

RTO Insider

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

ISSN 2377-8016 : Volume 2020/Issue 38

September 22, 2020

FERC Opens RTO Markets to DER Aggregation

Opt-in for Smallest Utilities

By Rich Heidorn Jr.

In a long awaited order, FERC on Thursday ordered RTOs and ISOs to open their markets to distributed energy resource aggregations now largely limited to providing demand response (*Order 2222, RM18-9*).

The commission voted 2-1 in favor of the order at its monthly opening, with Democratic Commissioner Richard Glick joining Republican Chairman Neil Chatterjee. Republican Commissioner James Danly dissented, saying the order intrudes on state jurisdiction.

The commission said that existing RTO and ISO rules are unjust and unreasonable because of their barriers to broader participation by aggregated DERs in capacity, energy and ancillary service markets. DERs are generally too small to meet the minimum size requirements to participate in the markets and also may be unable to meet certain qualification and performance requirements because of their operational constraints, the commission said.

Removing the barriers will improve competition and allow grid operators to avoid the dispatch of more expensive resources to meet



Freedom Solar Power's 50-kW solar array on an architects' office building in San Antonio | *Freedom Solar Power*

system needs, FERC said. DERs can locate where price signals indicate they're most needed, reducing congestion costs, it added.

The final rule largely follows the commission's November 2016 Notice of Proposed Rulemaking (RM16-23, AD16-20). That NOPR also led to Order 841, which removed barriers to energy storage, in February 2018. The commission said then that it needed more information before it could take action on DERs, ordering a technical conference for later that year. (See *FERC Rules to Boost Storage Role in Markets*.)

Continued on page 9

Consumer Advocates Upset with Pick for ISO-NE Board

Nominating Process Under Scrutiny

By Jason York and Rich Heidorn Jr.

Former state regulator Mark Vannoy is joining ISO-NE's Board of Directors — much to the annoyance of consumer advocates, who say his tenure at the Maine Public Utilities Commission was marked by opposition to clean energy development and energy efficiency and indifference to consumers.



Mark Vannoy, Maine Water | *Maine PUC*

Continued on page 23

Dykes Calls out ISO-NE, FERC on Carbon Pricing (p.21)

FERC Nominees Bob and Weave Through Senate Hearing



President Trump's nominees to FERC, Virginia SCC Chair Mark Christie and Energy Foundation consultant Allison Clements, are sworn in before their confirmation hearing Sept. 16. (p.11) | *Senate ENR Committee*

Takeaways from the Zero Emission Bus Conference



The University of Georgia has 20 electric buses and will soon add 13 more to phase out some of its remaining 50 diesels. (p.6) | *University of Georgia*

Also in this issue:



AEP Becomes 4th Utility to Join Nasdaq

(p.8)



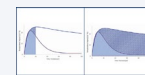
DOE Gas Summit Voices Industry Hopes, Grips

(p.14)



Heat Waves, Blackouts Slow Western EIM Expansion

(p.18)



NY Study Highlights Rising Methane Emissions

(p.36)

©2020 RTO Insider LLC

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

■ www.rtoinsider.com ■

RTO Insider

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

Associate Editor
Shawn McFarland 570-856-6738

CAISO/West Correspondent
Hudson Sangree 916-747-3595

ISO-NE Correspondent
Jason York 860-977-7830

MISO Correspondent
Amanda Durish Cook 810-288-1847

NYISO Correspondent
Michael Kuser 802-681-5581

PJM Correspondent
Michael Yoder 717-344-4989

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

NERC/ERO Correspondent
Holden Mann 205-370-7844

Subscriptions

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

Account Executive
Kathy Henderson 301-928-1639

Account Manager
Phaedra Welker 773-456-4353

Marketing Director
Margo Thomas 480-694-9341

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

2020 Annual Subscription Rates:

Plan	Price
Newsletter PDF Only	\$1,450
Newsletter PDF Plus Web	\$2,000

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

In this week's issue

Counterflow

No Carb California..... 3

Zero Emission Bus Conference

Takeaways from the Zero Emission Bus Conference..... 6

Company News

AEP Becomes 4th Utility to Join Nasdaq..... 8

FERC/Federal

FERC Opens RTO Markets to DER Aggregation..... 1

FERC Nominees Bob and Weave Through Senate Hearing 11

NC Muni Wins Right to Add Storage over Duke Objections..... 12

FERC will not Seek SCOTUS Review of Tolling Decision..... 13

DOE Gas Summit Voices Industry Hopes, Gripes..... 14

CAISO/West

Solid Support for EIM Joint Authority Plan 17

Heat Waves, Blackouts Slow Western EIM Expansion..... 18

CAISO Seeks Firm Tx for Resource Adequacy 19

FERC Accepts CAISO Intertie Changes..... 20

ISO-NE

Consumer Advocates Upset with Pick for ISO-NE Board 1

Dykes Calls out ISO-NE, FERC on Carbon Pricing..... 21

NEPOOL Transmission Committee Briefs 25

FERC Denies Waiver for Vt. Wind Farm 26

MISO

MISO Ready to Intensive Transmission Planning 27

MISO Monitor Rebutts Uneconomic Coal Commitment Studies 28

MISO to Finish 2020 Under Budget, Courtesy Pandemic 29

MISO Members Call for Dynamic Line Ratings 30

MISO Looks Back on Turbulent Summer 31

FERC Upholds MISO Self-fund Order, Glick Dissents 33

FERC: No MISO Rules on Mid-queue Fuel Change Studies 34

MISO, SPP Respond to Monitors' Seams Studies 35

NYISO

NY Study Highlights Rising Methane Emissions 36

NYISO ICAP/MIWG Briefs 37

Overheard at IPPNY 2020 Fall Conference 38

NYPSC Accepts CLCPA Environmental Review 40

PJM

ELCC Method Endorsed by PJM Stakeholders 42

PJM MRC/MC Briefs 44

NJ BPU Conference Addresses FRR, Alternatives..... 47

SPP

FERC Sets Hearing in Xcel-GridLiance Dispute..... 48

SPP Seams Steering Committee Briefs..... 49

FERC to Investigate Basin Electric Rates; Danly Dissents 51

Briefs

Company Briefs..... 52

Federal Briefs..... 53

State Briefs 53

Counterflow

By Steve Huntoon

No Carb California

By Steve Huntoon



Good news! California may not know what caused the rolling blackouts last month, but it does know that 25 years from now, a zero-carbon grid would be totally reliable.

That's the verdict of California Energy Commission Chairman

David Hochschild and other commissioners at a joint agency workshop on state law SB 100, which requires a zero-carbon grid by 2045, early this month. (See *Study: Calif. Must Build Renewables at Record Rate.*)

The core scenario presented at the workshop calls for a staggering amount of new solar (109 GW), new wind (30 GW) and new batteries (50 GW). For context, this would be a 528% increase from existing solar, 488% in wind and 5,417% in batteries.¹ All this results in a projected annual resource cost of \$66 billion and a generation rate cost component of 16 cents/kWh — about double the current one.

We'll get into the weeds below, but there were some red flags right at the outset. First is that the study's modeling was adapted from the

California Public Utilities Commission's 2019 integrated resource planning model, which is the same model that said the chance of rolling blackouts last month was 1 in 500.

Second, CEC staff said that the study was "not explicitly testing the reliability of the portfolios."

Third, this gathering of multiple agencies unintentionally confirmed the elephant in the room: no unity of command for planning and reliability. As long as that continues, so will the blackouts and the finger pointing.

With those warm fuzzies out of the way, let's roll into the weeds.

Peak Day Resource Adequacy

With general load growth and high electrification (electric vehicles, building electrification, etc.), the study projects peak-day demand in 2045 of 87 GW and adds a planning reserve margin of 15% for a resource adequacy requirement of 100 GW (slide 11).²

How is that covered? Slide 17 from the workshop shows how. Please focus on the middle column showing "SB 100 Core," which is the principal scenario, supposed to reflect compliance with SB 100.

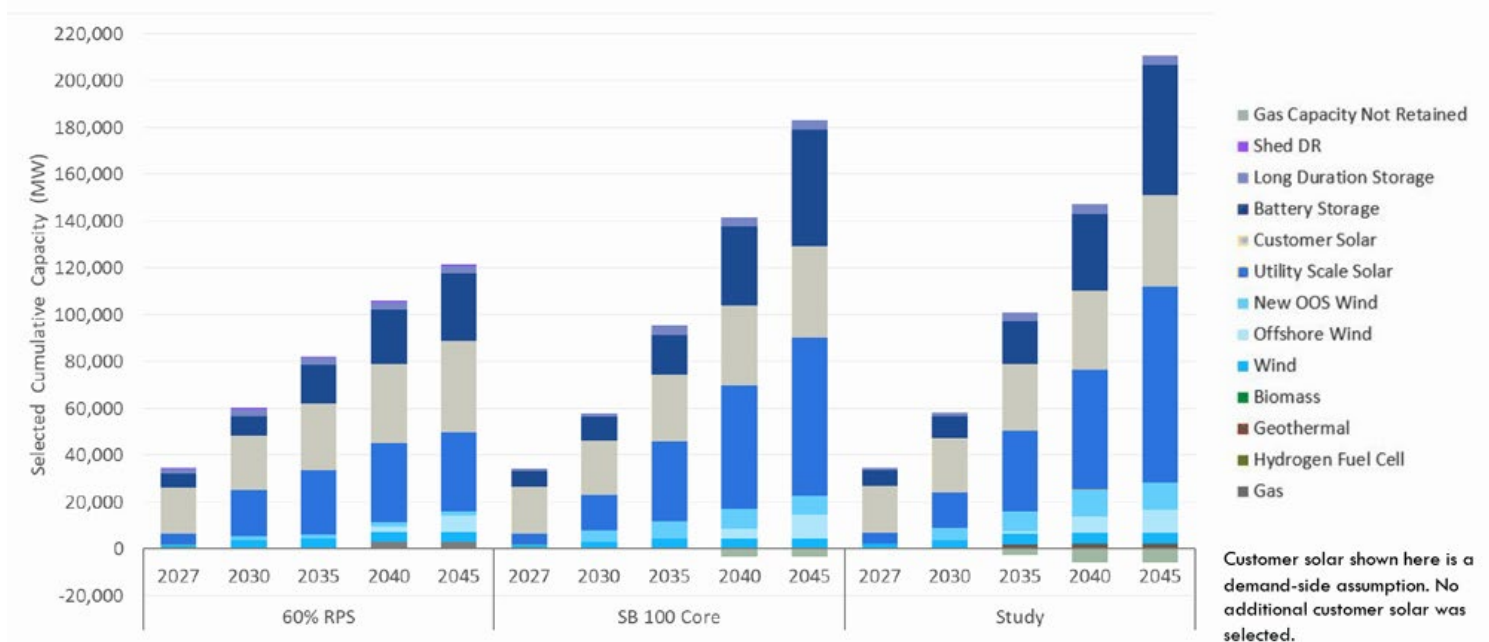
Starting from the top of the stack, first is "Variable Renewable ELCC," which looks to be

about 20 GW. But existing and new solar of 130 GW at an effective load-carrying capability (ELCC) of 2%, as shown on the slide, would be about 3 GW, and existing and new wind of 36 GW at an ELCC of 19% would be about 7 GW, for a total solar and wind ELCC of 10 GW. Not 20 GW. Problem.³

Next in the stack is "Long Duration Storage"⁴ of roughly 7 GW, and then four-hour batteries of about 30 GW. Batteries are problematic for reasons I've discussed before.⁵ If you don't believe me, check out the concerns of CAISO here. (By the way, this CAISO document from last year foretold last month's crisis pretty well.)⁶

Next is "Zero Carbon Firm" of roughly 12 GW. This is a catch-all for a variety of possible resources, most of which were excluded from the study as impractical and/or uneconomic and don't show up in any material way in the chart of capacity additions (slide 15). It seems to be basically green hydrogen fuel cells.

Those won't come cheap. This unproven technology involves additional "off-grid" solar and wind generation converted to hydrogen by electrolyzer,⁷ compression and storage of the hydrogen, transportation of the hydrogen and conversion of the hydrogen back to electricity via fuel cells. The study presents a projected hydrogen fuel cost of \$37.68/MMBtu, 825%



As of 2019, there is 80 GW of in-state capacity in California. | California Energy Commission

Counterflow

By Steve Huntoon

more than natural gas, which also doesn't appear to include the cost of the fuel cell itself and perhaps not fuel cell efficiency loss.⁸ By the way, the soup-to-nuts efficiency is 30%, which makes green hydrogen fuel cells a good way to turn a lot of renewable generation into not so much usable a resource.⁹

Next is about 5 GW of "Import Capacity." We know how that goes when the West is hot. California has only 2,230 GW of dedicated import resources (Palo Verde and Hoover).¹⁰

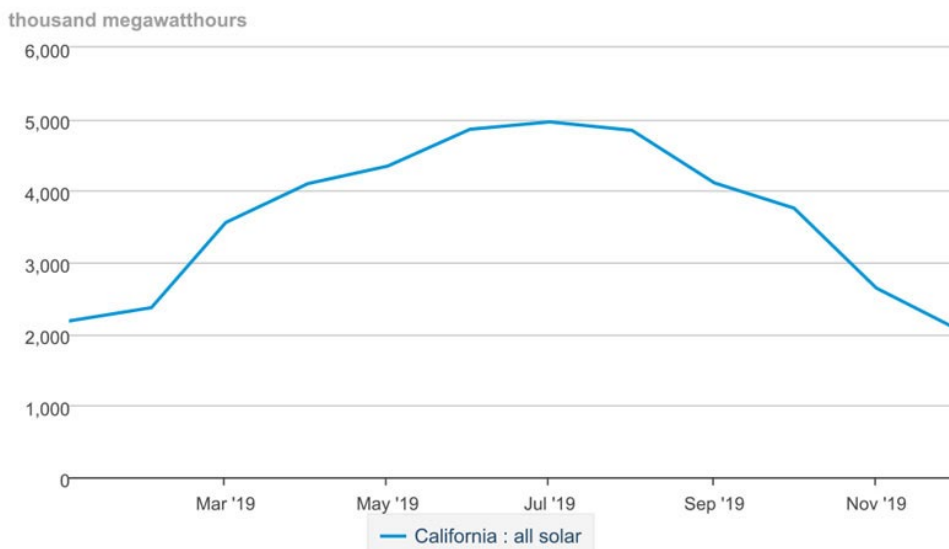
Finally, the stack shows about 28 GW of "Fossil Firm," which was explained at the workshop to essentially be the existing gas fleet. It also was stated at the workshop that carbon sequestration was excluded from the study.¹¹ So this gas can't be a zero-carbon resource.

Here's how I add it up from what's tangible. Solar and wind ELCC capacity value of 10 GW, long-duration storage of 7 GW, dedicated import resources of 2 GW and if you optimistically add batteries of 30 GW, you get to a zero-carbon resource adequacy value of 49 GW. And then there is the non-zero-carbon gas of 28 GW, which isn't supposed to be there.

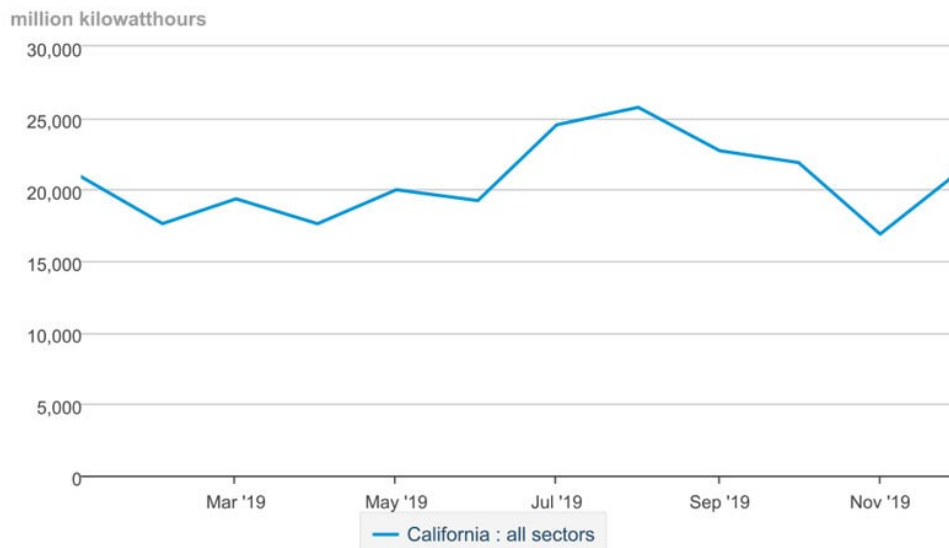
Good luck on that peak day when you need 100 GW.

The workshop did present a true zero-carbon scenario in which more green hydrogen fuel cells essentially replace the gas fleet (slide 33, comparing year 2045 columns). Assuming that, by my math, California would need about 50 GW total of this very expensive, unproven resource.

Piece of cake.



California solar generation in 2019 by month | EIA



California retail sales of electricity in 2019 by month | EIA

Multiday/Monthly/Seasonal Resource Adequacy

The study does not consider multiday, monthly or seasonal resource adequacy. But such consideration is critical in a system that relies on limited-duration storage resources like batteries.

Why? Because batteries depend on the availability of excess generation over consumption on a given day to recharge batteries depleted the day before. Fossil fuels, in contrast, are effectively 24/7 energy storage, and not dependent upon other resources to recharge. Big difference.

The problem can manifest over varying time

periods: whenever there isn't enough excess generation to recharge batteries before they're needed again. That could be because of cloud cover for a week that greatly reduces solar generation that would otherwise recharge the batteries, or fires producing smoke and ash that reduce radiance and cover solar panels. Maybe an extended lull in winds greatly reduces wind generation for a week or two.

Beyond this sort of day/week volatility, there is predictable monthly and seasonal variation. This chart from EIA data shows monthly solar generation in California in 2019.¹² You can see that the high months are more than twice the low months.

In contrast, this chart shows that California's monthly electric consumption (unlike some other regions with, for example, heavy summer air conditioning load) is fairly steady throughout the year.¹³

So the problem is with a month like December, with relatively low solar generation and yet average consumption. I crunched study inputs and EIA data to find that California consumption in December would be about 46,250 GWh.¹⁴ When I add up California's existing renewable generation that month (including imported hydro and Palo Verde nuclear), I get 8,760 GWh.¹⁵ Then I apply December capacity factors for wind and solar to the new wind and solar resources and get 18,000 GWh.¹⁶ So, total existing and new renewable generation is 26,760 GWh.¹⁷ There is a 19,490-GWh deficiency, i.e., blackouts.

Now, we could assume that the existing gas fleet is still around, despite being a non-zero-

Counterflow

By Steve Huntoon

carbon resource. I reckon 28 GW of gas running at a 94% capacity factor could cover the deficiency — if levels of consumption and other generation cooperated perfectly. But that doesn't do much for a zero-carbon future.

As with the peak-day analysis, to achieve true zero carbon, the study presents a scenario that assumes green hydrogen fuel cells replace gas generation. The study projects a green hydrogen fuel cell cost of \$126/MWh in 2045 (slide 28), making the cost of covering the December deficiency around \$2.5 billion.

And that's just one month, on top of the massive costs of new solar, wind and battery

resources.

What's the Takeaway?

A zero-carbon, reliable, affordable future remains an enormous challenge. We should be realistic and not sugarcoat this.

Nor should we throw staggering amounts of solar, wind, batteries and fuel cells at the problem and hope for the best. We need to think about all the options, especially on the consumption side of the equation. Efficiency (e.g., LED lighting, which has reduced carbon emissions twice as much as rooftop solar¹⁸), demand response, load shifting (hot water

heating) and time-of-use rates are a few examples.

And on the resource side, let's not make big mistakes, such as subsidizing rooftop solar that costs *four* times as much as grid-scale solar.¹⁹ And is it too late to save Diablo Canyon like I urged four years ago?²⁰ Remember when those insisting on closure said an estimated cost of \$69 to \$72/MWh made it too expensive to keep?²¹

Now even that inflated cost looks like a bargain compared to \$126/MWh for green hydrogen fuel cells. ■

¹ Existing solar and wind resource data from the Energy Information Administration's Electric Power Monthly, Table 6.2.B. Existing battery resource is existing and planned by end of 2020. <https://www.utilitydive.com/news/largest-battery-resource-connects-caiso-system/581540/>.

² The workshop slides are here, <https://efiling.energy.ca.gov/getdocument.aspx?tn=234549>.

³ It is possible that the reported ELCCs on slide 17 are marginal values rather than cumulative, in which case this concern may be misplaced.

⁴ "Long duration storage" is a bit of a misnomer as it appears to refer to hydro pumped storage of 12 hours duration.

⁵ <http://www.energy-counsel.com/docs/Grid-Batteries-Kool-Aid-Once-More-with-Feeling-RTO-Insider-12-5-17.pdf>.

⁶ <http://www.caiso.com/Documents/Jul22-2019-Comments-PotentialReliabilityIssues-R16-02-007.pdf> (pages 12-14).

⁷ The Inputs & Assumptions document refers to "assuming off-grid California wind or solar to power the electrolyzer..." <https://efiling.energy.ca.gov/getdocument.aspx?tn=234532> (page 41, fn. 20).

⁸ Inputs & Assumptions document (pages 84 and 43).

⁹ <https://www.greentechmedia.com/amp/article/the-reality-behind-green-hydrogens-soaring-hype>. By the way, a good critique of the hype around dirt-cheap future hydrogen is here, https://theicct.org/sites/default/files/publications/final_icct2020_assessment_of%20_hydrogen_production_costs%20v2.pdf.

¹⁰ Inputs & Assumptions document (page 91).

¹¹ "Candidate Resources ... • Removed Natural Gas w/ CCS due to insufficient cost data" (slide 7).

¹² At EIA's Electricity Data Browser here, <https://www.eia.gov/electricity/data/browser/>, choose the "Net generation" data set, then filter for California and all solar generation, and select the time period and monthly output on a time series basis.

¹³ At the Electricity Data Browser, choose the "Retail sales of electricity" data set, then filter for California and all sectors, and select a time period and monthly output on a time series basis.

¹⁴ The study projects California annual generation in 2045 of 500,000 GWh (slide 16), which I grossed up for transmission and distribution losses of 7.24% (Inputs & Assumptions, page 7) to get annual consumption of 539,000 GWh. Then, to get December's share of that, I divided December 2019 consumption by total 2019 consumption from EIA's Electric Power Monthly for December 2019, Tables 5.4.A and 5.4.B. Applying the share percentage of 8.58% to annual gives December 2045 consumption of 46,250 GWh.

¹⁵ Existing California renewable generation for December 2019 comes from Electric Power Monthly for December 2019, Tables 1.10.A, 1.14.A, 1.15.A, 11.16.A and 1.17.A. Imported hydro and nuclear estimated from the Inputs & Assumptions document, pages 22 and 29.

¹⁶ California renewable capacity factors for December 2019 calculated from Electric Power Monthly for December 2019, Tables 1.14.A, 1.17.A and 6.2.B. I used the study's capacity factor for offshore wind of 52%. The capacity factors are applied to the new renewable resources listed at the beginning of the column.

¹⁷ Please note that batteries and other storage such as 12-hour pumped storage can't help a monthly deficiency. They can't recharge without depleting the supply needed for load.

¹⁸ <http://www.energy-counsel.com/docs/LED-Kills-the-Edison-Star-2017-01-24%20RTO-Insider-Individual-Column.pdf>.

¹⁹ Grid-scale solar is about \$40/MWh levelized cost of energy while rooftop solar is about \$155/MWh. <https://www.lazard.com/media/451086/lazards-levelized-cost-of-energy-version-130-vf.pdf> (page 2, using the midpoint for grid solar and averaging the midpoints for both rooftop solar types). California could more than cover the (staggering) costs of 70 GW of new grid solar simply by not subsidizing rooftop solar.

²⁰ <http://www.energy-counsel.com/docs/Helter-Skelter-September-Fortnightly.pdf>.

²¹ <https://www.nrdc.org/experts/peter-miller/diablo-canyon-legislation-signed-law-governor-brown>.

Zero Emission Bus Conference

Takeaways from the Zero Emission Bus Conference

'Take the Plunge'

By Rich Heidorn Jr.

School district and transit agency officials met virtually last week to share their experiences with replacing their diesel and compressed natural gas buses with battery electric and fuel cell electric vehicles.

Raymond Manalo, vehicle maintenance manager for the Twin Rivers Unified School District near Sacramento, summed up the message from the *Center for Transportation and the Environment's* (CTE) *Zero Emission Bus Conference* for those districts that may be hesitating. "Don't be afraid to take the plunge," said Manalo, whose district has 30 electric buses among its 115-vehicle fleet. "There's so many new techs out there, you can find what is right for you."

Nate Baguio, vice president of sales for *The Lion Electric Co.*, said his company — which started offering battery electric school buses in 2016 with a 60-mile range — now has models that can travel more than 150 miles on a single charge, with a 200-mile range expected in future models.

"The electric bus today ... handles 95% of [the routes] the yellow school bus needs to cover right now," Baguio said. "It's inevitable that all the 500,000 school buses in America will be electric, and I believe sooner than a lot of people think."

US Lags China, Europe

But CTE Executive Director Dan Raudebaugh said the U.S. is lagging behind China and the EU in making the switch.

"The European Union just recently announced that they're investing literally billions of dollars in renewable hydrogen and hydrogen infrastructure to support transportation," Raudebaugh said. The EU in July *announced* it would spend billions to support the installation of at least 6 GW of renewable hydrogen electrolyzer by 2024, growing to 40 GW and becoming "an intrinsic part of our integrated energy system" by 2030.

"In China, there are 420,000 electric buses," Raudebaugh continued. "In the U.S., for battery electric buses, [transit agencies] have about 1,000. So, you can see that this market is a global market, and this is technology that is happening. Our choice in the U.S. is either to build it here ... develop it here, or to import that technology and give away all those high-



The California Energy Commission funded five Lion Electric electric school buses for the Twin Rivers Unified School District in Sacramento last year. | *The Lion Electric Co.*

tech jobs to other countries around the globe."

Aside from eliminating carbon dioxide emissions that cause climate change, battery electric buses (BEBs) and hydrogen-powered fuel cell electric buses (FCEBs) are quieter, cheaper to maintain and don't contribute to particulate emissions that can cause asthma and make people more vulnerable to COVID-19.

The downside? Electric buses can take longer to fuel, have shorter ranges and cost at least three times as much as conventional diesel vehicles. As a result, school districts and transit agencies are looking for grant funding to help them make the investments.

And the demand is likely to outstrip the funding in places such as California, said Ashwin Naidu, landside operations manager for San Jose International Airport.

In 2018, California mandated that transit agencies purchase all-electric buses starting in 2029. Earlier this year, the California Air Resources Board *approved* a rule requiring all commercial trucks and vans sold in the state be zero-emission vehicles (ZEVs) as of 2045, the first such requirement in the U.S.

"ZEV funding is going to become much harder [to obtain]," Naidu said. "So, for airports that are out there listening, definitely get in line, because there are a lot of airports that are going to jump on board for that ZEV grant funding."

In July, D.C., California and 14 other states *announced* a joint memorandum of understanding pledging that all new medium- and heavy-duty

vehicle sales be zero-emission by 2050, with an interim target of 30% ZEVs by 2030. Also signing were Connecticut, Colorado, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont and Washington.

Working with Utilities

Speakers at the conference said school districts and transit agencies considering the switch must work with their utilities to ensure they have the electrical infrastructure needed. They also should develop time-of-use rates to control charging costs, they said.

Doug Francis, associate transportation director and head mechanic for Gaylord Community Schools in Michigan, said his district's charging costs have been higher than expected. "It's basically the same as a diesel per mile for a school bus. About 26 to 27 cents/mile," said Francis, who says he has asthma from breathing diesel exhaust for 35 years.

"Those of us in the state of California know [it requires] a long lead time working with [Pacific Gas and Electric]. Getting the correct transformers. Getting the IT infrastructure," Naidu said.

Twin Rivers' Manalo urged transit agencies to "future proof" their plans.

"Think about where you want to be and plan for that. Trench anywhere you might want an [electric vehicle charging system]. While you have everything disrupted, you can run pipe and wire and always add the actual [charging]

Zero Emission Bus Conference

later down the road.”

Caley Edgerly, CEO of school bus maker Thomas Built Buses, said utility companies have become more collaborative than when the company announced its first BEB in 2017.

He cited Dominion Energy, which is helping school districts in Virginia buy 50 Thomas Built BEBs by paying for the difference in the capital costs over diesel buses. (See [Dominion Sees Green in Electrification](#).) Dominion also is backing [proposed legislation](#) that would add funding to replace all of the state’s 1,700 school buses with electric versions.

Edgerly acknowledged his company’s move to BEBs has not been without mistakes.

“You don’t know what you don’t know, so you have to find new partners and not be comfortable with the ones that you had in the past. We also have learned [that] you have to expect to get a bloody nose from time to time.”

When Denver’s Regional Transportation District (RTD) purchased 36 BYD BEBs for use on the agency’s 16th Street Mall shuttle, it generated headlines accusing Xcel Energy of price gouging the agency, said Carly Macias, senior transportation planner.

“We had expected to pay a lot less in our energy costs than we were,” she said. “And Xcel wasn’t even aware that they needed to educate us on how utility rates work and what would be the best for our fleet.”

She said the buses’ power costs dropped 20%

since January, after Xcel implemented a time-of-use rate with lower demand charges, which had represented about 80% of the buses’ electric bill. RTD expects to save 25 to 30% with the new rate and improved charging schedules.

“We do quite a bit of charging between 6 and 9 p.m. ... We need to change our behavior,” Macias said. “We need to shift this load to save money, but we also don’t want to increase our demand charges by having a higher peak. So, it’s very much an ongoing challenge that we’re trying to figure out.”

Macias said her agency also has been sharing lessons learned with Minneapolis’ Metro Transit because that region also is served by Xcel. “And then Xcel also has the benefit of seeing, ‘OK, this is what we did with Metro Transit, and it worked well. Maybe we can apply it in Colorado.’”

Chance Baragary, a project director for St. Louis’ Metro, said his agency donated a space for Ameren Missouri to build a new substation adjacent to its garage. “That will help with our power reliability, obviously, and make sure we have plenty of power for our initial fleet and as our fleet commitments to grow,” he said.

“Our 40-foot buses will be on a morning run and an afternoon run, so they will have some peak daytime charging,” Baragary said. “But we’re working to push that to off-peak as much as we can.”

