RTO Insider

Your Eyes and Ears on the Organized Electric Markets

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ISSN 2377-8016 : Volume 2019/Issue 23 June 4, 2019

PJM CEO Andy Ott to Retire

By Christen Smith

Andy Ott last week said he will step down as PJM's president and CEO next month, marking the second top executive to exit the organization this year.

Ott announced his retirement effective June 30 after more than two decades at the RTO, during which time he held several leadership positions, helped launch the wholesale energy market and navigated the fallout of the GreenHat Energy default — the latter of which he described as one of his greatest challenges.

"It has been a great privilege to serve as CEO and lead an incredibly talented group of professionals," he said in a press release. "I am grateful to have worked with such a talented group of people throughout my career at PJM, and I know PJM will continue to move ahead with solid values and integrity."

Ott will remain an adviser to the RTO's Board of Managers through Dec. 31 to ensure a "smooth transition," he said. Board member Susan J. Riley will serve as interim CEO beginning July 1.

Andy Ott | © *RTO Insider*

After GreenHat

Ott said during his keynote address at PJM's annual meeting last month that the ongoing fallout from the GreenHat default loomed large and that he is working hard to implement

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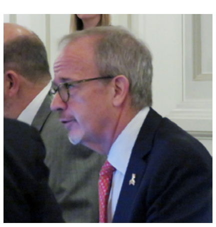
NERC Seeking New CFO, Counsel in Apparent Shake-up

By Rich Heidorn Jr.

Scott Jones | © *RTO Insider*



Charles Berardesco | © *RTO Insider*

NERC is looking for a new CFO and general counsel, allowing CEO Jim Robb to reshape the organization's senior management as he enters his second year on the job.

The Electric Reliability Organization announced on May 28 that Scott Jones — its CFO, chief administrative officer and treasurer — had *resigned* and that General Counsel Charles "Charlie" Berardesco would be *retiring* in August.

There was no indication that Jones was on his way out earlier last month, when he gave several presentations at the quarterly meetings of the Board of Trustees and Member Representatives Committee in St. Louis. Berardesco also made no public mention of his retirement plans at the meetings. (See *NERC MRC, Trustees Meeting Briefs: May 8-9, 2019*.)

"I heard Scott was being forced out and they're

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New RCs Tell WECC Transition on Schedule
(p.7)

Ohio Plan Subs Nuke, Fossil Fuel Subsidies for Renewables

By Christen Smith

A *plan* pending before the Ohio Senate could divert $300 million in ratepayer funds away from renewable resources to subsidize nuclear and fossil fuel plants, effectively gutting the state's renewable portfolio standard.

The state House of Representatives on Wednesday voted 53-43 to pass House Bill 6, which would create the Ohio Clean Air Program. The legislation — supported by a monthly fee added to utility bills that would range from $1 for residential customers up to $2,500 for large-scale users consuming more than 45 million kWh per year — would replace existing charges for helping the state meet its standards for renewable generation, energy efficiency and peak demand reduction.

"The good news for electric customers is that for many, their bills will actually go down," *said* Rep. Jamie Callender (R), chair of the House Public Utilities Committee and co-sponsor of the bill. "This is because there are already charges on their bills in the form of a renewable portfolio standard and energy efficiency standard/peak demand. The new program

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10837 Deborah Drive ▣ Potomac, MD 20854 ▣ (301) 299-0375 ▣ info@rtoinsider.com
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RTO Insider LLC
10837 Deborah Drive
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Mixed Reaction for 'Resilience Incentives'

By Rich Heidorn Jr.

Clockwise from foreground: TSA Administrator David Pekoske; FERC Commissioners Bernard McNamee, Cheryl LaFleur, Chair Neil Chatterjee and Richard Glick; and Bruce Walker, assistant secretary of DOE's Office of Electricity. | *© RTO Insider*

FERC Chairman Neil Chatterjee's suggestion that incentives may be needed to encourage investments in infrastructure security received mixed reaction in comments filed with the commission last week (AD19-12).

At a March 28 technical conference by FERC and the Department of Energy, Chatterjee said he wanted to learn whether incentives were needed to encourage security investments beyond those required by NERC reliability standards. (See *TSA Defends Pipeline Security Practices Before FERC*.)

In post-conference comments, the Edison Electric Institute and EEI members Dominion Energy, FirstEnergy and American Electric Power expressed support for some form of "resilience incentives," along with the North American Generator Forum, Calpine and International Transmission Co. EEI *asked* for incentives for technologies such as "high-temperature superconductor, smart grid communications-enabled technology or resilient hardened substation designs."

But EEI members Exelon and Alliant Energy opposed the idea, as did the Electric Power Supply Association, the American Public Power Association, transmission-dependent utilities (TDUs) and industrial consumers.

"An initiative to revise existing incentives or develop new ones may unintentionally distract resources from what is truly needed to continue making investments in the physical and cybersecurity of our assets: the regulatory certainty provided by timely and fair commission action on filings that involve cost recovery and price formation matters," Exelon *said*.

Delta Star, a Virginia-based provider of substation equipment, said FERC should encourage the use of trailer-mounted mobile substations. | *Delta Star*

Competitive Generators

The North American Generator Forum said deregulated generators have no federal or state cost recovery mechanisms for security spending and "have significant challenges justifying additional cybersecurity spending beyond the mandatory requirements."

Small generators also cannot afford dedicated information and operational technology staff on site, it said. "A government-sponsored program to provide cyber forensic assistance for facilities with limited resources would be a welcome tool for those facilities to be able to rely upon in times of need," it *said*.

It also said market mechanisms and tax incentives should be considered as ways to provide cost recovery, noting state property taxes act as a disincentive for maintaining spare transformers. "We should ensure that early adopters that have completed security projects beyond the required compliance have a method to recover costs."

EPSA *called* for "continued observation and analysis" of incentives in the future but said competitive suppliers "are currently able to recover costs associated with cyber and physical security through a number of sources, whether through market-based rates collected in the organized electricity markets, retail revenues, provisions within power purchase agreements or other sources of revenue."

But EPSA member Calpine *said* the commission should consider "maturity credits" for industry participants who meet or exceed security goals to encourage best practices.

The Electricity Consumers Resource Council (ELCON), which represents industrial users, *countered* that competitive generators already have incentive to adopt cost-effective security practices — the opportunity cost of foregone market revenues if they are idled. "Shifting a segment of competitive generators' costs to cost-of-service would set a deeply problematic precedent," it said. "Security is an easy justification for cost-of-service entities to expand rate base."

ELCON criticized ISO-NE's proposal to recover generators' costs for meeting critical infrastructure protection (CIP) standards via cost-based rates, saying such costs should be collected via energy and capacity markets. (See *Eversource Balks at ISO-NE Plan on CIP Costs*.)

"The costs of compliance with new regulations — CIP or otherwise — is an investment risk that should be internalized by competitive generators, not socialized through a new charge on transmission customers."

If market power mitigation rules do not allow the collection of such costs, they should be changed, ELCON said.

Dominion, however, *said* generators subject to CIP standards in organized markets may be at a disadvantage without "tailored cost recovery mechanisms in RTOs."

"Under current market rules, developers may favor only building new generation resources that are not subject to NERC CIP standards, resulting in incremental generation on the system that is not optimally located for reliability and system stability."

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Transmission Incentives

ITC *said* the commission should ensure cost recovery for transmission owners that go beyond NERC standards "consistent with Order No. 679 and associated commission policy."

But Alliant *rejected* the idea of a "resilience incentive," saying it would "provide a financial windfall to transmission owners without providing commensurate benefit to transmission customers. As stated at the technical conference, transmission owners currently do not have difficulty securing financing for transmission projects."

"Given that utilities with cost-of-service rates are able to recover the costs of any prudent security investments, it is neither necessary nor appropriate to grant them financial incentives for such investments," *agreed* the Transmission Access Policy Study Group, which represents TDUs.

APPA *said* "unjustified incentives could be particularly problematic for its" TDU members. "The costs of incentives paid by public power utilities in their transmission rates might be on top of infrastructure security costs incurred by public power utilities on their own systems," it said.

FirstEnergy *said* FERC should ensure black start resources are "appropriately valued" as transmission assets. It also called for funding for information sharing programs such as the Cybersecurity Risk Information Sharing Program (CRISP) managed by NERC's Electricity Information Sharing and Analysis Center. "The costs for participation in CRISP can be prohibitively expensive for smaller companies or municipalities. While companies participating in CRISP cover over 75% of U.S. customers, the goal should be 100%. Given the interconnected nature of the grid, the lack of participation by smaller entities could pose a significant threat to the reliability of the Bulk Power System."

Gas: Incentives Yes, Standards No

The American Gas Association, which represents local distribution companies, *said* it supports tax credits to reduce the costs of cybersecurity investments and certification processes that can be used to obtain lower insurance rates.

It also said state regulators should provide cost recovery for physical and cybersecurity measures, including cyber mutual assistance programs, video surveillance, sensor technology, physical barriers and lighting. Only some states allow security riders to recover investments outside of a full rate case, AGA said.

Mark Gabriel, WAPA, speaks at FERC technical conference March 28 as (from left) William Evanina, National Counterintelligence and Security Center; Chuck Kosak, Department of Defense; Sonya Proctor, Transportation Security Administration; AEP CEO Nick Akins; and NERC CEO James Robb listen. | © *RTO Insider*

It said the gas industry should continue following voluntary guidelines and best practices rather than being subject to the kind of mandatory standards that cover electric utilities.

"Allowing for riders based on, for example, the [Transportation Security Administration] Pipeline Security Guidelines, [the National Institute of Standards and Technology's] Framework for Improving Critical Infrastructure Cybersecurity or [DOE's Cybersecurity Capability Maturity Model] could accelerate the adoption of enhanced security practices and tools," it said. "Cost recovery that is limited to mandatory guidelines or standards for high-risk or critical energy facilities penalizes forward-thinking operators that are being proactive voluntarily and looking ahead to the next challenge."

Bandwidth

The Utilities Technology Council — a trade group for electric, gas and water utilities' telecommunications and IT functions — *called* on FERC to join it in fighting the Federal Communications Commission's proposal to allow others access to the 6-GHz frequency band, a communications channel used by electric utilities and other critical-infrastructure industries (CII).

"While UTC recognizes FERC has no authority over the FCC or spectrum, it nonetheless has a distinct interest in this proceeding. As the agency responsible for assuring the reliability of our nation's Bulk Electric System, FERC should amplify the significant concerns raised by the entire electric utility and the oil and natural gas industries that are in opposition to the FCC's 6-GHz plan and urge the FCC to protect utilities and other CII from interference in the band."

Public Citizen *criticized* FERC's reliance on "industry self-reporting" and said it should do more to protect whistleblowers. It also called for public identification of utilities that violate NERC standards and said NERC is not independent of the electric utility industry.

Delta Star, a Virginia-based provider of substation equipment, used its comments to make a sales pitch for trailer-mounted mobile substations, calling them "the only product that can be remotely secured from terrorist, cyber and physical threats and still be dispatched and installed within a matter of hours."

Beyond Standards

The National Association of Regulatory Utility Commissioners did not say whether it supported incentives. Instead, it *suggested* states would benefit from improved information sharing by FERC's Office of Electricity and Infrastructure Security and DOE's Office of Cybersecurity, Energy Security and Emergency Response.

ELCON called for less emphasis on mandatory NERC standards and more information sharing on emerging threats and best practices for defense. "The rapid rate of change in computing technology is outpacing the ability of standards development processes," it said.

On that, EEI appeared to agree. "The commission's current approach of addressing new threats with new requirements is pushing the CIP standards into areas beyond the electric industry and electric company control," it said. "We encourage the commission to take a more comprehensive approach to security than simply directing the development of modified or new industry security requirements." ■

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NERC Seeking New CFO, Counsel in Apparent Shake-up

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giving Charlie a retirement party," one former senior NERC official who is still in contact with former colleagues said in an interview. "When you see two senior guys leaving at the same time, it's clear somebody's cleaning house."

Berardesco, who joined NERC in 2012 from Constellation Energy, will retire on Aug. 31, NERC said. He served as acting CEO for about five months after the November 2017 resignation of former CEO Gerry Cauley following his arrest on domestic abuse charges in an incident involving his then-wife.

Robb joined NERC from the Western Electricity Coordinating Council in April 2018.

The former official said that Robb was selected by the board as "an independent guy who could come in and do what was necessary to take NERC into the future" after Cauley's departure. "I'm sure he's taken this last year to learn and evaluate any dysfunctions within the company."


Ken McIntyre | © *RTO Insider*

But Jean Cauley, Gerry Cauley's ex-wife, said she suspects the moves may have been orchestrated by the board after Ken McIntyre, NERC's vice president of standards and compliance, left the organization in March after less than three years.

Jean Cauley and the former NERC official said McIntyre was well regarded and was being groomed by Gerry Cauley as his successor.

"The board would have done a follow-up. They wanted to know why [McIntyre left]. If he told them, they would have started things rolling," Jean Cauley said. McIntyre did not respond to a request for comment.

Jean Cauley said Berardesco and Jones had attempted to prevent her and staff from talking to board members about management problems at NERC after Gerry Cauley's arrest for assaulting her.

She told police that her husband pushed her into a wall and a bathtub after she discovered him having cybersex with a "young female employee of his." She suffered a broken spine in the assault and now needs a walker. Gerry Cauley resigned about a week after the incident. (See *Cauley Resigns; NERC Launches Search for Replacement*.)

"Scott was telling everybody I was unbalanced and a nut case and not to be believed," Jean Cauley said in an interview.

"The board finally wised up and started seeing some of the deceit that's been going on at NERC for years," Jean Cauley said.

Cauley and several former NERC employees have described Berardesco as an abusive manager.

"Charlie is flat-out mean. He yells. Throws things," she said.

"He was pretty rough on people," the former executive said. "One of Charlie's favorite things to say was, 'I have more money than God.' … If he liked you, you were fine. If he didn't like you, it was hell on wheels."

NERC's announcements gave no indication of any dissatisfaction with either Jones or Berardesco, neither of whom responded to *RTO Insider*'s requests for comment.

"Charlie has done an outstanding job during his tenure at NERC," Board Chair Roy Thilly said in a statement. "He was instrumental in leading NERC as interim CEO during our time of transition."

