a backup source.

More: [The New Orleans Advocate](#)

Federal Briefs

5 Former National Grid Employees Charged in Kickback Scheme

nationalgrid Five former National Grid employees

accepted bribes and kickbacks, including cash, international travel and an RV, from companies that received millions of dollars in contracts, according to a federal criminal complaint filed in Brooklyn last week.

Charged were Patrick McCrann, Jevan Seepaul, Richard Zavada, Devraj Balbir and Ricardo Garcia. Prosecutors charged the men with soliciting and accepting hundreds of thousands of dollars in cash, gifts and services between 2013 and 2020 from the unnamed contractor and affiliated companies, chiefly to be awarded facilities maintenance work for National Grid.

National Grid was not named in the complaint but confirmed that the five men charged previously worked for the company. National Grid said it "fully cooperated" with the FBI investigation.

More: [Newsday](#)

EPA to Reinstate Air Pollution Panel



The EPA last week said it will reinstate a scientific group called the Particulate Matter Review Panel that looks at air pollution and was

disbanded under the Trump administration.

Agency Spokesperson Tim Carroll said the EPA's Science Advisory Board will issue a call "in the next few weeks" for nominations for the panel.

Then-EPA Administrator Andrew Wheeler disbanded the panel in 2018.

More: [The Hill](#)

Judge Orders Resumption of Federal Drilling Auctions



Judge **Terry Doughty** of the U.S. District Court for the Western District of Louisiana last week blocked the Biden administration's pause on oil and gas leasing on public lands and waters, saying 13 states had

met the requirements to establish that they would suffer injury from the pause.

The order granted a preliminary injunction to Louisiana and 12 other states that sued Biden and the Interior Department over the freeze on new drilling auctions. The department said it would comply with the ruling but did not say when auctions would resume.

The decision, which applies to onshore and offshore leasing, will remain in effect pending the final resolution of the case or

orders from higher courts, according to a court document.

More: [Reuters](#)

US Consumed Record Amount of Renewable Energy in 2020

Consumption of renewable energy in the U.S. grew for the fifth year in a row in 2020, reaching a record high of 11.6 quadrillion Btus, or 12% of total U.S. energy consumption, according to a report from the EIA.

Renewable energy was the only source of energy consumption to increase from 2019.

More: [EIA](#)

US Solar Installations Soar in Q1



U.S. solar installations soared 46% to more than 5 GW in the first quarter of 2021, according

to a report by Wood Mackenzie and industry trade group Solar Energy Industries Association. With that, the nation is on track to install 24.4 GW this year, an increase of nearly 24% over 2020.

Projects for utilities and other big customers made up nearly 75% of the total in the quarter. That segment of the market has a contracted pipeline of projects nearing 77 GW.

More: [Reuters](#)

State Briefs

ARIZONA

Flagstaff City Council Passes Carbon Neutrality Plan

The Flagstaff City Council last week voted 6-1 to pass a carbon neutrality plan that established a framework for reaching net-zero carbon emissions by 2030.

Projected costs include a “one-time investment of \$90 million” to enhance bike and pedestrian infrastructure, and \$5 million annually to support high-frequency bus lines. That is in addition to costs not yet specified for future infrastructure projects, such as reducing nonrenewable energy use.

More: [Arizona Daily Sun](#)

IDAHO

Boise Plans to be Carbon Neutral by 2050

The Boise City Council last week unanimously approved a long-term plan for the city to be carbon neutral by 2050.

The Climate Action Roadmap proposed three new goals: city operations are carbon neutral by 2035, the community is carbon neutral by 2050, and the community’s resilience to climate change impacts is enhanced.

More: [The Spokesman-Review](#)

ILLINOIS

CenterPoint Files Application for Natural Gas Turbine Facility



CenterPoint Energy last week announced it is seeking approval

from the Utility Regulatory Commission to construct two natural gas combustion turbines to replace portions of its existing coal-fired fleet.

The company said the \$323 million, 460-MW facility would be constructed at the current site of A.B. Brown power plant in Posey County, which is slated for retirement in late 2023.

More: [WFIE](#)

NRG to Shutter 2 Chicago Coal Plants by 2022

NRG last week announced the planned retirements of two coal plants in Waukegan



and Romeoville in June 2022, citing economic pressures and the company’s transition away from coal.

The announcement follows months of debate among lawmakers about when to order the closure of all remaining state coal plants to reduce air pollution and fight climate change. That debate came to a halt this week even as Gov. J.B. Pritzker, legislators and various groups seemed to be in agreement on a 2035 date for closing all coal plants.

More: [Chicago Sun-Times](#)

INDIANA

URC Approves AES Solar Project

The Utility Regulatory Commission last week approved AES Indiana’s acquisition of the 195-MW Hardy Hills solar project in Clinton County.