Simon Lonsdale, head of sales and strategy for [AMPLY Power](#), which provides “charging as a ser-



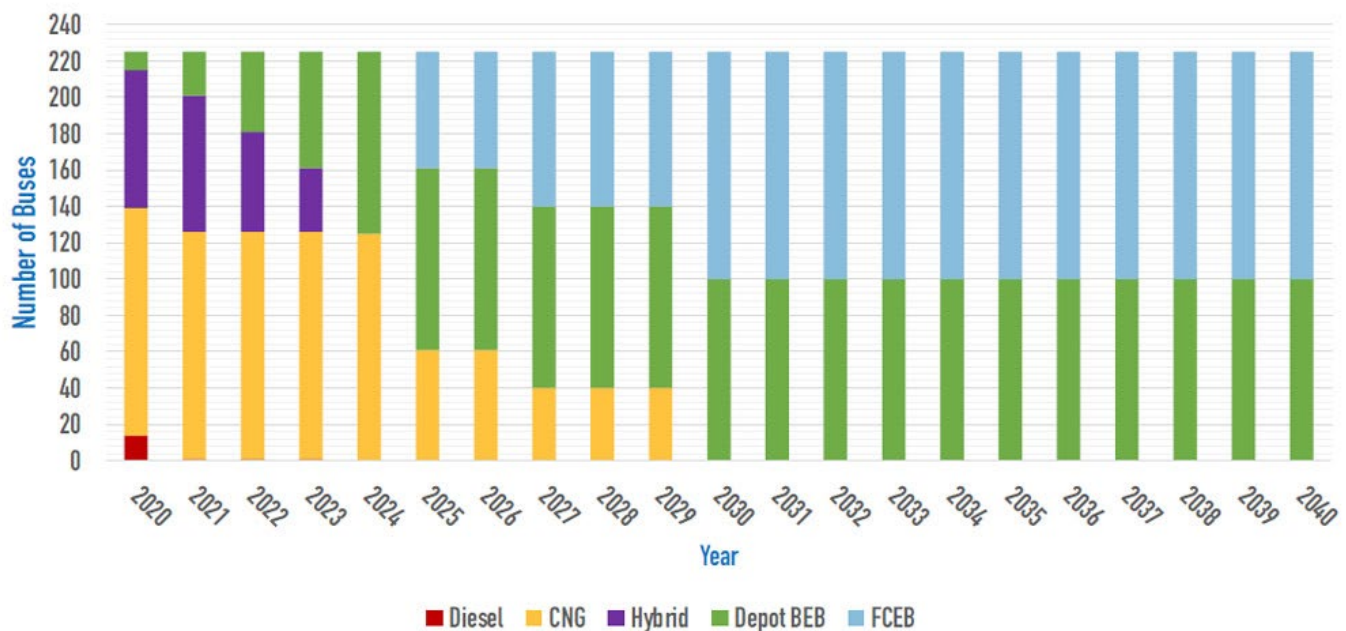
Sacramento International Airport has five Proterra Catalyst battery electric buses and five more on order. | Sacramento International Airport

vice,” recounted its work with Tri Delta Transit in eastern Contra Costa County, Calif.

The vehicles return from 1 to 4 p.m., with the drivers plugging them in.

“What was happening was that these vehicles were starting to charge up right in the middle of the afternoon and through the evening and were fully charged just about the time when cheap power came onstream from PG&E,” Lonsdale said. Now, smart-charging delays the consumption of power until the cheapest TOU rate appears and then staggers the charging to ensure each bus is refueled by morning, he said.

Steve Clermont, director of planning and deployment for CTE, said it is still “very early days” for EV rates across the country. “It doesn’t seem like there’s any single solution that’s going to meet the needs for everyone,” he said. “You still need to educate [utilities] on what your specific needs are. A lot of times



California’s Long Beach Transit plans to replace all its diesel, hybrid and CNG buses with a mix of battery and fuel cell electric vehicles by 2040. | Long Beach Transit

Company News

AEP Becomes 4th Utility to Join Nasdaq

Innovation, Climate Focus Cited

By Tom Kleckner

American Electric Power last week announced it will become at least the fourth major U.S. utility to switch its stock listing from the New York Stock Exchange to the Nasdaq Stock Market, joining Exelon, Xcel Energy and Alliant Energy.

The move to Nasdaq’s Global Select Market will be effective with the market’s opening bell on Oct. 1. The company’s stock will continue to trade under the “AEP” ticker symbol.

In *explaining* the move, AEP CEO Nick Akins said, “Nasdaq’s tradition of innovation aligns well with our company’s strategic goals.”

“As AEP transitions to a cleaner energy future, we’re harnessing the power of technology to create new solutions for our customers while bringing value to our shareholders,” he said.

Nasdaq *claims* it has won 76% of all switches among U.S. equity exchanges since 2005, saying “stocks listed on Nasdaq experience less volatility, tighter spreads and more depth.” It also *says* it is the only exchange in the Dow

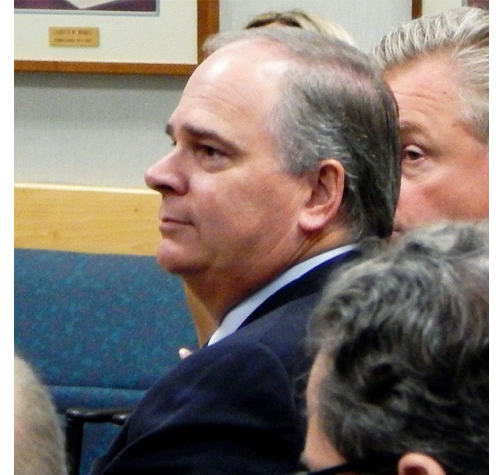
Jones North America Sustainability Index. Among the companies that have switched to Nasdaq are PepsiCo, T-Mobile, Kraft Foods and AstraZeneca.

Xcel, which switched from the NYSE effective Jan. 2, 2018, *said* it was the first Fortune 500 utility listed on Nasdaq. Alliant moved in late December 2018, *noting* its “shares will be listed on the same exchange as some of the world’s largest technology companies.”

Exelon, which made its move on Sept. 25, 2019, issued a *press release* saying it made the move to join “leading climate-focused innovators.”

“Nasdaq is the platform that many of the world’s leading innovators call home and — importantly — shares our commitment to a low-carbon economy and reducing greenhouse gas emissions,” Exelon CFO Joseph Nigro said in announcing its move. “We believe that moving to Nasdaq provides us the most cost-effective channel to connect with investors efficiently through technology.”

In recent years, Columbus, Ohio-based AEP



AEP CEO Nick Akins | © RTO Insider

has taken several actions to back up its mission of “redefining the future of energy and developing innovative solutions.” The company has an aspirational goal of zero emissions by 2050 and has said it believes it can cut CO₂ emissions by more than 80% by 2050 from its 2000 levels. (See *AEP Ups its Emission-reduction Targets for 2030.*) ■

AEP RENEWABLES' NATIONAL FOOTPRINT

PROJECT TYPES

- Wind (Active) - 10 Sites | 1,887 MW
- Solar (Active) - 3 Sites | 90 MWac/116 MWdc
- Wind/Storage (Active) - 1 Site | 17 MW
- AEP Renewables Headquarters
- AEP Renewables Office



AEP Renewables projects | AEP

FERC/Federal News



FERC Opens RTO Markets to DER Aggregation

Opt-in for Smallest Utilities

Continued from page 1

100-kW Threshold

Order 2222 defines DERs as resources located on the distribution system or a distribution subsystem, or behind a customer meter, including energy storage, thermal storage, intermittent generation, distributed generation, DR, energy efficiency and electric vehicles and their charging equipment.

It requires RTOs and ISOs to allow DER aggregators to register as market participants under participation models that accommodate their physical and operational characteristics. Grid operators must set minimum size requirements for DER aggregations of no more than 100 kW.

Their revised tariffs must cover technical issues such as:

- locational requirements for DER aggregations;
- distribution factors and bidding parameters;
- information and data requirements;
- metering and telemetry requirements;
- coordination among the regional grid operator, the DER aggregator, the distribution utility and the relevant electric retail regulatory authority (RERRA);



Freedom Solar Power's 214-kW solar array at a car dealership in San Antonio | Freedom Solar Power

- modifications to aggregations; and
- market participation agreements.

Chatterjee called the order “a landmark, foundational rule that paves the way for the grid of tomorrow.”

“DERs can hide in plain sight in our homes, businesses and communities across the nation. But their power is mighty,” he said during the open meeting. “Some studies have projected that the United States will see 65 GW of DER capacity come online over the next four years, while others have even projected upwards of

380 GW by 2025. While these estimates and analytical frameworks vary, there is no doubt that investments in these advanced technologies will only accelerate in the years to come, continuing the seismic shifts we’re seeing in our energy landscape.”

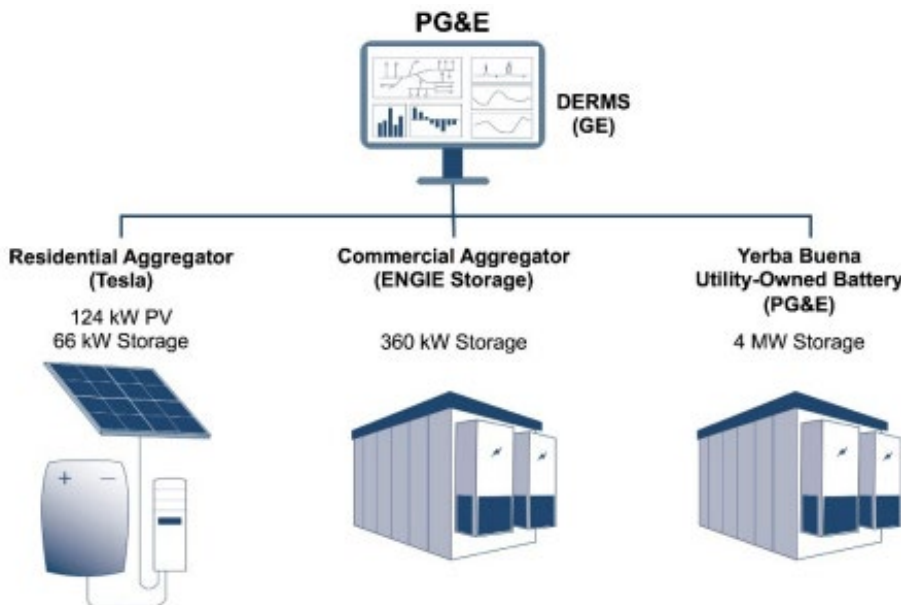
Chatterjee also cited the potential for EVs to eventually provide energy, spinning reserves or frequency regulation while plugged in.

No Opt Out

The commission declined to allow local or state regulators to prohibit DERs from participating in the wholesale markets through an opt-out, citing the D.C. Circuit Court of Appeals ruling upholding the commission’s similar position regarding behind-the-meter storage under Order 841. (See [FERC Storage Order Survives State Challenge](#).)

But in recognition of potential cost impacts, the commission created an opt-in mechanism for small utilities, similar to that in Order 719-A for DR. It says RTOs/ISOs must not accept bids from aggregations that include DERs that are customers of utilities that distributed 4 million MWh or less per year unless the RERRA allows it.

The commission also declined to assert jurisdiction over the interconnection of DERs to distribution facilities for aggregations. It “does not require standard commission-jurisdictional interconnection procedures and agreements or wholesale distribution tariffs in connection with DER aggregations,” FERC staff said in a presentation at the meeting. “Rather, state or



PG&E's DER management system demonstration | National Renewable Energy Laboratory

FERC/Federal News



local law would govern distribution-level interconnections for DERs participating in RTO/ISO markets.”

“If we granted all state regulators the option [to prevent DER aggregation], we’d have a checkerboard approach where some states in an RTO would opt out and some wouldn’t, and it would artificially limit the amount of DER energy and capacity participating in these markets,” Glick said at the meeting. “States still have significant authority to protect distribution system reliability. States will continue to exercise their jurisdiction over interconnection of aggregate DER facilities. ... I believe this is a fair compromise.”

Danly Dissent

Danly said he dissented because “regardless of the benefits promised by DERs, the commission goes too far in declaring the extent of its own jurisdiction and because the commission should not encourage resource development by fiat.

“Why promulgate a rule at all?” Danly asked. “Reluctance to govern by fiat is counseled particularly in a case like this in which the generation resources the majority seeks to promote, by their very nature, inevitably will affect the distribution system, responsibility for which is assigned, with no ambiguity, to the states. We should allow the RTOs and ISOs (or the states or the utilities) to develop their own DER programs in the first instance. If the promises of DERs are what they purport to be, the markets will encourage their development. And if those programs result in wholesale sales in interstate commerce, then the question of the commission’s jurisdiction will be ripe. Commission directives are unnecessary to

encourage the development of economically viable resources. I have greater faith in the power of market forces and in the discernment of the utilities and the states.”

The rule will become effective 60 days after publication in the *Federal Register*, with RTO and ISO compliance filings due nine months after publication.

Reaction

Reaction to the order was generally positive.

Louis Finkel, senior vice president of government relations for the National Rural Electric Cooperative Association, said the group — which had challenged Order 841 before the D.C. Circuit — was happy that FERC included the opt-in for small utilities.

“It is important that the commission has recognized the challenges that this order could pose for small utilities, including virtually all distribution co-ops,” Finkel said. “We look forward to carefully reviewing FERC’s decision in the coming days with the hope that it does indeed preserve state and local regulatory authority over retail electricity sales and local distribution service. Local control is critical, because every co-op is different and is uniquely positioned to meet the specific needs of the community it serves.”

Kelly Speakes-Backman, CEO of the Energy Storage Association, said the order builds on the foundation of Order 841 for distributed energy storage.

“Energy storage is increasingly located on local electric grids, in households and businesses, and is often integrated with distributed generation and controllable loads,” she said. “En-

“If we granted all state regulators the option [to prevent DER aggregation], we’d have a checkerboard approach where some states in an RTO would opt out and some wouldn’t, and it would artificially limit the amount of DER energy and capacity participating in these markets.”

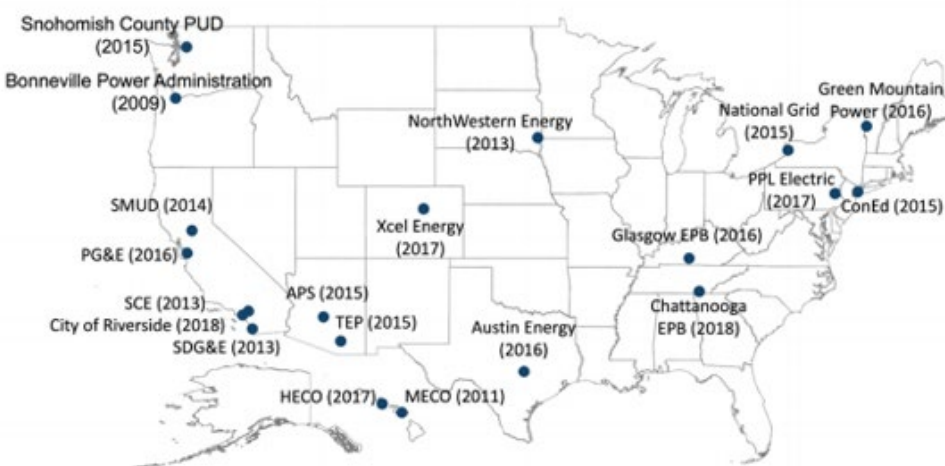
—FERC Commissioner
Richard Glick

abling these flexible resources to participate together as ‘virtual power plants’ in wholesale markets is a victory for enhancing grid reliability, enabling a more resilient grid and lowering costs for consumers.”

The Advanced Energy Management Alliance said “a participation model for consumers and distributed energy resources enables crucial cost savings, flexibility, resilience and environmental benefits to the grid. ... AEMA has been working through ISO stakeholder processes to encourage development of distributed energy resource participation but has also worked with state regulators and utilities to develop solutions through retail and state markets.”

Gregory Wetstone, CEO of the American Council on Renewable Energy, praised the ruling but said the commission was working at cross purposes by “continuing to erect barriers to the entry of new technologies in PJM and NYISO through the use of minimum offer price rules.”

“While today’s order on distributed energy resources follows in the forward-thinking footsteps of Order No. 841 on energy storage, no market can be free until arbitrary resource-specific price floors are eliminated,” he said. ■



DER aggregation programs (with year initiated) | National Renewable Energy Laboratory

FERC/Federal News



FERC Nominees Bob and Weave Through Senate Hearing

Clements, Christie Avoid Controversy — and Solid Answers

By Michael Brooks

President Trump's nominees to FERC, Allison Clements and Mark Christie, said just enough to satisfy senators on both sides of the aisle during their confirmation hearing Wednesday.

Neither nominee gave away how they might decide on the commission's thorniest issues, including carbon pricing, capacity markets and downstream greenhouse gas emissions from natural gas pipelines. Instead, they both said they did not want to "prejudge" any matters before they are sworn in and repeatedly committed to considering each matter that came before them on a case-by-case basis.

Both Republican and Democratic members of the Senate and Energy Natural Resources Committee were pressed for time because of votes on the Senate floor and did not press the nominees further for more clues. They gave no indication that they would oppose either nominee.

Clements, a Democrat and energy policy adviser for the Energy Foundation, and Christie, a Republican and chair of the Virginia State Corporation Commission, were nominated by Trump in late July. (See [Trump to Nominate Christie, Clements to FERC.](#)) Clements would fill the seat left open by the departure of Cheryl LaFleur in August 2019, while Christie would take the place of Bernard McNamee, who departed Sept. 4. (See [McNamee Leaves FERC.](#))

"Both nominees made multiple references to the need for objectivity, the importance of reliability and resiliency, and the central duty of the commission to ensure just and reasonable rates for consumers," ClearView Energy Partners said. "We thought both nominees were



President Trump's nominees to FERC, Virginia SCC Chair Mark Christie and Energy Foundation consultant Allison Clements, are sworn in before their confirmation hearing Sept. 16. | *Senate ENR Committee*

circumspect in their responses ... and steered clear of any remarks that might be construed as potentially prejudging an issue pending before the commission."

Several Republicans, most notably Sen. Cory Gardner (Colo.), did focus on Clements and her previous work for the Natural Resources Defense Council's Sustainable FERC Project. When Gardner asked her to "name an issue" on which she disagreed with her former colleagues, Clements without hesitation answered nuclear generation, which she said "plays an important role in providing carbon-free, reliable power to the system. That's a place where many of my very well studied and smart colleagues might disagree with me."

"Could you name another one, perhaps?" Gardner replied. He tried to get Clements to say whether she disagreed with the NRDC on its "fossil fuel agenda," but she wouldn't bite.

Democrats, meanwhile, tried to determine where Christie would side on the GHG dispute, which has caused tension at FERC. Democratic Commissioner Richard Glick has repeatedly dissented from the commission's approvals of natural gas infrastructure, contending that they ignore a D.C. Circuit Court of Appeals ruling that said it must consider the effects of downstream GHG emissions in its environmental impact statements.

Christie, however, demurred, telling Sen. Martin Heinrich (N.M.) that he did not "want to prejudge that issue because that is a legal question about what does the law require and what does the D.C. Circuit opinion require." He often sounded like McNamee, a fellow

Virginian, repeatedly stressing the importance of "the law and the facts," a phrase that the former commissioner often used in his public appearances.

One of the few mentions of the RTOs came when Christie answered to a question about market manipulation from Sen. Maria Cantwell (D-Wash.). Christie acknowledged that Washington has been considering whether to allow its utilities to join an RTO with CAISO and advised that, having "lived in PJM world for the past 16 years, it is absolutely essential that you have an Independent Market Monitor in these RTO capacity markets. ... We have an outstanding market monitor in PJM, Dr. [Joe] Bowring."

Christie was president of the Organization of PJM States Inc. in 2007 when it pressed FERC to separate PJM's Market Monitoring Unit into an IMM. In March 2008, FERC approved the current monitoring structure, with Bowring as head of his own independent firm.

Committee Chair Lisa Murkowski (R-Alaska) said she hopes to have both nominees confirmed before Congress adjourns at the end of the year. ClearView expects that to happen, albeit most likely after Election Day. "We did not observe any statements by either nominee that would appear to imperil their eventual confirmation," ClearView said. "That said, we cannot foretell how a potentially contested presidential race could impact the day-to-day functioning of the U.S. Senate in a lame duck session."

If confirmed, Clements' term would end in June 2024 and Christie's in June 2025. ■



Senate ENR Chair Lisa Murkowski (R-Alaska) | *Senate ENR Committee*

FERC/Federal News



NC Muni Wins Right to Add Storage over Duke Objections

FERC: Full-requirements Contract Doesn't Bar Batteries

By Rich Heidorn Jr.

FERC on Thursday granted North Carolina Eastern Municipal Power Agency's (NCEMPA) request for a declaratory order allowing it to add battery storage to its system under its full-requirements power purchase agreement with Duke Energy Progress (EL20-15).

The commission rejected Duke's opposition to the request, ruling that the PPA permits NCEMPA to use battery storage technology as either demand-side management or demand response. The commission cited a sentence in the agreement stating that it does not "preclude [NCEMPA] and/or its members from instituting or promoting activities designed, in whole or in part, to manage or reduce the members' demands and/or loads through demand-side management programs."

"When used as NCEMPA proposes, battery storage technology is inherently a

load-shape-modifying device, designed not to reduce a customer's overall load, but to shift the incidence of such load, i.e., to manage the customer's demands," the commission said. "Similar to other demand-side management activities, such as pre-cooling buildings overnight or midday to avoid withdrawing energy to provide air conditioning during afternoon peak-load conditions, NCEMPA's proposed use of battery storage technology simply determines when energy is consumed."

NCEMPA said it intended to use storage to reduce its load when prices are high because of increased system demand.

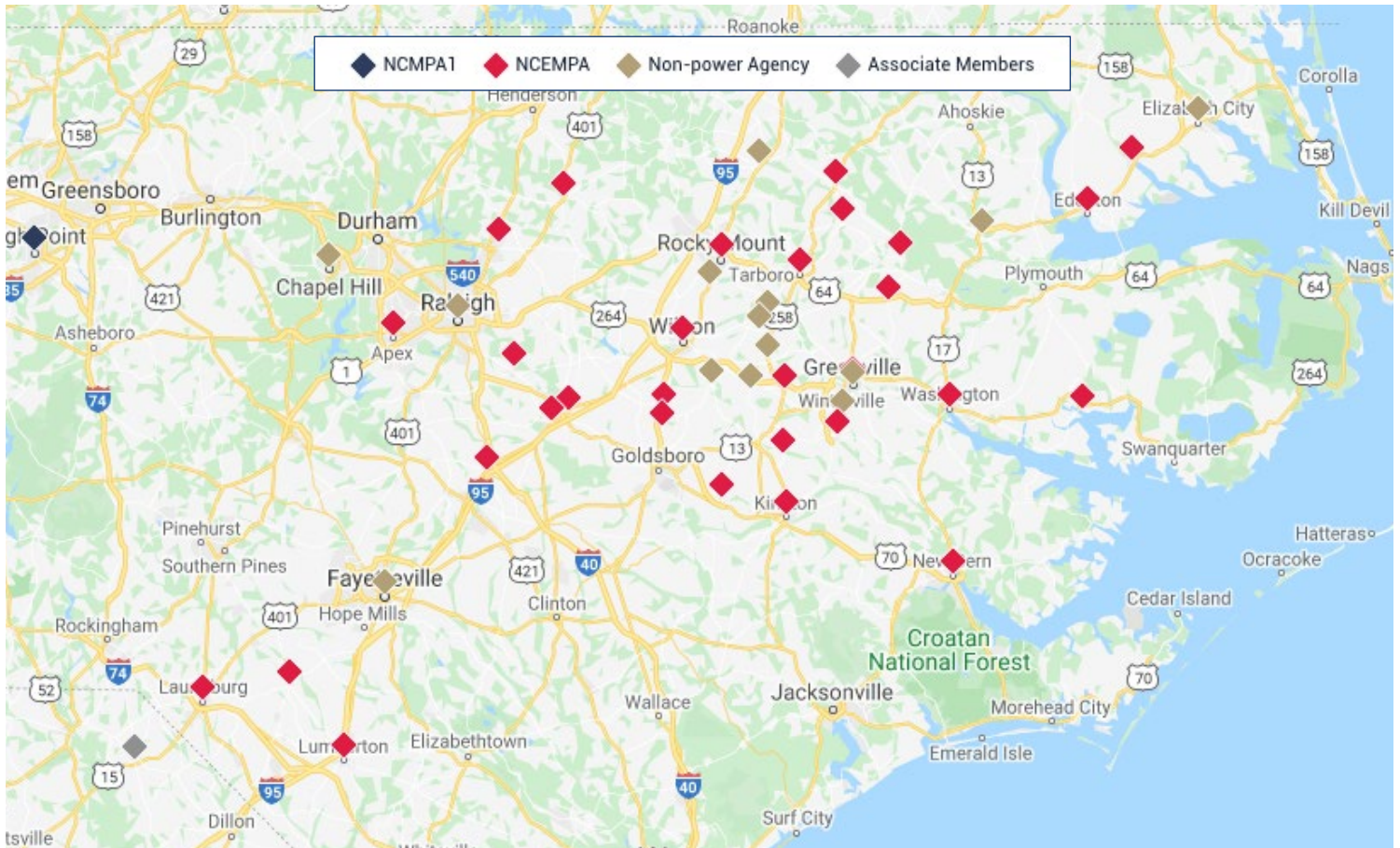
The commission noted that Order 841 — although not applicable in this case because NCEMPA is not part of an RTO or ISO market — "confirms that battery storage resources are capable of providing demand response service."

The commission rejected Duke's "restrictive

interpretation" that battery storage is a form of generation, saying that it allows "a withdrawal of energy for later injection back onto the grid."

Duke's "argument ignores the fact that NCEMPA still would be purchasing its full energy requirements from Duke. The power used to charge the batteries would come from Duke's generation, and then that power would be discharged from the batteries to serve NCEMPA's customers," FERC said. "The fact that NCEMPA is buying power from Duke at one hour and then using that same power from Duke in another hour does not change the fact that NCEMPA is meeting its full requirements through Duke."

NCEMPA serves 32 cities and towns with their own municipal electric distribution systems. Between 1981 and 2015, it was the co-owner with Duke of two coal-fired generating units and three nuclear-fueled generating units operated by Duke. ■



NCEMPA serves cities and towns with their own municipal electric distribution systems in North Carolina. | *Electricities of North Carolina*

FERC/Federal News



FERC will not Seek SCOTUS Review of Tolling Decision

By Michael Brooks

FERC Chairman Neil Chatterjee last week said the commission will not petition the Supreme Court over the D.C. Circuit Court of Appeals' ruling that its use of tolling orders violates the Natural Gas Act and Federal Power Act.

In *Allegheny Defense Project v. FERC*, the D.C. Circuit ruled in July that the commission could no longer grant requests for rehearing "for the limited purpose of further consideration." The court ruled that such tolling orders improperly prevented litigants from appealing commission rulings indefinitely.

Under the NGA and FPA, requests for rehearing are automatically considered rejected if FERC does not act within 30 days of the request. Once a request is denied, the petitioner has 60 days to appeal that decision in a federal appeals court. (See [D.C. Circuit Rejects FERC on Tolling Orders](#).)

Speaking to reporters by teleconference after FERC's virtual open meeting Thursday, Chatterjee said the commission's focus is on acting on rehearing requests as quickly as possible. The commission was given until Oct. 5 to decide how to respond to the D.C. Circuit's decision after the court granted its request for a 90-day delay before issuing a mandate. (See [FERC Gets More Time on Tolling Orders](#).)

But beginning the day after the *Allegheny* decision, FERC began implementing a new method for acting on rehearing requests. If the commission does not grant rehearing on the merits of the requests by the 30th day, it now issues either a notice of denial of rehearing

by operation of law, signaling that it does not intend to act further, or a notice of denial and "providing for further consideration."

Under both notices, petitioners are then free to appeal them in court. But in the latter, "after indicating that rehearing may be deemed denied by operation of law, this notice states the commission's intention to issue a further order addressing issues raised on rehearing, citing the commission's authority to 'modify or set aside' the underlying order" under the NGA and FPA, Holly Cafer, associate general counsel, told commissioners in a presentation at the meeting.

FERC is free to "modify or set aside, in whole or in part," a prior order until the record on appeal is filed with the appellate court. When the commission does so, it will then either issue an order "modifying the discussion," in which it provides further clarification but uphold the denial; or reverse itself and "set aside" the denial.

"Standardizing this terminology is intended to provide guidance to parties in discerning whether the commission's order is final, such that aggrieved parties may proceed to court," Cafer said. "We recognize that decisions regarding if or when to file a petition for review may be complex, particularly in cases where the 30-day deadline has passed and the rehearing request may be deemed denied by operation of law, but the commission, through a notice, has announced its intent to issue a further merits order. ...

"The changes in commission practice discussed today, among others, are intended to allow

appeals of commission orders to proceed on a complete administrative record, including a rehearing order, in a timely manner."

FERC had regularly used tolling orders under both the NGA and FPA, but the indefinite delay of an order on rehearing was most controversial in natural gas pipeline approvals, as companies were still allowed to seize property under eminent domain and even begin construction of their projects while the commission considered requests.

The D.C. Circuit's decision arose from the commission's 2017 approval of Williams Companies' Atlantic Sunrise project, an expansion of the company's existing Transcontinental Pipeline. While the case was being litigated, Chatterjee sought to give landowners' requests higher priority.

In September 2019, he pledged that the commission would try to rule on such requests within the 30-day deadline. In February, he announced the creation of a new rehearing section within the Office of the General Counsel to expedite action. And finally in June, the commission said it would no longer allow companies to begin construction on projects while it considered rehearing requests. (See [FERC Revises Pipeline Policy on Landowner Concerns](#).)

But on Thursday, Chatterjee reiterated that the commission cannot prevent companies from taking property under eminent domain after it approves a project. He and Commissioner Richard Glick repeated their call on Congress to pass legislation effecting such a change, as well as giving the commission more time to act on rehearing requests. ■



E. Barrett Prettyman Federal Courthouse, home of the D.C. Circuit Court of Appeals | HSU Builders

FERC/Federal News



DOE Gas Summit Voices Industry Hopes, Gripes

By Robert Mullin

A lack of infrastructure and “well funded” opposition groups are depriving Americans and U.S. trading partners of the country’s abundant and cheap natural gas, participants in the Department of Energy’s 2020 Natural Gas Summit said last week.