Jones, who joined NERC in December 2014 as senior director of finance, was promoted to vice president of finance in May 2016 and CFO in August 2017.

"During his tenure, Scott elevated the caliber of our financial processes and procedures and brought a high level of expertise to our accounting and budgeting processes that will benefit NERC and our many stakeholders well into the future," Robb said in a statement.

Thilly and Robb declined requests for comment.


Andy Sharp | © *RTO Insider*

NERC said Controller Andy Sharp will serve as interim CFO, responsible for oversight of business plans and budgets and day-to-day financial administration, while the organization searches for Jones' successor.

With the latest moves, NERC will have replaced three of its top officials since Cauley's departure. Senior Vice President and Chief Security Officer Marcus Sachs, then one of seven direct reports to CEO, was forced out in November 2017 and replaced by Bill Lawrence. (See *NERC Parts Ways with Chief Security Officer*.) ■

Out of the Game, Skelly Still High on Wind Energy

By Tom Kleckner

Michael Skelly | © *RTO Insider*

HOUSTON — It wasn't too long ago that Michael Skelly was at the forefront of an effort to develop long-haul transmission lines to ship power from remote wind farms in SPP to urban centers to the east.

Skelly's Clean Line Energy Partners, which he founded and led, was developing five projects capable of carrying 16.5 GW of energy. The future seemed bright.

"We thought transmission was going to be the linchpin of expanding wind energy," Skelly said. (See *Unfazed by Obstacles, Clean Line's Skelly Focuses on Future*.)

He's now on the outside looking in. Clean Line has sold off its projects, its employee count is down to zero, and Skelly has taken a senior adviser role for Lazard Asset Management.

Asked how he is doing during a panel discussion at the American Wind Energy Association's WINDPOWER 2019 conference last month, Skelly responded, "I'm very happy."

But Skelly exhibited new regrets over his failure to complete a long-haul, high-voltage project. He's said Clean Line wasn't able to "win the World Cup of transmission," but that's not to say someone else won't.

"Hopefully, the second mouse gets the cheese in the transmission world," he said, using the proposed $2.6 billion, 1.5-GW Cape Wind offshore site off Massachusetts as an example. Cape Wind was abandoned in 2017, but developers expect the nation's 30 GW of offshore capacity to exceed 2 GW by 2030. Another 25 GW sits in the development pipeline.

"Transmission is super hard. We're not really in the mood right now to do these giant projects in the United States," Skelly said. "These things change. We'll look back in 100 years. There'll be times we didn't do a lot of infrastructure; there are times we did a lot of infrastructure. Hopefully, the country will be in a better mood and ready to do these big-bone transmission projects."

Coincidentally, Pattern Energy CEO Michael Garland sat at the other end of the panel. Pattern last year bought Clean Line's interests in the Mesa Canyons Wind Farm and Western Spirit Clean Line projects in New Mexico. It has already reached a $285 million agreement with PNM Resources to sell Western Spirit once it's completed in 2021.

"They've pushed forward with development," Skelly said of Pattern. "Clearly it's a new model, and that's exciting."

Clean Line sold another of its projects, the Grain Belt Express in the Upper Midwest, to Invenergy, contingent upon approval from Missouri regulators. The Public Service Commission has already approved the line after several earlier failed attempts and is now deliberating the sale.

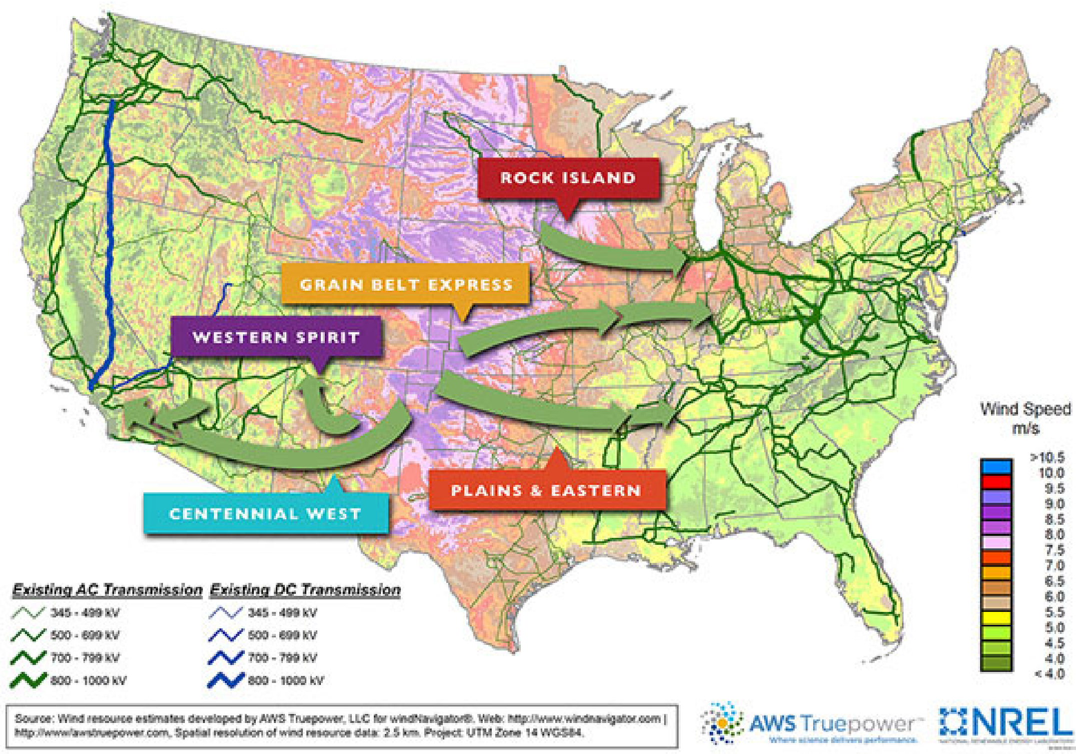
The state's most recent legislative session ended without eminent domain legislation, another positive for the $2.3 billion, 780-mile project that would connect Kansas' bountiful wind energy with population centers on the other side of the Mississippi River.

"It's survived several attempts to kill it," Skelly said.

NextEra Energy Resources has acquired Clean Line's Plains & Eastern Clean Line assets in Oklahoma. The Rock Island Clean Line was killed by Iowa legislation that made above-ground HVDC transmission projects illegal, Skelly has said.

Still, he remains optimistic about the wind energy business, pointing to decreasing costs and increased hunger for renewable energy.

"There's a huge supply chain of service folks that really know how to do these things, and that will help us to be more flexible," Skelly said. "There's a bunch of states now that want 100% renewable energy. I think we're on a great path, and for the younger folks just getting started in the industry, it's going to be interesting." ■



Clean Line Energy Partners' projects | *Clean Line Energy*

CAISO/WECC News

New RCs Tell WECC Transition is on Schedule

By Hudson Sangree

The key players in the Western reliability coordinator transition said Wednesday they're largely on track to take over from Peak Reliability on a staggered timeline from July to December.

"Overall, our project is on schedule, and we're making changes needed to be ready in August," Bruce Rew, SPP's vice president of operations, told the Western Electricity Coordinating Council's RC Forum in a web-only meeting.

SPP and CAISO will be the main RCs for the Western states, while BC Hydro will assume responsibility for most of British Columbia. Gridforce will serve several small balancing areas in Arizona, Oregon and Washington. Alberta Electric Service Operator will continue performing the RC function in its province, rounding out the *Western Interconnection*.

Each entity provided an update on its progress Wednesday, and Peak described its gradual wind down as it exits the RC business this year.

CAISO's *RC West* will start the handoff when it takes over RC services for its California territory July 1. The ISO is awaiting final certification from NERC, which it expects to receive "any day now," Tim Beach, RC West's director of operations told the forum. (See *RC West Moving Smoothly Toward July Handover*.)

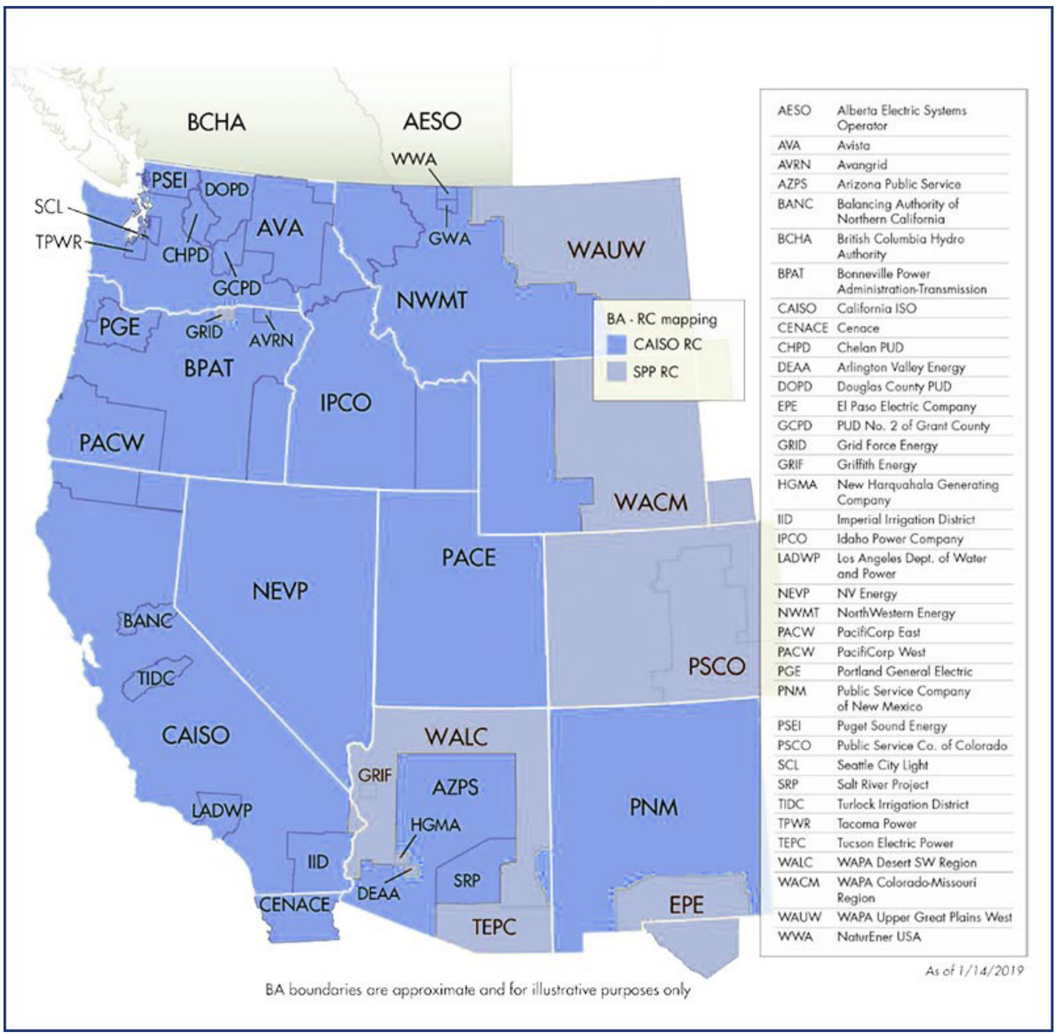
RC West staff members are in the second phase of shadowing Peak employees and have already been involved in problem situations, including a high-voltage event late last month in California that required switching a transmission line out of service to mitigate the problem, Beach said.

After July 1, RC West will be preparing for Nov. 1, when it assumes the RC role for most of the West; 39 entities have contracted for its services from the Canadian border to northern Baja California and from the Pacific Ocean to the Rocky Mountains.

SPP has agreements with 13 customers, 11 of which have completed connecting with SPP, Rew said. The utility will start its certification process with WECC and NERC in August in anticipation of going live Dec. 3. (See *SPP on Track for WECC RC Certification*.)

Gridforce President C.J. Ingersoll said that as a relative newcomer, the company is in "catch-up mode" but with its small footprint, things should work out fine.

"Our target go-live date is Dec. 3, and we feel like we're on track there," Ingersoll said.



CAISO and SPP are taking over RC responsibilties in most of the West this year. | *CAISO*

Asher Steed, BC Hydro's manager of provincial reliability coordination operations, said the company's employees will start shadow operations with Peak on July 8 as it ramps up for its Sept. 2 start date.

Peak said all is going as planned on its end. Losing key staff members was a major concern earlier this year, but the company's retention policies, including severance packages, appear to have worked, Chief Administrative Officer Rachel Sherrard said.

"We've had some unplanned attrition. Not a lot." The company has shrunk from more than 160 employees in May 2018 to 119 today, she said.

Peak will start decertifying Dec. 4, vacate its offices in Vancouver, Wash., and Loveland, Colo., and cease to be a company by May 2020.

Eric Whitley, a grid expert from Folsom, Calif., who serves on WECC's RC Transition Coordination Group, said "Peak will not be operational after the last transition on Dec. 3. There's no going backwards," he warned. Peak has posted a banner on its *website* showing the countdown to when it ceases operations.

The forums will continue every two or three months, as needed, Whitley said.