The project, which is being developed by Invenery, is expected to begin construction this fall and be completed in 2023.

More: [Renewables Now](#)

MICHIGAN

Grant Aims to Help Recovery Following Nuclear Plant Closure



The U.S. Commerce Department’s Economic Development Administration last week announced it is awarding a \$969,261 grant to the Southwestern Michigan Planning Commission to develop an economic recovery strategy ahead of the closure of Palisades Nuclear Generating Station in 2022. The funds will be matched with \$242,316 in state and private funds provided by the state Department of Treasury, making a total of more than \$1.2 million

The funds are part of a statewide effort to implement the Energy Transition Impact Project (ETIP). ETIP is meant to help communities overcome issues associated with the closure of an aging power plant, such as

reduced tax base, lost employment, reduction in services, site remediation, environmental justice and the need for economic development.

More: [MLive](#)

NEW MEXICO

Hilcorp Energy Emits the Most Methane in the US, Study says

Hilcorp Energy, an oil and gas company that operates in the San Juan Basin, has the highest reported methane emissions in the U.S., according to a report released by the Clean Air Task Force.

The report, which was authored by the advisory group M.J. Bradley and Associates, says Hilcorp’s methane emissions intensity is about six times the national average and, in the San Juan Basin, more than half of the emissions come from its facilities.

Hilcorp Spokesman Nick Piatek said the formula the researchers used did not reflect actual conditions. However, Task Force Senior Scientist David McCabe said the data are only capturing a portion of the emissions, which are likely higher than what is reported because they rely on companies to self-report the emissions.

More: [NM Political Report](#)

OHIO

House Expels Householder in Historic Vote



The Ohio House last week voted 75-21 to expel Rep. **Larry Householder**, the federally indicted Republican ex-speaker, in a bipartisan vote that invoked its power to remove a member for the first

time in 150 years. The state Constitution allows expulsion for “disorderly conduct” without defining it.

The full House took to a vote after Republican lawmakers forced the measure to the floor instead of waiting for the expulsion resolution to work through the committee process.

Householder and four associates were arrested in July in an investigation connected to a nuclear bailout bill that contained a \$1 billion ratepayer-funded rescue that would

have added a new fee to every electricity bill in the state and directed more than \$150 million a year through 2026 to plants near Cleveland and Toledo.

Householder faces up to 20 years in prison if convicted.

More: *The Associated Press*

OREGON

TriMet to Reduce Carbon Emissions by 25%

TriMet last week unveiled plans to reduce its carbon dioxide emissions by 25% by transitioning all MAX trains, electric buses and agency-owned facilities to renewable electricity.

According to the transit agency, the switch from standard electricity to renewable

electricity, which occurred on June 1, will decrease its greenhouse emissions by more than 54 million pounds in one year.

Currently the largest diesel user in the state, TriMet is in the process of transitioning to a zero-emissions bus fleet by 2040.

More: *Portland Mercury*

VIRGINIA

Chesapeake Council Approves Solar Project

The Chesapeake City Council last week approved NextEra Energy Resources to build a 900-acre solar farm.

The Chesapeake Solar Project is the fourth project approved by the council in recent years. As part of the conditional use permit, NextEra must take down the solar panels

after 35 years and return the land to agriculture.

NextEra hopes to break ground in December and start generating power within a year.

More: *The Virginian-Pilot*

Whaleyville Solar Farm Denied

The Suffolk City Council last week unanimously denied a conditional use permit for a solar farm.

Councilmembers told the developers that the city is not ready to handle the increasing requests for solar farms until it develops better guidelines for them.

Chaberton Solar Whitney, which applied for the conditional use permit, was seeking to put a 3-MW farm on a 108-acre property.

More: *Suffolk News-Herald*

Save your 10 to 1 odds for Vegas.

You never want to chance too much in this market.



RTO Insider. Stay informed.

Staying on top of the trends and policy changes in the wholesale energy market is a mighty challenge. That's why you subscribe to *RTO Insider*. Offering unlimited access to comprehensive coverage, timely unbiased reporting and information delivered directly from reporters inside the room at almost all RTO/ISO meetings, *RTO Insider* makes staying informed and prepared effortless.



Save your obstacle courses for weekend Mud Runs.

Getting the information you need shouldn't wear you out.



RTO Insider. Stay informed.

Staying on top of the trends and policy changes in the wholesale energy market is a mighty challenge. That's why you subscribe to *RTO Insider*. Offering unlimited access to comprehensive coverage, timely unbiased reporting and information delivered directly from reporters inside the room at almost all RTO/ISO meetings, *RTO Insider* makes staying informed and prepared effortless.