Energy Secretary Dan Brouillette | DOE

Energy Secretary Dan Brouillette kicked off the virtual event Thursday with a warm tribute

to the oil and gas industry.

“We talk about this industry often in terms of number of jobs created, and that’s absolutely true: You are hiring Americans all across the country and, in fact, all across the world,” Brouillette told industry executives participating in the summit. “But you are also providing this president — and any future president who chooses to wrap their arms around this important industry — with foreign policy options that many presidents have not had in the last four to five decades.”

That spirit of bonhomie continued after Brouillette turned the mic over to the Trump administration’s top economic adviser Larry Kudlow,

a panel moderator, who said: “No better cabinet officer than Dan Brouillette. None. Zero.”

Kudlow took a moment to praise his boss.

“President Trump has put a premium on energy and energy dominance, or energy independence, or however you want to call it, and he will continue to do so,” Kudlow said. “I don’t want to politicize this; I just want to say that the other team, if you will, has some bizarre plans that would do great harm to energy, to the economy, to jobs, and so forth.”

Kudlow made clear his stance on increased fossil fuel production in the U.S.

“I myself have become a tremendous proponent of LNG in negotiations with Europe. I’m an unpaid, un-commissioned salesperson,” he said. “Not too long ago, in 2008, I was the guy on TV who started the [CNBC show Kudlow & Cramer] every night for a couple months [saying,] ‘Drill, drill, drill!’ So, I think you understand my sympathies — or biases.”

And so it went during an event that was more a confab of gas industry insiders and supporters than a rigorous exploration of the potential impacts — good and bad — of expanded natural gas production and consumption in the U.S. and worldwide. Conspicuously absent from the summit were any representatives of “the other team,” presumably Democrats, environmentalists or Green New Dealers.

Here’s some of what *RTO Insider* heard.

Stepping on the Hose

“We know that the foundation of the economic recovery that we expect [after COVID-19] is going to be energy. This industry historically has provided inexpensive energy for the American people,” said Mike Sommers, CEO of the American Petroleum Institute.

While other costs such as housing and education have risen as much as two-thirds over the past 10 years, household energy costs have declined 14.7% “as a consequence of the energy revolution that has happened in this country,” Sommers said.

Trump’s regulatory and tax policies have “supported” this industry, which “is going to lead the way from an economic recovery



Larry Kudlow, U.S. National Economic Council | DOE



Advancements in fracking have made the U.S. the world’s leading producer of natural gas.

FERC/Federal News



perspective,” he said. “But I think what is really important for the United States natural gas industry, in particular, is how do we get the infrastructure online so that we continue to support America’s energy revolution.”

Activists “on the other side of this industry” are seeking to halt that recovery, Sommers said.

“What they’ve figured out ... is that they can’t beat us on the supply side, and they can’t beat us on the demand side — the world is going to continue to demand these products,” he said. “What they do is try to step on the hose in the middle and stop this country from building the infrastructure that it needs to continue to grow.”



Western Energy Alliance President Kathleen Sgamma | DOE

“When you look at the profile of natural gas, it not only reduces greenhouse gas emissions ... it’s the No. 1 reason why the U.S. has reduced greenhouse gas emissions more than any other country, including Europe. And we did it through market economics, not heavy-handed

government policies,” said Kathleen Sgamma, president of the Western Energy Alliance.

While the U.S. has led the world in volume of GHG reductions since 2000, it is still the second-largest emitter, behind China. EU countries, which emit fewer GHGs overall, have actually seen *larger percentage reductions* over that time. The U.S. and Canada still remain the biggest *per capita emitters* by far, at 18 tCO₂e and 20 tCO₂e, respectively.

Sgamma added that natural gas use has also contributed to the 77% decline in other air pollutants in the U.S. since 1970.

“If you want to see a clean energy transformation, it has to include natural gas,” American Gas Association CEO Karen Harbert said.

Sgamma said “the other team” is not “really interested in a solution that actually works and protects the environment. I think they’re interested in government control of the economy [and] government control of energy; and that involves a scarcity to the consumer, like the scarcity of natural gas in the dead of winter in New England, which when you hit that reality, it causes Russian imports to come in because they won’t let a pipeline be built.”

States such as Oregon, Washington and New York are using Clean Water Act certification processes “to stop interstate commerce by

preventing pipelines,” she said, appealing to the Trump administration to “remove states’ ability” to take such actions.

Deputy Interior Secretary Katherine MacGregor, a former oil and gas lobbyist, lauded Trump for “absolutely chang[ing] the game of deregulation in Washington, D.C.” She called the administration’s move to shorten National Environmental Policy Act reviews from 4.5 years to under one year “nothing short of significant.”

“If you think about it, when you’re permitting a pipeline like Kathleen’s talking about ... there’s so many different statutes you have to deal with, and there’s so many levers that folks who don’t want production can pull,” MacGregor said.



PennEnergy CEO Richard Weber | DOE

PennEnergy Resources CEO Richard Weber said any other country in the world would envy the U.S. position of having abundant natural gas. Gas projects confront opposition from “four or five very well funded, very left-wing environmental groups

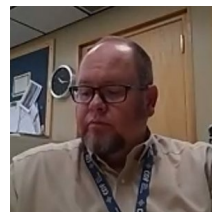
— or so-called environmental groups, because I think if you really cared about the environment you would embrace natural gas,” he said.

“We’ve solved the supply problem here in America,” Brouillette said. “What is challenging us, and what I think is challenging the industry, is an infrastructure problem. We need more pipelines. We need more export facilities. We have to improve our permitting processes so that we can allow this infrastructure to be built more quickly, more efficiently.

“The product has no value without its ability to get to market. ... So, we must work much more aggressively to get that done,” he said.

Nathan Duckett, mayor of Farmington, N.M., said he “absolutely agrees” with the rollback of regulations on gas infrastructure. His city, which sits in the gas-rich San Juan Basin is “surrounded by public lands.”

“If they were to stop the extraction of natural gas from public lands, that would be a huge detriment to our area,” Duckett said, calling it a “stake in our heart.”



Farmington, N.M., Mayor Nathan Duckett | DOE

‘Fundamentally Wrong’

“I have nothing against renewables — nothing,” Kudlow said. “I think, as an amateur, solar has probably made the most inroads in the renewable field.”

But, he continued, “you only have 10% of energy coming from renewables, but my friends on the other team say we can do it all through renewables, maybe in 15 or 25 years. ... If we’re only at 10% now, how does that happen? I just don’t get that. I don’t see a pathway.”

Renewables accounted for 11% of U.S. energy use and 17% of electricity consumption last year, according to the Energy Information Administration.

“It is fundamentally wrong at this point, in my view, to have a state or have a country adopt a 100% renewable policy,” Brouillette said. “There are a number of technologies that are coming online that are related to things like battery technology that may at some point allow some additional integration of renewable electricity generation into our electric grid, but it doesn’t exist today.”

Pointing to the recent grid emergencies that have plagued California, Brouillette called out the state’s policy goal of a carbon-free electricity system by 2050 on top of closure of its nuclear power plants.

“Now they’re looking at their natural gas industry and saying, ‘We don’t want you here. Our policy is going to be 100% renewables. And should we need some extra electricity, we’ll buy it from Arizona, we’ll buy it from Nevada,’ who are using natural gas and, in some cases, nuclear energy as well,” he said.

Brouillette likened California to his “environmentally sensitive” daughter who doesn’t want to buy a car but chooses to instead borrow one from her sister, which works fine until they both need it at the same time.

“And that’s what happened in California. They needed electricity because it was pretty hot, which is not unusual in California ... but it was also hot in Arizona and Nevada. And those states chose to keep their electricity because they like their air conditioning and they wanted their lights to come on when they come home at night,” he said.

There are multiple competing theories about the main causes of the recent California blackouts, ranging from a shortage of imports to potential market manipulation. CAISO and state energy agencies will release a joint analysis of the events this month. (See [Theories Abound over California Blackouts Cause.](#)) ■

FERC/Federal News



it seems the schedules are designed around light-duty residential charging versus the heavy-duty charging that's needed by transit agencies."

Including the Drivers

In addition to following a charging schedule to minimize costs, speakers said bus fleets making the change must consider their drivers and technicians.

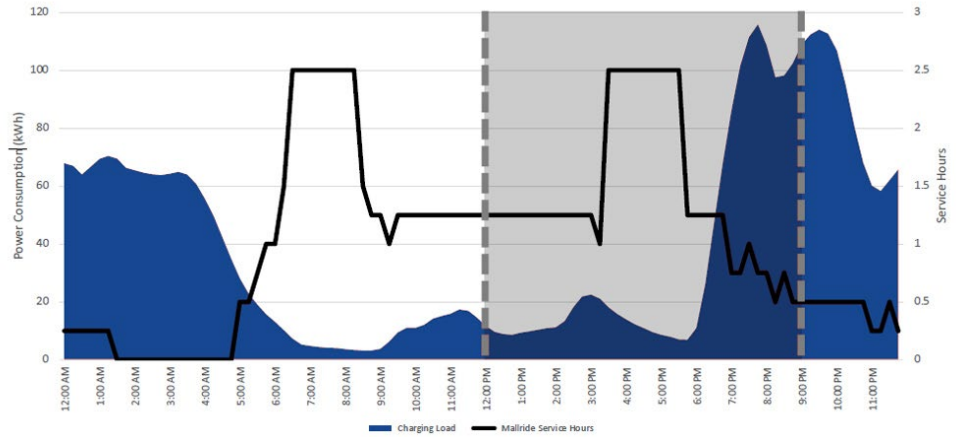
"Technicians will need to know what they can and cannot work on," Twin Rivers' Manalo said. "We actually require [training] from our vendors as part of our purchase contract. And the drivers are also a critical piece because they are either going to make or break your cost per mile."

"Seventy-five percent of the cost of providing our service is in the operator — the person in the seat," said Karl Gnadt, managing director of the Champaign-Urbana Mass Transit District. "Seventy-five percent of operating [costs] is personnel. If I have to have personnel just sitting around ... waiting for our buses to charge every 30 miles or so, I am by default not experiencing operational efficiency."

Using Buses as Emergency Generators

Current generation electric buses also have the ability to *provide power* to the grid or a building.

"If we had an emergency, they could power



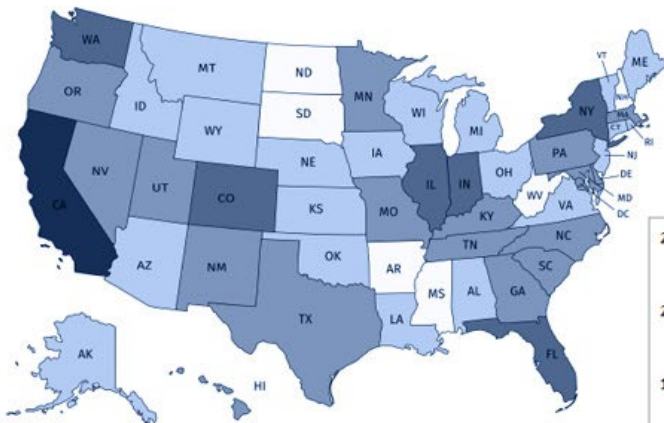
Charging schedule for Denver Regional Transportation District's battery electric buses (blue) versus service hours (black line) and on-peak rates (gray shading) | *Denver's Regional Transportation District*

dorms or dining halls," said Todd Berven, associate director of auxiliary services for the University of Georgia, which has 20 electric buses. It will soon add 13 more to phase out some of its remaining 50 diesels. It also plans to seek a grant to add solar generation to its bus yard, which Berven said will have the university "driving on sunshine."

"On a 40-foot New Flyer fuel cell bus, [there is] almost 600 kWh of stored usable energy," said Jaimie Levin, senior managing consultant for CTE. "On an articulated bus, [there is] over 1 MWh of usable energy. CTE has been working with some of our partners on inverters that

allow those vehicles to plug in ... at a hospital or seniors center and run those facilities in an emergency. And what does it take to refuel those vehicles? Minutes. So that brings a tremendous amount of resiliency capability with hydrogen fuel cell technology."

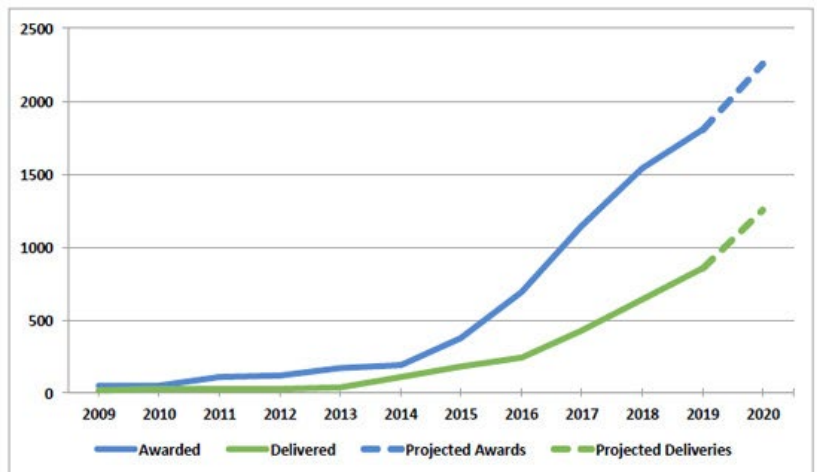
Manalo said Twin Rivers is working on a pilot bus-to-grid program with the Sacramento Municipal Utility District. "The buses are equipped to do that. The charging infrastructure is equipped to do that. But there's some logistics that still need to be worked out," he said, noting that increased cycling can reduce battery lifespans. "Who pays for that in the long run?" ■



* Estimated sales & deliveries of heavy-duty battery electric and fuel cell electric buses for transit, universities, airports, and commercial fleets



Cumulative ZEB Awards/Sales & Deliveries



CAISO/West News



Solid Support for EIM Joint Authority Plan

By Robert Mullin

Western Energy Imbalance Market (EIM) stakeholders broadly support a proposal that would significantly expand the EIM Governing Body's approval authority and grant it a "more collaborative" relationship with CAISO's Board of Governors.

The plan, part of a broader [straw proposal](#) released by the EIM Governance Review Committee (GRC) this summer, would extend the Governing Body's voting rights to cover any CAISO initiatives that impact the EIM and create a concept of "joint authority" with the ISO board.

EIM stakeholders strongly endorsed the thrust of the GRC's proposal in comments during a virtual meeting Sept. 15 while pressing for more details regarding the shared authority.

The straw proposal states that EIM stakeholders seek "a more 'bright line' or at least [a] less complex and more objective set of rules for identifying those matters where the Governing Body has approval authority."

Still, support for the idea is colored by uncertainty over how joint authority between the two rulemaking bodies will play out in practice, especially when they disagree over Tariff changes to be filed with FERC.

Under the EIM's existing charter, which falls within CAISO's Tariff, the Governing Body enjoys "primary" voting authority over rulemakings specific to the EIM and plays an "advisory" role to the Board of Governors regarding ISO rule changes that also impact the EIM.

That arrangement has sufficed under current circumstances in which the EIM and CAISO markets only intersect through real-time operations. But the overlap between the two markets is set to broaden with the proposed implementation of the extended day-ahead market (EDAM) in the EIM, expanding to include rules covering transmission use, congestion revenues, ancillary services, greenhouse gas accounting, convergence bidding and new market power mitigation mechanisms. (See [CAISO Proposal Sets Course for EIM Day-ahead](#).)

"If EDAM is implemented, the Governing Body approval authority would be further expanded to include any proposed changes to the design or market rules governing the CAISO's day-ahead market," the straw proposal states. "The GRC also recommends that the EIM Governing Body be provided decision authority over

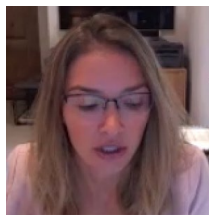
any EDAM market design, thereby formally recognizing CAISO management's current proposal in the ongoing EDAM initiative to bring the EDAM market design to both the board and the Governing Body for their joint approval."

'Jump Ball' Fear

Matt LeCar, a principal with Pacific Gas and Electric, voiced concerns about a joint authority plan provision that would allow the EIM and CAISO to submit competing Tariff filings with FERC when they reach an impasse over the final project.

"We're concerned, first of all, that may not be how FERC wants to participate in this process. Typically, FERC is dealing with issues that have already been resolved in a regional transmission organization or independent system operator," LeCar said. "We're really punting issues to FERC to decide that are more properly adjudicated among stakeholders within the West."

LeCar said PG&E also worries that CAISO would not be appropriately staffed to defend both points of view before FERC. "We have a hard time seeing how you would segregate and put in place firewalls between types of staff working on one side versus the other."



Jennifer Gardner, Western Resource Advocates | EIM Governance Review Committee

GRC member and Western Resource Advocates attorney Jennifer Gardner, donning her hat as a representative of the Western Grid Group and the NW Energy Coalition, expressed similar reservations about the provision.

She pointed to ISO-NE and PJM, where the RTO and stakeholder groups can file competing "jump ball" Tariff revisions. Some of those proceedings have resulted in FERC rejecting both proposals and instead creating its own "Frankenstein" version that includes elements of each, Gardner said. "We were just concerned with the uncertainty that this creates, and we really wanted any type of competing filings to be avoided whenever possible."

"The preference here is for the stakeholder process here in the West to come up with a sort of a joint proposal," said NV Energy Federal Energy Policy Director David Rubin,

speaking for the 18 current and future EIM entities. Rubin was skeptical of the proposal's plan for resolving deadlocks through an "iterative" process in which Governing Body and board members convene to discuss objections to a filing, then send it back to CAISO staff for further development before convening another stakeholder process designed to address remaining concerns.

"The challenge that we felt was that going back that second time certainly adds half a year to an already [one]-year, two-year process, and there are times where a market participant feels that the design becomes unjust and unreasonable and they bring it to FERC's attention anyway," Rubin said.

Meg McNaul, an attorney representing CAISO's "Six Cities" municipal utilities (Anaheim, Azusa, Banning, Colton, Pasadena and Riverside), said that while her clients support the joint authority provision, they also think the decisional authority of the CAISO board should be "preserved" because participation in the ISO markets is not voluntary for entities located within its balancing authority area.

McNaul agreed with PG&E's recommendation for a "reversionary approach" to restoring the board's decisional authority if a large number of EIM participants opt to withdraw from the voluntary market.

"I think the topic of a reversionary interest is one that's worth pursuing," McNaul said.

Lone Skeptic

Chloe Lukins, program manager for the California Public Utilities Commission's Public Advocates Office, represented the lone voice of dissent on the call, opposing the joint authority model because EIM membership is voluntary and members are not required to pay CAISO's grid management charge, which largely funds the ISO's operations.

"If the model does go through, it should be explained how it will be paid for," Lukins said.

"Is there a presumption that there will be an additional cost to California, and, if so, can you elaborate at all about where you see those cost arising?" Governing Body member Doug Howe asked.

"I think that's what we would like some clarity on ... providing some more information if it will cost more. If it doesn't, if you could provide that information, that would be good, too," Lukins said. ■

CAISO/West News

Heat Waves, Blackouts Slow Western EIM Expansion

By Hudson Sangree

Heat waves and capacity shortfalls in August and September have slowed an effort by the Western Energy Imbalance Market (EIM) to expand from a real-time interstate trading forum to a day-ahead market, CAISO and EIM entities told the market's Governing Body at its Wednesday meeting.

The events included CAISO-ordered rolling blackouts Aug. 14-15. (See [CAISO Avoids Blackouts amid Brutal Heat, Fires.](#))

The extended day-ahead market (EDAM) initiative is moving forward with a straw proposal on topics including resource sufficiency and transmission use. Comments had been due Sept. 10, but CAISO extended the deadline by two months to Nov. 12 at the request of stakeholders, said Mark Rothleder, vice president of market policy and performance.

"I think that's a fair and good approach because I think people should factor in and consider the learnings of the August and September events," Rothleder said. The extension is "providing everyone, including the ISO, time to consider [those] events."

The EDAM initiative, one of CAISO's highest priorities, is divided into three "bundles" of topics that the ISO is addressing in succession through next year. The market is expected to go live in 2024. (See [CAISO Proposal Sets Course for EIM Day-ahead.](#))

"It's very timely that we're talking about resource sufficiency," Rothleder said of the initial set of topics. "I think there is a nexus between resource adequacy discussions, both in California and across the West, that I think do come together in an important way in the resource sufficiency discussion in bundle 1 of this topic."

The EIM includes 11 members across the West, with 10 more set to join in the next two years. The newest members are Seattle City Light and Arizona's Salt River Project. On July 3, the EIM surpassed \$1 billion in benefits for its members since its launch in 2014.

Jim Shetler, general manager of the Balancing Authority of Northern California, an EIM participant, spoke on behalf of all EIM entities about tapping the brakes on EDAM.

"We know there's a lot of evaluation going on about the heat wave events of August and September," Shetler said. "As these issues are being discussed and evaluated, we've been hearing some comments made by some parties about 'the utilities are relying on exports from others too much' and whether there's a need to become more independent and self-sufficient."

CAISO was faulted by some for its reliance on out-of-state exports to meet its evening peak demand, an apparent cause of the shortfalls and outages this summer.

The EIM entities support a robust resource

adequacy program and a strong resource sufficiency test that applies the same metrics to all participants, Shetler said.

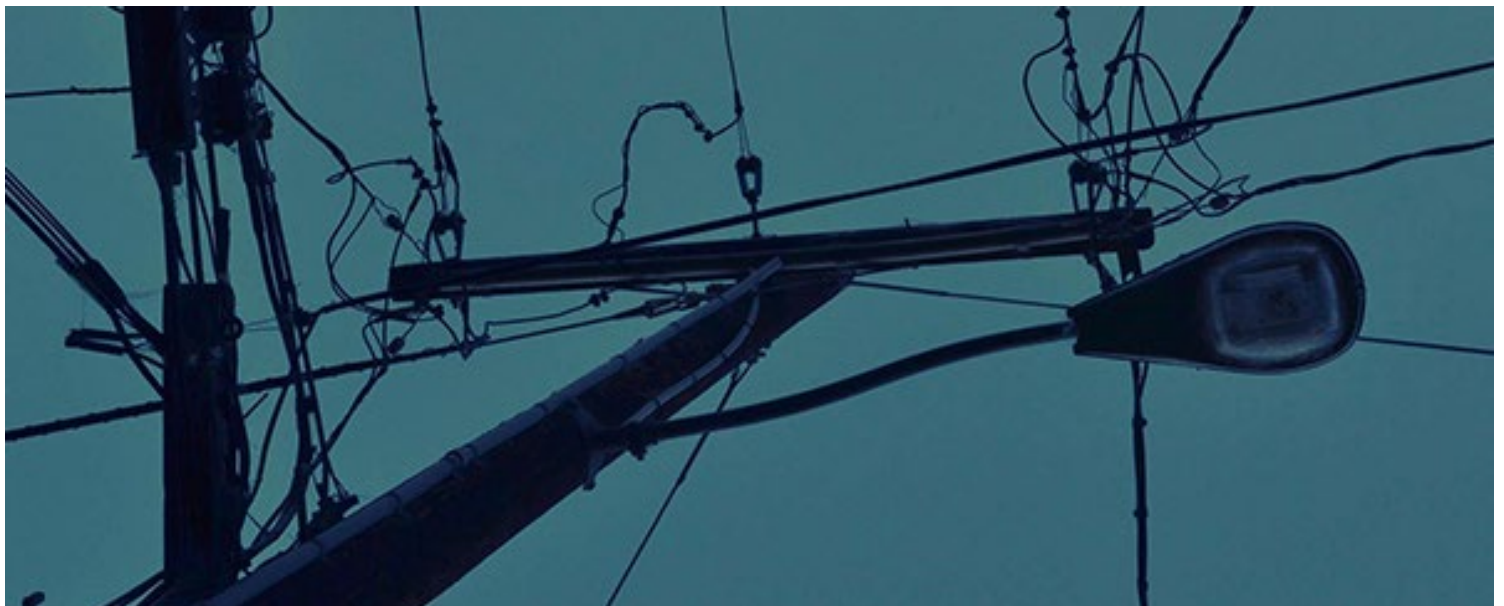
"However, we equally recognize that collaboration across the West is absolutely necessary in order for the region to reliably and efficiently manage the changing resources with the ever increasing variable renewables and decreasing dispatchable resources," Shetler said.

The EIM was a first step in greater regional collaboration, he said. The EDAM is the logical next step, and EIM entities support the day-ahead market moving forward.

"We do not want to lose the momentum that has been established," but the heat waves and blackouts have shown potential resource deficiencies and economic issues that could impact the EIM and EDAM, Shetler said. Taking time to address the issues will ensure an EDAM design "that meets the needs of all the market participants," he said.

Governing Body member Robert Kondziolka asked Shetler if EIM entities are looking into the shortfalls and could brief the Governing Body on their findings.

"We're in the middle of looking at what each one of the EIM entities have experienced as a result of the August and Labor Day weekend heat waves," Shetler said. "We're trying to summarize [the findings]" and plan to update the ISO and EIM once the analyses are complete, he said. ■



CAISO/West News

CAISO Seeks Firm Tx for Resource Adequacy

RA Enhancements Initiative also Looks for Dedicated Generation

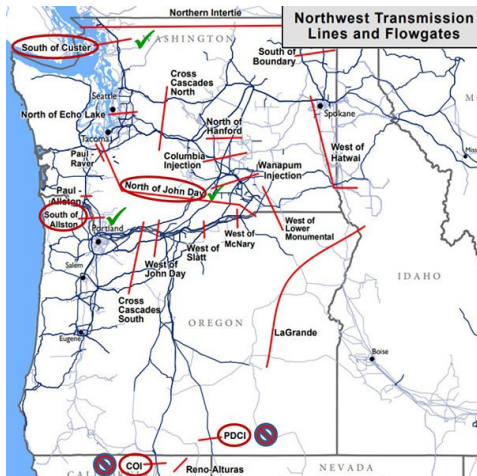
By Hudson Sangree

A CAISO resource adequacy workshop Thursday was part of an initiative that started nearly two years ago, but it could not have been more timely following the heat waves and energy emergencies of mid-August and Labor Day weekend.

During those periods, the ISO had to compete for strained energy resources across the West, scrambling last-minute and paying sky-high prices for imports to cover peak demand. California was criticized by some for relying too heavily on imports that grew scarce as other states tried to meet heavy demand amid record temperatures.

The *Resource Adequacy Enhancements Initiative*, launched in October 2018, deals in large part with securing imports to cover such situations without the uncertainty that plagued the state and led to rolling blackouts Aug. 14-15. (See *Theories Abound over California Blackouts Cause*.)

“Our challenge, in this RA imports policy, is how do we strike that right balance between ensuring that our imports, which we rely on heavily, are reliable and dependable, and yet we understand we are competing for this supply broadly across the West?” said John Goodin, the ISO’s senior manager for infrastructure and regulatory policy. “How do we not make it so onerous that others reject the California market as too rigorous and go sell somewhere else?”



The COI and Pacific DC Intertie were at or near maximum capacity during the mid-August Western heat wave. | CAISO

The CAISO market needs to be “liquid and able to trade and transact imports,” he said.

The authors of the initiative’s issue paper wrote that CAISO’s must-offer obligations, RA substitution rules and resource availability incentive mechanisms together “create a very complicated system of processes that differ vastly from other ISOs/RTOs.” Part of the initiative involves addressing those “overly complicated” processes.

Goodin spoke Thursday about the need for the ISO to ensure that it has dedicated generation and transmission capacity for RA imports.

“You not only have to lock up the source, but you have to lock up the transmission as well,” he said.

The ISO’s “perennial concerns” are that “speculative” supply and double-counted resources are clouding its RA import estimates, Goodin said. CAISO wants out-of-state suppliers to dedicate specific generation resources, including pooled resources, to serving California load so that CAISO is not relying on supply that doesn’t materialize, he said.

The ISO prefers resources come from a seller’s capacity reserves and that non-delivery be subject to fines.

“That’s the key point,” Goodin said. “It’s backed by capacity reserves, and it pays damages if it’s not delivered. Those are the two requirements we’re very interested in.”

Firm Transmission

More recently, the ISO has been worried about not having the means to bring in energy from out of state.

The “hotter topic is the delivery assurance,” the transmission side of RA imports, Goodin said.

During the “heat storms” of August and September, vital transmission lines linking Southern California to the Pacific Northwest were pushed to their limits and sometimes beyond, he said in his *presentation* to the RA Enhancements Working Group. Slides showed the strained situation at the California-Oregon Intertie (COI).

Goodin argued the situation underscored the need for firm transmission service that’s guaranteed, especially in times of crisis.

“RA import capacity must be dependable and deliverable on high-priority transmission ser-

vice,” one of his slides said.

Some stakeholders — such as the Bonneville Power Administration, Calpine and LS Power — back the proposal for firm point-to-point, source-to-sink transmission.

However, the plan is unpopular with other stakeholders who contend it isn’t necessary and could even prove harmful.

Opponents include California’s community choice aggregators, represented by the California Community Choice Association, and the state’s three large investor-owned utilities: Pacific Gas and Electric, Southern California Edison and San Diego Gas & Electric.

The publicly owned Sacramento Municipal Utility District also opposes firm transmission, arguing there’s no supporting data demonstrating the need for it. Though at or near maximum capacity, the COI’s 500-kV lines retained some transfer capacity during the crises in August and September, opponents contended.

Financial services firm Morgan Stanley argued that firm point-to-point transmission will do more harm than good.

“The CAISO should reject the arguments promoting source-to-sink firm requirements,” Ali Yazdi, a head energy trader with Morgan Stanley Capital Group in Canada, said in his written comments on the ISO’s fifth revised straw proposal, now under discussion. “These stringent rules will only serve to squeeze out competition, reduce diversity of supply and, in fact, harm reliability.”

The plan could lead to long-term hoarding of transmission rights by entities that stand to gain the most, Yazdi said. He reiterated his comments during Thursday’s workshop.

Morgan Stanley and others favor an alternative proposal by CAISO that requires firm transmission delivery only on the last line of interest, the last leg to the CAISO balancing authority area. Goodin said the alternative remains a viable option.

Thursday’s meeting was one of two held last week by the RA working group; the first dealt mainly with unforced capacity evaluations. Comments on the sessions are due Oct. 1, and a draft final proposal is due Nov. 3. The CAISO Board of Governors is expected to take up the plan in the first quarter of 2021. ■

CAISO/West News

FERC Accepts CAISO Intertie Changes

Non-delivery of Imports, Uncertainty Pose Ongoing RA Problems

By Hudson Sangree

FERC gave fast-track approval Thursday to CAISO Tariff changes meant to discourage sellers from failing to deliver on import energy bids (ER20-1890).