"It's going to be a very active rest of the year," he said. ■

CAISO/WECC News

California Regulators OK Utility Wildfire Plans

Cost of Grid Hardening Could Be 'Enormous,' They Warn

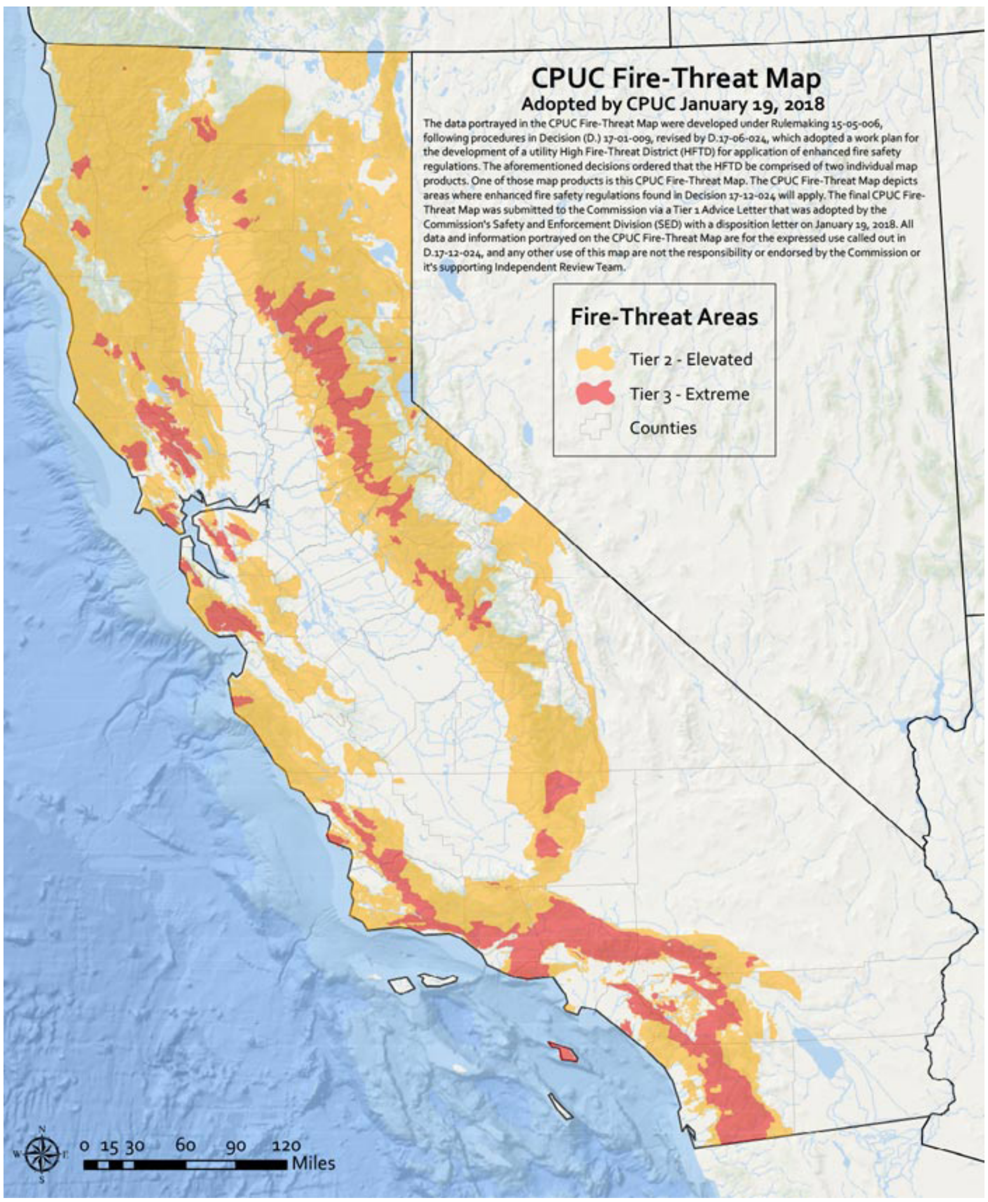
By Hudson Sangree

The five members of the California Public Utilities Commission on Thursday unanimously approved *wildfire mitigation plans* filed by the state's three large investor-owned utilities in response to last year's Senate Bill 901.

But they warned that hardening the grid against fires and climate change could be an immense and extremely expensive undertaking.

CPUC President Michael Picker cited Pacific Gas and Electric's plans to spend $237 million to expand its use of covered conductors along 150 miles of its overhead lines in 2019.

"Assuming that the 7,100 miles of PG&E's system located in Tier 3 high-fire-threat areas is eventually covered, the magnitude of future general rate case costs could be enormous," Picker said.



California's investor-owned utilities have plans to de-energize transmission and distribution lines during high winds in areas of extreme (red) and elevated (yellow) fire risk. | *CPUC*

PG&E also intends to clear 305,000 hazardous trees near its lines at an estimated cost of $1.3 billion, he said.

The CPUC announced a series of *public hearings* May 28 to consider PG&E's request for a $2 billion rate hike over the next three years to cover wildfire prevention measures.

On Wednesday, a panel convened by Gov. Gavin Newsom — the *Commission on Catastrophic Wildfire Cost and Recovery* — issued a draft report and scheduled a hearing for Friday in Sacramento. Its recommendations include replacing the state's strict liability standard for utilities when electrical equipment starts wildfires — called "inverse condemnation" — with a negligence standard. (See *Calif. Must Limit Wildfire Liability, Governor Says*.)

PG&E filed for bankruptcy in January, saying it faced at least $30 billion in liability for fires in 2017 and 2018, including the Camp Fire, the deadliest in state history. Southern California Edison also faces massive liability for its equipment's role in starting the fatal Thomas Fire in 2017. (See *Edison Takes Partial Blame for Wildfire in Earnings Call*.)

On Thursday, the CPUC approved a proposed decision providing guidance on wildfire plans submitted under SB 901 along with individual decisions on each of the 2019 plans submitted.

In its plan, SCE said it will inspect 450,000 pieces of equipment by the height of the 2019 fire season, Picker said.

"It's unclear how Southern California Edison can perform detailed inspections of this volume of equipment in so short a time," he said. "But without better data and a stronger record, we're not prepared to stop SCE from carrying out its new inspection program. It is required under SB 901 to prove the effectiveness of its inspection program."

Picker said the commissioners want to make sure that SCE isn't just doing drive-by inspections or duplicating routine inspections.

Both PG&E and SCE, the state's first- and second-largest utilities, are playing catchup with smaller San Diego Gas & Electric, which has been hardening its grid and installing cameras and weather stations for a decade in response to catastrophic fires in 2003 and 2007.

While often cited as a model, SDG&E has far

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CAISO/WECC News

CAISO Defers Day-ahead, SATA Initiatives

Adds 4 New Efforts

By Hudson Sangree and Robert Mullin

CAISO is postponing stakeholder initiatives on day-ahead market enhancements and storage-as-transmission assets (SATA), while adding four new initiatives as part of its 2019 annual plan.

The *day-ahead market enhancements initiative* has been postponed in response to stakeholder requests for more time to implement required changes, CAISO said in an *update* posted Wednesday. The effort aims to replace the day-ahead market's current one-hour scheduling with a 15-minute granularity to improve handling of net load variability in real time. (See *CAISO Says Changes Will Better Match Forecasting, Demand*.)

"Grid infrastructure has advanced, the resource fleet has changed and the policies regulating operation of the grid have evolved (i.e., FERC mandated 15-minute scheduling in real-time energy markets). As a result, hourly scheduling granularity is no longer the most efficient way to schedule resources," the ISO said in its *straw proposal* for the initiative.

As a byproduct of the initiative, CAISO is proposing to alter the Western Energy Imbalance Market to require participants to submit base schedules with a 15-minute granularity instead of the current one-hour.

"The use of hourly base schedules was originally chosen to align with the CAISO's hourly day-ahead schedules, which were the reference point for imbalance energy," the ISO said.

While EIM participants are generally supportive of the change, they've also cautioned CAISO that they need more time to comply with it.

In its April 1 *comments* on the ISO's third straw proposal, for example, EIM member Arizona Public Service wrote that "while APS is supportive of moving to 15-minute scheduling and bidding granularity, these changes will require significant software and system changes, and will likely require modifications to EIM entities' internal business processes. Sufficient time must be included in the implementation schedule for these system upgrades."

NV Energy *noted* that the scheduling changes will require EIM members to revise their open access transmission tariffs (OATTs).

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

"NV Energy requests that the EIM entity OATT amendments be coordinated with the CAISO Tariff amendment for this market enhancement. It will be necessary for the CAISO Tariff to be approved with ample time for the EIM entities to file OATT amendment changes with FERC," the utility said. It and founding EIM member PacifiCorp also urged CAISO to provide market participants 60 days to test the 15-minute functionality before implementation.

Northern California Power Agency (NCPA) also *expressed* concerns about the speed of the effort, contending the ISO "has exhibited a tendency to release major market changes that contain material deficiencies that have to be corrected over time." Such an approach can have "financial consequences" for market participants, it warned.

"As such, NCPA believes the implementation timeline being considered will need to be adjusted to include very robust structured and unstructured market simulations, based on a clearly defined set of measurable and verifiable milestones, managed in close coordination and collaboration with stakeholders prior to releasing the changes into the production environments," it said.

SATA Deferred

The *storage initiative* is being deferred until 2020 to provide time for the resolution of storage-dispatch policy in CAISO's energy storage and distributed energy resources initiative phase 4 (*ESDER 4*). Phase 4 "will explore refinements to the distributed energy resource and storage participation models, as well as lower integration barriers for demand

CAISO/WECC News

response resources," the ISO said. (See *CAISO Updates ESDER Phase 3 Proposal*.)

"The scope of this initiative is to enable storage providing cost-based transmission services to also participate in ISO markets and receive market revenues to provide additional ratepayer benefits and provide greater flexibility to the grid," CAISO wrote in its *second revised straw proposal* in October 2018.

New Additions

Meanwhile, CAISO said it's adding four new measures to its 2019 roadmap:

- Its new hybrid resources initiative will address issues related to solar-plus-storage in "forecasting, operations, resource adequacy and market design to provide for storage dispatch resolution in ESDER 4."
- A second initiative will address an "inefficiency" in the allocation of the real-time market neutrality settlement charge, which is currently calculated based on the sum of instructed and uninstructed imbalance energy, unaccounted for energy and greenhouse gas awards. The charge is allocated to settlements based on an offset calculated for each LMP component. The initiative proposes to eliminate the transfer of the real-time imbalance energy offset between EIM balancing authority areas, remove the GHG awards from the real-time market neutrality and create a GHG-specific neutrality allocation.
- An intertie bid cost verification initiative will seek to align "intertie resource requirements with internal resources under FERC Order 831," which directs ISOs and RTOs to cap resources' incremental energy offers at the higher of $1,000/MWh or the resource's verified cost-based incremental energy offer. FERC issued the *order* in November 2016 after wholesale power prices spiked during the winter storms of 2013/14 and generators said they could not recover their costs. (See *CAISO Developing New Bidding Rules*.)
- A capacity procurement mechanism (CPM) initiative is meant to update the soft offer cap and consider 12-month pricing for CPM designations. ■

California Regulators OK Utility Wildfire Plans

Cost of Grid Hardening Could Be 'Enormous,' They Warn

Continued from page X

less territory to cover than PG&E or SCE, whose systems cover 70,000 and 50,000 square miles respectively. SDG&E's service territory is 4,100 square miles. (See *California Utilities Prepare, as Fire Season Looms*.)

"In congratulating SDG&E, I don't want to underestimate how long it's going to take for the other utilities to get to that scale," Commissioner Liane Randolph said. "I just want to make sure that we're mindful of the heavy lift in terms of expense and time that it's going to take to implement these plans, and as they get updated in the coming years."

California is trying to prevent fires in the wildland-urban interface (WUI), such as the Carr Fire that burned near the city of Redding in 2018. | *Bureau of Land Management*

The CPUC also approved the wildfire mitigation plans of several smaller utilities in California: PacifiCorp, Liberty Utilities and Bear Valley Electric Service. The utilities' lines run through high-fire-risk areas, commissioners said.

"It's critical that these utilities have robust and effective mitigation plans as well," Commissioner Clifford Rechtschaffen said.

Transmission owners NextEra Energy and Trans Bay Cable also had to file wildfire mitigation plans, which the commission approved.

Trans Bay operates a cable that runs under San Francisco Bay and said its cable was "fire-hardened by virtue of being located underwater," Picker said.

In a separate item on utilities' plans to de-energize lines in hazardous weather conditions, commissioners insisted that the tool be used only as last resort and not to avoid liability.

De-energization "presents its own safety and health risks," especially to those who rely on electricity for medical equipment, Rechtschaffen said. ■

ISO-NE News

New England Regulators Talk Wholesale Market Evolution

By Michael Kuser

HARTFORD, Conn. — New England regulators are struggling to deal with how rapidly public policy is transforming the region's wholesale electricity markets, state officials said Monday at the New England Conference of Public Utilities Commissioners' (NECPUC) 72nd annual symposium.

Ned Lamont | *© RTO Insider*

As if to drive home the point about the pace of change, Connecticut Gov. Ned Lamont alerted the conference that his state would expand its offshore wind commitment more than six-fold.

"We had a 300-MW commitment, and our legislature, virtually as we speak, is going to up that commitment to 2,000 MW ... over the next five to seven years," Lamont said. (Two OSW bills — Senate Bill 975 and House Bill 7195 — were on Monday's Senate agenda.) He was speaking just days after the Massachusetts Department of Energy Resources issued a *report* calling for that state to solicit an additional 1,600 MW on top of an existing 1,600-MW procurement.

"We're doing the right thing to make sure we have a carbon-free future and a reliable, predictable energy source that allows our region to continue to grow and prosper," Lamont said.

The governor said he had faced an energy crisis shortly after being elected last November.

Katie Dykes | *© RTO Insider*

"I got a call from [Department of Energy and Environmental Protection Commissioner] Katie Dykes, who said we may have an issue with Millstone, the nuclear power plant that supplies 50% of our electricity," Lamont said, referring to Dominion Energy's threat to shut down the 2,111-MW plant, claiming it was no longer financially viable.

In December, Millstone was thrown a lifeline as one of the winning bidders in a state solicitation for nearly 12 million MWh of zero-carbon energy, securing purchase of about half its output for 10 years. (See *Conn. Zero-Carbon Awards Include Nukes, OSW, Solar*.)

The New England Conference of Public Utilities Commissioners (NECPUC) opened its 72nd annual symposium on Monday, June 3. | *© RTO Insider*

"We solved that Millstone problem ... and I'm going to make sure that no governor gets stuck again in the same situation I was," Lamont said.

Market Disconnect

Sharon Reishus | *© RTO Insider*

Restructuring of the electricity industry was meant to shift risks from ratepayers to the market players who stood to profit from their investments, said Sharon Reishus, president of Reishus Consulting and former chair of the Maine Public Utilities Commission.

"There was not an explicit design of the wholesale markets to address state environmental goals. There was an assumption that you would not harm environmental goals," Reishus said.

In moderating a panel on markets, Reishus asked: "How do state energy procurements keep from shifting risks back to consumers, and what are the risks of unintended consequences?" She added that the regional wholesale market may not survive if states continue to pursue their own separate goals.

New England has seen a disconnect between the roles of state policymaking and the design of the markets, said Vermont Department of Public Service Commissioner June Tierney.