The changes are partial fixes to ongoing problems that may have contributed to the energy emergencies of August and September. The import issues are being addressed more fully in the ISO's Resource Adequacy Enhancements Initiative. (See related story, *CAISO Seeks 'Firm' Tx for Resource Adequacy*.)

"CAISO states that the proposed revisions address problems arising from significant amounts of undelivered intertie transactions in the CAISO market and will improve system reliability and price stability," FERC said.

In its filing, CAISO said imports from neighboring balancing authority areas serve up to 25% of load at times. Undelivered imports can undermine reliability, skew market prices and cause inefficient use of transmission paths.

CAISO asked FERC to approve increased charges for non-delivery and enhanced rules for intertie schedules and e-Tags by Oct. 1. The commission agreed the changes would help.

"Taken together, these revisions improve CAISO's current Tariff rules, which otherwise may not sufficiently incentivize a market participant to deliver an awarded intertie transaction," it said.

Two commenters, CAISO's Department of



CAISO's control room in Folsom, Calif. | CAISO

Market Monitoring and Powerex, contended the ISO needs more substantial, long-term solutions to its import problems.

"Powerex states that intertie non-deliveries have contributed to emergency conditions in CAISO and contends that delivery failures reflect CAISO's inability to distinguish firm energy supply from non-firm energy, unit-contingent energy and speculative supply in dispatch, pricing and settlement," FERC wrote. "Powerex argues that even if CAISO's proposed measures reduce intertie delivery failures, the displacement of firm energy in CAISO markets by speculative and non-firm supply will continue to create reliability challenges and price spikes."

Similarly, the DMM expressed concern that CAISO meets too much of its resource adequacy requirements with imports and that current rules could allow "high-priced day-ahead import bids that are not backed by resources that are available in the real-time market."

FERC agreed that CAISO "should continue to work with stakeholders to develop solutions to the market design challenges raised in the comments."

"We encourage CAISO to further improve its rules for intertie transactions through the ongoing Resource Adequacy Enhancements and Day-Ahead Market Enhancements stakeholder initiatives," it said. ■

Save your acrobatics for Cirque de Soleil.

Jumping through hoops was never really your thing anyway.

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.



ISO-NE News

Dykes Calls out ISO-NE, FERC on Carbon Pricing

By Jason York

Connecticut Department of Energy and Environmental Protection Commissioner Katie Dykes took aim at both ISO-NE and FERC in a panel discussion on carbon pricing in wholesale electricity markets at Thursday's Consumer Liaison Group video meeting.

Dykes said she opposes the RTO's proposal to add a carbon price on top of the Regional Greenhouse Gas Initiative (RGGI), which sets the cap for carbon emissions across New England.

"Our states in New England, participating in RGGI as we do, have sent multiple letters to ISO New England and to [the New England Power Pool] regarding carbon pricing," Dykes said. "And essentially, repeatedly we've had to go on record, stating that we are not in support of a carbon adder as a supplement or perhaps as a replacement for the RGGI program."

Dykes, who served as chair of the Connecticut Public Utilities Regulatory Authority from

2015 to 2018 and RGGI board of directors chair from 2014 to 2017, noted that states also contract for grid-scale renewables and back utility-administered investments in energy efficiency.

"Overall, those programs, in compliment with the RGGI program, have contributed to achieving significant reductions in carbon emissions in our state at a relatively low cost to families and businesses," Dykes said.

RGGI's strengths are that it is governed by state commissioners, Dykes said, which means program designs align with individual states' policies, and it provides for reinvestment of proceeds from the sale of allowances.

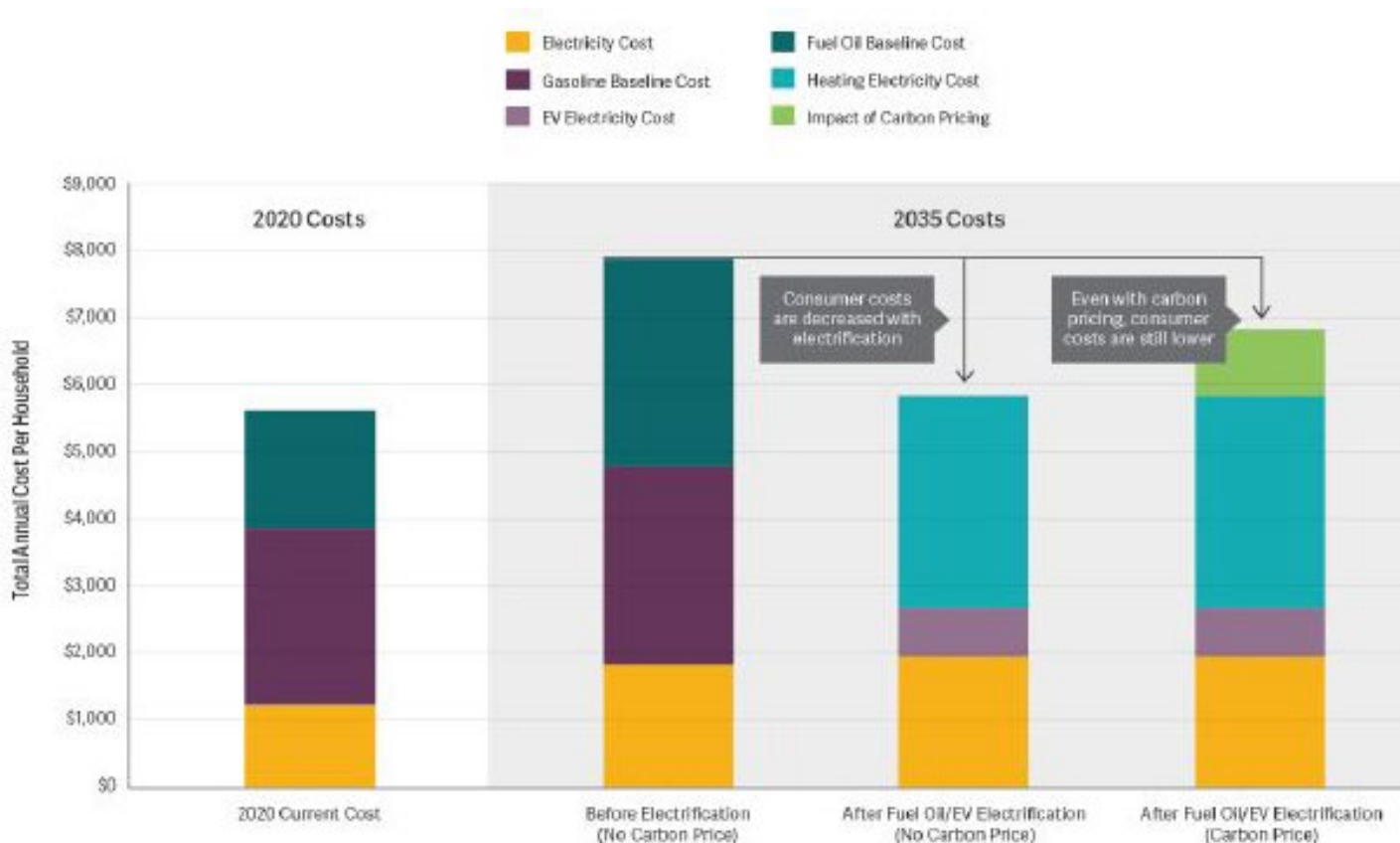
"Those reinvestments are flowing back into energy efficiency programs, which provide the greatest magnifier of benefits for our customers, not just in terms of further reducing emissions ... but also helping to offset individual bills," she said.

Asked to comment on Dykes' remarks, an ISO-NE spokesperson said the RTO "continues

to support the states as they work to develop electricity sources that are clean, reliable and cost-effective for the benefit of our region. We've recommended carbon pricing as a simple, cost-effective and transparent solution to integrate the state's policy goals with the wholesale electricity markets. We recognize it as just one of several ideas being discussed among the states and regional stakeholders to deliver a clean energy future for New England."

Joseph Cavicchi, vice president of Analysis Group, gave the Consumer Liaison Group a presentation on his company's report on carbon pricing for the New England Power Generators Association (NEPGA). He agreed with Dykes for the "need to be cognizant of the costs that would be incurred by consumers" if carbon pricing pushed up not only electricity prices, but also increased the cost of gasoline, natural gas and oil as well. Cavicchi said progressively increasing the price on carbon emissions can support market-based investment in "clean energy technologies."

"If you had a carbon price that translated to



Estimated consumer energy costs for adopting electric vehicles and converting to electric heat pumps | Analysis Group

ISO-NE News

\$25 to \$35/short ton in 2025, upwards to \$55 to \$70/short ton in 2030 and 2035, you'd go a long way toward supporting the kinds of investments that we think are necessary," Cavicchi said.

'Tragic' Disconnect

During the panel's question-and-answer session, Dykes fielded a question from an attendee who referenced FERC's Sept. 4 ruling rejecting NYISO's proposal to make it easier for public policy resources to clear its capacity market. (See [FERC Rejects NYISO Bid to Aid Public Policy Resources.](#))

Dykes said that FERC is challenging the ability of states to rely on competitive markets to achieve decarbonization goals. That is "really the tragedy of this disconnect between the federal policies and in states continuing to address the need to mitigate carbon emissions," she said.

She also said it concerned her that no state regulators were invited to speak at FERC's Sept. 30 [technical conference](#) on carbon pricing in the wholesale electricity markets. (See [FERC An-](#)

[nounces Tech Conferences on Carbon, OSW.](#)) ISO-NE CEO Gordon van Welie and Matthew White, chief economist for the RTO, are scheduled to be panelists.

"We look forward to sharing our perspectives," the RTO spokesperson said of the conference. "The New England states play an important role in evaluating potential solutions, and we fully recognize that any solution for carbon reduction in our region, such as carbon pricing, requires a coordinated effort with state policymakers."

Boston Climate Action Plan

John Cleveland, executive director of the Boston Green Ribbon Commission, a group of stakeholders working to implement the city's Climate Action Plan, gave a [presentation](#) on the group's work and the 2019 update of the climate plan, which highlights the steps the city will take over the next five years toward achieving carbon neutrality by 2050.

Cleveland emphasized the need for a "comprehensive and integrated approach," including reducing energy demand and maximizing energy

efficiency; electrification of transportation and heating; and a transition to greenhouse gas-free fuels. "There is no silver bullet," he said.

As next steps, he urged the RTO to engage stakeholders to reach consensus, "reinvigorate" the Integrating Markets and Public Policy Initiative, invest in the Future of the Grid analysis and develop a decarbonization "pathways" analysis with options including carbon pricing.

ISO-NE Update

Eric Johnson, ISO-NE's director of external affairs, gave the group an [update](#) on activities in the RTO, including the impact of COVID-19 on power demand, the RTO's proposed 2021 budget and preparations for Forward Capacity Auction 15.

He said the RTO's latest Electric Generator Air Emissions Report showed carbon dioxide emissions dropped by 31% during the 10-year period of 2009 to 2018. Nitrogen oxide emissions decreased by 43% and sulfur dioxide emissions plunged 94% over the same period, he said. ■

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.



ISO-NE News

Consumer Advocates Upset with Pick for ISO-NE Board

Nominating Process Under Scrutiny

Continued from page 1

Vannoy, who joined the PUC in 2012 and served as chair from 2014 to early 2019, is now vice president of Maine Water. ISO-NE [announced](#) Friday that Vannoy was elected to the RTO's 10-member board on a slate with incumbent Directors Brook Colangelo, who was elected to his second term, and Roberto Denis, who will begin his third and final term. The slate was approved by the RTO's board last week, following its [endorsement](#) by the New England Power Pool Participants Committee on Sept. 3. Vannoy's three-year term begins Oct. 1.

Vannoy emerged as the replacement for retiring board member Christopher Wilson following a confidential nominating process that some stakeholders now want to change.

Vannoy was nominated by the Joint Nominating Committee (JNC), a panel comprising seven current board members, NEPOOL's six sector leaders and New Hampshire Public Utilities Commissioner Michael Giaimo, representing the New England Conference of Public Utilities Commissioners (NECPUC).

Although the JNC approved the slate unanimously, stakeholders told *RTO Insider* that the leaders of NEPOOL's End User and Alternative Resources sectors attempted to withdraw their support for Vannoy after hearing negative feedback from their sector members. Doug Hurley, head of the AR sector, and Michael Macrae, head of the End User sector, did not respond to requests for comment.

Under RTO rules, the sector leaders were



Brook Colangelo, ISO-NE | ISO-NE

not permitted to identify Vannoy until after the JNC voted. The names of Vannoy and the other members of the slate were submitted to the Participants Committee in late August in advance of the Sept. 3 vote, which required 70% support for endorsement.

Disgruntled stakeholders say Vannoy's selection highlighted two problems with the nominating process: the secrecy that resulted in the two sector leaders endorsing a candidate widely opposed by their caucuses, and the inability to vote on candidates individually.

Nancy Chafetz, chair of the Participants Committee, confirmed Monday via email that "a number of members suggested potential enhancements to the nominating process."

"Based on the discussions, the NEPOOL members of the JNC committed to explore the suggestions with the full JNC when the process for the next slate got underway in the late fall," Chafetz said.

Vannoy, a graduate of the U.S. Naval Academy and a 20-year Navy veteran, holds a master's degree in civil and environmental engineering from Cornell University. He did not respond to a request for comment Monday.

In a statement released by ISO-NE, Vannoy said he was honored to join the board "during this pivotal time for the energy industry, the environment and those looking to the ISO for reliable, affordable and increasingly cleaner energy."

An appointee of controversial former Gov. Paul LePage, Vannoy angered consumer advocates and clean energy developers in several instances, according to Andrew Landry, Maine's deputy public advocate, and others:

- An investigation of a competitive energy supplier that Landry says "languished" for two years under Vannoy.
- Excluding customers and consumer advocates from an [investigation](#) of billing errors by Central Maine Power (CMP).
- A 20% [cut in funding](#) of the Efficiency Maine Trust, which administers programs to improve energy efficiency and reduce greenhouse gases.
- A "gross metering" program that Vannoy agreed to [reverse](#) for nonresidential solar customers after criticism in 2018.

"I think that his record is one that has been



Roberto Denis, ISO-NE | ISO-NE

problematic for clean energy advocates and for clean energy market participants," said Deborah Donovan, senior policy advocate and Massachusetts director for [Acadia Center](#), which promotes solutions to climate change. "But we very much hope that his function as a board member will not track to that, and we're looking forward to working with him and all the members of the board.

"I think that the part of the conversation that we need to have at NEPOOL is about whether some of the confidentiality requirements are hindering a more transparent conversation for things like board nominations," Donovan continued. "There's just so much at stake right now, not just with who's on the board, but other very significant policies and discussions that could impact how state policies are expressing their climate change and clean energy goals, for example."

Donovan said that she would like to see future board candidates reflect more ethnic, gender and racial diversity.

"Where we're at right now is just trying to move forward in a way that can expand the scope of what board members are evaluated on and ensure that values beyond the ones that were weighed for Mark's candidacy are included in future vetting processes," she said.

Landry said, "There's a problem with the ISO nominating process where there's no vetting of the candidates from stakeholders, other than the Nominating Committee before you're forced to vote, and then you're forced to vote [on] a panel."

ISO-NE News

Vannoy is “very intelligent ... and he’s well liked,” Landry said. “I think we had concerns he was being postured as being a representative of consumer interests. Not that a board member should be an advocate for consumer interests. ... You have people on the board who were former generation industry people or transmission industry people, and I think it’d be useful to have somebody on the board who was previously engaged in consumer advocacy, and I guess we don’t view being a member of a regulatory commission as being synonymous with that because they’ve got to balance the interests of all the parties.”

One stakeholder who asked not to be identified said the issue of slate voting, which has been raised in past years, is particularly acute now. “This is an important position. ... If I were being interviewed for a job, I wouldn’t expect to be voted on as part of a panel.”

The stakeholder also said the confidential nature of the process was problematic. “I certainly understand why discretion is important, but if we’re to continue the way we are going now, [the late opposition to Vannoy] could happen again. It’s unfortunate for the candidates, unfortunate for the Nominating Committee and unfortunate for NEPOOL members. This is their moment to raise objections. But if you can’t stop the process, why are we even doing it? What I witnessed was clearly a process that did not function.”

“I think the slate-voting issue concerns a lot of people,” said a second stakeholder who requested anonymity. “People want to be able to vote for the board member.”

The stakeholder said winning changes on the confidentiality of the nominating process was more likely, however. “Getting ISO-NE to change the three-person slate is going to be really difficult,” the stakeholder said.



Then-Maine PUC Commissioner Mark Vannoy (left) and ISO-NE CEO Gordon van Welie at NECPUC’s 71st annual symposium in 2018 | © RTO Insider

The nominating rules are contained in the *Participants Agreement* (PA) between ISO-NE and NEPOOL, and changes to these rules can be made with the consent of both, according to Janine Saunders, the RTO’s corporate communications manager.

“Confidentiality rules are not a part of the PA but are a requirement of the search process,” Saunders said in an email. “Most prospective candidates do not wish to have their identities publicly revealed for privacy reasons. As a result, members of the JNC sign a confidentiality agreement. A nationally recognized executive search firm then presents potential candidates to the JNC, and those candidates can have confidence in their anonymity during the early selection process.”

Praise from ISO-NE, States

Calpine’s Brett Kruse said in an interview Monday that his company supported Vannoy’s appointment even though he voted for CMP’s New England Clean Energy Connect transmission line, which Calpine fought.

Kruse said state regulators rarely have strong energy backgrounds when they begin their service. “What you’re looking for are smart, open-minded curious thinkers. Mark was that kind of guy. For me, those are the same kind of attributes that you want a board member to have.”

ISO-NE board Chair Kathleen Abernathy said in a statement that Vannoy’s background as chair of the Maine PUC, “where he was entrusted with protecting Maine consumers, ensures Mark will bring unique experiences and perspectives to the board.”

She noted that his candidacy was also supported by regulators from all six New England states, who sent letters of endorsement to

“There’s a problem with the ISO nominating process where there’s no vetting of the candidates from stakeholders, other than the Nominating Committee before you’re forced to vote, and then you’re forced to vote [on] a panel.”

— Andrew Landry, Maine’s deputy public advocate

the JNC.

Maine’s three current commissioners praised Vannoy’s “strong advocacy for Maine ratepayers.”

“We believe you have selected a great candidate,” Giaimo and New Hampshire’s other two commissioners said in a letter to the JNC. “Beyond his technical and engineering skills, Mr. Vannoy has a tremendous understanding of the regional markets and is well versed in system operation and planning.”

The New Hampshire commission thanked the JNC for “prioritizing NECPUC’s concern that the next ISO board director have state regulatory experience to provide focus on consumer costs.”

ISO-NE CEO Gordon van Welie praised Vannoy’s “wealth of first-hand knowledge of the many perspectives that exist around planning for New England’s energy future.”

“This, combined with his expertise in critical infrastructure planning, security and management, will strengthen the ISO’s decision-making,” he added.

Landry said Vannoy is “well qualified” for the board.

“I don’t have any problem with him personally being on the board,” he said. “My problem is I think the ISO is patting itself on the back now [that] they’ve got somebody with this experience on the board. In our view, he doesn’t fit the bill of having been the representative of consumer interests.” ■

ISO-NE News

NEPOOL Transmission Committee Briefs

Northern Maine Seeks to End TOUT Charges

The Northern Maine Independent System Administrator (NMISA) is asking New England transmission owners to eliminate through-and-out (TOUT) transmission charges for transactions between it and ISO-NE, similar to the reciprocal discount currently used by the RTO and NYISO.

NMISA CEO Ken Belcher and consultant Steve Garwood of PowerGrid Strategies outlined the proposal to the New England Power Pool Transmission Committee on Sept. 15, saying it would eliminate pancaked transmission charges between the two regions, “consistent with FERC’s longstanding policy of eliminating seams issues where possible.”

NMISA, which serves a peak load of about 138 MW in Aroostook, Washington and Penobscot counties, is not directly interconnected with the rest of New England. Its two regions — Versant Power’s Maine Public District (MPD) in the north and the Eastern Maine Electric Cooperative in the south — connect to ISO-NE through the transmission facilities of New Brunswick’s NB Power. (Versant Power was formerly known as Emera Maine.)

Officials said the change would result in a “de minimis” impact on transmission rates for both regions while improving market efficiency and liquidity and increasing generation competition by reducing the costs for Northern Maine to access ISO-NE generation and for the RTO to use the region’s wind resources.

Had the proposal been in effect during 2019, it would have increased the June 1, 2020, regional network service rate by 4 cents/kW-year (0.03%), NMISA said, while MPD would see a 1.3% increase.

Northern Maine currently purchases about 70,000 MWh annually from ISO-NE, producing \$67,000 in transmission revenue not subject to the discount. By reducing the seams costs, that could rise to 659,000 MWh, producing non-discounted charges of \$633,000, NMISA said.

Increasing south-to-north transactions also would reduce congestion at the Orrington-South interface, potentially reducing curtailments of Northern Maine’s wind power exports to the RTO, the ISA said.

Northern Maine’s renewable exports are currently worth \$2.5 million in renewable energy credits. That could increase by \$750,000 through scheduling optimization, NMISA said. “Also, there is potential for further development of renewables up to 100 MW in Northern Maine for delivery to New England based on unused existing transmission capacity. Exporting the energy from these new resources to ISO-NE is unlikely to occur absent implementation of the proposed discount,” it said.

In its first presentation on the proposal at the joint Transmission/Reliability committees meeting in August, NMISA said MPD would have lost \$164,546 in TOUT revenue had the charge been eliminated in 2019. In response to a question, it acknowledged that the revenue would have been \$874,546 had MPD not already been discounting its export point-to-point rate. “However, absent continuation of the discount, it is unlikely that the same level of transactions would occur as occurred during 2019,” NMISA said.

Garwood said Northern Maine will ask ISO-NE’s Participating Transmission Owners Administrative Committee (PTO AC) at its meeting today to issue a notice of intent to eliminate the TOUT.

ISO-NE Proposes Tariff Revision on Transmission Charge Exemption for Storage

ISO-NE shared proposed Tariff revisions it intends to include in its third compliance filing on FERC Order 841 after the commission last month said the RTO had failed to demonstrate that a storage resource that is self-scheduled to charge at a fixed megawatt quantity is providing a service that warrants exempting it from transmission charges. (See [FERC OKs Most of ISO-NE 2nd Storage Compliance](#).)

Jennifer Wolfson, an attorney for ISO-NE, presented the revisions on behalf of the RTO and PTO AC. Addressing FERC’s concern with self-schedules, she said that “a charging self-scheduled” storage dispatchable asset-related demand (DARD) provides similar services as “a charging pool-scheduled” storage DARD.

ISO-NE and the PTO-AC contend that all charging megawatts of a self-scheduled storage DARD supply voltage support and reactive control. “A self-scheduled resource is required to follow ISO dispatch instructions, without delay, to consume at the requested megawatt level; therefore, when it charges it provides real-time balancing of supply and demand and operating reserve,” they say. “A charging self-scheduled storage DARD, in contrast to other load, helps address reliability concerns given that the ISO can dispatch the load off if needed to address a contingency.”

The Tariff revisions state that storage will be exempt from transmission charges only if its charging load does not include station service load or any other load and “is providing one or more of the following services: reactive power voltage support, operating reserves, regulation and frequency response, balancing energy supply and demand, or addressing a reliability concern.”

The Transmission Committee will vote on the proposed Tariff revisions on Oct. 27, with a Participants Committee vote expected Dec. 3.

On Sept. 8, RTO officials outlined their plans for responding to two other directives from FERC’s Aug. 4 order. (See “Order 841 Compliance Update,” [NEPOOL Markets Committee Briefs: Sept. 8, 2020](#).)

The compliance filing is due Dec. 7. ■

— Jason York and Rich Heidorn Jr.



| NB Power

ISO-NE News

FERC Denies Waiver for Vt. Wind Farm

By Jason York

FERC on Thursday denied a request from Green Mountain Power for a waiver of ISO-NE's revised definition of settlement-only resources, saying the Vermont utility failed to show its request would be "limited in scope" and "not have undesirable consequences" (ER20-1755).

Green Mountain had sought a waiver from the revised definition, which will be effective Jan. 1, for its Searsburg wind power facility in southern Vermont, which went online in July 1997. Without the waiver, Green Mountain said it will have to register as a non-settlement-only resource and comply with the RTO's dispatch requirements.

But Green Mountain said its 11 Zond Energy Systems turbines cannot be operated remotely because the project was installed before the availability of supervisory control and data acquisition technology for wind facilities, and it is unable to acquire hardware or software to set up an active power limit because the turbines are among the last of its type still in operation. As a result, the power output of the facility can only be limited manually by taking individual turbines offline or shutting down the entire facility remotely by tripping the substation, which could damage the turbines, the company said.

FERC said Green Mountain failed to demonstrate that its waiver request was limited in scope and "span a specific and limited period of time." The company said it expects to decommission individual turbines at Searsburg "within the coming years" but did not provide a



| Green Mountain Power

specific decommissioning date.

The commission rejected Green Mountain's argument that the waiver request was limited in scope because it would involve only the settlement-only resource Tariff provisions.

Although Searsburg has a nameplate rating of 6 MW, Green Mountain said the facility has

only a 20 to 25% capacity factor and produces an average of 1.2 to 1.5 MW.

"Green Mountain claims, without further explanation, that any harm would be minor due to the small size of its facility, but the fact that a facility is small does not alone sufficiently demonstrate that a waiver would have no undesirable consequences," FERC said. ■

GOES VIRTUAL!

Calendar & Registration on www.necanews.org

NECBC's 28th Annual Executive Energy Conference

Energy and Environmental Leadership in Times of Unprecedented Uncertainty

A Two-Day Virtual Event November 12-13, 2020

www.necbc.org/energy-trade

Sept 25, 2020

Economy-Wide Decarbonization Pathways, Policies and Programs in N.E.

Co-Keynotes:
Secretary Kathleen Theoharides, MA EEA
Commissioner Katie Dykes, CT DEEP

Full Agenda/Register Here

MISO News

MISO Ready to Intensive Transmission Planning

By Amanda Durish Cook

Two recently announced special transmission planning efforts could have MISO members soon stringing miles of new wires across the footprint.

Stakeholders heard last week that a recently announced long-term transmission plan may result in project approvals as early as late 2021. At the same time, MISO and SPP will partner on an extra study focusing on transmission projects that could bring more of the renewable generation in the RTOs' interconnection queues online. (See [MISO, SPP to Conduct Targeted Transmission Study](#).)

Jennifer Curran, MISO's vice president of system planning, said during the Board of Directors' teleconference Thursday that while member companies' renewable transition plans are disparate, stakeholder attitudes have shifted in favor of new transmission to support the metamorphosing generation portfolio.

"I think in our stakeholder community, we're in quite a different place, even from a year ago," Curran said. "Not all stakeholders are enthusiastic about new transmission ... but we have received a lot of letters, feedback [and] emails from stakeholders saying, 'Yes, it's time to get going.' 2030 is the equivalent of tomorrow when you're talking about long-term, large-scale transmission projects. The work must begin today."

MISO in mid-July confirmed it will undertake a series of long-range transmission planning studies under its annual transmission planning cycles. (See [MISO Foresees Massive Shift to Renewables by 2040](#).)

Curran likened long-term planning to considering buying a new car rather than replacing a high-mileage car's bald tires and fixing an oil leak. Long-term projects will not be approved *en masse* in a special portfolio, but under different annual MISO Transmission Expansion Plans, she said.

"With the Multi-Value Projects, it took four or five years to decide on projects for board approval. I just don't think we have that kind of time here to bring projects forward for approval in 2025," Curran said during the board's System Planning Committee meeting Sept. 15.

From 2020 to 2022, MISO *expects* members to bring more than 25 GW in new generation online. That number pales in comparison to the 756 projects, totaling 113 GW, currently



Jennifer Curran, MISO | MISO

awaiting interconnection in its queue. (See [MISO Processing Heftiest Interconnection Queue Ever](#).)

Curran acknowledged it will be challenging to find that "just-right, Goldilocks" level of long-term project approvals.

MISO and stakeholders will also work on cost-allocation processes next year as more immediate project needs emerge, she said.

The Organization of MISO States last week announced it has formed a special committee to examine and advise MISO on possible cost-allocation methods for long-term transmission projects. The special committee will be helmed by Indiana Utility Regulatory Commissioner Sarah Freeman.

Curran said the regulators' perspective on cost allocation will be invaluable to MISO.

Teamwork with SPP

In a first, SPP CEO Barbara Sugg joined the MISO board's virtual meeting on Thursday to discuss the RTOs' increasingly crowded generation interconnection queues, the catalyst for the new joint study.

"SPP and MISO are such similar organizations dealing with such similar issues. ... Our interconnection queue certainly draws the most criticism in SPP, and I'd wager MISO gets its share of criticism too. I think there's no better time to collaborate and work together," Sugg said.

"We thought about those queues ... and how to make a difference for both of our members," MISO CEO John Bear said in agreement.

MISO Executive Director of System Planning Aubrey Johnson said the study will likely last a year and is meant to identify project opportunities that wouldn't be unearthed in the RTOs' coordinated system plan studies.

Sugg gave MISO staff her "heartfelt thanks" for joining forces with SPP to possibly plan transmission together.

MISO Board Chairman Phyllis Currie said it was refreshing to see the cooperation between the two RTOs.

"I think her presence today says a lot about the level of commitment," Currie said of Sugg's address.

"Meeting after meeting, I've heard from our stakeholders that we need to do something about our seams issues. I hope this is evidence that we hear you," Currie told stakeholders. "We can't solve all seams issues, but I think it's important we show that we're listening to concerns."

Director Baljit Dail said the "fantastic" teamwork between MISO and SPP was difficult to imagine more than a decade ago when he joined the board. "It may have taken a bit of time to get there, but we got there," he said.

Clean Grid Alliance's Beth Soholt also commended MISO and SPP for agreeing to the "important undertaking."

Director Mark Johnson asked that MISO executives update the board on the study's progress during the March quarterly board meeting. ■

MISO News

MISO Monitor Rebutts Uneconomic Coal Commitment Studies

By Amanda Durish Cook

Uneconomic self-commitments of coal resources in MISO's footprint are not occurring at the clip that critics imagine, the RTO's Independent Market Monitor said in new findings last week.

IMM David Patton released an analysis showing that most of the footprint's coal self-commitments are lucrative. The Monitor found that 90% of 6,300 coal resource commitments from 2016 to 2018 were profitable. In 2019, 83% of coal self-commitments were economic. Patton said the 2019 percentage was lower because overall energy prices drifted downward during the year.

"Generally, our coal resources are starting when it's economic to start, despite some recent concerns and studies saying otherwise. We don't find those studies to be credible," Patton told MISO board members during a virtual Markets Committee meeting Sept. 15. "In fairness to the authors of those studies, they don't have access to some of our cost data."

The report is a response to increasing scrutiny around coal plants' self-scheduling and studies that have reported that customers shell out more in rates as a result. The Union of Concerned Scientists has said Xcel Energy, DTE Energy, Cleco Power and Consumers Energy are MISO's worst offenders. (See [UCS Analysis Knocks Coal Self-commitments.](#))

The Monitor said that when coal self-commitments were unprofitable, it was sometimes because of decisions based on MISO's day-ahead market prices that didn't pan out.



MISO IMM David Patton | © RTO Insider

Had day-ahead pricing prevailed, Patton said, less than 10% of coal commitments between 2016 and 2019 would still have been made at economic losses.

"While this indicates room for improvement, we find that the vast majority of coal resource commitments were efficient," Patton wrote. "Overall, we believe that the decisions of the owners of coal resources to start them or to keep them online have been efficient, even when they are not profitable and generating negative operating net revenues."

The Monitor did find that merchant coal generation tends to operate more economically than its integrated counterparts. "A small share of integrated utilities operate much less efficiently than others," Patton said.

He urged those utilities to take extended

outages in shoulder seasons and consider economically offering their resources more frequently in the day-ahead market. Patton said that "economic offers that are discounted to reflect the costs of cycling would allow the day-ahead market to economically evaluate whether to keep the resources online for the following day."

Patton also suggested MISO consider publishing more hours of future pricing data. He noted that while the grid operator's day-ahead market evaluates commitments and schedules over 36 hours instead of 24, it does not release the prices for the additional 12 hours beyond the following day. Patton said those additional 12 hours of data could "provide valuable insight to coal resource owners seeking to make the most efficient dispatch decision possible for the following day." ■

ENERGY BAR ASSOCIATION

Commit. Engage. Ignite.

EBA FALL CONFERENCE
OCTOBER 13-14, 2020
 1:00 PM - 5:00 PM ET

GCPA
 Gulf Coast Power Association

SAVE THE DATES!
GCPA Fall Conference is Going Virtual

GCPA 2020 VIRTUAL FALL CONFERENCE
 WATCH YOUR EMAIL FOR MORE DETAILS IN THE COMING WEEKS

SEP 29TH - OCT 1ST REGISTER TODAY!

The 2020 OMS Annual Meeting
 Thursday, October 29th

Please join us *virtually* for engaging speakers, stimulating conversation, and collaboration!

Register Today!

OMS
 Commission of MISO States
 Established 2003

MISO News

MISO to Finish 2020 Under Budget, Courtesy Pandemic

By Amanda Durish Cook

The coronavirus pandemic continues to clamp down on MISO's spending, with the RTO again predicting to be millions under budget by the end of the year.

Staff told the Board of Directors during its meeting Thursday that they expect MISO's base operating expenses to be about \$6.6 million, or 2.5%, below budget. That's a slight decrease from the \$7.3 million variance the RTO reported to the board in June. The RTO budgeted \$264.7 million in base operating expenses this year. (See [Pandemic Pause Leaves MISO Under Budget.](#))

MISO has reduced expenses through slimmed-down employee training and travel expenses, a product of social distancing measures aimed at slowing the virus's infection rate. The grid operator also has a higher-than-normal employee vacancy rate, as the pandemic complicated its usual hiring tempo.

Carl Nystrom, MISO's senior director of corporate planning and analysis, said building maintenance expenses are also down this

year because the facilities are less populated and offices used less often. However, he said the grid operator is buying a new air filtration system and equipment to improve ventilation in its Carmel, Ind., headquarters.



MISO CFO Melissa Brown | MISO

CFO Melissa Brown said MISO expects to bill its members for 703 TWh of energy in 2020, a 3.3% reduction from 2019's 727 TWh. Lower load levels during pandemic lockdowns have now inched back to near normal.

"In 2021, we are forecasting a return to normal," Brown said, adding that MISO expects to collect on about 730 TWh next year.

MISO has a 45-cent/MWh Tariff revenue rate in effect for 2020 and will have a 44-cent rate in effect for 2021.

The grid operator said it expects continued pandemic-related cost savings to persist through at least early 2021. Brown said MISO

anticipates pared-down travel and an embargo on in-person stakeholder meetings through June 2021.

"Obviously if the pandemic eases before then, we could have travel pick up," she said.

MISO is planning for a \$379 million budget in 2021, a 3% increase from 2020. Next year's budget includes a \$270.2 million base operating budget, a \$50 million investment budget and \$58.7 million in other operating expenses.

"Likely in 2022, we expect to see upward pressure on our budget," Brown said. She attributed the increase to a more normal travel schedule, rebounding employee training activities, technology upgrades, and increased costs from running the old and new market systems in parallel during the new platform's testing phase.

CEO John Bear said technology costs are trending toward subscription-based payments instead of lump-sum investments.

"We will be expensing things in the year instead of amortizing them," Bear said of future budgets. ■

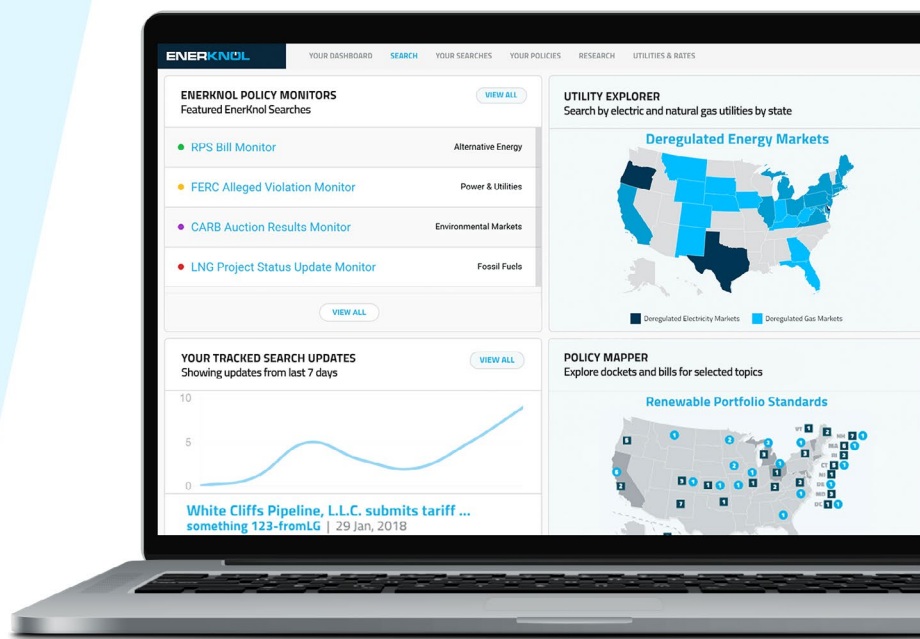
ENERKNOL

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

MISO News

MISO Members Call for Dynamic Line Ratings

By Amanda Durish Cook

MISO members last week said the RTO's footprint could benefit from transmission line ratings that change with the weather and other factors.

Clean Grid Alliance's Natalie McIntire said static, conservative line ratings might be unnecessarily limiting transmission capacity and the amount of new generation resources that can interconnect to the MISO system.

"There might be transmission limitations that might exist for a small number of hours every year," she said during a Advisory Committee conference call Wednesday.

McIntire also said it would be helpful if MISO transmission owners offered more information on how they form line ratings and for the RTO to identify the circuits that stand to benefit the most from more flexible ratings.

"As we're all trying to make the most efficient use of the system, it would be helpful for MISO to tell us which are the lines that have the most potential gap between the static and dynamic ratings," she said. Dynamic line ratings (DLRs) will ensure that consumers "get the most from their investment," McIntire said.

DTE Energy's Nick Griffin said MISO and its TOs should concentrate first on congested flowgates with the largest impact. "It doesn't have to be broad range right at first," he said.

Other members said MISO should establish a standard method for TOs to report the latest line ratings.

Organization of MISO States Executive Director Marcus Hawkins said transmission ratings in the RTO aren't formed transparently. He has asked stakeholders to decide how large a role the grid operator should take in managing line ratings.

"MISO really could play a critical role in deciding where these enhanced ratings could be most beneficial and most cost-effective," Hawkins said last month during an Advisory Committee teleconference.

Independent Market Monitor David Patton has said temperature-adjusted ratings would save the RTO about 10% of its total transmission congestion. He has estimated that MISO stands to save more than \$150 million on an annual basis but says TOs remain reluctant to adopt DLRs because it involves investing in equipment and manpower with little return. Entergy already uses ambient-adjusted ratings

in MISO South.

"The costs of not utilizing our transmission network is large," Patton said during MISO's Market Subcommittee meeting in April.

The Monitor and TOs have been discussing the possibility of DLRs in nonpublic Reliable Operations Working Group meetings.

The TOs said they're working on their own benefit analysis of DLRs. Some cautioned that while some lines' ratings could go up, some could also be lowered.

Transmission Owners sector representative Stacie Hebert said changes to facility ratings could result in higher cost recoveries and additional risk to TOs' equipment.

DLR implementation made a shortlist of improvements that the MISO community was interested in working on in 2020. (See [7 Projects Make MISO 2020 Integrated Roadmap](#).)

Some stakeholders have said that while it's true that lines can carry more capacity in below-freezing temperatures, it's the generation component that's often lacking in emergency conditions. That is especially true in MISO South, which is less prepared for arctic blasts. ■



© RTO Insider

MISO News

MISO Looks Back on Turbulent Summer

Grid Operator Prepares for Fall and Beyond

By Amanda Durish Cook

With a challenging summer in the rearview, MISO expects more traditional reliability risks this fall while making blueprints for an industry roiled by change.

MISO's relatively low 114-GW summer peak in early July and average \$21/MWh real-time prices belied a whirlwind season containing two emergency declarations. The peak was lower than both the grid operator's projection (125 GW) and last summer's peak (121 GW).

In late summer, MISO directed its first load-shed event after Hurricane Laura ripped through the heel of Louisiana. (See [MISO Keeps Advisories in Effect a Week After Laura](#).)

MISO Executive Director of Market Operations Shawn McFarlane said the RTO began preparations for the hurricane about a week before the storm's landfall. At the grid operator's orders on Aug. 27, Entergy shed about 573 MW of load in the West of the Atchafalaya Basin load pocket.

The load-shed orders maintained grid stability and kept MISO South from experiencing cascading outages, McFarlane said during a summer review Sept. 15 before the Board of Directors' Markets Committee.

MISO estimated that uplift payments totaled \$90 million during the event. McFarlane said that is the largest the RTO has ever experienced from a single episode.

It could take until the end of October to restore power to all Louisiana ratepayers, based on Entergy's restoration estimate, he said. About 80,000 Entergy customers remain without power, down from approximately 700,000 immediately after the storm.

McFarlane also said MISO monitored Hurricane Sally, which was brewing in the Gulf of Mexico before ultimately tracking east of its footprint.

The grid operator continues to review the Laura event and will hold future stakeholder discussions during the Market Subcommittee's public session, McFarlane said. Subcommittee Chair Megan Wisersky has proposed a special joint meeting with the Reliability Subcommittee on Oct. 1 to discuss the hurricane's impact on the grid.

RTO executives also reported that proactive



Restoration work in the wake of Hurricane Laura | Entergy

communication with other grid operators was much improved during its other maximum generation event on July 7, when MISO Midwest was seized by a stubborn heat wave.

"It's good to hear that coordination has improved. That's what the public expects of us," Board Chairman Phyllis Currie said.

"This was an exciting quarter. Usually I begin by saying it was an uninteresting quarter," Independent Market Monitor David Patton said.

Patton said he is concerned about the availability of supply in Michigan's Lower Peninsula, which racked up high congestion costs this summer. He said three resources in one transmission pricing zone that cleared the annual Planning Resource Auction were unavailable for most of the summer.

"They provided us virtually no value during the

summer," he said.

MISO: Fall Emergency a Possibility

McFarlane said MISO expects near normal load going forward.

"Load levels will more or less be at the level of what we call non-COVID," McFarlane told the board. "We haven't totally confirmed this, but our suspicion was air conditioning load was making up for economic impacts" during the summer, he said, explaining that mostly empty offices were still being temperature controlled while widespread work-from-home employees kept their houses comfortable too.

MISO might have to declare an emergency this fall if conditions are right, despite its 152 GW of available capacity paired with a 113-GW forecasted seasonal peak.

MISO News



“As we say every quarter, if we end up in a high-load, high-outage situation, it may require access of our emergency resources,” McFarlane said.

He said higher outages paired with extreme weather conditions could lead to tightening supply. MISO said it’s preparing to work around more outages than usual this year, as the pandemic lockdowns in spring led to maintenance rescheduling.

“In the spring, 20 GW of outages were deferred,” McFarlane said.

MISO expects to have a little more than 115 GW of total available capacity in September after factoring in outages. If load stays at normal levels – about 112 GW – the grid operator doesn’t foresee a problem. But if high demand pushes load to 119 GW, MISO will have to dip into at least a few gigawatts of its 14.6 GW in load-modifying resources and operating reserves. The supply picture worsens if MISO has only 104.1 GW of capacity, as predicted by its worst-case outage scenario.

The RTO said that as usual, the largest amount of generation outages are slated to occur in October and November. It said the two months contain the highest potential for significant generation outages on monthly peak days.

MISO projects about 94.2 GW of available capacity in October with nearly 90 GW of usual load and a 95.2-GW high load. Increased outages could cull capacity to just 90.6 GW, making emergency measures all but certain in a high-demand scenario.

In November, MISO said available capacity should rise to 97 GW, handling both a typical 90.3 GW load and a 95.7 GW high load. However, if generation doesn’t return as expected,

MISO could have just 92.6 GW of capacity on hand during the month, spurring operational challenges.

Changes Ahead

MISO Executive Director Ken McIntyre, a former NERC and ERCOT staffer, is helping the RTO modernize its operations and markets as the electric industry moves toward renewable and more dispersed generation.

“Today, we rely on operator experience and years and years of on-the-job-training. Tomorrow, we will have to rely on advanced monitoring and decision-support tools that predict conditions and provide guidance. Today, more days are the same. Tomorrow, more days will be different. The seasonal and peak demand profiles will become ... less obvious and less meaningful for day-to-day operations,” McIntyre said.

He said MISO can launch automated tools using artificial intelligence in control rooms that can “pre-position the grid” for extreme weather or outages.

Vice President of System Planning Jennifer Curran said operations decisions will rely more on artificial intelligence and automated processes in the future.

“Today, we rely on operators with years of experience, and many of them are near retirement,” Curran said during the full board’s Thursday meeting. “There’s not a ready pool of additionally experienced operators to replace them.”

Director Barbara Krumsiek asked how MISO might incorporate “non-traditional forecasting arenas,” such as social forces, to predict energy demand. She pointed out that a coronavirus

“Today, we rely on operator experience and years and years of on-the-job-training. Tomorrow, we will have to rely on advanced monitoring and decision-support tools that predict conditions and provide guidance. Today, more days are the same. Tomorrow, more days will be different. The seasonal and peak demand profiles will become ... less obvious and less meaningful for day-to-day operations.”

— Ken McIntyre, MISO Executive Director



Damaged transmission infrastructure caused by Hurricane Laura | Entergy

vaccine’s introduction could rally the economy and cause electricity demand to spike.

McIntyre said MISO might gather society trends by “scraping” data on social media to influence forecasts.

Patton also said MISO should transition to a “more sophisticated, probabilistic forecast” in their control rooms. He said that when faced with tight conditions, MISO tends to overcommit resources. That overcompensation often results in high revenue-sufficiency guarantee payments but low LMPs, he said.

“The tools could be much better to let operators make more surgical decisions,” he said. ■

MISO News

FERC Upholds MISO Self-fund Order, Glick Dissents

By Amanda Durish Cook

FERC on Thursday left MISO transmission owners' ability to self-fund network upgrades intact over a protest from the American Wind Energy Association and the dissent of Commissioner Richard Glick (*EL15-68-005, et al.*).

MISO in August 2018 reinstated TOs' rights to self-fund network upgrades necessary for new generation. That meant generator interconnection agreements signed between June 24, 2015, and Aug. 31, 2018, could be revised to allow TOs to fund network upgrades and bill interconnection customers. (See *MISO Gauging Aftershocks of TO Self-fund Order.*)

The change came after the D.C. Circuit Court of Appeals remanded FERC's 2015 decision barring TOs from electing to provide initial funding for network upgrades.

AWEA argued that the commission's ultimate decision is "patently discriminatory" because it will allow those who had never applied for the self-fund option to do so and treat different interconnection customers differently. The association pointed out that before mid-2015, only one MISO TO has ever opted to self-fund a network upgrade.

FERC disagreed with the claims of discriminatory treatment.

"The fact that transmission owners may not have elected transmission owner initial funding in GIAs they were a party to prior to the interim period ... does not, by itself, support a finding that such transmission owners should be barred from electing transmission owner initial funding on an ongoing basis," FERC wrote.

AWEA also argued that FERC strayed from its usual mode of "preserving the sanctity of contracts." It said the commission "has previously only departed from that precedent in extreme circumstances, such as fundamental industry restructuring and reorganization of a bankrupt utility." The association contended that TOs shouldn't be allowed to self-fund upgrades under multiparty facilities construction agreements because MISO's original compliance filing didn't mention such agreements.

FERC disagreed, noting that prior orders found that MISO's facilities construction agreements and multiparty facilities construction agreements should be treated like GIAs.

Glick said the commission's order didn't "meaningfully" address AWEA's concerns about the possible discrimination of some interconnection customers.

"Today's order ... doubles down on the unwise

decision to permit the reopening of numerous previously negotiated interconnection agreements, despite considerable evidence that allowing transmission owners and affected-system operators to retroactively elect to self-fund the network upgrades associated with those agreements will result in substantial harm to interconnection customers and could lead to project terminations," he wrote.

AWEA also argued that resource owners may have already started depreciating network upgrade investments in their books. FERC said that since 2015, generation owners have been put on notice that TO self-funding could again become a possibility.

Glick said that FERC stumbled by simply reversing its 2015 decision after the D.C. Circuit's remand. He pointed out that the commission five years ago found that allowing TOs to unilaterally elect to fund upgrades could deny interconnection customers the "opportunity to finance network upgrades with more favorable rates and terms."

He also said FERC's decision to treat GIAs, facilities construction agreements and multiparty facilities construction agreements similarly was done without "any additional analysis or meaningful response to arguments raised by protesters." ■

ERO Insider

ERO Insider's website is now live! Here are our latest stories:



NERC RSTC Briefs: Sept. 15, 2020

FERC Opens Supply Chain Cyber Risk Inquiry

NERC Planning Lessons Learned on COVID-19 Response

Texas RE Names Albright as New CEO

FERC Accepts Removal of 18 NERC Requirements

RTO Insider subscribers have access to two stories each month. Use your RTO Insider credentials to log in at www.ero-insider.com

MISO News

FERC: No MISO Rules on Mid-queue Fuel Change Studies

By Amanda Durish Cook

FERC on Thursday said that MISO's Tariff was silent on the issue of whether a generation project can switch from wind to solar while in the RTO's interconnection queue (*ER19-1823-003*).

It also said that there was no requirement in Order 845 that requires grid operators to study projects that opt to change fuel types.

The issue stems from a Leeward Renewable Energy Development wind project currently in the definitive planning phase (DPP) of MISO's generator interconnection queue. The developer wants to convert the project to using solar energy while also retaining its position in the queue.

Leeward said MISO was disregarding its own Tariff when it refused to perform an analysis to determine whether switching the project would constitute a material modification. Borrowing a phrase from Order 845, Leeward

argued that the switch would result in "equal to or better" electrical performance.

Order 845 allows interconnection customers to make certain technological advancements to their generation projects without triggering a material-modification rule. Under the order, a customer can offer evidence that a requested technological change results in "equal to or better" performance. MISO must evaluate such claims and render a decision before projects can proceed.

Order 845 also dictates that changes between wind and solar technologies should not automatically be treated as non-material modifications because "such changes involve a change in the electrical characteristics of an interconnection request, and the transmission provider would likely need to evaluate the impacts of such changes."

MISO argued that it should not have to evaluate "mid-DPP fuel change requests" under Order 845 and said its Tariff doesn't permit fuel type changes to projects after they enter

the DPP.

But FERC said the Tariff allows Leeward to at least make a case for a fuel change in its generation project. It said Order 845 didn't change MISO's pre-existing material-modification provisions in its generator interconnection procedures. While Order 845 doesn't require the grid operator to study fuel type changes, FERC said MISO also doesn't have language in its generator interconnection procedures to preclude itself from studying fuel change requests.

"We find that the question of whether these pre-existing Tariff provisions allow an interconnection customer to submit a fuel change request after its project enters the DPP is therefore outside the scope of MISO's Order No. 845 compliance filing," FERC said.

The commission added that its decision was without prejudice to MISO making any filings to "further address the permissibility of, and requirements for, fuel change requests." ■



| Leeward Renewable Energy Development

MISO News

MISO, SPP Respond to Monitors' Seams Studies

By Tom Kleckner

MISO's and SPP's state regulators last week gave the RTOs' staffs an opportunity to respond to their market monitors' suggestions for improving interregional coordination between the two seam neighbors. (See [MISO, SPP Regulators Mull Seams Recommendations](#).)

After hearing from MISO's Jeremiah Doner and SPP's Casey Cathey, the Seams Liaison Committee (SLC), comprising regulators from the Organization of MISO States and SPP's Regional State Committee, offered up suggestions on potential SLC actions.

"We need to get serious about starting to prioritize these [recommendations]," said North Dakota Public Service Commissioner Julie Fedorchak, one of the more vocal regulators during the SLC's web meeting Sept. 14.

Ted Thomas, chair of both the Arkansas Public Service Commission and the SLC, proposed the committee break the recommendations and staff and stakeholder feedback into four buckets: actionable items, further analysis, planning topics and affected-system studies.

Topping the list of actionable items is market-to-market (M2M) coordination, in which the RTOs' manage congestion by using least-cost generation redispatch. The grid operators have been engaged in the M2M process since 2015, with SPP piling up more than \$93 million in settlement payments for congestion on its system caused by MISO.

MISO's Independent Market Monitor, Potomac Economics, [said](#) the RTOs could reap up to \$30 million in annual benefits by improving congestion management, noting that many changes would be incremental and only re-



SPP's Casey Cathey (left) and MISO's Jeremiah Doner participate in a 2018 panel discussion. | © RTO Insider

quire coordination between the grid operators.

Cathey, SPP's director of system planning, said the RTOs have been working to improve the process and asked for more time to let the changes take hold.

"If we see still lost opportunities ... or reliability concerns after those enhancements are in place, we will have to prioritize some of those [IMM] suggestions," Cathey said. "We absolutely would like to fix some of the issues we see in market-to-market."

Potomac's [analysis](#) of interface pricing generated more discussion than any other item. The Monitor viewed the RTOs' current interface pricing mechanism favorably but noted a flaw in how congestion is charged. FERC recently scheduled a technical conference to investigate complaints by American Electric Power and the city of Prescott, Ark., regarding the RTOs' overlapping congestion charges. (See [FERC Orders Tech Conference on MISO-SPP Congestion](#).)

Doner, MISO's director of seams coordination, said the grid operators agree improvements can be made to the pricing mechanism's design and methodology. He said resolving the issue would require changes to MISO's market systems, which won't be fully implemented until 2022. SPP plans to address the issue with a couple of projects that won't begin until that same year.

"There's a value to evaluating the interface pricing," Doner said. "At this point, it's too early to say what that should be."

"This is a very complex issue. Whatever we do will take a lot of thinking and additional analysis," Cathey said. With more than 250 tie lines along the MISO-SPP seam, he asked, "How can you properly send the right signal for imports or exports?"

Potomac President David Patton called in to dispute what he was hearing.

"The overall time frame, the complexity ... this has been studied for almost 10 years, including a study on unintended consequences," he said. "This can be done in a simplified form in a much quicker time frame. The flawed interfacing pricing that exists is generating costs. To say we're going to leave it for three, four or five years ... is not an appropriate action."

Cathey said it's a misconception that there's "a lot of money on the table" and "efficiencies to be gained" by fixing the interfacing pricing. He

said ramp limits and make-whole payments for exports are among the issue's barriers. Both he and Doner said they would be happy to work on interface pricing with the monitors.

"Both RTOs are paying for congestion relief on their neighbor's system. We're paying transactors to relieve constraints that neither one has a way to recover, and it ends up being uplifted to the customers," Patton said. "When people transact at inefficient levels, the overall market results are inefficient and that can hurt generators and load. We should be motivated enough to fix it."

Doner said MISO stakeholders consider coordinated transaction scheduling (CTS), the third item on the actionable list, to be a low-priority item and have placed its implementation in the Integrated Roadmap process's parking lot. MISO and PJM have been using CTS on their seam since 2017, he said.

"We're seeing that the volume of transactions that leverage that product is very small," Doner said. "What we hear from stakeholders and [transmission] customers is that's because of transmission service charges and the uncertainty [around] that pricing. Transmission service charges on the PJM seam are even smaller than they are on the SPP seam."

The RTOs said CTS implementation costs could be as high as \$10 million, effectively negating the SPP Market Monitoring Unit's [projection](#) of \$9.4 million to \$11.2 million in benefits.

The SLC's leadership has suggested that rate pancaking, unreserved use charges and joint dispatch need further analysis. The monitors' [study](#) on rate pancaking and unreserved use focused on real-time transactions, for which both RTOs already offer heavily discounted transmission service. The analysis did not evaluate the effect on long-term transmission service or day-ahead transactions.

"It would be worthwhile to get [the monitors'] response to those things at some point," Fedorchak said.

The IMM's [study](#) of joint dispatch found few benefits, noting that dispatching two systems that are already optimized separately yields little incremental production cost benefits. The SLC pointed out that the monitors did not analyze other benefits, such as reliability, reduced unit cycling or reduced reserve margins.

The SLC hopes to present a list of recommendations by the end of 2020 on how the RTOs can improve coordination across the seam. ■

NYISO News



NY Study Highlights Rising Methane Emissions

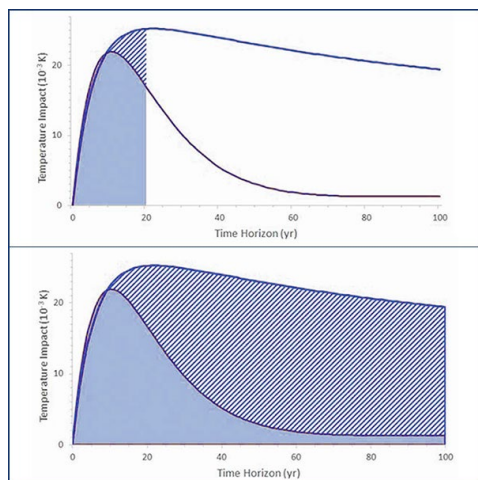
Finds Total GHG Emissions Unchanged Since 1990

By Michael Kuser

New York's greenhouse gas emissions in 2015 were virtually unchanged from 1990 levels, according to a newly published study that highlights upstream impacts and the role of methane under the state's revised reporting rules.

The *study*, published in the *Journal of Integrative Environmental Sciences* last month, concludes that methane emissions have grown as carbon dioxide emissions have declined, leaving New York's total GHG emissions in 2015 virtually unchanged from 1990.

The analysis by Robert Howarth, Cornell University professor of ecology and environmental biology, was based on the new emissions reporting rules enacted in the 2019 Climate Leadership and Community Protection Act (A8429), which calls for reporting to include emissions from outside New York if they are associated with energy use within the state. It also requires that methane emissions be compared with CO₂ over a 20-year time frame rather than the 100-year time frame still used by virtually all other governments in the world, according to Howarth. Methane is about 80 times as potent at trapping heat as CO₂ in the first 20 years but has a much shorter half-life.



Stylized comparison of the global temperature response over time from methane (solid) and carbon dioxide (striped). Methane is about 80 times as potent at trapping heat as CO₂ in the first 20 years but has a much shorter half-life. Other GHGs, including nitrous oxide and fluorocarbons, represent less than 4% of total emissions. | *Journal of Integrative Environmental Sciences*

Calculating Emissions

Howarth's paper compares emissions based on the CLCPA approach for GHG reporting with the traditional inventory, driven almost entirely by CO₂ emissions. As of 2015, the latest state data available for comparison, carbon emissions had declined by 15% since 1990, thanks to an 88% cut in coal consumption and a 27% decrease in petroleum use, he said, while methane emissions increased by almost 30% over the same period, largely from the increased consumption of natural gas. According to the new GHG reporting rules, methane rose from 28% of all fossil-fuel emissions in 1990 to 37% in 2015. (Other GHGs, including nitrous oxide and fluorocarbons, represent less than 4% of total emissions.)

"A robust conclusion is that total emissions have changed remarkably little over the past 25 years, when viewed through the lens of the CLCPA approach," Howarth wrote.

It is difficult to establish the 1990 baseline greenhouse gas emissions, which the state needs to finalize by December 2020, Howarth said. Next year, the state agencies will determine how to account for contemporary GHG emissions, he said.

"I would prefer they be done together in a combined way ... but I think overall, [the state agencies] have done a pretty good job," Howarth, one of 22 members on the state's Climate Action Council, told *RTO Insider*.

The CLCPA's mandate means "not simply to rely on EPA-packaged emissions estimates, but rather to fall back and use the best available science, including the peer-reviewed academic science," Howarth said. "They're not using EPA estimates at all, which is good, because the EPA has systematically low-balled [emissions], particularly methane emissions from the oil and gas industry, for decades and continues to do so. And the peer-reviewed literature is full of papers where that's been demonstrated time and time again."

New York state agencies did not do a thorough review of the peer-reviewed literature and are relying on the Greek model, a method developed in Europe for estimating GHG emissions, which doesn't reflect all the latest and best science, Howarth said. "I would have preferred the DEC [Department of Environmental Conservation] make sure they have the best science in there, but nevertheless, it's a step in the right direction."