"There's this tension in the market design between affording the states the proper" authority to pursue environmental goals and the mission of the grid operator to secure reliable energy at the lowest cost possible, Tierney said.

June Tierney | *© RTO Insider*

"The market exists to serve the needs of six sovereign states ... which push much more in the same direction than in contrary ones," she said. "It's about using American ingenuity to ... meet a basic need our citizens have, which is the need for electricity.

"When we were struggling with CASPR [Competitive Auctions with Sponsored Policy Resources] ... the bottom line of that issue was that ISO-NE was engaged in tweaking market design," Tierney said.

Pointing to FERC's March 2018 split decision approving the design, Tierney found it "interesting that it was splintered, that FERC itself was struggling with balancing state interests with the need and desire to have an electric market of the future." (See *Split FERC Approves ISO-NE CASPR Plan*.)

Commissioner Richard Glick's dissent caught her attention, she said. Glick contended that FERC had misinterpreted the Federal Power Act, failing to respect "that states, not the commission, are the entities primarily responsible for shaping the generation mix."

"It isn't FERC's job to interpret the Federal Power Act as if the states didn't have legiti-

ISO-NE News

mate interests in propagating laws that effectuate renewable energy policy," Tierney said.

R. Bruce Williamson | © *RTO Insider*

Answering Reishus' question about unintended consequences, Maine PUC Commissioner R. Bruce Williamson said, "In Maine, it's a constant battle. We have to remind, even to unwilling ears, that there are cost implications to some of the great ideas."

The region sees the benefit of retaining existing carbon-free resources in the market, but there is a misperception that state procurements of energy drive prices higher, Massachusetts Department of Public Utilities Chairman Matthew Nelson said.

"Out-of-market contracts get seen as the bogeymen here, but the most recent one occurred in Massachusetts and actually saw real reductions to ratepayers," Nelson said. "We live in a complicated market, and ISO-NE is doing its best ... but there's no going back to a vertically integrated electricity market."

"Folks start realizing they are paying for a renewable project in their bills, but [they] don't understand the benefits," said Nicholas Ucci, deputy commissioner of energy with the Rhode Island Office of Energy Resources.

Matthew Nelson | © *RTO Insider*

Nicholas Ucci | © *RTO Insider*

Left to right: R. Bruce Williamson, Maine PUC; June Tierney, Vermont DPS; Nicholas Ucci, Rhode Island OER; Katie Dykes, Connecticut DEEP; New Hampshire PUC; Kathryn Bailey, Matthew Nelson, Massachusetts DPU; and consultant Sharon Reishus. | © *RTO Insider*

"No system is perfect, especially one that is two decades old," Ucci said. "This is a work in progress."

Prayers Answered?

DEEP Commissioner Dykes said Connecticut has "gone from a minimal percentage of our load contracted to ... close to 100%."

"The contracting will only go so far," Dykes said. "We have to assume that states are going to continue pursuing their environmental goals. The real question is: Are we going to do so in a coordinated way?"

Kathryn Bailey | © *RTO Insider*

New Hampshire Public Utilities Commissioner Kathryn Bailey noted that in 1996, her state was the first in the country to pilot restructuring utilities.

"Customers now have the ability to purchase their energy through competitive suppliers," Bailey said, adding that the emphasis on least-cost generation resulted in an overreliance on natural gas.

Now, as regulators and ISO-NE work to both mold and adapt to a new resource mix, "utility-scale storage will be the answer to the prayer that we have today, and we'll be able to balance the reliability with the long-term contracts that continue to be negotiated," Bailey said.

"Having storage is really flexible and it's probably going to be the answer ... when we still need flexible resources, but 50% of the demand is powered by long-term contracts," Bailey said. ■

MISO News

MTEP 19 Revealing High Price Tag

By Amanda Durish Cook

With about six months left before it seeks approval, MISO is polishing a draft 2019 Transmission Expansion Plan (MTEP) that could end up being one of the RTO's most expensive buildout packages.

The draft so far contains 518 new projects at $4.3 billion to be recommended for approval. Included are 65 new projects valued at $771 million up for consideration in MISO South, stakeholders learned Wednesday at a subregional planning meeting.

MTEP 19 is so far clocking in at $1 billion more than the $3.3 billion, 442-project MTEP 18. (See *MISO Board OKs Full MTEP 18 over Stakeholder Complaints*.) MTEP 11, which contained the Multi-Value Project portfolio, holds the record for the most expensive proposal at $6.5 billion.

The highest-cost MTEP transmission projects in recent years have been in MISO South, which held five of the top 10 most expensive projects in MTEP 16 and MTEP 18, and eight of the top 10 costliest in MTEP 17.

MISO South Replacement Project

One of the priciest MISO South projects recommended in MTEP 19 will negate the need for two costlier projects approved for southern Louisiana the two previous years.

Cleco and Entergy's proposed $81.5 million joint project near Lafayette can replace the North and East Acadiana Load Pocket (ALP) transmission projects that were set to cost a combined $213.1 million.

Patrick Jehring | © *RTO Insider*

MISO engineer Patrick Jehring said the replacement Sellers LeBlanc project is poised to save customers $131.6 million, and the cost difference is the only "differentiating factor" between the projects. He said MISO supports the withdrawal of the ALP projects.

He praised Cleco and Entergy for working together on a lower-cost solution.

"This is really a good story to tell, and really only happened because of … significant collaboration between entities," Jehring said. "The only way we got here is through engagement with Cleco, Entergy and the Lafayette Utilities System."

The Sellers LeBlanc project involves a new 19-mile 138-kV line and a series reactor on an existing nearby 138-kV line for $66.7 million from Entergy. Cleco will take on the remaining $14.8 million by tying the new line into an existing 138-kV line and constructing a new autotransformer.

The project will resolve the overloading risk of multiple 138-kV lines around Lafayette. Additionally, MISO said there is approximately 300 MW of load in the Abbeville, La., area served by just one 230-kV line.

"It's pretty obvious that we want to go with the cheaper project," Jehring said. "We've truly identified the least-cost solution here."

Jehring encouraged stakeholders to provide written feedback on the proposed project.

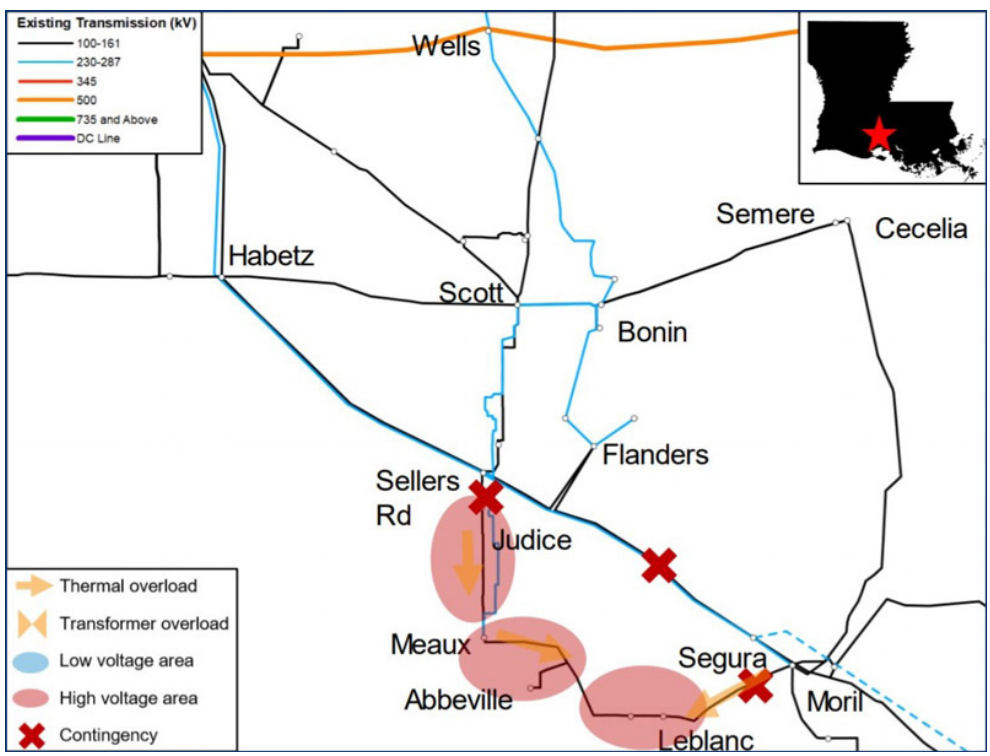
Shortlist from MCPS

Meanwhile, MISO's 2019 Market Congestion Planning Study (MCPS) has identified a short list of *potential projects*, with seven project candidates proposing to solve three separate issues making the first round of screening.

Three 345-kV projects ranging from $32 million to $85 million propose to solve congestion issues on the Helena-to-Scott County 345-kV line in southern Minnesota. MISO Economic Studies Engineer Karthik Munukutla said all three solutions are potentially eligible for market efficiency project categorization and cost sharing.

Two projects — a $58 million, 161-kV line rebuild and a $20 million new substation — are proposed to solve congestion on a 161-kV flowgate on the Iowa-Nebraska border. Finally, two new 115-kV lines at either $35 million or $37 million are competing to solve congestion on a 115-kV flowgate in southwest Arkansas. Munukutla said the four projects deal with MISO-SPP seams issues and will be added to the RTOs' ongoing coordinated system plan study to see whether they'd make beneficial interregional projects.

Munukutla said he wanted to share preliminary MCPS results so stakeholders get an idea of which projects stand to provide the most value after initial transmission analyses. He said MISO expects to have more certainty in July about what projects may be selected from the study. ■



Issues in the Lafayette, La., area | *MISO*

MISO News

MISO Sectors Support Expanding Nominating Committee

By Amanda Durish Cook

Representatives from multiple sectors contend MISO should increase stakeholder representation on the committee that selects candidates for the RTO's Board of Directors.

During a conference call of the Board Qualification Task Team (BQTT) on May 28, four of MISO's 10 sectors expressed support for expanding stakeholder seats on the Nominating Committee, which is currently *composed* of two stakeholder and three director seats. The team has six months to recommend any changes to improve the board selection process. (See *Task Team Begins Look at MISO Board Rules*.)


Mark Volpe | © *RTO Insider*

BQTT Chair Mark Volpe said a "common theme" among sectors is to both expand and rotate the sectors that serve on the Nominating Committee alongside sitting board members. However, the team hasn't made a formal recommendation to the board to expand the committee's stakeholder seats.

Power Marketers and Brokers representative David Bloom said his sector wants a more diverse set of stakeholders to make for a "more inclusive" Nominating Committee. The sector recommended MISO invite an Advisory Committee representative from each sector to serve on a voluntary basis. If that can't be done, Bloom said the PMs would like the Nominating Committee to add at least two additional seats for Advisory Committee members, provided the four members come from different sectors and eligibility is rotated each year among sectors.

Independent Power Producers and Exempt Wholesale Generators representative Volpe proposed each sector representing a minimum of seven organizations be required to provide a representative to serve on the Nominating Committee each year.

If adopted, the change would leave MISO's newest sector, the Competitive Transmission Developer sector and the Coordination Member sector — which contains only Manitoba Hydro — unrepresented.

"Expansion of the MISO Nominating Committee in this manner would be consistent with the majority of the committees representing the sectors as found in the other RTO/ISOs across the country," the IPPs said.


MISO headquarters | © *RTO Insider*

However, the Public Consumer Advocates proposed keeping the five-member format but flipping the structure so stakeholders hold the three-seat majority and board members are allotted two seats. Sector representative Jennifer Easler said the change could be adopted without modifying provisions to select Nominating Committee members.

"Currently, a majority of the five-member MISO Nominating Committee is held by MISO board members. Other RTO nominating committees are composed wholly of sector representatives or a majority of sector representatives," the sector pointed out. It also recommended MISO rotate sector representation on the committee.

Municipals, Cooperatives and Transmission Dependent Utilities representative Megan Wisersky proposed the least intrusive "tweak," calling for a rule forbidding any sector from having a Nominating Committee representative for two consecutive years. She said the rule would be in effect unless there's a shortage of willing participants from sectors.

Too Many Cooks?

The Environmental and Other Stakeholder Groups would also likely support a "broadening" of the Nominating Committee, sector representative Beth Soholt said. But she also asked if any other members foresaw an expanded committee becoming a "barrier" to consensus on candidates.

Former Nominating Committee member Wisersky said too large a group might make the interviewing process chaotic.

"It's important to make sure the group is freshened periodically so different viewpoints are heard," Wisersky said, adding that stakeholders serving on the Nominating Committee are there to represent the full membership, not the individual interests of their respective sectors.

Wisconsin Public Service Commissioner Mike Huebsch also cautioned against expanding the group too much, saying sector allegiance should be irrelevant on the Nominating Committee. He said if most sectors are allowed their own representative, sector representatives may start considering only their sector's needs when selecting a board candidate.

But Huebsch also said the manageability of a group often depends on the committee chair and personalities in the room. "I've been in groups of 25 that are of a manageable size and groups of three that are unmanageable," Huebsch said.

The Nominating Committee is "a board committee, not a stakeholder committee," Wisersky said, adding that she was personally undecided on whether stakeholders should outnumber board members.

Volpe reminded the task team that MISO is an outlier among all other RTOs in not allowing stakeholders to be a majority voice in the Nominating Committee.

The BQTT will next examine whether MISO's one-year cooling-off period prior to service should continue being a *prerequisite* to serving on the board. The task team's next meeting will be held in-person on June 19 in Traverse City, Mich., as part of MISO Board Week.

The task team is charged with producing a list of board qualification recommendations to be put before MISO's Corporate Governance and Strategic Planning Committee of the Board of Directors by December. ■

MISO News

MISO Stakeholders: Communication Fix Too Late for Summer

By Amanda Durish Cook

MISO's effort to improve a key communication system will come too late to smooth summertime emergency procedures, stakeholders said last week.

In post-mortems of a January emergency event in which less than a quarter of load-modifying resources (LMRs) performed to the RTO's criteria, multiple stakeholders complained the MISO Communications System (MCS) was difficult to understand and navigate.

The poor generator performance resulted in MISO last month issuing market participants nearly $2 million in penalties and disqualifying 21 LMRs for the remainder of the 2018/19 planning year. (See "MISO: $2 Million in Penalties for Jan. 30 LMR Underperformance," *MISO Reliability Subcommittee Briefs: May 2, 2019*.)