Including out-of-state emissions in reporting "is a big step forward," he said, because most methane emissions occur at the site of gas production, processing and storage. "When we use natural gas here in New York, a lot of those methane emissions are occurring in Pennsylvania, West Virginia [and] Ohio, and we should take responsibility for them. The DEC in their *draft* has included that, but they've come up with an estimate of methane that I think is low. It's not as low as what the EPA would have you believe, but it's still somewhat low," Howarth said.

On the other hand, the DEC also included CO₂ emissions from out of state that are associated with the mining, processing and transporting of the fuel, whether coal, oil or gas, he said.

"And they came up with a pretty big number for that. I sidestepped that in my paper and said you might want to do it, but I thought it was a pretty big challenge — beyond what I was going to take on," Howarth said.

Last month, New York officials on the Climate Action Council discussed the DEC's newly *proposed* statewide GHG limits of 60% of 1990 emissions by 2030 and 15% by 2050. Administrative Law Judge Molly McBride will conduct two public comment hearing *webinars* for the proposed rule on Oct. 20, and public comments will be accepted by the DEC until Oct. 27. (See [NY Seeks Comment on Proposed Emissions Limits](#).)

Meeting the CLCPA's 2030 emissions target will require major reductions in natural gas use in the residential and commercial sector and similar cuts in petroleum use in transportation, Howarth said. "To date, the state has focused little attention on GHG emissions from these sectors and has instead prioritized reducing the use of fossil fuels to produce electricity."

Converting from natural gas heating to modern heat pumps will reduce GHG emissions even if the heat pump is powered by electricity generated from fossil fuels, Howarth said. "Similarly, electric vehicles reduce overall emissions compared to gasoline- and diesel-powered vehicles, even if fossil fuels are used to produce the electricity, because of the greater efficiency of the electric vehicles. Consequently, to reduce overall GHG emissions for New York state, electrification of heating and transportation systems must proceed as quickly as possible, even if this precedes reduction of fossil fuels to produce electricity." ■

NYISO News

NYISO ICAP/MIWG Briefs

Reserve Pickup Performance

NYISO analysis of reserve pickup (RPU) performance for winter 2019/20 shows that 76% of the time, resources provided more than 90% of total energy expected.

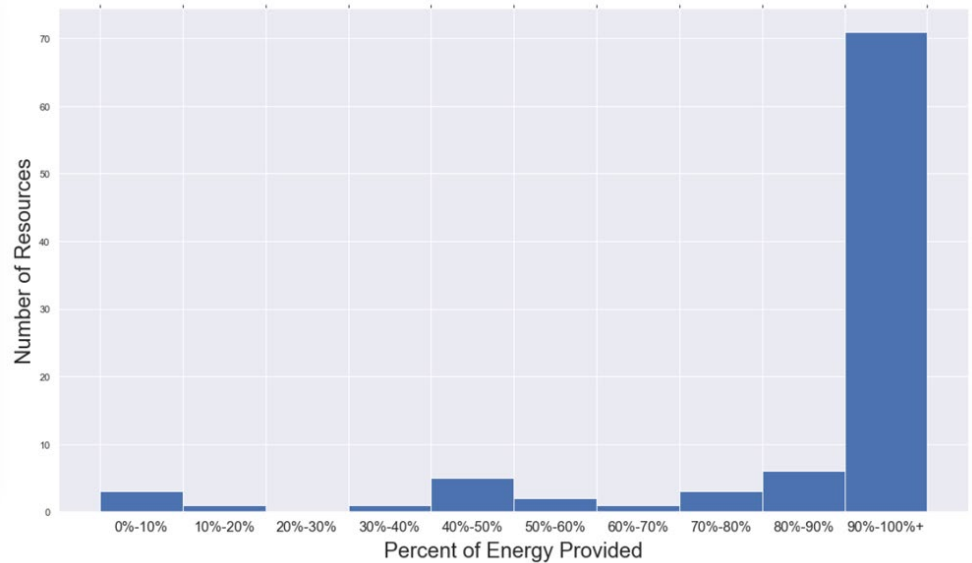
Control Room Operations Manager Jon Sawyer *told* the Installed Capacity/Market Issues Working Group last week that from November 2019 to April 2020, 16 RPUs occurred, and there were 93 unique instances in which a resource was asked to convert reserves to energy.

For gas turbines, total energy provided was measured at the 11th minute after the start of the RPU. For all other resources, total energy provided was measured one minute after the end time of the RPU.

One stakeholder asked how aggregated data used in the analysis can account for single generating units that fail to perform adequately, and whether the ISO can provide such breakout data for the upcoming RPU report for summer 2020.

Sawyer said the ISO cannot divulge unit-specific data, but that it has a process for generators that do not pass a performance audit and is working through the same process for RPU performance.

The process involves the same tight tolerances used in an audit. As soon as a unit fails, there is



This graph shows that 76% of the time, resources provided more than 90% of total energy expected. | NYISO

immediate communication through the transmission owner to the generator that it did not pass, and the Market Mitigation and Analysis Department starts follow-up immediately, Sawyer said.

If a resource does not perform, or performs poorly, it will fail the audit, upon which NYISO may derate the resource's response rates and possibly the resource's upper operating limit. For a gas turbine that fails to start during the

audit, there would be a derate down to 0 MW.

It's expected that the generator would respond with the cause of the failure and what has been done to mitigate it, Sawyer said. The ISO would perform another audit of the same generator within 48 hours.

New Business

NYISO acknowledged that, as part of the ongoing demand curve reset, it has proposed a revision to the logic of the model used to estimate net energy and ancillary services revenue earnings for the hypothetical peaking plant. The revision addresses a misalignment of natural gas prices with actual delivery date associated with such prices.

One stakeholder asked if the ISO has looked back to see whether the same thing happened in the model in use for the past three and a half years.

Michael DeSocio, the ISO's director for market design, said they are still investigating that issue and will have results in a week, or earlier if possible.

Another stakeholder asked about fast-start pricing revisions, which the ISO is supposed to be implementing by the end of this year.

DeSocio said that the software is in development and that the ISO expects to wrap it up in a couple weeks and move to testing, still on time for implementation by year-end. ■

— Michael Kuser

Pass and Fail Rates During a RPU				
	Pass	Fail	Total	Pass %
GTs	8	2	10	80%
All Resources	83	10	93	89%

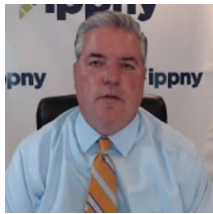
Total Quantity of Energy Expected and Provided During a RPU			
	Total Energy Expected (MW)	Total Energy Provided (MW)	Percent of Energy Provided
GTs	367	365	99.6%
All Resources	2815	3649	130%

The tables summarize the results of NYISO's reserve pickup analysis for November 2019 through April 2020, during which period 16 RPUs occurred. | NYISO

NYISO News

Overheard at IPPNY 2020 Fall Conference

More than 150 industry representatives, state officials, legal scholars and analysts attended the 35th annual Independent Power Producers of New York (IPPNY) Fall Conference last week to discuss resource adequacy, carbon pricing and emissions limits, as well as the broader need to address social and environmental justice.



IPPNY CEO Gavin Donohue | IPPNY

IPPNY President and CEO Gavin Donohue released a set of six *principles* to guide members on their varied approaches to the transition to renewable energy resources. Reliability comes first, followed by the need to use markets to achieve

decarbonization, electrify the transportation and heating sectors, develop needed transmission infrastructure, diversify fuels and technologies, and examine economic impacts.

“At some point in the near future, the question of New York’s reliability — generators’ ability to perform with quick, fast-starting, environmentally responsible units — is going to collide with the state’s public policy goals,” Donohue said.

Following is some of what we heard at the virtual meeting.

State Leadership

Ali Zaidi, chair of climate policy and finance in the office of Gov. Andrew Cuomo, highlighted three new initiatives this year to improve administrative efficiency and speed up the pace of the clean energy transition.

“The first is significant reform to our approach to permitting renewables within the state. You will be seeing soon proposals for how those changes get made here just a few months after the passage of the [siting] law,” Zaidi said.

The Office of Renewable Energy Siting on Wednesday proposed draft *regulations* for permitting new wind and solar energy projects, as directed by the Accelerated Renewable Energy Growth and Community Benefits Act included as part of this year’s state budget.

Second is the governor’s “*build-ready*” initiative whereby the New York State Energy Research and Development Authority (NYSERDA) will prepare existing or abandoned commercial sites and brownfields to bundle with renew-



Clockwise from top left: Emilie Nelson, NYISO; William Hogan, Harvard Electricity Policy Group; Matthew Schwall, IPPNY; Kathleen Spees, The Brattle Group; and Pallas LeeVanSchaik, Potomac Economics. | IPPNY

able energy contracts to provide de-risked package deals for private developers.

And third is the effort to speed up transmission infrastructure permitting and construction under the Public Service Commission’s grid study program, Zaidi said. (See *NYPSC Launches Grid Study, Extends Solar Funding*.)

“We know that if we want to decarbonize the entire economy, we need to help the grid reach further and deeper into the economy; specifically that means electrifying a greater share of the economy year over year,” he said. To that end, the governor this year launched an initiative to invest \$1.5 billion in preparing the infrastructure to support electric vehicle charging stations, he said. (See *NYPSC Approves \$700 Million for EV Chargers*.)

Asked what the administration’s thinking is on the upcoming carbon pricing conference at FERC and how it fits in with the state’s future, Zaidi said the technical conference would focus on state-of-the-art methods for evaluating the social costs of carbon and the implications for the power sector.

“Those are important conversations to have ... and over the summer, we have proposed draft *regulations* on the social cost of carbon, which is going to be important in thinking about how those social costs are shaping decisions within state agencies,” Zaidi said.

Social Justice

The Climate Leadership and Community Protection Act (*CLCPA*), signed by Cuomo in July 2019 and enacted this year, calls for 70% of

New York’s electricity to come from renewable energy resources by 2030 and for electricity to be 100% carbon-free by 2040.



Raya Salter, NY Renews | IPPNY

“This landmark climate legislation has really shaken the ground and reset the table for the environmental conversation in New York state,” said Raya Salter, member of the New York Climate Action Council and lead policy organizer for *NY Renews*,

a coalition of more than 200 environmental, justice, faith, labor and community groups.

Climate justice emanated from environmental justice as people became more aware of the climate crisis, and the concept eventually assumed economic aspects with the idea of a Green New Deal, she said.

“People are gravitating toward this idea of how can we make sure that we address the climate crisis yet make sure that folks get jobs [and] health care,” Salter said. “The origins of the term, however, are not as lefty as people may think. It still comes from a central-left, neoliberal or neoclassical economic idea that Milton Friedman came up with: ... make these investments, and market-based mechanisms will help us drive our economy and address the climate crisis.”

The CLCPA is unique in terms of renewable portfolio standards, not only edging out California as being the most aggressive, but it includes justice provisions, she said. For example,

NYISO News

no less than 35% of state spending on climate change will be directed toward disadvantaged communities.

Donohue asked whether NY Renewables would be open to amending the CLCPA to open the industry up to more innovation and allow, for example, carbon capture and sequestration as an offset for IPPNY members, and allow them to use other technologies.

“Because NY Renewables is a coalition, I can’t speak on behalf of it unless we have an official position. ... However, I think innovation is opened up rather than constrained by the CLCPA,” Salter said.

On carbon pricing, the effort needs a revenue stream.

IPPNY Chairman Chris LaRoe, senior director for regulatory affairs at Brookfield Renewable, asked what initiatives or policies do Salter or NY Renewables support to help existing renewable resources across the state benefit those communities in need of environmental justice: Is there a way for them to support each other, such as increased delivery into those areas?

“I think that’s right,” she said. “Certainly NY Renewables has been a part of the large-scale renewable clean energy standard docket before the Public Service Commission. ... Yes, we want to alleviate transmission constraints; yes, we want to see more in-city and in-state development of clean and resilient power.”

Investing in Reliability

NYISO Executive Vice President Emilie Nelson

moderated a panel on capacity markets, public policy and the age of intermittency.

“When we think about New York specifically, we see the energy and ancillary services markets working together to provide sufficient revenues for the resources needed for reliability,” Nelson said. “With that idea, and considering that we’re working on a transitioning grid and there are significant environmental mandates that need to be satisfied ... where do we start?”

Pallas LeeVanSchaik, vice president of Potomac Economics, which serves as the ISO’s Market Monitoring Unit, urged policymakers to retain the existing capacity market framework as “indispensable” for achieving the CLCPA’s goals.

“In our *comments* earlier this year in the [resource adequacy model] proceeding, we calculated just the outstanding obligations for capacity would reach \$25 billion by 2040, so [leaving the organized capacity market] would involve huge risks to ratepayers and would also greatly increase market risk for suppliers,” he said.

Considering the reduction in capacity value since state renewable energy contracts were signed up to the summer of 2020, “our estimate is in the hundreds of millions of dollars of additional capacity costs to cover this shortfall ... and that’s just in 2020 alone,” LeeVanSchaik said.

Kathleen Spees, principal at The Brattle Group, said that markets can play the main role in achieving state clean energy goals, rather than

a secondary, supporting role, with buyer-side mitigation central to the discussion.

NYISERDA and the Department of Public Service this year engaged Brattle to explore alternatives to the existing capacity markets under the resource adequacy proceeding (Case No. 19-E-0530). Brattle provided *qualitative* analysis in May and updated *quantitative* analysis in July.

“Not just New York, but many of the states are concerned about buyer-side mitigation rules resulting, as they’re intended to do, in excluding policy resources from clearing in the capacity market,” Spees said. “The outcome of that is to keep capacity market prices higher than they otherwise would be.”

Carbon pricing would be “way better” if applied economywide, across regions, but Brattle prefers the Forward Clean Energy Market as it put forth in a *paper* last September, she said.

William Hogan, research director of the Harvard Electricity Policy Group (HEPG), which examines alternative strategies for competitive electricity markets, *recommended* increasing the importance of scarcity pricing.

“What I am trying to do is dispel the notion that the arrival of intermittent renewables with zero variable costs means that the energy market becomes unimportant, which is wrong; but what it does mean is that scarcity pricing becomes much more important,” Hogan said.

ERCOT is implementing much more aggressive scarcity pricing than what New York is doing, he said.

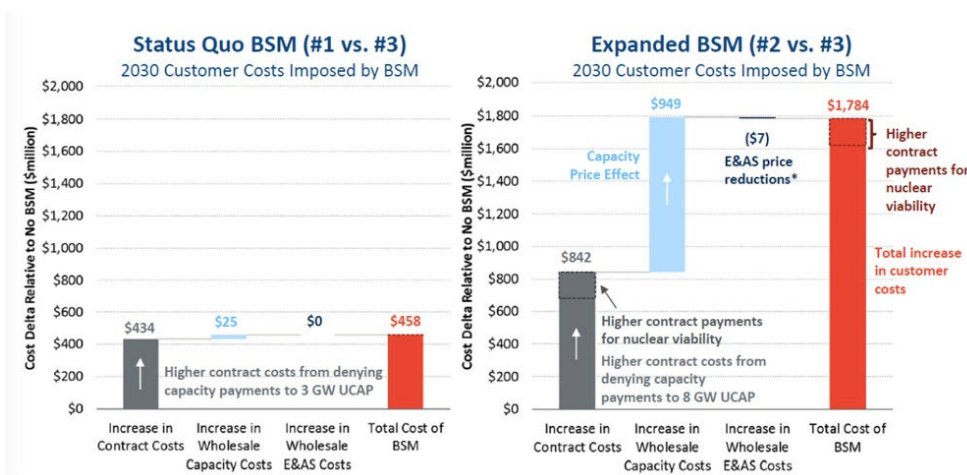
Examining ERCOT performance for summer 2019, Hogan said that “the tightest conditions frequently occurred earlier than the time of peak demand, so intuitively you would expect that net demand matters more than peak demand.”

Nelson asked panelists for an alternative to carbon pricing.

“I’m a hawk on this subject, so I think carbon pricing is necessary but not sufficient,” Hogan said. “We should be focusing our research and development on new technologies and innovation, not deploying the ones we currently have. We need something way better and that’s going to be transferrable to India.”

LeeVanSchaik agreed, but with a twist: “Even if [carbon pricing] by itself doesn’t achieve the goals of the CLCPA, in concert with other things, it certainly will allow the state to achieve those goals at a significantly lower cost.” ■

– Michael Kuser



The graphs show what costs customers might face from buyer-side mitigation in New York. Energy and AS prices decrease in some cases because excess capacity depresses prices in tight hours and because higher contract payments (from lack of capacity payments) cause energy prices to be more negative in over-generation hours. | IPPNY

NYISO News



NYPSC Accepts CLCPA Environmental Review

Extends Utility DLM Incentives to 3 Years

By Michael Kuser

The New York Public Service Commission on Thursday approved an environmental impact statement on the additional renewable resources needed under the Climate Leadership and Community Protection Act (CLCPA) that concludes that the increase “could result in direct benefits in the form of reduction in [greenhouse gas] emissions, additional economic development, workforce employment, the avoidance of adverse health outcomes, and improved transmission and distribution network” (15-E-0302).

“This is just one step, but it is essential in moving ahead on the ambitious and necessary

renewable energy targets called for in the CLCPA,” PSC Chair John B. Rhodes said.

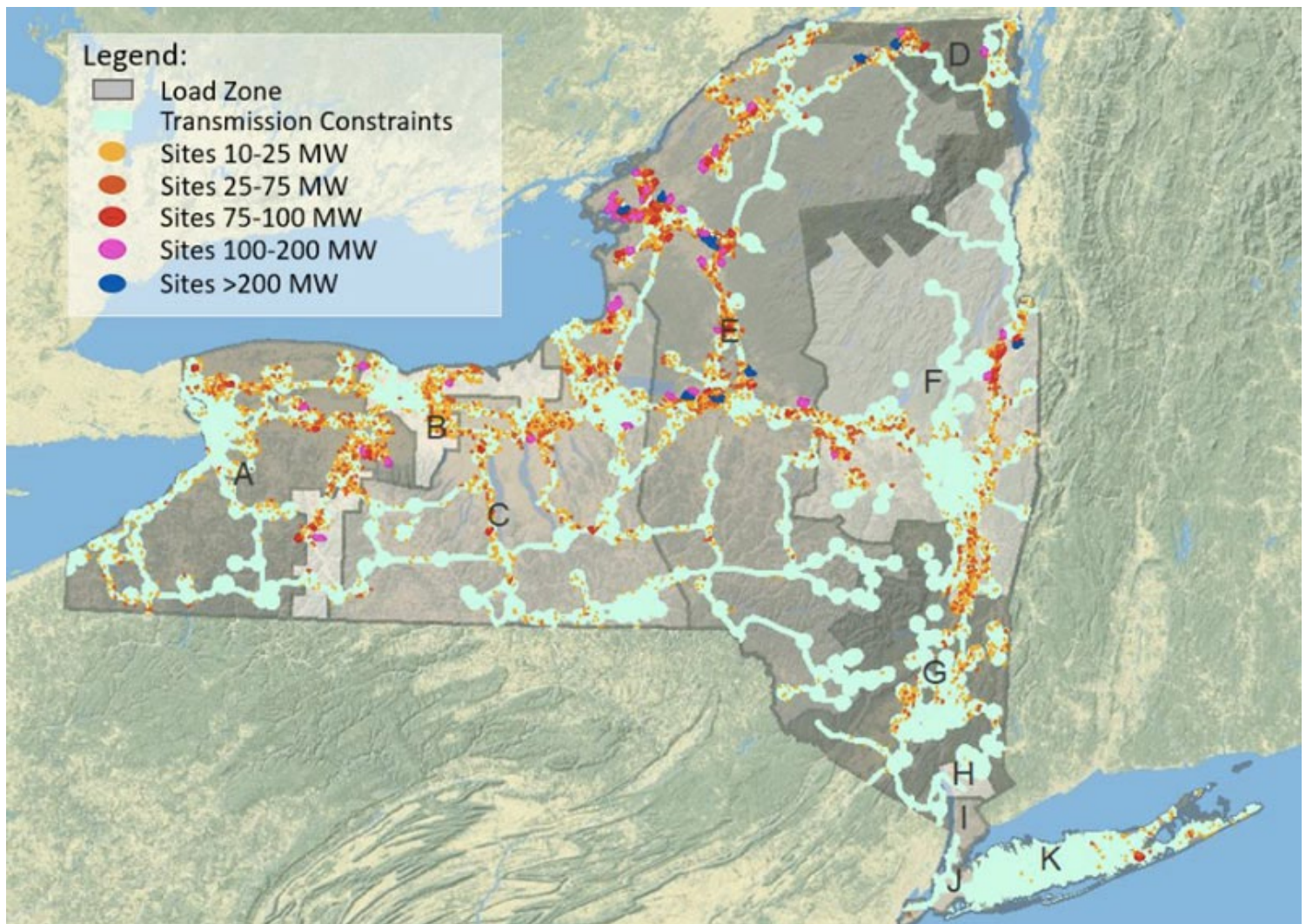
The CLCPA requires that 70% of electricity come from renewable resources by 2030 and that electricity generation be 100% carbon-free by 2040. Its clean energy targets include deploying at least 9 GW of offshore wind energy by 2035, doubling distributed solar generation to 6 GW by 2025, deploying 3 GW of energy storage by 2030 and raising energy efficiency savings to 185 trillion BTU by 2025.

The *supplemental generic environmental impact statement* (SGEIS) for the new law, as required by the State Environmental Quality Review Act (SEQRA), updated the state’s 2018 SGEIS

by including:

- the impact of additional utility-scale solar projects on grassland birds;
- additional hydropower upgrades and low-impact run-of-river projects;
- development of additional offshore wind; and
- development of 3,000 MW of distributed solar on land use, visual resources and birds.

The PSC’s resolution of acceptance built on a white paper published in June by it and the New York State Energy Research and Development Authority (NYSERDA), which recommended updating the state’s Clean Energy Standard



Potential sites for utility-scale solar PV categorized by size | NYSERDA

NYISO News



with the CLCPA targets and proposed a feasibility study for Great Lakes wind development. (See [NYPSC Approves \\$700 Million for EV Chargers.](#))

Commissioner Diane Burman voted “no” without prejudice, as she did in June on the draft SGEIS. Although she said she would normally vote in favor of such a procedural matter, she could not accept the SGEIS as complete because the comments from stakeholders such as *Sierra Club* and *National Fuel Gas* “are really worth taking the time as a group to review and go through.”

Commissioner Tracey Edwards voted in favor but noted that an SGEIS can be submitted anytime “if there is any change in circumstances. ... We should be following the [SEQRA] documents, as it’s important for us to check environmental circumstances along the way. The lead agency has a requirement to do that.”

Commissioner John Howard said that “while this is a roadmap, the real nitty-gritty questions will come in implementation.” He asked that the PSC pay close attention to “environmental justice issues, to make sure that rural communities get treated equitably.”

The assessment noted that it does “not substitute for project-specific environmental reviews, which may result in the identification of site-specific impacts.”

DLM Incentives Extension

The commission also *modified* the dynamic load management (DLM) implementation plans for the six major electric utilities in New York to include solicitations for two new products ([18-E-0130](#)).

The commission’s action follows from its 2018 energy storage order, which directed Central Hudson Gas and Electric, Consolidated Edison, New York State Electric and Gas, Niagara Mohawk, Orange and Rockland Utilities and Rochester Gas & Electric to supplement their existing one-year DLM programs by holding competitive procurements for resources for at least three years. The commission said it expects that energy storage rates for PSEG Long Island, which operates the grid for the Long Island Power Authority, will be consistent with its guidelines.

The commission said the existing DLM programs — commercial system relief program, a day-ahead peak-shaving program; distribution load relief program, an intraday reliability program; and direct load control program, a peak-shaving and reliability program for residential and small commercial non-demand customers — “resulted in a bias towards



Enel X installed, owns and operates this 4.8-MW/16.4-MWh front-of-the-meter battery system, which was paid for in part by Con Edison via its Brooklyn Queens Demand Management Program. | *Con Edison*

short-term, low-capital investment solutions” because of their yearly performance structure.

“The [2018] energy storage order explained that securing compensation over a multiyear period is expected to stimulate more participation and investment in the programs,” the commission said.

The commission ordered the utilities to issue solicitations by November to procure DLM resources beginning next summer:

- A day-ahead peak-shaving program requiring load relief for a four-hour period with at least 21 hours advance notice (called “Term-DLM”)
- A reliability and peak-shaving program to provide load relief for four hours at any time except for specified off-peak charging hours, with at least 10 minutes advance notice (called “Auto-DLM”)

Term-DLM will be available throughout each utility’s service territory, while Auto-DLM will be limited to certain areas of their territories.

Although the order did not explicitly require the utilities to issue annual solicitations for new Term-DLM and Auto-DLM resources, it said “we hereby establish the expectation that such solicitations will become a regular part of DLM program operations.”

“Sometimes our work is technical, and at the

same time it’s a big deal, and this is one of those cases,” Chairman Rhodes said. “This will unlock storage and other flexibility resources into use cases that are good for the system and, critically, are also good for customers.”

New York now has approximately 93 MW of advanced energy storage capacity deployed with 841 MW in the pipeline, in addition to 1,400 MW of traditional pumped hydro storage, toward meeting its goal of 1,500 MW deployed by 2025, the PSC said.

The PSC’s 2018 storage order, which doubled New York’s storage goal to 3,000 MW by 2030, said that the targeted deployment of storage “will result in reductions in system peak load demand during critical periods, increases in the overall efficiency and resiliency of the electric grid, and displacement of fossil fuel-based generation.” (See [NYPSC Expands Storage, Energy Efficiency Programs.](#))

Commissioner Burman dissented in part because she said the commission should have reconsidered its position on energy storage, as so much has changed since the 2018 order.

“We started numerous technical conferences; a market design and integration group was set up; NYSEDA filed many different filings; and there was a [Department of Public Service] end-use storage deployment program report; and there were notices issued for comment; ... and the list goes on,” Burman said. ■

PJM News



ELCC Method Endorsed by PJM Stakeholders

By Michael Yoder

PJM members on Thursday endorsed a revised joint stakeholder proposal to use the effective load-carrying capability (ELCC) method to calculate the capacity value of limited-duration, intermittent and combination (limited-duration plus intermittent) resources.

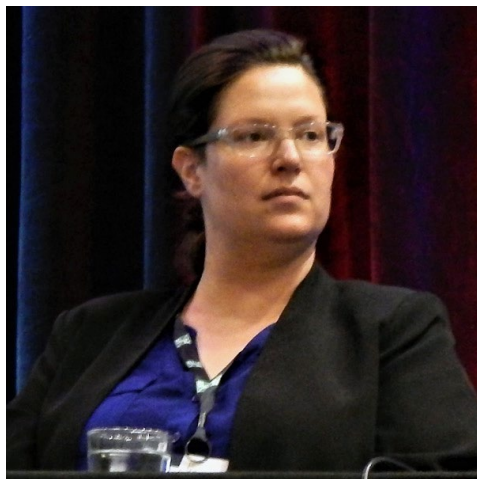
The Markets and Reliability Committee and Members Committee approved the ELCC over the objections of Independent Market Monitor Joe Bowring and others, who said the proposal, which could have a profound effect on the capacity market, was flawed.

The joint stakeholder proposal, *Package D*, received a sector-weighted vote of 3.98 (79.6%) from the MRC after a *friendly amendment* clarifying issues was added at the meeting. In a first-round vote at the MRC, the proposal without the friendly amendment received a sector-weighted vote of 2.56 (51.2%), failing to meet the two-thirds threshold for endorsement.

The Members Committee approved Package D with the friendly amendment later Thursday by a sector-weighted vote of 4.05 (81%).

ELCC, which is already used by MISO, NY-ISO and CAISO, evaluates reliability in each hour of a simulated year and compares a resource mix with limited resources against one with unlimited resources. A resource that contributes a significant level of capacity during high-risk hours will have a higher capacity value than a resource that delivers the same capacity only during low-risk hours.

Betty Watson, senior director of policy and



Betty Watson, Modern Energy | © RTO Insider

market design at *Modern Energy*, one of the sponsors of Package D, praised the work done by PJM and stakeholders since April when the issue was brought to the Capacity Capability Senior Task Force (CCSTF).

“The package approved by stakeholders today represents an important step forward for the participation of energy storage and intermittent renewables in PJM,” Watson said. “Just as important, the package represents the result of meaningful stakeholder cooperation and finding common ground.”

ELCC Background

Melissa Pilog of PJM provided an *update* of the work completed at the CCSTF. In October 2019, FERC opened a paper hearing under Federal Power Act Section 206 on the capacity capability of energy storage resources in PJM. Pilog said ELCC, which was already under consideration for solar and wind resources in the RTO, could serve as an alternative to the 10-hour minimum run time requirement for storage that was rejected by FERC last October.

FERC partially approved PJM’s Order 841 compliance filing but set a paper hearing to determine whether its 10-hour minimum for storage seeking capacity obligations was unjust and unreasonable. (See *FERC Partially OKs PJM, SPP Order 841 Filings*.)

Pilog said that by January, PJM began soliciting feedback from stakeholders on proposed alternatives to the 10-hour requirement. PJM then submitted a motion to hold the FERC hearing in abeyance to pursue an ELCC construct with stakeholders. The commission ultimately granted PJM’s abeyance motion, setting a deadline of Oct. 30 for a response from the RTO.

The MRC approved an *issue charge* in March to consider using ELCC to set the capacity value of limited-duration resources such as battery storage. The issue was then sent to be worked on by the newly created CCSTF. (See *PJM MRC Moves Forward on Storage, Hybrids*.)

Proposed Packages

Andrew Levitt, PJM’s senior business solution architect, presented *Package A*, the main motion endorsed by the CCSTF, receiving 64% support in a nonbinding vote in the subcommittee.

Levitt said the PJM package had several key characteristics, including specifying the ELCC methodology for simulated dispatch of energy

“The package approved by stakeholders today represents an important step forward for the participation of energy storage and intermittent renewables in PJM. Just as important, the package represents the result of meaningful stakeholder cooperation and finding common ground.”

—Betty Watson, Modern Energy

storage resources, hydroelectric resources with storage and other limited-duration resources. It also provided for an annual reassessment of derate factors, performance factors and accredited unforced capacity (UCAP) values for all applicable resources.

Levitt said the package was designed to accommodate a diversity of resource classes, including new technology like four-hour energy storage resources and hybrids.

Package A ultimately failed at the MRC, receiving a sector-weighted vote of 1.29 (25.8%).

Watson reviewed Package D at the MRC, which was the alternative solution endorsed by the CCSTF with 57% support in a nonbinding poll. Watson said the joint stakeholder transition package was formulated to find a balance between accurate and stable market signals, stakeholder preferences, the various business models of asset owners and existing and future resources.