As a result, MISO is seeking to improve how LMR owners interact with the nonpublic MCS webpage. (See *MISO to Fix Communications System Shortcomings*.)

During a Reliability Subcommittee (RSC) conference call Thursday, Chair Bill SeDoris said the low LMR success rate in January is evidence of "serious procedural issues on both sides of the house."

Customized Energy Solutions' Ted Kuhn criticized the RSC for scheduling MCS improvement discussions for the third quarter, saying MISO is likely to call multiple summertime emergencies using an inadequate system while market participants wait on improvements.

"The current MCS is not sufficient. … Some of these things need to get fixed," Kuhn said. Other call participants repeated the plea for quicker improvements.

SeDoris said MISO's nonpublic Reliable Operations Working Group (ROWG) has taken up short-term improvements, including clearer communication when the RTO terminates a maximum generation alert.

Ron Arness, MISO director of Central Region operations, said the ROWG had a "healthy" discussion on how to improve usability of the MCS on Wednesday.

Ron Arness | © *RTO Insider*

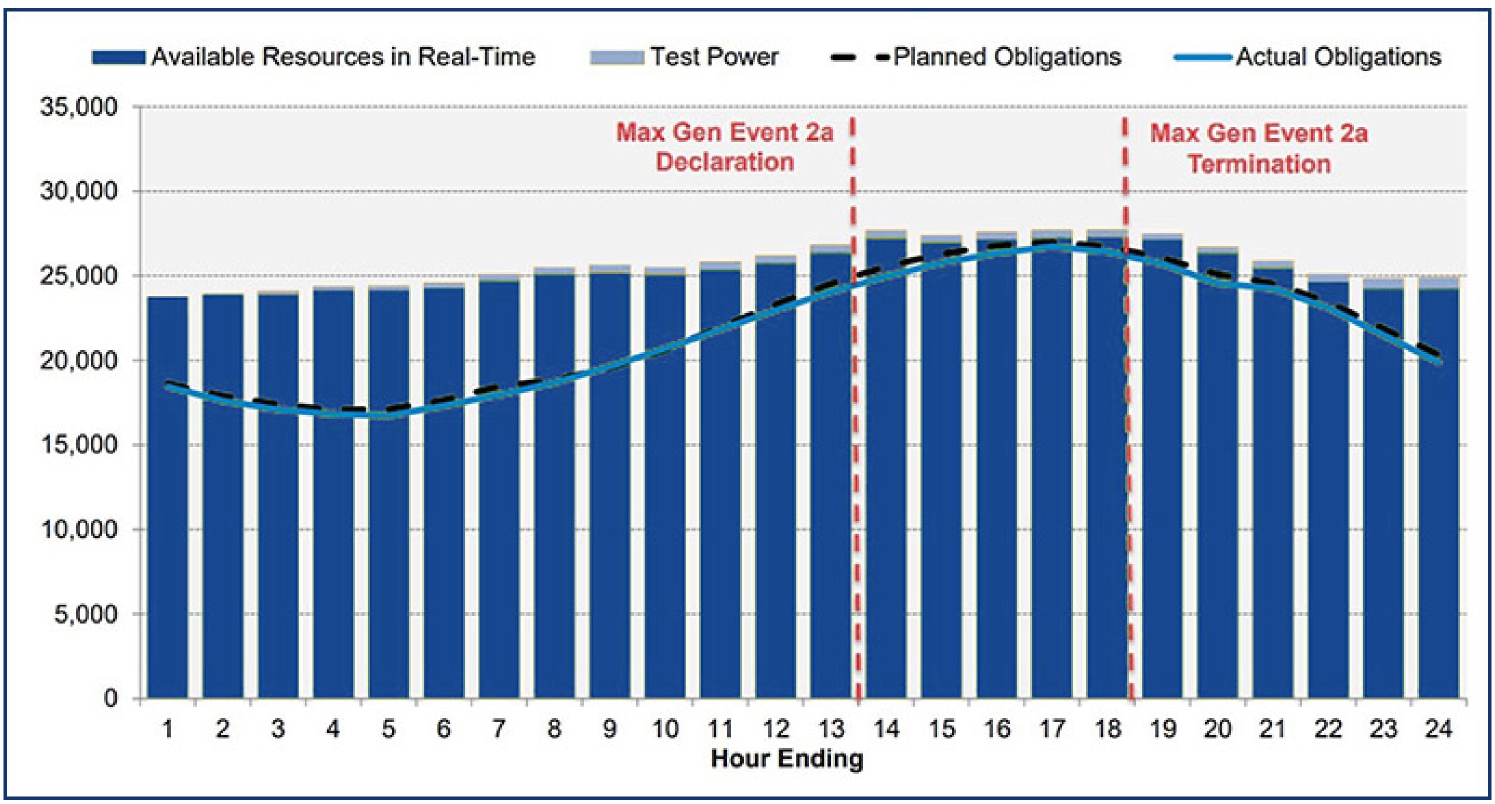
"There are some changes coming; those changes aren't going to occur overnight. … Be patient with us," Arness said.

But stakeholders say a mid-May emergency in MISO South already illustrates that the MCS is ill-suited for emergency communications. WPPI Energy economist Valy Goepfrich said when MISO called the May 16 maximum generation alert, it wasn't clear the alert only extended to the South region.

MISO South May Emergency

MISO said the five-hour May 16 *emergency* was atypical, the result of a higher-than-normal forced outage rate combined with above-average temperatures and the usual spring maintenance season.

"While unplanned outages are expected, the successive loss of [about] 4 GW of generation in a short period of time is outside normal



MISO South May 16 emergency (megawatts) | *MISO*

MISO News

expected operating conditions," MISO said.

Outages and derates in MISO South reached 16.6 GW that day, and load obligations hit a peak of about 27 GW around 5 p.m. MISO said it was able to maintain reliability through two separate calls for LMRs with lead times of three hours or fewer. The RTO will provide LMR response data at a later date.

Arness said MISO South frequently experienced tight capacity conditions over the last three weeks of May.

The RTO expects tight operating conditions in South through June due to hotter weather and continuing maintenance activity. Arness told stakeholders to be prepared for more emergency alerts in the region.

Goepfrich noted that MISO didn't come close to hitting the North-South transfer limit during the event and asked that it ensure that transfer capability is used before it calls on LMRs.

Outage Exemption Talk Ongoing

MISO last week also said it will *expand* a penalty exemption to include resources that return early from a planned outage, part of new outage scheduling rules.

The RTO will exempt resources from accreditation penalties if the start and end date of their submitted outages remain within 10% of the originally scheduled outage window "and/or [the resource] reduces the capacity of the outage" to provide MISO with more available capacity.

MISO originally proposed that unit owners submit a new outage request for both extended and shortened outages to allow it to evaluate the request based on maintenance margin supply predictions, putting a resource's penalty exemption at risk. Units earn penalty exemptions if they schedule an outage at least four months in advance. However, stakeholders questioned the potential for MISO to revoke the penalty exemption on even shortened outages. (See "MISO Taking Second Look at Outage Change Penalties," *MISO Reliability Subcommittee Briefs: May 2, 2019*.)

Jeanna Furnish, MISO manager of outage coordination, said the RTO still seeks to discourage "bad behavior" when participants schedule planned outages. She said significant shortening of outages impacts MISO data and forecasting and affects other available megawatts.

"We want the best information we can get about your outage schedule. We want you to return early if you reliably can … but we want to acknowledge this isn't a free pass to schedule the longest outage you can then reduce," Furnish said.

Some stakeholders still weren't satisfied with MISO's compromise.

"You're creating a huge disincentive for generation to shorten their outages," CES' David Sapper said.

Furnish said she rarely sees generation return significantly early from outages, adding that many generators actually lengthen planned outages.

MISO Director of Resource Adequacy Coordination Laura Rauch said the RTO is seeking to "strike a balance" to prevent generators from scheduling longer-than-necessary outages simply for the wiggle room.

Furnish put the 10% proposal to a round of feedback and encouraged stakeholders to offer exemption alternatives. ■

MTEP 19 Could Yield 1st MISO SATA Project

By Amanda Durish Cook

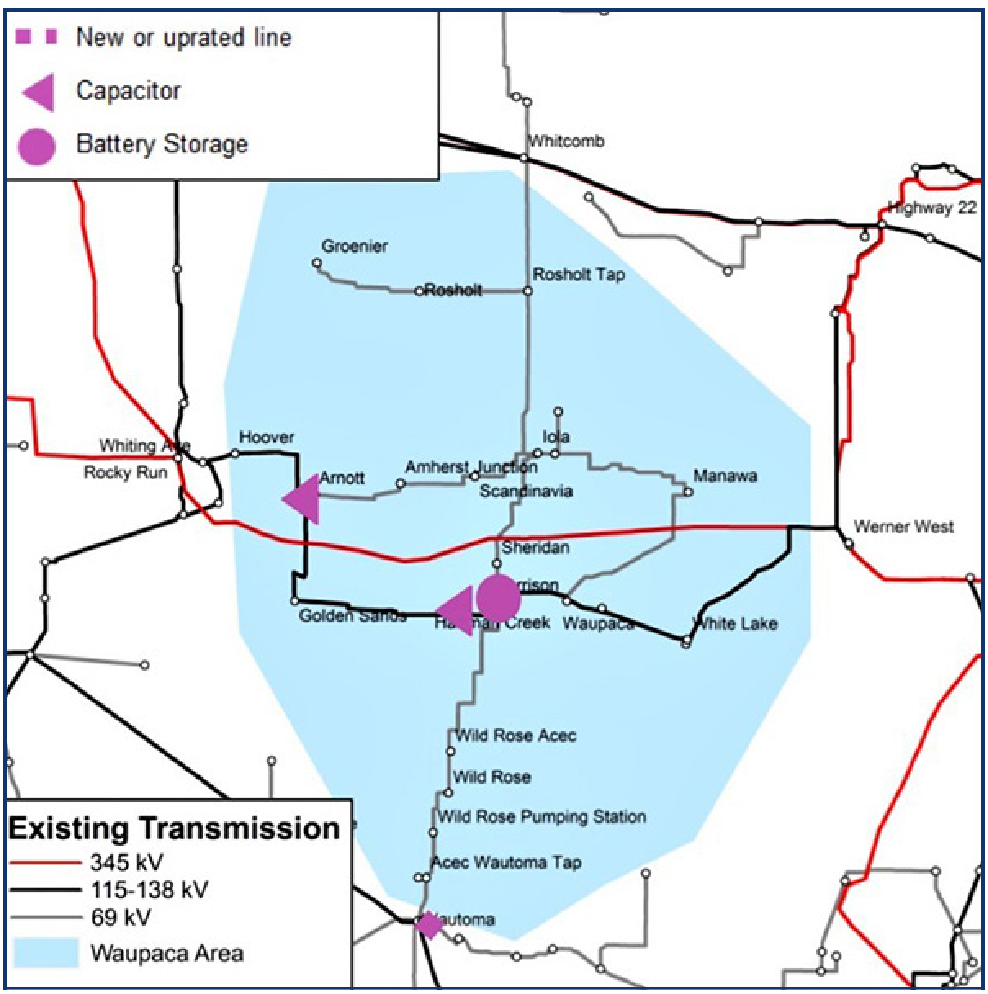
An American Transmission Co. effort to improve reliability in central Wisconsin could within two years provide MISO with its first-ever storage-as-transmission asset (SATA) project.

ATC is proposing to build a 2.5-MW/5-MWh battery on a 138-kV line in the Waupaca, Wisc., area, installing two capacitors and upgrading a nearby 69-kV bus to accommodate the project. The project would cost an estimated $9.1 million and be in service at the end of 2021. ATC said the battery would be available for two-hour discharge times.

The company is proposing the project for inclusion in MISO's 2019 Transmission Expansion Plan (MTEP 19) to function as strictly transmission. MISO is so far prohibiting SATA projects from also providing market services. (See *MISO Limits Storage as Transmission Asset Ownership*.)

During a West subregional planning meeting Friday, MISO staff said the project still requires study, including determining how it could impact load service risks and system reliability. The RTO said it will present final project justification results at another subregional planning meeting on Aug. 23.

The company has also *submitted* two alternatives — another battery farther north and a traditional wires solution — in the event that MISO finds negative impacts from the originally submitted battery format. The 5-MW/10-MWh alternate battery project would cost $10.4 million, and a rebuild of the Whiting Avenue-Hoover 115-kV would cost $12.4 million. Both would stick to a late 2021 timeline.



ATC's proposed SATA project | *MISO*

ATC said its preferred battery project is designed to more reliably maintain up to a 155-MW load level, capturing more than 90% of historical load levels in the Waupaca area. The area is currently at risk during multiple outage conditions, MISO expansion planner James Slegers said.

"At certain load levels, the system cannot sustain the load," Slegers said.

Waupaca contains a local 69-kV system supported by a nearby multi-segment 115/138-kV transmission line. MISO said local loads cannot be sustained when both ends of the 115/138-kV supply line are out of service. ATC currently uses an operating guide to open line segments to serve load radially on the 69-kV system after load levels reach a certain point and after a first outage. While the operating guide allows loads to be served after a second contingency, it places up to 114 MW of load at risk of disconnection, according to MISO. ATC's battery is designed to operate after a second contingency.

"There are not many hours in a year that you could take a maintenance outage and not sectionalize the system," Slegers said, adding the solution aims to allow multiple maintenance outages without a loss-of-load risk.

MISO has completed a reliability assessment on the battery project. So far, it found the most effective siting of a SATA solution is near the Harrison 69-kV substation in the area, although other nearby 138-kV buses between Arnott and Waupaca "performed similarly well."

MISO Manager of Expansion Planning Lynn Hecker said the RTO has so far been using a conservative, approximately 20-year life cycle assumption in battery reliability studies.

The RTO has yet to develop life cycle cost comparisons for ATC's battery and alternate projects.

Slegers said MISO is open to studying even more project alternatives, if stakeholders offer them. The RTO has said it will work with stakeholders "to understand technical details and evaluate any additional alternatives proposed."