Watson said the package was a “true negoti-

PJM News



ated outcome” and not the design of any one stakeholder. It built upon the foundation of Package A and went even further, Watson said, adding in a transition package that provides values for the class average ELCC percentages. The transition package will be evaluated in the 2026 quadrennial review, Watson said, in which PJM will “evaluate its efficacy and appropriateness and make recommendations as to whether some or all components of this package should be reconsidered through a stakeholder process.”

The friendly amendment added to Package D was developed after further discussions with stakeholders, Watson said, with an agreement to further evaluate the operations of limited-duration resources following FERC approval of the ELCC-related filing that includes a four-hour limited-duration class. PJM will also initiate a stakeholder process to further evaluate the coordination of the operation of limited-duration capacity resources with system needs and to consider rules to ensure that their operational behavior is “appropriately aligned with the resource adequacy construct and system reliability by examining issues including, but not limited to, bidding, operations, emergency procedures and energy market offer requirements.”

Also in the friendly amendment is a “clarification of intent of transition” with language



Andrew Levitt, PJM | © RTO Insider

recommended to the PJM Board of Managers to include in the cover letter for the proposal’s filing with FERC, stating, “Nothing in the joint stakeholder package is intended to preclude any potential changes to the structure and market design of PJM’s Reliability Pricing Model or create the expectation that the current market design will remain intact.”

“This package is not at all where the joint stakeholders started but really represents the evolution that we’ve all arrived at after months of dedicated work,” Watson said.

Besides the packages, stakeholders also voted to endorse corresponding *Reliability Assurance Agreement (RAA) revisions*.

Stakeholder Opinions

Monitor Bowring gave a *presentation* on his firm’s interpretation of the ELCC, saying it was “premature” for stakeholders to rush toward a solution on the issue. Bowring said the solutions in the packages could have significant impacts on the PJM capacity market for decades because of issues like a locked-in floor value based on a 10-year forecast of ELCC values.

Bowring said a 10-year ELCC forecast will be based on unknown inputs, including thermal and intermittent capacity levels, which would prevent a mechanism for understanding the ELCC forecast error. He said the ELCC should reflect the capacity resource mix and can only be accurately determined when incorporated into PJM’s market clearing engines.

“We just want to emphasize that the ELCC approach represents a really significant change to the capacity market,” Bowring said. “We don’t think there’s any reason to rush.”

Calpine’s David “Scarp” Scarpignato said FERC put PJM in a position where it’s difficult to meet deadlines while still adequately addressing the issues surrounding ELCC. Scarp said he hoped there would be more time to formulate a more clearly defined solution to the issue and wanted to see more data from PJM to make a more comprehensive decision.

“We weren’t given adequate time as stakeholders to truly give this justice,” Scarp said. “I imagine we’re going to have to rework some of this in the future.”

Tom Rutigliano of the Natural Resources Defense Council said both proposed packages were a “major improvement” in how PJM handles non-traditional resources and represented a “big step forward” in how the RTO handles resource adequacy in a “rapidly changing grid.”

Carl Johnson of the PJM Public Power Coalition said most stakeholder criticisms of the packages were “valid” and presented a difficult issue for members to solve as PJM makes its filing with FERC next month. Johnson said the packages provided little detail as to how resources would be represented in the ELCC model and how they would actually have to behave in real-world scenarios for the model to work.

“Above all, it’s certainly in my members’ interest that we do not send another mess to FERC or that we at least limit the mess,” Johnson said. ■



| Connexus Energy

PJM News



PJM MRC/MC Briefs

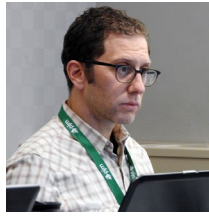
Markets and Reliability Committee

PMU Placement Endorsed

PJM stakeholders last week endorsed “quick-fix” manual revisions to expand the use of synchrophasors and make them a requirement for certain projects under the Regional Transmission Expansion Plan (RTEP).

The endorsement of the revisions at the Markets and Reliability Committee meeting Thursday came after members jockeyed to put friendly amendments in place. A *friendly amendment* by American Municipal Power (AMP) to proposed language in Manual 1 was ultimately endorsed, receiving a sector-weighted vote of 3.47 (69.4%), meeting the two-thirds threshold for passage.

AMP’s amendment added language giving PJM the ability to waive the phasor measurement unit (PMU) requirement on a “case-by-case basis.” The amended language also calls for the RTO to “evaluate the effectiveness of synchrophasor measurement on a periodic basis” and to work with stakeholders to modify requirements when necessary.



Steve Lieberman, AMP
| © RTO Insider

Steve Lieberman, assistant vice president of transmission and PJM affairs for AMP, said the addition of an evaluation by the RTO of the PMU installation in future years gave stakeholders who will be required to conduct the installation projects some security in the process.

“It gave us the comfort that we would be able to have some review of how these are going and what benefits PJM is seeing from them,” Lieberman said.

The vote came after several months of stakeholder debate over the requirement of installing synchrophasors — also known as PMUs — in new RTEP projects beginning June 1, 2021, to monitor bus voltage and line flows. (See *PMU Vote Delayed by PJM and PJM Stakeholders OK PMU Requirement*.)

Shaun Murphy of PJM *reviewed* the language changes to *Manual 1: Control Center and Data Exchange Requirements* and *Manual 14B: PJM Region Transmission Planning Process*.

Murphy said adding PMUs will allow PJM to detect high-speed grid disturbances from oscillation events and equipment failures in real time while providing the ability for detailed analysis after a major outage. The installation of PMUs was a recommendation following the Northeast blackout of 2003, Murphy said, an event that lasted for four days, impacted 50 million people and carried an estimated cost of \$6 billion.

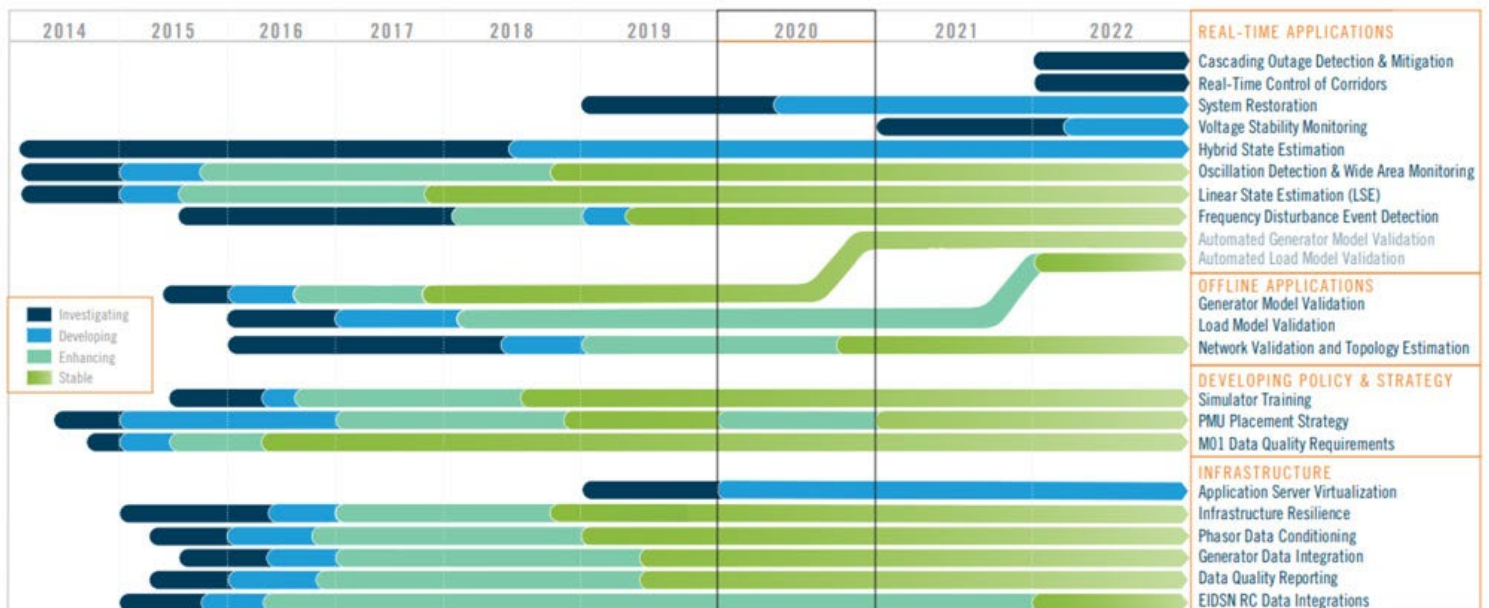
For new substations with three or more non-radial transmission lines at 200 kV or above and four or more non-radial transmission lines between 100 and 200 kV, synchrophasor measurement signals will be required for:

- bus voltages at 100 kV and above;
- line-terminal voltage and current values for transmission lines at 100 kV and above;
- high-side/low-side voltage and current values for transformers at 100 kV and above; and
- dynamic reactive device power output (SVC, STATCOM and synchronous condensers).

The manual language adds a PMU Placement

PJM SYNCHROPHASOR TECHNOLOGY ROADMAP

USED & USEFUL	Year Started	Year Stable
Phasor Data Concentrator	2013	2015
TO DOE Project Data Integration	2013	2016
Post-Event Analysis	2014	2016



PJM News



Strategy (PPS), including placement targets and required operational dates.

PJM officials said making each substation “PMU ready” costs as much as \$120,000 and each substation would have two or three PMUs that cost about \$10,000 each.

Greg Poulos, executive director of the Consumer Advocates of the PJM States, said his group is supportive of the PMU installation concept but could not vote for the proposals. Poulos said the cost was the deciding factor because consumers will ultimately pay for the technology.

“There needs to be some level of cost-benefit analysis provided when a proposal like this is made,” Poulos said.

Cost Development Subcommittee Revisions

Stakeholders unanimously endorsed a revised charter for the Cost Development Subcommittee (CDS) despite an objection by the Independent Market Monitor over a change to its reporting structure.



Glen Boyle, PJM | © RTO Insider

Glen Boyle of PJM reviewed the proposed revisions to the CDS charter. He said the CDS, which was originally tasked with developing procedures for calculating the costs of products or services, has been dormant since 2013.

PJM and the Monitor have discussed the need to restart the CDS to address several issues, Boyle said, including Manual 15 clarifications, variable operations and maintenance (VOM), and fuel-cost policy clarifications and educational topics.

Under the new charter, the CDS will report to the Market Implementation Committee instead of the MRC, as most of the issues are handled at the MIC.

Monitor Joe Bowring said he opposed the reporting change, pointing to voting issues being brought to the MIC from the CDS.

“I don’t think it makes sense, and I don’t think there’s any good rationale provided for it,” Bowring said.



David “Scarp” Scarpignato, Calpine | © RTO Insider

Calpine’s David “Scarp” Scarpignato said he agreed with PJM’s decision to have the subcommittee report to the MIC because it would give more time for issues to be vetted before they make their way to the MRC.

Susan Bruce of the PJM Industrial Customer Coalition said she was glad to see the CDS restarted, but she had “reservations” on the voting aspect of the MIC. Bruce said the concentration of asset owners in the affiliate voting of the MIC gives her concerns that some of the issues being discussed are “not getting a complete picture.”

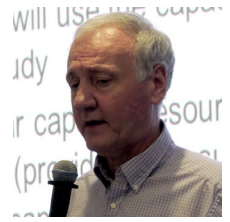
But Bruce said she is comfortable with the change in reporting structure because a sector-weighted vote remains in place at the MRC for any issues coming out of the MIC. She said members should remember that it’s not a failure in the stakeholder process if an issue that comes from the MIC ultimately is voted down at the MRC.

“It should not be surprise if the sector-weighted vote at the MRC looks different than the vote coming out of the MIC because of the change in how the voting occurs,” Bruce said.

2020 Installed Reserve Margin Study Results

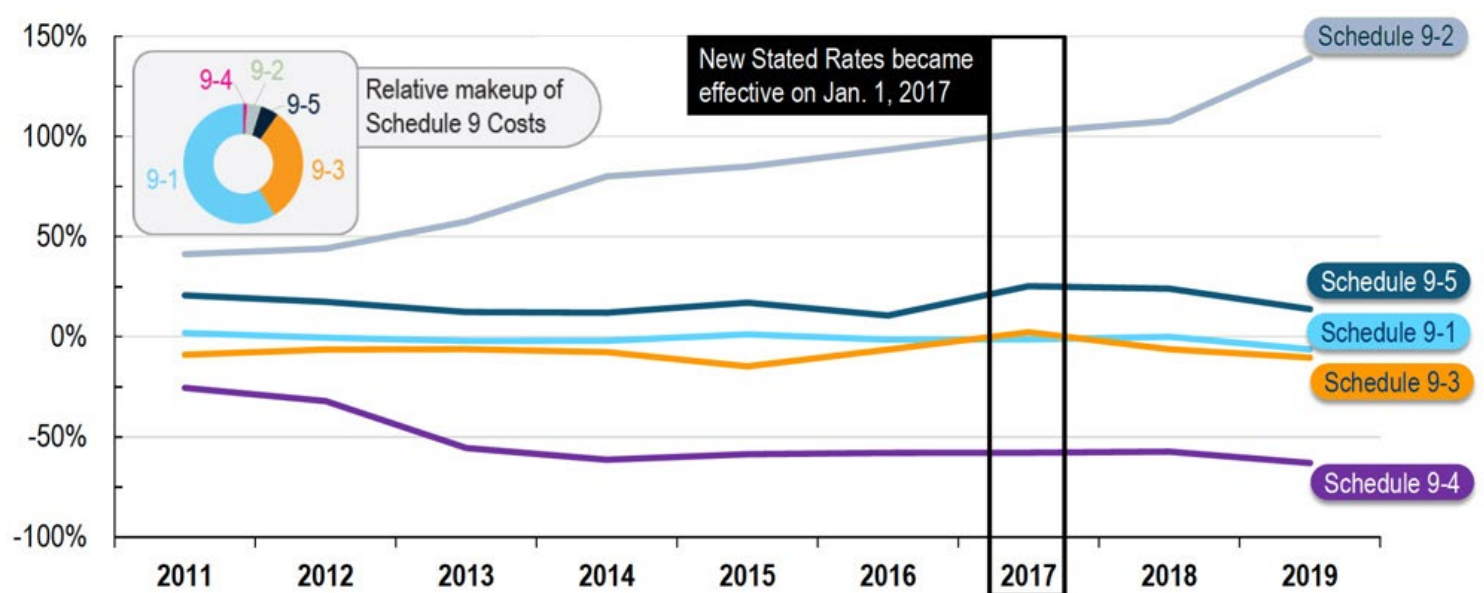
PJM is continuing to recommend an installed reserve margin (IRM) of 14.4%, down from 14.8% required in 2019.

Tom Falin, PJM’s director of resource adequacy planning, reviewed the 2020 reserve requirement study (RRS) results during a first read, which determine the RTO’s IRM and forecast pool requirement (FPR) for 2021/22 through 2023/24 and establishes the initial IRM and FPR for 2024/25. The results are based on the 2020 capacity model, load model and capacity benefit of ties (CBOT).



Tom Falin, PJM | © RTO Insider

Falin said the 2020 capacity model is putting downward pressure on the IRM, with the



Billing determinants PJM uses to recover operating expenses through Schedule 9 of the Tariff. | PJM

PJM News



average effective equivalent demand forced outage rate (EEFORd) of 5.78%, compared to 6.03% in the 2019 RRS. Falin said the lower average EEFORd was caused by the increased representation of combined cycle units and gas turbines.

The CBOT — the help PJM can expect from imports during peak loads — is estimated to increase pressure on the IRM. Falin said imports from neighboring RTOs have decreased from 1.6% in 2019 to 1.5% in 2020.

The FPR is essentially the same as 2019, Falin said, coming in at 1.0865 instead of 1.086 the previous year.

The PJM and world load models used are based on the 2002-2014 period and were approved at the August Planning Committee meeting. (See “Load Model Selection,” *PJM PC/TEAC Briefs: July 7, 2020*.) Analysis from the *2020 PJM Load Forecast Report* released in January was also used.

Liquidation Process

Chief Risk Officer Nigeria Bloczynski *reviewed* proposed revisions to PJM’s rules for liquidating defaulted financial transmission rights positions.

Bloczynski said that through work being conducted at the Financial Risk Mitigation Senior Task Force, PJM has determined its desire to re-establish the ability to liquidate defaulted FTR open positions in a “prudent and practical



PJM Chief Risk Officer Nigeria Poole Bloczynski | © RTO Insider

manner.” Bloczynski said the RTO is also looking to provide flexibility in the way it exercises liquidation rights based on market liquidity, the size of the defaulted portfolio and market conditions.

Bloczynski said the liquidation process

would include but is not limited to closing out, auctioning off portions of a portfolio across several regular auctions, and/or conducting one or more special FTR liquidation auctions.

In December 2018, PJM implemented changes to its Tariff and Operating Agreement ending the practice of liquidating a defaulting FTR participant’s open positions. This action followed the GreenHat Energy FTR portfolio default. (See *FERC OKs Key PJM Changes to Address GreenHat Default*.)

Stakeholders agreed to fast track the liquidation language into the Tariff and OA using a quick-fix approach, Bloczynski said, with endorsement of the proposed revisions being sought at the October MRC and MC meetings.

Members Committee

Schedule 9-2 Options

PJM CFO Lisa Drauschak *reviewed* for the

Members Committee proposed near-term changes to the RTO’s administrative rates as recommended by the Finance Committee.

PJM recovers its operating expenses through *Schedule 9* of the Tariff. Drauschak said 90% of Schedule 9 revenue is tied to actual load multiplied by a transmission factor, while the rest is connected to transactional activity.

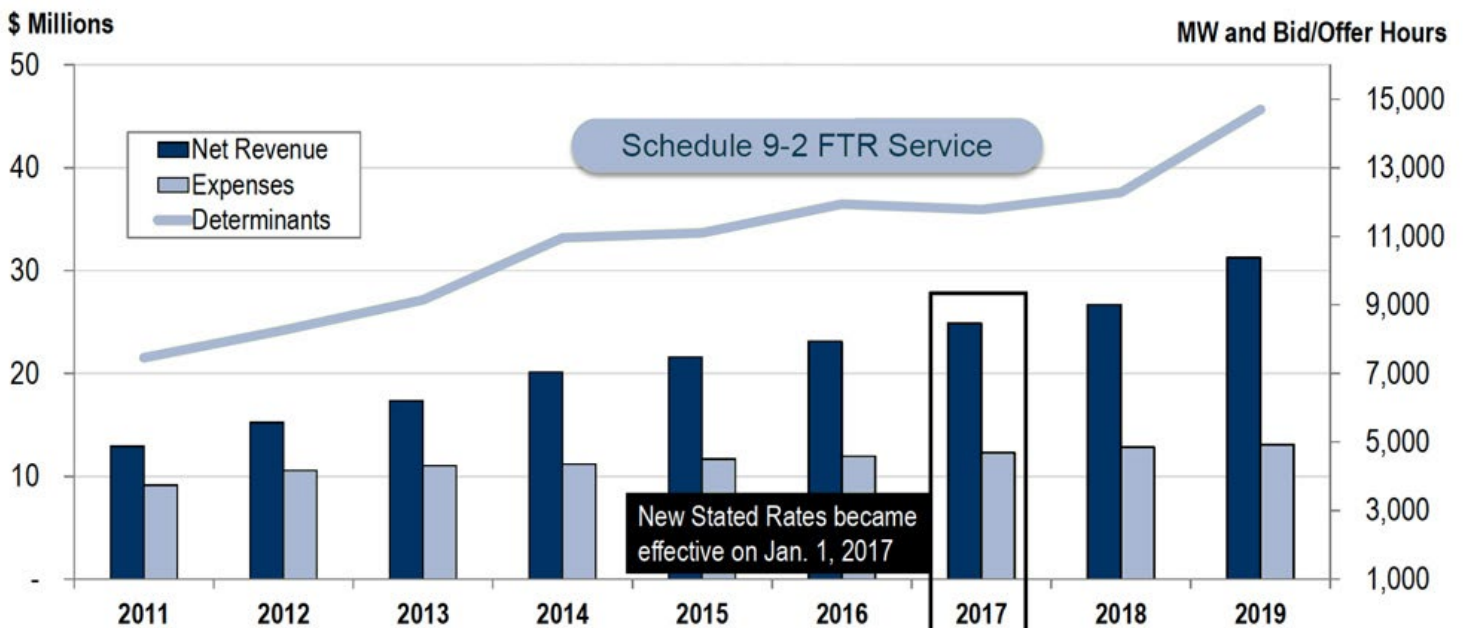
The transactional FTR billing volume, which has increased 97% since 2011, is tied to Schedule 9-2, Drauschak said. The FTR administration service revenues have “significantly exceeded costs” because of an increase in the volume of FTR bidding activity, she said.

The Schedule 9-2 determinants are significantly higher than the assumptions used to build current stated rates, Drauschak said, which has led to the imbalance of revenues and expenses.

PJM is proposing to reset the refund percentages to allocate excess collections over a “rolling 12-month period, based on service category net revenue.” The RTO is recommending an *amendment* of the Schedule 9 refund mechanism to allocate the excess collections.

Members of the Finance Committee endorsed the recommendation at its Sept. 9 meeting. PJM will seek endorsement of the changes at the October MC meeting. ■

— Michael Yoder



Billing determinants of Schedule 9-2 of the Tariff | PJM

PJM News



NJ BPU Conference Addresses FRR, Alternatives

By Michael Yoder

The New Jersey Board of Public Utilities held a daylong technical conference Friday to consider its [resource adequacy alternatives](#) and whether it should remain in PJM's capacity market or go on its own through the fixed resource requirement (FRR) alternative.

The conference comes on the heels last month of a bill making its way through the New Jersey Senate that would require the BPU to study the implications of withdrawing from PJM and either going it alone or joining NYISO. (See [NJ Senate Exploring Exit from PJM](#).)

BPU President Joseph Fiordaliso said the board's investigation stems from Gov. Phil Murphy's [Energy Master Plan](#) outlining how the state will meet its goal of 100% clean energy and an 80% reduction in statewide greenhouse gas from 2006 levels by 2050. (See [NJ Unveils Plan for 100% Clean Energy by 2050](#).)

Fiordaliso said the purpose of the investigation is to consider whether New Jersey can achieve its long-term clean energy objectives under the expanded minimum offer price rule (MOPR) ordered by FERC in December 2019. If it can't, Fiordaliso said, the board has asked its staff to recommend the best alternative. (See [N.J. Investigating Alternatives to PJM Capacity Market](#).)

Fixed Resource Requirement

The first panel during the conference featured a discussion of the FRR option for New Jersey with panelists debating various proposals, including full- and partial-FRR options, as well as the option of staying in the PJM capacity market.

PJM Independent Market Monitor Joe Bowring said competition is more effective than state or federal regulations in ensuring outcomes, creating incentives for innovation and ensuring the lowest possible costs for consumers.



PJM Monitor Joe Bowring | © RTO Insider

"Markets are actually good for all unit types," Bowring said. "Markets are in fact good for renewables. Markets create incentives for creative responses."

Bowring said FERC's MOPR ruling has been mischaracterized by stakeholders and its actual impact exaggerated. (See [Commenters Weigh in on](#)

[MOPR Compliance Filing](#).)

There has been no demonstration that the expanded MOPR will raise capacity prices, Bowring said, and [analysis](#) done by his firm, Monitoring Analytics, has found prices in the Base Residual Auction for the 2022/23 delivery year should stay stable. Bowring said the assumption that prices will rise is based on the assumption that renewable resources aren't competitive in the market, with which he said he disagrees.

While he said he disagreed with significant parts of FERC's order, especially the definition of a "competitive offer," Bowring said the point of the MOPR is to "draw clear lines" between the areas of federal and state jurisdictions.

Bowring said one of the alleged advantages of states moving to an FRR alternative is that current rules allow for a lower reserve margin. But he said there's no guarantee reserve margin rules won't change and result in a more balanced capacity market obligation for states with an FRR.

"FRRs create, exacerbate and do not address market power," Bowring said. "Market power is a key issue right now in the capacity market, and the only reason that it's offset is because of the broad capacity market and because there are clear market power mitigation rules in the market." (See [PJM Monitor Finds Capacity Exit Costly for NJ](#).)

Glen Thomas of the PJM Power Providers Group said he came with a simple message to the BPU: to "put a fork" in the FRR option.

The FRR is a "risky venture" that will increase costs for consumers and leave ratepayers "virtually defenseless" against market power, Thomas said. Once the conversation moves past it in New Jersey, Thomas said, more productive conversations can be had about the positions the state can take to achieve its energy goals.

Thomas said there's little reason for New Jersey to move quickly on a decision, insisting that FERC's order does not mean the "sky is falling," as portrayed by many.

"Don't be bullied into bad ideas, especially when those ideas appear to be changing very quickly," Thomas said. "This is the future of New Jersey's power sector. People want power; they need power; and we have to do it right."

Rob Gramlich of Grid Strategies said his group has written several reports regarding the high costs of the MOPR, the inefficiencies of the

current PJM capacity construct and the opportunity for states to use the FRR option to avoid those perceived problems. (See [Report: Imports Key to Successful FRR](#).) Gramlich also pointed to a recent [paper](#) dealing with ways states that have retail competition can improve their ability to achieve low-cost decarbonization by making sure "well equipped buyers" are in the wholesale markets.

"The FRR is a way and a means to achieve greater reliance on markets and to achieve state energy goals in a cheaper way than the current construct," Gramlich said.

Non-FRR Procurement Strategies

The conference also featured a panel exploring non-FRR procurement strategies for New Jersey to achieve its clean energy goals and ensure resource adequacy.

Stu Bresler, PJM's senior vice president of market services, said that while the current capacity market structure and the FRR alternative represent the existing options for New Jersey, they don't need to be the only options.

Bresler said New Jersey's clean energy direction is "clear" to PJM and that the RTO is committed to working with the state and other stakeholders to advance their objectives.

"While PJM is not here to drive policy and will support New Jersey's policy choices, we want to continue to engage with New Jersey to develop market-based solutions to help achieve goals at the lowest possible cost to consumers while maintaining a reliable grid," Bresler said.

Katie Guerry, head of regulatory affairs for Enel North America, said transparent and liquid markets, stable policies and access to regional markets drive her company's investments in the types of renewable resources New Jersey is attempting to incentivize and develop.

Guerry said that while Enel has several projects it is considering in PJM, questions over whether New Jersey and other states will remain in the RTO has hampered the decisions to move forward. The state can't achieve its clean energy goals on its own and that its decision on the FRR and its future with PJM could have "far reaching impacts" on investments, she said. She urged the BPU to send a clear signal that they plan to remain in the PJM capacity market.

"Regional markets yield value and attract investment into our economy," Guerry said. "When you pull one piece of that puzzle out of that regional nature, both pieces suffer." ■

SPP News

FERC Sets Hearing in Xcel-GridLiance Dispute

By Tom Kleckner

FERC last week set hearing and settlement judge procedures for Xcel Energy's formal challenge to GridLiance High Plains' proposed annual transmission revenue requirement (ATRR) for 2020 (ER20-1313, ER19-1357, ER18-2358).

Xcel, filing on behalf of subsidiary Southwestern Public Service, argued that GridLiance's inclusion of upgraded Oklahoma assets in the SPP transmission zone it shares with SPS was improper and requested the proceeding be consolidated with two pending dockets that also concerned its Oklahoma Panhandle facilities. The commission agreed, holding the hearing in abeyance to provide time for settlement procedures.

Xcel says GridLiance's Oklahoma assets do not qualify for regional cost allocation under the SPP Tariff and would result in a cost shift to its SPS subsidiary.

The commission found Xcel's challenge raised

factual issues that could not be resolved based on the record before it and disagreed with GridLiance's charge that Xcel's challenge was duplicative and should be dismissed. It said GridLiance was attempting for the first time to recover the costs of one of its projects and that they were different than the costs at issue in the other proceedings.

FERC also disagreed with GridLiance that Xcel's motion to consolidate should be denied given the status of the proceedings. "There are no additional issues in Xcel's formal challenge that would inject unnecessary delay into the pending proceedings, which are in their early stages," the commission wrote.

Xcel also issued a formal challenge of GridLiance's 2019 annual update, which resulted in an October 2019 order that set hearing and settlement judge procedures. FERC in August ruled that qualifying as a transmission facility under SPP's Tariff Attachment AI does not eliminate the need to pass the seven-factor test established by Order 888. GridLiance has responded that SPP may have been incorrectly



Workers install a transformer on Tri-County Electric Cooperative's Panhandle Substation, part of a transmission upgrade project with GridLiance. | *Tri-County Electric Cooperative*

charging transmission customers for their use of certain facilities. (See *GridLiance, Xcel Battle over Tx Qualifications.*) ■

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.



SPP News



SPP Seams Steering Committee Briefs

SPP, MISO Staff Share Details on Joint Transmission Study

SPP and MISO staff last week shared with the SPP Seams Steering Committee additional details on the yearlong transmission study the RTOs will soon pursue. (See *MISO, SPP to Conduct Targeted Transmission Study*.)

SPP Vice President of Engineering Antoine Lucas described the study as a “vehicle” that offers a different approach than previous joint transmission studies. The RTOs have conducted four joint studies in six years but have yet to agree on a single interregional project after being frustrated by differences in metric thresholds and cost estimates. (See *MISO, SPP Close to Ruling out Joint Projects Again*.)

“We’re looking to have a little more flexibility in this process and approach it differently and see if we can get a little different result,” Lucas

said during the SSC’s meeting Thursday. “We want to focus and consider issues arising from our interconnection processes. We want to identify solutions to the issues we’ve seen that we believe if we can resolve, both RTOs’ customers can create some benefits and opportunities ... that are worth pursuing.”

Aubrey Johnson, MISO’s executive director of system planning and competitive transmission, stressed that much work needs to be done “to frame up what needs to take place and get us going.” The study is planned to begin in December.