He noted that the ATC project evaluation will serve as a starting point and "lessons learned" for other SATA projects proposed in future MTEP cycles. ■

NYISO News

Stakeholders Discuss NYISO Grid Study, LBMPc Change

By Michael Kuser

RENSSELAER, N.Y. — NYISO stakeholders on Thursday debated the content of a *draft* study on the impact of public policy on the New York grid and learned about the ISO's proposed changes to its carbon price calculation.

The draft "Reliability and Market Considerations for a Grid in Transition" study comes after New York Gov. Andrew Cuomo in January nearly quadrupled the state's offshore wind energy goal to 9 GW by 2035, while his proposed Green New Deal would mandate 100% clean power by 2040, increase renewable energy requirements from 50% to 70% by 2030, and require other clean energy benchmarks. (See *New York Boosts Zero-carbon, Renewable Goals*.)

"What we try to do in the report is to describe the challenges and fill in the gaps," Mike DeSocio, the ISO's senior manager for market design, *told* the Installed Capacity/Market Issues Working Group.

NYISO first presented an outline of the new study, which analyzes the projected Bulk Power System in 2030 and 2040, at the group's April 15 meeting. (See *NYISO Studies Grid Transformation, Fuel Security*.)

"The ISO would be better off looking at what the market will be like in five years and not spend too much time preparing for 15 or 20 years down the road," said Couch White attorney Michael Mager, who represents Multiple Intervenors, a coalition of large industrial, commercial and institutional energy customers.

DeSocio agreed but said some of the needed investments are long-term.

"I think looking at 2030 and 2040 is important, at least to provide reality checks on what people are planning," said Mark Younger of Hudson Energy Economics. "NYISO needs to go out to 2040 and assume all-renewable generation, then do a multiday analysis of very little wind or solar, which would provide you a good snapshot of what you need for backup if you rely upon fossil generation compared to what you would need if you relied upon storage as backup."

Noting that the state recognizes a carbon-reduction imperative that the market does not, David Clarke, director of wholesale market policy for Power Supply Long Island, suggested that NYISO's study consider how to optimize various as-bid resources and other alternatives to achieve the state's targets. He noted that whether carbon pricing is ratified or not, "sequestration might be a better way to achieve the goals cost-effectively rather than other approaches, including carbon pricing."

Andrew Antinori, senior director of the New York Power Authority's Market Issues Group, asked whether it would be more efficient for the ISO to see whether or not a carbon charge will be implemented before expending resources studying different possible futures.

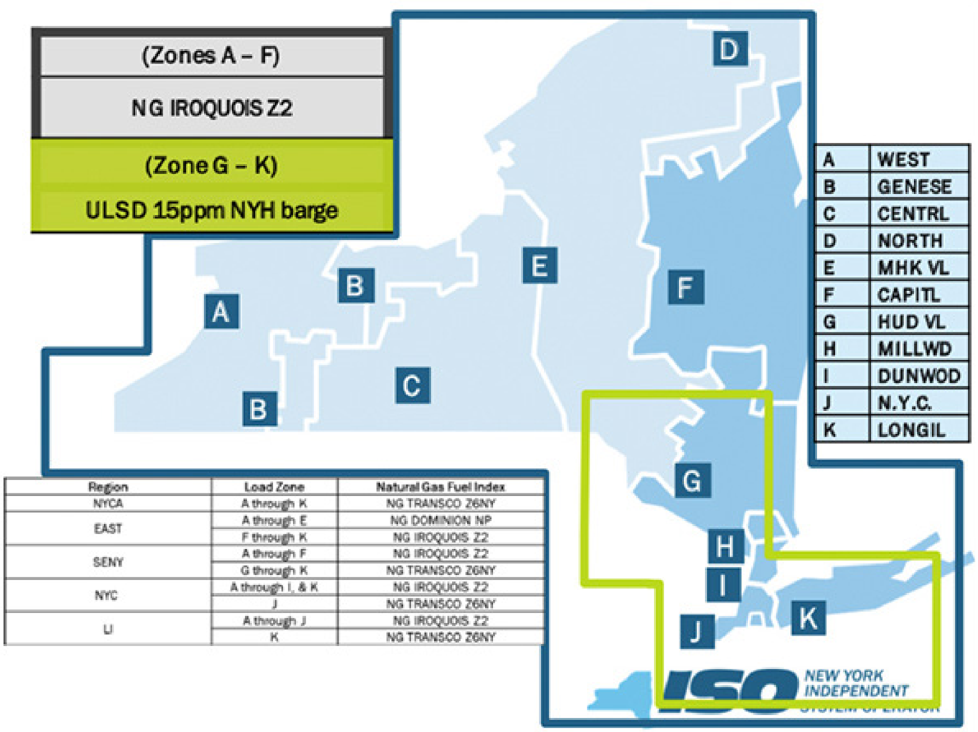
Howard Fromer, director of market policy for PSEG Power New York, asked whether the ISO has looked at using external resources to provide reserves.

"It seems the movement of resources across borders is going to become more important," Fromer said. "I know we don't currently have any projects to look at that, but it seems important to look at the whole seam issue and see how to access those resources." (See *NY Carbon Task Force Discusses Seams, 'Leakage'*.)

DeSocio agreed that external resources do fit into the picture.

"We're probably going to need additional transmission, but it's got to be strategic, and we're probably going to need additional capacity, but it's got to be strategic," DeSocio said. "We need to get the energy prices right ... that's what it's about here. ... My bias is not to spend a lot of time on expanding new capacity products; that's a pretty blunt instrument."

The ISO's timeline is to get an updated report out by the end of summer and add some quantitative analysis ahead of the Board of Directors' strategic planning session in September, DeSocio said. By the end of June, the Analysis Group will provide preliminary analyses from a different study examining the market impacts of pricing carbon and will complete its report by the end of July, he said. (See *More Details Divulged on New NYISO Carbon Pricing Study*.)



Region	Load Zone	Natural Gas Fuel Index
NYCA	A through K	NG TRANSCO Z6NY
EAST	A through E	NG DOMINION NP
	F through K	NG IROQUOIS Z2
SENY	A through F	NG IROQUOIS Z2
	G through K	NG TRANSCO Z6NY
NYC	A through I, & K	NG IROQUOIS Z2
	J	NG TRANSCO Z6NY
LI	A through J	NG IROQUOIS Z2
	K	NG TRANSCO Z6NY

LBMPc calculation – fuel indices by region | *NYISO*

Carbon Pricing: Calculating the LBMPc

After considering stakeholder feedback, NYISO has revised its proposed calculation

NYISO News

of the carbon component in locational-based marginal prices (LBMPc), now subtracting a variable operations and maintenance (VOM) cost from the LBMP. The resulting value will then be divided by the estimated marginal fuel cost ($/MMBtu) plus the cost of emissions ($/MMBtu).

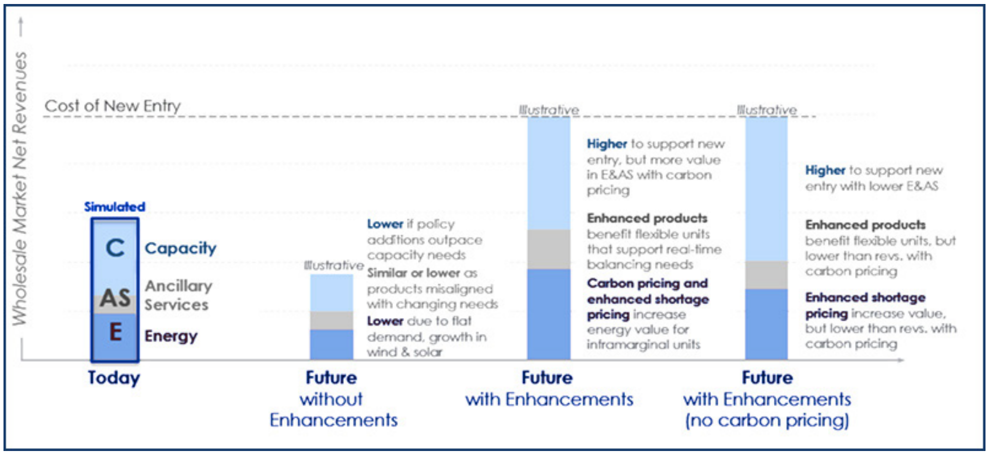
"Adding the cost of emissions was suggested by a few stakeholders last time to arrive at a more realistic heat rate," said Ethan Avallone, the ISO's technical specialist in energy market design who presented the *analysis*.

As discussed in previous meetings, NYISO will set the LBMPc to zero when the calculated LBMPc is less than zero and set the implied heat rate to zero when the calculated implied heat rate is below the minimum implied heat rate. (See *Carbon Pricing Impact on Waste-to-Energy Examined*.)

"We will use the LBMPc to allocate the carbon credit to [load-serving entities] and to prevent leakage and distortion of regional flows by charging imports and crediting exports the LBMPc, and also to provide market transparency," Avallone said.

Internal generators are charged based on their actual emissions — not the LBMPc.

The implied heat rate produced by the calculation should be limited by a minimum and maximum to maintain an appropriate LBMPc, Avallone said. Absent a maximum value, the impact of shortage pricing on the LBMP could result in an inappropriately high implied heat rate; without a minimum, the impact of renewable generation on the LBMP could result in an inappropriately low heat rate.



Illustrative change in revenues, 1x1 gas combined-cycle, assuming new entry is needed | *NYISO*

The implied heat rate should be set to zero when less than the minimum limit and set to the maximum when above the maximum limit, Avallone said. A low implied heat rate indicates that zero-emission energy, which does not bid opportunity cost, is likely marginal.

NYISO would post minimum and maximum heat rates on its website and is considering stakeholder feedback to describe potential future revisions to eligibility criteria, he said.

In addition, the ISO will post the effective social cost of carbon (SCC), as determined by the state's Public Service Commission.

The net SCC would be the gross SCC, established by the commission, minus the Regional Greenhouse Gas Initiative price.

Avallone also presented a *summary* of proposed Tariff changes to accommodate a carbon pricing regime, with new sections to describe carbon charges, payments and residual allocation.

NYISO is considering stakeholder feedback to describe potential future revisions to eligibility criteria and plans to review the proposed Tariff changes again at the June 11 ICAP/MIWG meeting, Avallone said. (See "Tariff Terms, Penalties," *NYISO Commissions New Social Cost of Carbon Study*.)

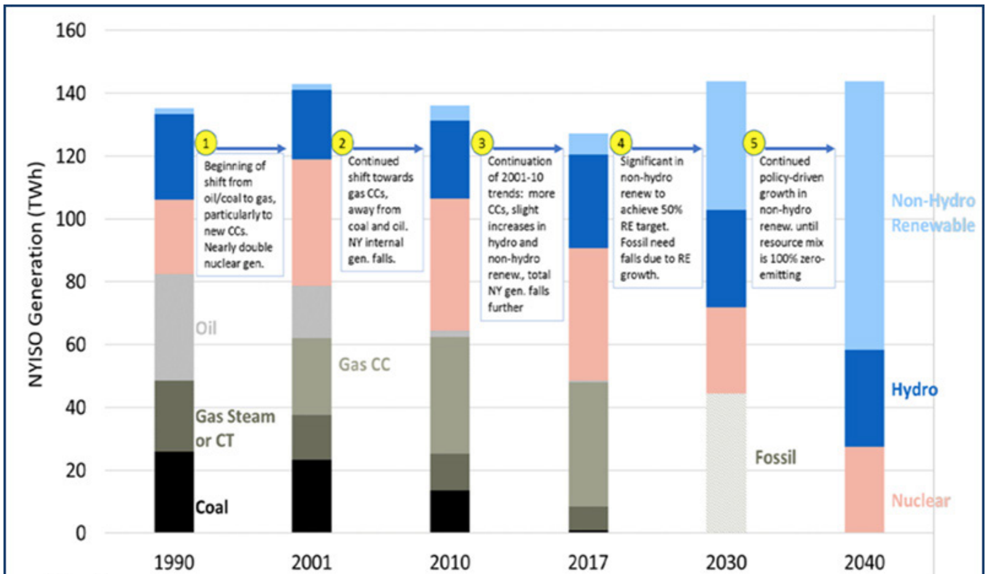


Figure 4
Sources and Notes: 2001, 2010 and 2017 data from SNL Energy. 2030 data is adapted from 2030 MAPS modeling (offshore wind scenario). 2040 shows assumed resource mix needed to achieve 100% zero-emissions goal.

| *NYISO*

Enhanced Fast-start Pricing

In response to a FERC order, NYISO is revising fast-start pricing to apply to all resources that can start up and synchronize to the grid in 30 minutes or less, have a minimum run time of one hour or less, and submit economic offers for evaluation.

The commission on April 18 ordered the ISO to revise its pricing logic to reflect the start-up costs of fast-start resources and relax the economic minimum operating limits of all fast-start resources by up to 100% to allow them to set prices (*ER18-33*). (See *FERC Orders Fast-start Rules for PJM, NYISO*.)

Under the proposed changes, "we use special pricing logic to better reflect the true cost of energy," said Whitney Lesnicki, an ISO manager for energy market design, who *presented* the enhancements.

The ISO must submit its compliance filing by Dec. 31 and implement the changes by Dec. 31, 2020. ■

PJM CEO Andy Ott to Retire

Continued from page 1

staffing and procedural changes recommended as part of an independent probe into the situation. (See *'Naive' PJM Underestimated GreenHat Risks*.)

His retirement comes two months after Suzanne Daugherty, the RTO's longtime CFO, stepped down amid deepening criticism of the way PJM handled the default. Susan Buehler, PJM's spokesperson, said the search for both positions remains "well underway," despite Ott's departure. She did not say the default contributed to his decision.

"He reached retirement age about a year ago," she said. "I believe he thought this was the right time for him."

At the Market Implementation Committee meeting on Feb. 6, Daugherty told members a FERC order to rerun the July 2018 FTR auction to liquidate GreenHat's positions could add $250 million to $300 million to the $186 million the RTO had earlier projected the default would cost members. (See *PJM Won't Act on FTR Order Before Stay Ruling.)*

The independent review released in March further blamed the RTO's leadership for ignoring red flags about the company's assets and exhortations from other members about the portfolio's financial shortcomings — a failure of protocol Ott said "needs to change."

"PJM needs to get better," Ott previously told *RTO Insider*. "Quite frankly, we're just not used to this type of behavior from a market participant."

Stakeholders approved creation of a Financial Risk Senior Management Task Force in April to consider changes to PJM's credit and risk management requirements, market rules, membership qualifications and the stakeholder process in response to the identified structural flaws in its financial transmission rights market. (See *Stakeholders OK Risk Management Task Force*.)

Some stakeholders, however, feel PJM wasn't doing everything it could to prevent the situation from happening again.

The Organization of PJM States Inc. (OPSI) said in a May 24 *letter* to the board that the RTO appears to have brushed off the probe's recommendation to conduct a general market review "to evaluate the risks and rewards of potential structural reforms."

"Neither the discussions in the Financial Risk Mitigation Senior Task Force nor PJM's observations report indicates PJM is even considering such a general review, informed by expert help, of the FTR market," said Michael Richard, OPSI president. "OPSI urges PJM to seize that opportunity, avail itself of outside expert help and conduct the general review of the FTR market recommended by the independent consultant report."

Fresh Perspective

During Thursday's Markets and Reliability Committee meeting, Ott said that both internal and external candidates will be considered for his replacement — though chatter among stakeholders suggests the latter is preferred.

"This is not a direction change; it's just a CEO change," Ott said. "We will stay true to our mission."

Stakeholders expressed a desire for change and improvement — not continuity — especially when it comes to the cultural issues raised in the GreenHat report. PJM should find a leader with rock solid management skills that can be by supplemented a strong technical team who will guide the organization through the anticipated challenges of the next few years, members said. Others said it's less important for PJM to ingratiate itself to the industry than it is to regain the confidence and trust of stakeholders.

Ed Tatum, vice president of transmission at American Municipal Power, wished Ott well and expressed appreciation for his hard work, describing the change in leadership as "significant."

"PJM is very important to AMP, and we stand ready to work with the new leadership to navigate the many complex issues before us primarily through the stakeholder process, which has been and can continue to be the cornerstone to PJM's success," he said. "The PJM stakeholder process has worked well when there are incentives for all parties involved to collaborate to develop effective and balanced solutions. AMP looks forward to engaging in the process and to the insights and fresh perspectives that the new leadership team may bring."

Leadership Shake-up

Ott's departure came with a windfall of executive promotions for many of the RTO's key leaders.

"We're ensuring the structure of the company reinforces our commitment to reliable operations, fair and efficient wholesale markets and infrastructure planning," Ott said. "Each of these promotions helps ensure we continue to be an electric industry leader in areas that are critical for our members, stakeholders and the 65 million people in the region served by PJM."


Mike Bryson | © *RTO Insider*

Mike Bryson will now serve as senior vice president of operations, be a company officer and report to the CEO. Bryson has worked for PJM since 1998 and managed such duties as 24/7 transmission operations for real-time systems, scheduling, transmission and generation dispatch, reliability coordination, training, and engineering analysis.

Stu Bresler | © *RTO Insider*

Stu Bresler will take on the title of senior vice president of markets and planning. Meanwhile, PJM's existing vice president of system planning, Steve Herling, will transition to the role of executive consultant, where he will focus on strategic system planning projects.

"A 29-year veteran of PJM, Steve has been integral in developing a robust system planning process aimed at delivering a strong, reliable, economical grid, and we look forward to his continued leadership and contributions as he transitions to this new role," Ott said.

Ken Seiler will transition from executive director to senior vice president of planning, where he will be responsible for the oversight of the System Planning Division, which includes transmission planning, interregional planning, interconnection analysis, interconnection projects, infrastructure coordination and resource adequacy planning.


Adam Keech | © *RTO Insider*

Finally, Adam Keech will become the vice president of markets, where he will oversee all of PJM's wholesale markets. Both Keech and Seiler will report to Bresler, PJM said. ■

PJM News

Ohio Plan Subs Nuke, Fossil Fuel Subsidies for Renewables

Continued from page 1

seeks to offer an alternative way to encourage cleaner energy production in Ohio."

Electric companies currently assess a monthly $4.10 fee on customers related to green energy policies. The Ohio Environmental Council Action Fund says about 74 cents supports distributors meeting renewable resource standards and the remaining $3.36 is used for prioritizing energy efficiency and peak demand reduction.

HB 6 instead mandates residential customers pay $1/month, starting in 2021, for FirstEnergy Solutions' Davis-Besse and Perry nuclear plants. The fee grows depending upon the ratepayers' classification, with all revenues collected by the state treasury and distributed back to the defined "clean air resources" at a rate of $9/credit for every megawatt-hour of energy produced. Solar and wind generators are ineligible for the credit.

FirstEnergy said PJM's existing market structure values cheaper, polluting fossil fuels over the reliable, carbon-free — and costly — generation from nuclear reactors. The plan levels the playing field, FirstEnergy said, given renewable resources like wind and solar already receive federal out-of-market subsidies.

"Wind can tail off during extreme cold temperatures, while solar is already offline in the evening or early morning hours," said Dave Griffing, vice president of government affairs for FirstEnergy. "Nuclear power, by contrast, is remarkably reliable and typically picks up the slack as other generators struggle."

The nuclear plants provide a combined 2,100 MW of capacity, enough to power 2 million homes, Griffing said. Without state intervention, the bankrupt company will retire both reactors over the next two years, taking $30 million in state and local tax revenue with it.

"Carbon and other harmful emissions will increase," he said. "Grid resilience will deteriorate. And costs to consumers will go up." The Union of Concerned Scientists said the bill will raise more than $170 million in ratepayer fees for the failing plants.

On top of the nuclear subsidy fee, which sunsets in 2026, electricity companies can recoup costs lost on long-term contracts to meet Ohio's RPS mandates until 2030. American Electric Power, the Columbus-based utility that owns more than 40% of the state's coal and natural gas plants, urged lawmakers to consider these existing contracts when moving the bill forward.

Perry Nuclear Power Plant

'Total Flip-flop'

Supporters of the state's RPS have unsurprisingly urged lawmakers to reject the bill.

"Ohio should not go down the path of effectively repealing this important policy and certainly not under the narrative it will provide cleaner air and better public health," said Andrew Gohn, eastern region director of state affairs for the American Wind Energy Association, who noted funding from the state's alternative energy mandates supports 2,200 MW of energy from wind farms.

The PJM Power Providers Group defended the RTO's competitive markets for spurring renewable generation development and reducing carbon emissions 15% between 2013 and 2017. Sulfur dioxide and nitrogen oxide levels declined 65% and 31%, respectively, it said.

"This progress was not made because Ohio selected certain resources that it wanted to subsidize," said Glen Thomas, the group's president, "but rather through the setting of environmental goals and allowing the market, and consumers empowered with choice, to select which resources are best equipped to meet those goals."

Ohio's House Democrats sided with industry critics of the bill, instead proposing their own *Clean Energy Jobs Act* to preserve the state's environmental goals. The caucus also criticized Republicans for using the bill to codify a state Supreme Court ruling that would allow the Ohio Valley Electric Corp. to charge customers up to $2.50/month to subsidize two of its coal plants — including one in Indiana.

"HB 6 is a total flip-flop that started by calling itself a clean air bill and evolved to be a corporate welfare bill that bails out a failing Indiana coal plant," Assistant Minority Leader Kristin Boggs (D) said.

"It's a bad deal that kills jobs, subsidizes failing out-of-state corporations and takes us backward," Rep. David Leland (D) said. "We owe it to taxpayers to live up to our promise that we work for them. Our Ohio Clean Energy Jobs Act invests in a framework for the future that protects existing jobs, grows new ones and moves Ohio forward toward a clean energy economy."

The bill, however, passed the House with support from 10 Democrats, while 17 Republicans voted against it. Republicans hold a comfortable 24-9 majority in the Senate, but it's unclear how many support HB 6 in its current form. *RTO Insider* questioned Senate Majority Leader Matt Huffman about his caucus' support for the bill and how quickly — if it all — it will be considered for a vote. He did not return requests for comment.

Republican Gov. Mike DeWine applauded House leadership for moving the bill quickly, in spite of the issue's "difficult" and divisive nature, but didn't commit to signing it should it cross his desk.

"As I have previously stated, Ohio needs to maintain carbon-free nuclear energy generation as part of our energy portfolio," he said Wednesday. "In addition, these energy jobs are vital to Ohio's economy. I look forward to this legislative discussion continuing in the Ohio Senate." ■

PJM MRC Briefs

VALLEY FORGE, Pa. — PJM on Thursday held what may have been its shortest Markets and Reliability Committee meeting ever, lasting just under an hour.

PJM's Markets and Reliability Committee on May 30 | © *RTO Insider*

Annual FTR Changes

PJM presented a *first read* of its annual Manual 6 cover-to-cover *review* regarding financial transmission rights.

Brian Chmielewski, manager of market simulation, said staff are continuing their look into rule changes around FTR mark-to-auction credit requirements detailed in Section 6.7, but they're moving ahead with default settlement rule updates, realignments to the OASIS refresh and the hourly cost component change, pending FERC approval.

Manuals Endorsed

- *Manual 01*: Control Center and Data Exchange Requirements as a part of the cover-to-cover review.
- *Manual 03*: Transmission Operations as a part of a cover-to-cover review.
- *Manual 07*: PJM Protection Standards to update applicability references and an Institute of Electrical and Electronics Engineers standard reference.
- *Manual 11*: Energy & Ancillary Services Market Operations and *Manual 13*: Emergency Operations to clarify the impact of operationalizing gas contingencies on reserve requirements and reserve market eligibility.
- *Manual 13*: Emergency Operations as part of a cover-to-cover review.
- *Manual 36*: System Restoration as a part of a cover-to-cover review. ■

— Christen Smith

SPP News

SPP Tx Planners at Forefront of New Challenges

By Tom Kleckner

LITTLE ROCK, Ark. — The predominance of renewable energy and battery storage in the nation's RTO interconnection queues is certainly no secret.

SPP's queue is dominated by 51.8 GW of wind projects in all stages of study and development. That's on top of 21.6 GW of installed wind capacity and another 7.7 GW of unbuilt projects with signed interconnection agreements. Layered on top of that is 25 GW of solar projects in the queue — 215 MW is already installed — along with 4.5 GW of battery storage.

Casey Cathey, SPP manager of reliability planning and seams, listed those numbers as he moderated a panel Thursday devoted to planning for an evolving grid.

"What's our next challenge?" Cathey asked ITC Holdings' director of regional planning, Alan Myers.

"Isn't that enough?" Myers responded, drawing laughter from those gathered last week for SPP's Engineering Planning Summit.

Turning serious, Myers offered a response: "It's matching that variable to the variability of the load."

"It used to be generation was the variable. Now, we're seeing load becoming a huge variable," said fellow panelist Holly Carias, NextEra Energy Resources' director of origination. "It will take different technologies to maximize what we already have. Not only with transmission, but on the load side. We have to focus on providing service to the end customer and give them a better customer experience."

Daniel Brooks, who manages the Electric Power Research Institute's grid operations and planning research group, threw a wrench into the discussion when he reminded the panel and audience, "EVs are coming."

Brooks said 10 to 20 years ago, automakers were first attempting to turn a car's wheels with batteries.

"Listen to those [original equipment manufacturers] today. They're completely committed to moving to electric vehicle fleets," he said. "Some heavy-duty vehicle fleets are talking about multi-megawatt charging stations. That's a challenge, but an opportunity as well."

As Brooks is fond of saying, "It's tough to make predictions, especially about the future."

Engineering Planning Summit attendees listen to SPP's Jay Caspary. | © *RTO Insider*

So far, SPP has been pretty successful with its forecasts. It says its planning efforts have resulted in $10 billion of construction projects over the last 14 years, allowing the RTO to focus on smaller upgrades and reliability projects.

The RTO's Board of Directors in April approved a $1.8 billion Transmission Expansion Plan that will build projects in 13 states over the next five years. Members last year completed 98 transmission system upgrades in seven states at an estimated cost of $779 million.

A 2016 *SPP study* indicated $3.4 billion of transmission upgrades during 2012-2014 resulted in more than $240 million in fuel-cost savings for SPP members during the first year of the Integrated Marketplace. The RTO has said it expects the benefits to exceed a net present value of $16.6 billion into the 2050s, with a benefit-to-cost ratio of 3.5. (See *SPP Begins Promotional Campaign to Tout Transmission Value*.)

'Big Boys'

"Transmission planning provides a lot of value, particularly when it results in construction," SPP Engineering Vice President Lanny Nickell said in opening the summit Wednesday. "We have a lot of metrics that have determined we do provide a lot of value through the expansion of transmission."

Stakeholders reviewed the transmission projects that could make up the 2019 Integrated Transmission Planning assessment, which will go before the board in October for approval.

The 2019 portfolio's cost could be as high

“It’s tough to make predictions, especially about the future.”

-Daniel Brooks

as $407 million, though staff estimate the projects could provide as much as $2 billion in benefits. Several of the projects target the southern corner of SPP’s footprint in Kansas and Missouri. There, congestion on MISO’s side of the seam has resulted in more than $60 million in market-to-market payments to SPP since March 2015. Constructing new 345-kV lines in the area could cost as much as $158 million, according to one proposed project.

Cathey noted SPP can no longer look at other RTOs — and Denmark and Germany, both leaders in renewable integration — for guidance on the ratemaking that will eventually help pay for the lines.

“SPP is kind of at the forefront of some of these challenges. We’re kind of the big boys now,” he said.

“A big gap I see is that relationship between planning and regulatory. We’ve always been on the tail end. We find out what the regulatory decision is, then we scramble to make our plan fit that,” SPP Planning Director Antoine Lucas responded. “I don’t think we can expect that we’ll drive the regulatory process, but there has to be some form of collaboration on the front end to develop solutions that benefit both sides. It will be a big value-add if we can figure out ways to work in different partnerships with different organizations to tackle these problems.”

Evergy’s Katy Onnen (left) listens as co-worker Derek Brown asks a question. | © *RTO Insider*

Antoine Lucas | © *RTO Insider*

As the summit wound to a close, Jay Caspary, SPP’s director of research and development and special studies, reminded stakeholders that the RTO and its members will also have to deal with the footprint’s aging infrastructure, some of which is more than 60 years old.

“We’ve got to manage these assets in the field,” he said, referring to himself as an “aging asset too.”

“There are a lot of uncertainties, but one thing that isn’t is that time marches on. These things are getting older by the day. I want us to get ahead of that.”