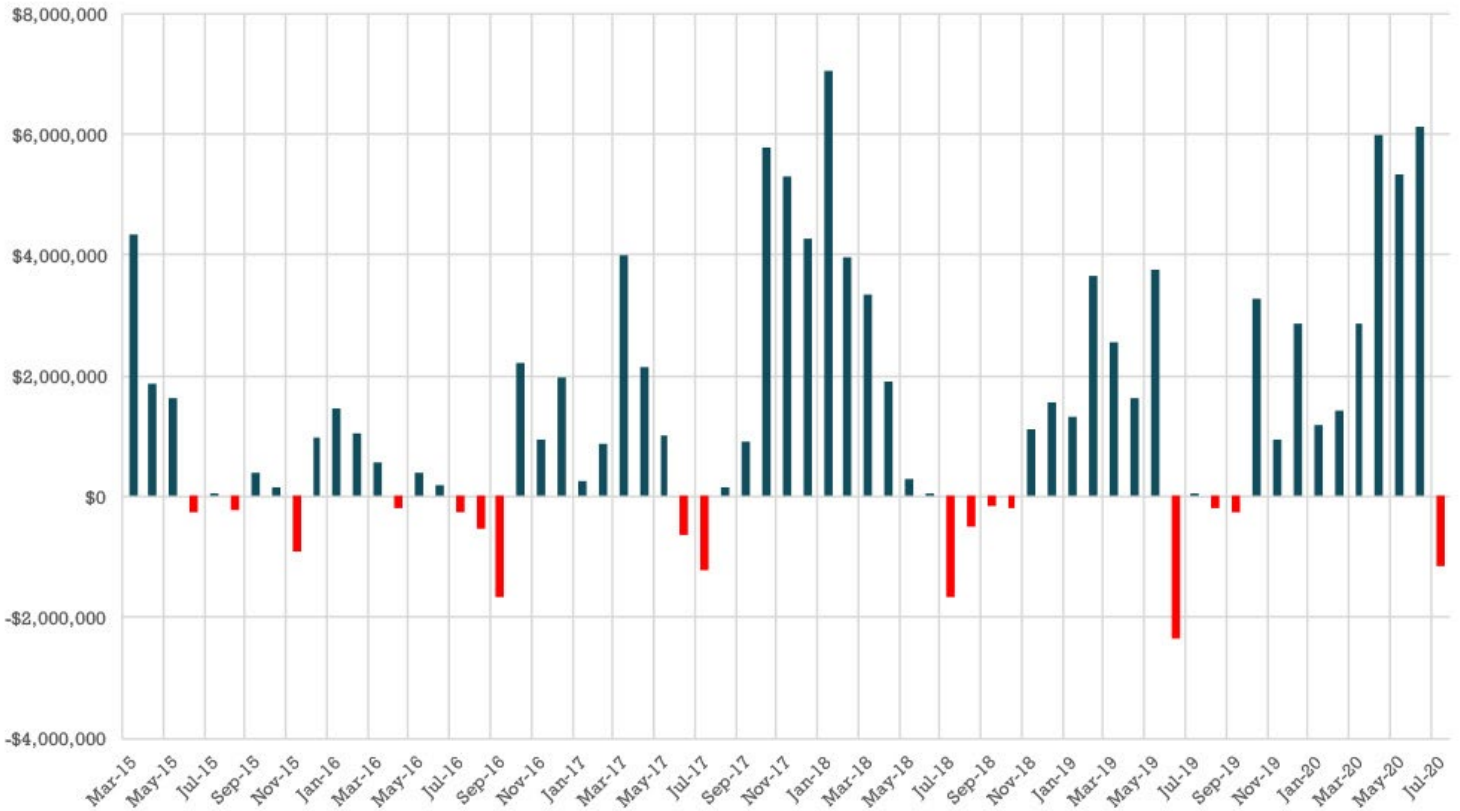
“We’re not suggesting this become the solution to all of the interregional planning processes. We see this as an opportunity to have a focus on some collaboration that, hopefully, will inform those processes moving forward,” Johnson said. “We’ll move forward with the existing interconnection processes

and keep the trains running in some of those areas. Where we learn things out of this study and to the extent that they have any impact on those studies, we’ll do something downstream.”

GridLiance High Plains’ Bary Warren, the SSC’s vice chair, reminded Lucas and Johnson that the committee has seen four joint studies come up empty over cost-allocation issues and encouraged them to place cost allocation on the table.

“We thought it was important to almost stay away from any of the named processes we already have,” Johnson said. “To the extent that we can, we really want the planning teams to focus on identifying the issues and figure out what the solutions might be and that they work out for stakeholders in both RTOs. We’re just doing a study. We want to keep it open-minded around the concepts that offers us the best return.”

M2M Settlements since Go-Live



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

SPP News



Debrief on MISO, AECI Joint Studies

Neil Robertson, SPP interregional relations senior engineer, said the latest failed attempt to find joint projects stemmed from “significant differences” with MISO in cost estimates.

“The cost estimates generated by MISO were significantly higher than cost estimates generated by SPP,” Robertson told the committee. “We haven’t really achieved a great deal of consistency on cost estimates. We continue to identify areas for improvement.”

Robertson noted that MISO has a more “thoroughly defined cost-estimation process” than SPP, with a team of staffers working on detailed estimates.

“We attempted to rectify some of the differences in this cycle,” he said. “We’ve tried to come together when we initially started comparing costs estimates. There are some areas where I think we need to continue the discussion and come to a consensus on a consistent approach to cost estimation in the planning cycles.”

Robertson said MISO’s estimates provide benefit-to-cost ratios that were “unattractive,” with initial projections about 150 to 250% above SPP’s.

“We were able to close the gap after some refinements, but there was still a gap at the end of the day,” he said.

The RTOs have scheduled a Sept. 25 meeting of their interregional Planning Stakeholder Advisory Committee to discuss next steps.

A cost-of-use agreement between SPP and Associated Electric Cooperative Inc. (AECI) for a 345-kV competitive project and filed with FERC has passed the comment period without protests, staff said. David Kelley, SPP’s director of seams and market design, noted that the RTO’s Board of Directors will *meet* today and could decide to issue a request for proposals before the commission issues an order ([ER20-2708](#)).

The board suspended the project in April while awaiting the completed agreement with AECI.

“There could be a decision to advance the project through the process, even while that order is pending,” Kelley said.

AECI will build the 105-mile Wolf Creek-Blackberry line in Kansas and Missouri at a projected cost of \$152 million. SPP cannot allocate funds to the cooperative without FERC approval. (See “AECI Wolf Creek

Agreement Filed with FERC,” *SPP Seams Steering Committee Briefs: Aug. 20, 2020*.)

Robertson also said SPP and AECI have posted a *final report* on their recent joint and coordinated system planning (JCSP). The study did not find any potential jointly funded transmission projects, but it also didn’t find reliability effects from the Wolf Creek-Blackberry project.

The SPP-AECI joint operating agreement requires a JCSP study be performed every other year to “assure the reliable, efficient and effective operation of the transmission system” around the organizations’ seam.

Patton Shares Thoughts on Interface Pricing

MISO Independent Market Monitor David Patton made a guest appearance at the meeting to discuss interface pricing and market-to-market coordination. Both topics are being considered by a group of state regulators studying seams coordination between SPP and MISO, with the RTOs’ monitors providing much of the analysis. (See *MISO, SPP Respond to Monitors’ Seams Studies*.)

Patton explained some of the finer details of interface pricing, which he labeled “essential” because it is the only way to facilitate efficient power flows between RTOs. Poor interface pricing can lead to significant uplift costs and other inefficiencies, he said. The interface price’s congestion component becomes critical because it reflects the estimated effect of transactions on any binding constraints in an RTO’s market, he said.

“If MISO can produce power for \$20/MWh on the margin, and prices in SPP are \$30/MWh, we want somebody to schedule an export from MISO to SPP that will reduce the overall cost of serving load in SPP,” he said. “If there’s a transaction from SPP to MISO, then SPP charges the exporter its interface price and MISO pays the same person for the import on its side of the interface. At the end of the day, it’s the difference in interface prices.”

Committee members peppered Patton with questions and engaged him in discussion. He shared his thoughts on market-to-market (M2M) operations, which SPP and MISO have been coordinating since 2015.

“When there’s a market-to-market constraint, we both model it and we both make payments for the same transaction, because we’re both activating that constraint in the dispatch models,” he said. “We both activate the MISO constraint, because you can move the SPP generators to provide relief and you get paid

by MISO to provide that relief. It’s a win-win for everybody, because it lowers the cost of congestion. You’re paying the SPP generators to provide relief, and MISO is paying the generators to provide relief, so it makes sense.”

Except, that is, at the interface.

“You’re both calculating the effect of the generators on the constraint, and you’re both paying for it. You’re both paying what you pretty much expect the full benefit of the transaction is,” Patton said. “When a market-to-market constraint is binding, we’re either overpaying or overcharging all of the transactions at the interface. We’re not giving people good incentive to schedule exports and imports. That’s an efficiency problem.”

Committee Tweaks its Scope

The committee, soon to become the Seams Advisory Group, agreed to tweaks to its scope in preparation for its new role.

The scope says the SAG will be responsible for “providing direction, guidance, and advice” to SPP and its staff regarding issues involving seams agreements, JOAs or arrangements with neighboring transmission providers, transmission owners or customers.

Staff said SPP was “uneasy” over original wording that the SAG would be “directing” action. The group will still be able to identify seams coordination issues between SPP and adjacent transmission providers.

The SAG will consist of no more than 15 representatives from member companies, up two from its current makeup.

The change is a result of the reorganization of the Markets and Operations Policy Committee stakeholder groups. The MOPC endorsed the proposed changes in July. (See “Members OK MOPC Reorg, Strategic Roadmap,” *SPP MOPC Briefs: July 15-16, 2020*.)

M2M Payments in MISO’s Favor

M2M payments during July were settled in MISO’s favor for the first time in 10 months.

SPP staff said MISO accrued \$1.13 million in M2M settlements for 686 hours of binding temporary and permanent flowgates. SPP still has the overall edge, having piled up \$92.71 million in accruals since the two seam neighbors began the process in March 2015.

Settlements have been in SPP’s favor for 48 of 65 months. ■

— Tom Kleckner

SPP News

FERC to Investigate Basin Electric Rates; Danly Dissents

Tri-State Case also Set for Hearing

By Tom Kleckner

FERC last week opened an investigation under Federal Power Act Section 206 into the justness and reasonableness of Basin Electric Power Cooperative's 2020 rate schedule and the wholesale power contracts between the cooperative and 19 of its members (ER20-2441, ER20-2442, EL20-68).

The commission found Basin's rate schedule and power contracts raised factual issues that should be addressed through hearing and settlement judge procedures.

FERC said it accepted Basin's 2020 filings because it considered them to be initial rates, effective Sept. 15. The commission disagreed with intervenors' arguments that a lack of withdrawal and termination procedures rendered the wholesale contracts unjust and unreasonable, saying each contract includes provisions requiring notice of termination for the contract term's end.

Commissioner James Danly dissented in the order, saying he didn't agree with the commission's decision to set for hearing whether the *Mobile-Sierra* presumption should attach to the wholesale contracts. Under *Mobile-Sierra*, FERC must presume that the electricity rate set in a freely negotiated wholesale contract meets the FPA's "just and reasonable" requirement. The presumption may be overcome only if the commission concludes that the contract seriously harms the public interest.

"My disagreement ... stems from my general disagreement as to the analysis applied by the commission in considering whether and when the *Mobile-Sierra* presumption should apply," Danly wrote. He noted that Basin's counterparties "almost uniformly agree[d] that 'without a doubt' the wholesale contracts were freely negotiated. Only Tri-State Generation and Transmission Association asserted its contract was "not accomplished on an even playing field," he said.

"Given the near universal support for the [contracts] other than Tri-State's generalized



FERC has set Tri-State's membership fee calculations for hearing and settlement procedures. | Tri-State Generation and Transmission Association

complaint about bargaining positions, there is no credible claim of infirmity in the [contracts] formation ... that would lead us to conclude that they do not represent the fully voluntary agreement of the parties," Danly said. "This issue should not be set for hearing."

FERC Combines Tri-State Membership Fee Dockets

FERC on Sept. 11 accepted Tri-State's methodology for members' one-time payments to become partial-requirements members, but it also established hearing and settlement procedures over the co-op's buy-down payment (BDP) calculation, subject to refund.

The commission combined the proceeding with another docket involving Tri-State that it set for hearing in June concerning the cooperative's proposed contract-termination payment (CTP) methodology for computing member exit fees (ER20-2417, ER20-1559). (See [FERC Sets Tri-State's Exit-fee Rules for Hearing](#).)

FERC found there were several common issues regarding Tri-State's use of the two methodologies and agreed with United Power, a Tri-State member, to consolidate the proceedings.

Tri-State's BDP methodology is designed to give its utility members additional flexibility for the self supply of power and more local renewable energy development.

In February, Tri-State's board *agreed* to hold an open season to allocate 300 MW of system-wide member self-supply capacity for future

member partial requirements contracts, equal to 10% of Tri-State's total demand. Under previous rules, members were limited to self supplying only 5% of their power, with an additional 2% through community solar.

The cooperative said the BDP methodology establishes a framework for holding partial requirements customers responsible for the costs incurred in permitting them to switch to partial requirements service without imposing a financial burden on the remaining full-requirements members.

Tri-State said the proposed methodology uses the same underlying mark-to-market method as the CTP methodology. The mark-to-market method is a planning approach, Tri-State said, with the departing utility member's required BDP based on a forecasted difference between the cooperative's long-term financial forecast (LTFF) business-as-usual case and load-loss case.

FERC said its preliminary analysis indicated the proposed methodology had not been shown to be just and reasonable.

Several Tri-State members protested in the docket, raising concerns that certain material terms and conditions are referenced in the cooperative's transmittal letter but are not included in the rate schedule. FERC found that terms and conditions of Tri-State's proposal to impose a full transmission service requirement on partial requirements members needs to be filed with the commission under FPA Section 205 and included in its rate schedule. ■



FERC Commissioner James Danly at his confirmation hearing in November 2019 | © RTO Insider

Company Briefs

AT&T Aims to Cut Majority of Emissions by 2035



AT&T last week said it will cut emissions from its own operations to net zero by 2035 and encourage suppliers to set similar targets.

The company says it will try to cut its operational emissions through initiatives such as more renewable energy, buying hybrid vehicles and deploying efficiency measures. It has yet to set a firm target for the remainder of its emissions but will have at least half of its suppliers set their own science-based emissions goals by 2024.

In 2019, AT&T's annual emissions stood at 10.4 million metric tons of carbon dioxide. About 63% came from the company's own operations, with the remaining Scope 3 emissions tied to suppliers, business travel and waste.

More: [Bloomberg Green](#)

Facebook Targets Net-zero Across Global Supply Chain by 2030



Facebook last week said it will expand its emission-reduction goals by eliminating or offsetting all of its own emissions this year while completely decarbonizing its supply chain by 2030.

To accomplish its goals, Facebook is joining the Science Based Targets initiative, which helps businesses set climate goals in line with the Paris Agreement.

Much of the company's progress stems from its growing renewable energy portfolio. Facebook expects to buy enough renewable energy in 2020 to offset all of the power used at its buildings and data centers and plans to tackle its new target the same way as its 75% emissions-reduction goal: through energy efficiency and the buildout of renewables. Facebook currently has 5.4 GW of renewables under contract, including 2 GW online.

More: [GreenTech Media](#)

GridLiance Announces New Chief Legal Officer

GridLiance last week announced the appointment of Mark S. Laufman as executive vice president, chief legal officer and secretary, effective immediately. Laufman succeeds N. Beth Emery, who announced her retirement.

Laufman has more than 30 years of legal experience working on energy and infrastructure transactions, including transmission and renewable energy projects. Most recently, he served in private practice working with clients on energy-related transactions.

More: [GridLiance](#)

Google Intends to be Carbon Free by 2030



Google CEO Sundar Pichai last week said the company is

aiming to power its data centers and offices using only carbon-free electricity by 2030.

Wind, solar and other renewable sources accounted for 61% of Google's global hourly electricity usage last year. The proportion varied by facility, with carbon-free sources fulfilling 96% of hourly power needs at its wind-swept Oklahoma data center compared with 3% at its gas-reliant Singapore operation.

Google has been carbon-neutral since 2007, meaning it has planted trees, bought credits and funded large amounts of wind power to offset its tapping of coal and natural gas power. It also estimated that its 1 million metric tons of emissions between 1998 and 2006 have been offset.

More: [Reuters](#)

Murray Energy Emerges from Bankruptcy with New Name



Murray Energy Holdings announced that its Chapter 11 reorganization plan

was approved last month in U.S. bankruptcy court in Ohio and will be renamed as American Consolidated Natural Resources (ACNR).

The restructuring eliminated more than \$8 billion of Murray's debt and legacy liabilities and allowed the new company to access new financing, providing ACNR with enhanced financial flexibility.

The company plans to produce about 35 million tons of bituminous coal annually. In 2018, Murray produced 46.4 million tons and was the country's fourth largest coal producer, according to the U.S. Energy Information Administration.

More: [The Associated Press](#)

NextEra Increases Financial Expectations, Outlook Through 2023

NextEra Energy last week announced it is increasing its financial expectations for 2021 and 2022 and is extending its longer-term growth outlook to 2023 because of the ongoing strength of the renewables development environment and the continued execution across its businesses.

The company is increasing its financial expectation ranges for 2021 by 20 cents and now expects adjusted earnings per share to be in the range of \$9.60 to \$10.15. For 2022 and 2023, NextEra expects to grow 6 to 8% off the expected increased 2021 adjusted earnings per share.

In addition, the NextEra board of directors approved a four-for-one split of the company's common stock. Each shareholder of record on Oct. 19 will receive three additional shares of common stock for each then-held share, to be distributed on Oct. 26.

More: [Seeking Alpha](#)

PG&E CFO Joins CenterPoint Energy

CenterPoint Energy last week appointed PG&E Corp. CFO Jason Wells to the same position as the Houston-based utility tries to navigate stormy financial waters. The move is effective Sept. 28.

Wells will oversee the company's financial organization, which includes mergers and acquisitions. He was with PG&E for 13 years, where he managed the financial activities of the nearly \$60 billion enterprise and implemented strategies to support California's transition to a clean energy economy, CenterPoint said in a press release.

More: [CenterPoint Energy](#)

Siemens to Cut Jobs at Fort Madison, Iowa, Factory

SIEMENS Gamesa RENEWABLE ENERGY Siemens Gamesa notified

employees on Sept. 14 that it will lay off about 130 workers at its blade factory in Fort Madison, Iowa.

The workforce reduction is taking place as the company plans to cease production of older blades at the factory. Workers will be let go at various times over the next 60 days but will continue to be paid throughout the notice period.

More: [Renewables Now](#)

Federal Briefs

States Sue Trump Administration for Weakening Methane Rules

California and 19 other states filed a lawsuit last week challenging the Trump administration's decision to weaken restrictions on methane emissions, saying the West Coast wildfires should be a reminder of the dangers of climate change.

The lawsuit targets two policy amendments announced by EPA in August that rolled back methane emissions limits on the oil and gas industry and weakened requirements for leak detection. It is California's 54th lawsuit against the administration that challenges rollbacks to key environmental protections.

More: [Reuters](#)

Climate Change Rollbacks to Drive up US Emissions

President Trump's rollback of Obama-era climate regulations will cause the U.S. to expel an extra 1.8 billion tons of greenhouse gases between now and 2035, according to research firm Rhodium Group.

Its forecast said that if Trump's rollbacks remain in place, U.S. climate pollution 15 years from now will be 3% higher than current projections indicate. The cumulative additional amount of gases would exceed the current annual output of Russia, the world's fourth-largest carbon polluter.

Rhodium projected increased emissions associated with most of the Trump EPA's deregulatory actions. Reducing vehicle fuel economy standards and revoking California's stringent rules would contribute more than half of the extra carbon dioxide emissions. EPA's recent rescission of methane

limits was also a major driver. Other actions that will increase methane pollution from landfills and emissions of hydrofluorocarbons made up the remainder.

More: [POLITICO](#)

Court Rules in Favor of Utilities in Natural Gas Lawsuit

A federal appeals court last week upheld a lower court's ruling that left in place Eversource Energy's and Avangrid's policies to reserve excess natural gas supplies as they deem reasonable, despite lawsuits by customers that the practice is driving up electricity prices in the winter.

A group of customers claimed the practice added as much as 20% to the rates they pay for electricity and calculated it resulted in an extra \$3.6 billion being added to bills over three years. The lawsuit filed in state court sought \$1.5 billion in restitutions.

The original suit came on the heels of a 2017 Environmental Defense Fund study critical of Eversource's and Avangrid's practices for reserving extra capacity on the Algonquin Gas Transmission Pipeline.

More: [Connecticut Post](#)

Seabrook License Extension Upheld with Conditions



The Atomic Safety and Licensing Board last week upheld the operating license amendment

to NextEra Energy's nuclear power plant in Seabrook, N.H. However, the board imposed four additional conditions to address the alkali-silica reaction (ASR) concrete degradation issues within the plant's structure.

The amendment relates to monitoring the physical impact ASR will have on the plant's operation as it ages. The board concluded the additional conditions are necessary to ensure adequate health and safety protections for the public.

ASR is a slow-developing type of degradation found in concrete when moisture is present. It was discovered at Seabrook Station about 10 years ago, just as NextEra was applying for a 20-year extension on its original 40-year operating license.

More: [Seacoastonline.com](#)

Secret Recording Reveals Oil Execs' Views on Climate Change

A recording of a discussion convened by the Independent Petroleum Association of America last year showed some participants being worried that producers were intentionally flaring too much natural gas and were threatening the industry's image.

Flaring gas is an inexpensive way of getting rid of it. Yet, burning it off represented a "huge, huge threat" to the industry's efforts to portray natural gas as a cleaner and more climate-friendly energy source, North Dakota Petroleum Council President Ron Ness can be heard saying at the June 2019 meeting. When burned, natural gas typically emits half the greenhouse gases as coal. But by flaring off the gas, rather than capturing it, companies are creating pollution without creating usable energy.

The audio was provided by an organization dedicated to tracking climate policy and said the recording had been made by an industry official who attended the meeting.

More: [The New York Times](#)

State Briefs

ARIZONA

APS Extends Disconnect Moratorium Through 2020



Arizona Public Service last week announced it is extending its moratorium on service disconnections through the end of 2020.

The residential disconnect hold by regula-

tors expires on Oct. 15, but APS said it will extend it through the end of the year for both residential and business customers. Late fees will also be waived.

As of Aug. 31, APS said approximately 38,300 residential accounts and 4,700 business accounts would have been eligible for disconnection on Oct. 15 because they are past due by \$300 or more.

More: [The Associated Press](#)

CALIFORNIA

8minute Solar Completes Solar Project for SCE

8minute Solar Energy last week said its 67-MW Lotus Solar Farm in Madera County is fully operational. The farm will deliver energy to Southern California Edison customers through a 20-year power purchase agreement.

The 375-acre project was built on low-productivity former grazing land. Alliant Global Investors acquired the project from 8minute last year, making it the team's first U.S. solar project purchase.

More: [Solar Power World](#)

COLORADO

Colorado Springs Utilities Announces New Solar Panel Facility

Colorado Springs Utilities last week said it intends to buy the 175-MW Pike Solar Project along with a 25-MW, four-hour storage system from juwi.

The project, which will be constructed in El Paso County, is expected to be complete in 2023. It will have a 17-year term length and will use more than 400,000 panels. The energy stored in the battery will be discharged during peak hours or at night when the facility is not generating electricity.

More: [KRDO](#)

INDIANA

I&M to File New IRP After Withdrawing 2019 Version



Indiana Michigan Power (I&M) last week announced a settlement agreement that will have the company withdraw

its current integrated resource plan in favor of a new version by Dec. 15, 2021.

I&M originally filed an IRP in August 2019 with the Public Service Commission to meet the requirements of an updated energy law that required all rate-regulated utilities to submit plans for providing reliable, cost-effective service while responding to risks. However, it was determined the utility should be given more time to establish its preferred course and address outstanding issues, such as the leasing of the Rockford Unit 2 coal plant.

Under the terms of the settlement, I&M must hold at least one stakeholder meeting in its service territory and work with stakeholders to define modeling inputs.

More: [Daily Energy Insider](#)

KANSAS

Evergy Continues to Collect Fee Despite Court Ruling

Evergy customers who own solar panels said the utility continues to collect a demand

fee five months after the state's Supreme Court ruled it illegal and discriminatory.

Evergy won approval from regulators in 2018 to begin collecting the demand fee as part of a broader rate case. After an appeals court upheld the decision, the Sierra Club and Vote Solar appealed the ruling to the Supreme Court and won in April. The high court said that imposing a fee only on customers with solar panels was discriminatory.

Company spokeswoman Gina Penzig said the utility is following regulatory protocol and plans to keep the fee in place until February, when regulators are expected to approve a new rate.

More: [Energy News Network](#)

MAINE

NECEC Opponents Launch 2nd Referendum



Opponents of Central Maine Power's proposed New England Clean

Energy Connect transmission line launched a second referendum bid last week intended to pressure lawmakers to overturn the \$1 billion project, but they could face similar issues to an initial bid struck from the 2020 ballot.

This latest effort will try to essentially serve as an advisory referendum by asking lawmakers to change state law. It would require the Legislature to take a two-thirds vote to approve any transmission lines in the future and require another two-thirds to approve the use of public lands for such projects. The latter provision would be retroactive to projects passed in the last six years, which would allow the question to affect the NECEC. However, it could run into similar problems as the last challenge, where justices questioned the ability of lawmakers and citizens to overturn executive branch decisions on permitting.

More: [Maine Public Radio](#)

MASSACHUSETTS

Transit Officials: Battery Buses not Ready for Primetime

Massachusetts Bay Transportation Authority (MBTA) officials last week said battery-powered buses are still several years away from being ready for large-scale use, largely because a test of five vehicles indicated they take too long to charge and don't live up to their mileage specifications.



The MBTA purchased five 60-foot, battery-powered buses in 2019 and ran them on Silver Line routes over the past year. The manufacturer claimed the buses would run 100 to 120 miles on a single charge, but the actual mileage ranged from 60 to 110, with the lesser amounts coming on colder days.

Lawmakers and transportation advocates have been pushing the authority to convert to all-electric buses as quickly as possible to reduce greenhouse gas emissions.

More: [CommonWealth Magazine](#)

MINNESOTA

Xcel Updating Grid Congestion Maps



Xcel Energy last week said it is

updating its online mapping tool that helps solar developers determine where to site their projects.

The Public Utilities Commission this summer asked Xcel to file new hosting capacity analysis data and maps by Nov. 2. Although the refined maps should be immediately useful to the solar community, they will also influence planning for electric vehicle charging, beneficial electrification and other clean energy infrastructure.

Residential and commercial solar installers may be the chief beneficiaries because they can warn clients of any potential problems with their projects because of grid congestion or other issues.

More: [Energy News Network](#)

NEW YORK

Report Lays out Budget Actions for Climate Change

The New York League of Conservation Voters and the Citizens Budget Commission last week released a report with recommendations for how the state can begin hitting its climate goals through fiscal policies and the use of clean energy sources.

The first recommendation points to \$800 million in tax exemptions that promote residential and nonresidential use of fossil fuels. The report suggests a partial repeal of the

exemption for the tax on residential energy, removing the exemption for fossil fuels but maintaining it for renewables and electricity. The report also suggests a full repeal of petroleum business tax exemptions and encourages local aid reimbursement rates for school building and transportation aid.

More: [City and State NY](#)

NORTH CAROLINA

Duke University to Buy More Solar Power



Duke University last week agreed to a deal with developer Pine Gate

Renewables on three new solar facilities and became the first university to participate in Duke Energy's Green Source Advantage program.

The university, which is hoping to become carbon neutral by 2024, will receive 101 MW of capacity from the three facilities. They are expected to be online by 2022. It is the largest such initiative under Duke Energy's Green Source Advantage program.

More: [WRAL Tech Wire](#)

OHIO

Lake Erie Wind Farm Clears 'Poison Pill' Hurdle

The Power Siting Board last week unanimously voted to rescind part of an order it issued last May that approved the construction of the \$126 million Icebreaker Wind project only if the turbine blades did not move at night between March 1 and Nov. 1, on the grounds that they would harm bats and birds. Such a limit would have been a "poison pill" that would have made the project financially infeasible.

Despite the board's decision, there are still

details that need to be worked out regarding how to mitigate the harm to animals.

More: [Cleveland.com](#)

PENNSYLVANIA

EQB Takes Next Step in Moving State Toward RGGI

The Environmental Quality Board last week voted 13-6 to approve a draft regulation to enter the Regional Greenhouse Gas Initiative. The draft will be open for public comment for a 60-day period and begins the next phase in the regulatory process.

Based on public feedback, the Department of Environmental Protection will revise the rule before presenting a final version to the board. If approved, the state could join RGGI by 2022.

More: [StatelImpact Pennsylvania](#)

VIRGINIA

SCC Grants Extension of Moratorium on Utility Disconnections

The State Corporation Commission last week granted Gov. Ralph Northam's request to extend a moratorium on utility disconnections until Oct. 5.

The SCC said it will not extend the moratorium beyond Oct. 5 and urged the governor and lawmakers to appropriate funds to help customers who cannot pay their bills. As of June 30, state residents owed more than \$184 million in past-due utility bills.

More: [Richmond Times-Dispatch](#)

VERMONT

Gov. Scott Vetoes Global Warming Solutions Act

Gov. **Phil Scott** on Sept. 15 vetoed the Global Warming Solutions Act, leaving the



legislation — which would mandate the state meet carbon emission-reductions targets — in the hands of the legislature. Despite the veto, Democratic leadership has the two-thirds majority needed to

override the decision and enact the bill, with the House of Representatives on Thursday voting 103-47 to do so.

The bill would require the state to reduce greenhouse gas pollution to 26% below 2005 levels by 2025. Emissions would need to be 40% below 1990 levels by 2030 and 80% below by 2050. If the government failed to meet these goals, individuals would be allowed to sue the state.

The House voted 102-45 in favor of the bill, while the Senate passed it in a 22-6 vote.

More: [VT Digger](#); [Seven Days](#)

WYOMING

Lawmakers Propose to Repeal Tax Exemptions for Wind

The Legislature's Joint Committee on Corporations, Elections and Political Subdivisions last week voted 6-5 to draft a bill to eliminate a three-year electricity tax moratorium available to new wind energy projects. The legislation will be reviewed in November.

The change would eliminate the three-year exemption from the \$1/MWh electricity tax now available to new wind facilities. Proponents of the repeal argued the move could create an alternate revenue stream for the state during a fiscal crisis. Others said it would raise costs for consumers and severely deter renewable energy investment in the state.

More: [Casper Star-Tribune](#)

Save your acrobatics for Cirque de Soleil.

Jumping through hoops was never really your thing anyway.

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 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.