“There’s a lot to consider. It’s not like it was 10 years ago,” Cathey said. “These will be interesting times moving forward. We’ll see if we’re accurate with our transmission planning as we were with all the transmission we built 20 years ago.” ■

RSC Approves SPP-MISO Monitors' Seams Study

By Tom Kleckner

State regulators in SPP on Monday approved a recommendation to engage the RTO's Market Monitoring Unit and the MISO Independent Market Monitor to conduct a joint analysis on seams issues between the two grid operators.

The Regional State Committee, meeting by conference call, agreed unanimously with the RSC-Organization of MISO States Seams Liaison Committee's recommendation to work with the Monitors. The MMU and IMM brought a ***scoping plan*** to the Liaison Committee earlier in May, offering to identify and study seams issues, quantifying costs and benefits of proposed solutions when possible.

The recommendation directs the Monitors to immediately begin a Tier I study of market-to-market coordination, rate pancaking and joint dispatch.

A Tier II study following the completion of Tier I would focus on interface pricing, interchange optimization and regional directional transfer limits.

Both studies are to be completed by June 2020.

Tier III will serve as a parking lot for several other issues: exchanging firm flow entitlements in M2M transactions, targeted market efficiency projects, and outage and day-ahead coordination.


Shari Feist Albrecht | *© RTO Insider*

Kansas Corporation Commissioner Shari Feist Albrecht, who represents the RSC on the Liaison Committee, said stakeholder comments on potential study subjects centered on rate pancaking and joint dispatch.

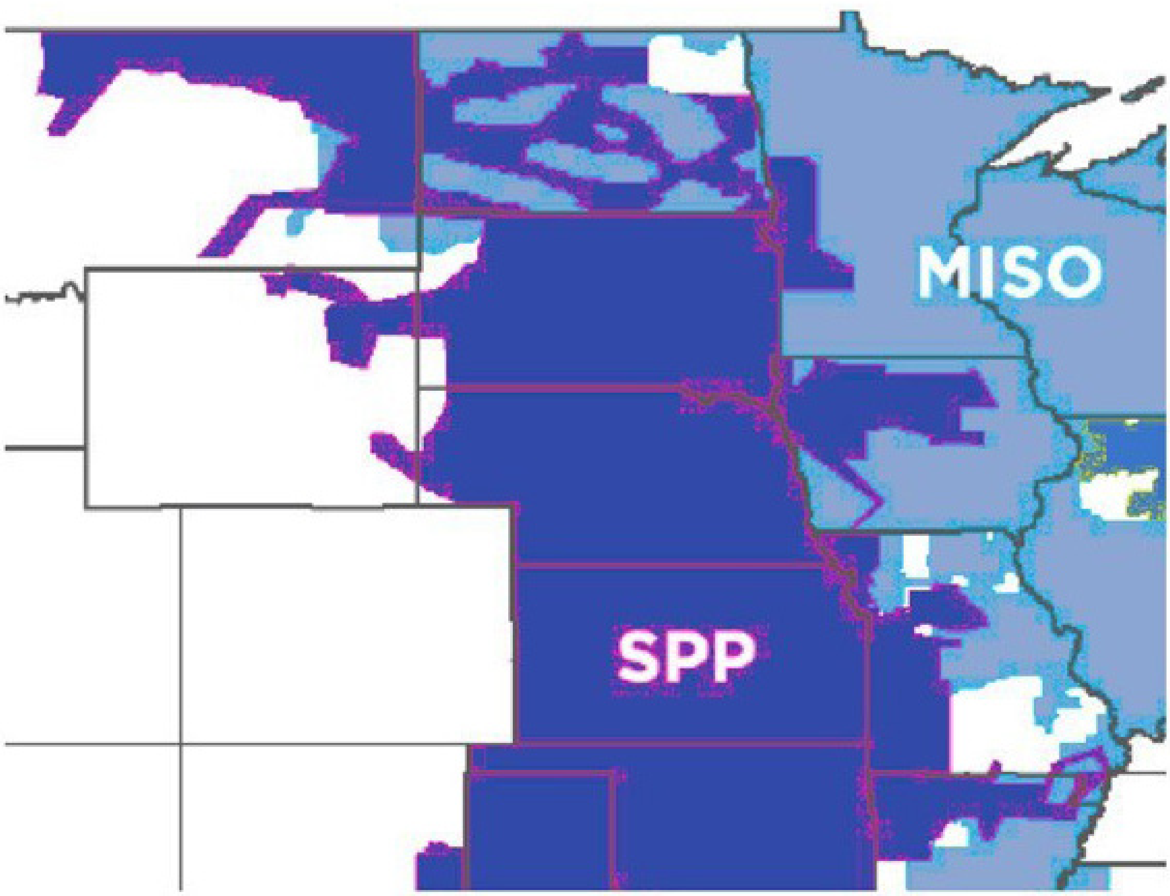
"We decided that might be a significant issue from a state perspective," Albrecht said. "We're just trying to get some ballpark numbers to identify potential savings."

Albrecht hopes the Monitors can finish their Tier I work in "six months or so," then move on to Tier II.

The MMU's Greg Sorenson addressed RSC concerns that the study would add incremental costs, saying the Monitor's goal is to conduct four independent market studies each year; the RSC/OMS analysis would serve as one of those four studies.

The Liaison Committee has been meeting since mid-2018 to help improve the grid operators' interregional coordination, which has never produced a major project. (See ***MISO, SPP to Ease Interregional Project Criteria***.) That has frustrated some stakeholders and caused market inefficiencies.

Committee members will meet July 21 at the National Association of Regulatory Utility Commissioners' summer policy summit in Indianapolis. The committee has invited FERC commissioners and staff to attend. ■



| *ACES*

Company Briefs

Duke to Decommission Fla. Nuclear Plant Ahead of Schedule

Duke Energy wants to tear down its Crystal River nuclear power plant about 50 years earlier than planned, the company announced last week.

In 2013, Duke decided to keep the facility idle until 2074 and then demolish the physical plant after removing all radioactive material. But a recent review of the cost to accelerate the timeline found the company had enough money in its decommissioning trust fund to cover the accelerated plan, said Heather Danenehower, Duke communications manager.

The company needs approval from the U.S. Nuclear Regulatory Commission to change plans, and that process will take at least a year. If approved, the decommissioning process would take until 2027 to complete and cost $540 million.

More: *Star-Banner*

Facebook Invests Directly in Renewable Project

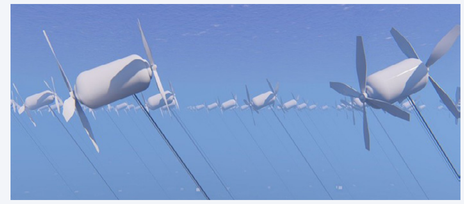
Facebook last week announced it has finalized an agreement to provide tax-equity financing for the 379-MW Prospero solar project developed by Longroad Energy Partners in West Texas. It's the first time the social media company, which last year committed to reaching 100% renewables by 2020, has directly invested in a wind or solar project.

Shell Energy North America has signed a 12-year power-purchase agreement for the project's power. Both Facebook and Shell will use the renewable energy credits from the project, though Facebook told Greentech Media it would receive the majority of those credits.

"We hope such investments can be a new avenue of meaningfully engaging with projects, which might be easier for some companies than a long-term power-purchase agreement, thereby unlocking new options for more organizations to meet their goals and grow the market," said Peter Freed, Facebook's energy strategy manager, in a statement.

More: *Greentech Media*

Company Planning Ocean Current Power Project off Fla. Coast



OceanBased Perpetual Energy hopes to install hundreds of megawatts of power generating capacity off the southeast coast of Florida as part of what it believes would be the world's largest commercial ocean current energy project.

The company announced last week that it will team up with Florida Atlantic University's Southeast National Marine Renewable Energy Center (SNMREC) to develop the project.

The project would be developed in the Gulf Stream, which, according to estimates by the U.S. Department of Energy, can generate up to 45 TWh of electricity per year for Florida. The company plans to start with verifying the compatibility between generation and subsea transmission equipment, and then install up to 1 MW of shore-connected capacity.

More: *Renewables Now*

Federal Briefs

Tribe Rips Trump Admin over Federal Coal Leasing

The Northern Cheyenne tribe last week blasted the Trump administration for seeking to overturn an Obama-era moratorium on federal coal leasing without consulting it, saying the move violated its treaty rights and would have major impacts on its land.

Tribe President Rynalea Whiteman Pena wrote to Interior Secretary David Bernhardt in reaction to a draft environmental assessment by the Interior Department's Bureau of Land Management that concluded that restarting federal coal leasing would have no environmental impact, and that it was not necessary to consult tribes before doing so.

"Your department's statement in the environmental assessment that no consultation is necessary with affected Indian tribes violates your sacred trust obligation to the Northern Cheyenne Tribe and other tribes, undermines the formation of sound public policy, and constitutes a shortsighted and unwise approach to land management," Pena wrote.

More: *Reuters*

UN: 80 Countries May Ramp up Climate Pledges

About 80 countries want to increase their climate pledges ahead of schedule under the Paris Agreement, the U.N. said last week, signaling that some of them would do so at a summit of world leaders in September.

Even if every country were to meet the pledges already made under the 2015 Paris agreement — and they are nowhere on track to do so — it would be insufficient to avert the worst effects of climate change. An "exponential increase in ambition" is needed, said Luis Alfonso de Alba, the U.N. secretary general's envoy on climate change.

De Alba declined to say which countries were expected to announce higher climate ambitions, nor whether they would be enough to make a difference to the fate of the world. He said he is "hopeful" that China would announce new climate pledges at the September summit.

More: *The New York Times*

E&E: Trump Briefed on Plan to Review Climate Science

Will Happer, the senior director for emerging technologies at the National Security Council, met with President Trump last month to brief him on a plan to scrutinize climate science, two sources told E&E News. The initiative is expected to highlight uncertainties in climate research and downplay the threat of global warming to national security.

The shape of the plan is unclear, though it's expected to question scientific elements of the National Climate Assessment, three people with knowledge of the plan told E&E News.

Happer, an emeritus physics professor at Princeton University, has said that the world is experiencing a carbon dioxide "drought" and that the planet would benefit from burning more fossil fuels. In recent weeks, Happer has discussed his ideas with people associated with think tanks that reject established climate science, including the Competitive Enterprise Institute and the CO2 Coalition, which he founded.

More: *E&E News*

State Briefs

ARIZONA

Chevron Exec Secretly Pushing Anti-EV Effort

A lobbyist for Chevron is urging retirees of the oil company in the state to oppose electric vehicle policies there, saying the vehicles are too expensive for most people and should not be promoted.

A handful of people who either retired from Chevron or from Unocal, which Chevron acquired in 2005, have used a form letter to urge the Corporation Commission not to require electric companies in the state to build EV charging stations. The letters do not identify their senders as company retirees, though some did write their own personal letters identifying themselves as such.

A Unocal retiree, David Newell of Scottsdale, alerted the commission to the campaign, *adding* lobbyist Marian Catedral-King's email to retirees to docket regarding renewable energy. The letter-writing campaign is a response to a March document from the commission asking electric companies to propose how they will roll out EV infrastructure and incorporate EVs into their business. "It's within their rights to make their position known," Newell said. "It's unfair to enlist people without clearly identifying who they are."

More: *The Arizona Republic*

Tobin Resigns from ACC

Corporation Commissioner **Andy Tobin** last week announced his resignation from the commission to become director of the state's Department of Administration.

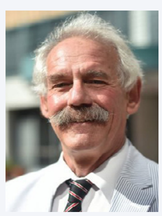
Gov. Doug Ducey appointed Lea Marquez Peterson, former president of the Tucson Hispanic Chamber of Commerce, to replace Tobin the same day as his resignation.

Tobin resigned rather abruptly and unusually, just hours before the commission voted in favor of a plan to have Arizona Public Service file a new rate case. It comes after the airing of his frustration at the ACC, following the stalling of his proposed amendment to the commission's Public Utility Regulatory Policies Act process. In his agitation, Tobin stated his objection to a "sixth commissioner" on the ACC, hinting at his concern that commissioners' views were being directly swayed by unelected staff members.

More: *pv magazine*

CALIFORNIA

PUC President Picker to Retire



Public Utilities Commission President **Michael Picker** last week announced he will retire after almost five years on the job. However, Picker said he won't leave until Gov. Gavin Newsom names a successor.

Picker was appointed to the commission in 2014 and became president that December. Much of his work has focused on regulating and investigating the state's biggest utility, PG&E Corp.

More: *The Associated Press*

Santa Monica Adopts $800M Climate Action Plan

The Santa Monica City Council last week adopted a nearly billion-dollar Climate Action & Adaptation Plan (CAAP), a roadmap to achieving an 80% reduction in carbon emissions by 2030 and reaching community-wide carbon neutrality by no later than 2050.

"This is a practical and ambitious plan to achieve water self-sufficiency by 2023, zero waste by 2030 and carbon-neutrality by 2050 or sooner," Mayor Gleam Davis said. "Santa Monicans set the bar for local stewardship of our planet and I'm confident we will continue to do so with this plan to guide us."

The plan, which staff estimates will cost over $800 million over the next decade, includes major investments, simple things residents can do in their day-to-day lives, and advances in existing initiatives to enhance community well-being, smart city innovation, transportation, public health and social equity.

More: *Santa Monica Mirror*

CONNECTICUT

House Bill Saves Net Metering, but Enviros Want More

The House of Representatives unanimously passed a watered-down version of the federal Green New Deal resolution, removing a goal of 100% renewable energy by 2050 but including an extension of the state's net metering program through 2021.

Legislation from last year established a process to switch from net metering to a flat tariff system to be set by Public Utilities Regulatory Commission, but it eventually became clear the time frame was too short. Along with the extension, the bill would authorize a study of the value of solar, which would quantify all the attributes solar provides, such as avoided costs and contributions to combating climate change. That information would be used to help determine a tariff rate to replace net metering. The bill would also allow the state's utilities to own energy storage systems for the first time.

But the bill's passage disappointed many in the state's environmentalist community.

"It leaves a lot of unfinished business," said Chris Phelps of Environment Connecticut, though he and others said the net metering extension is critical and the bill's few other provisions are beneficial.

More: *The Connecticut Mirror*

ILLINOIS

Zalewski, Bocanegra Confirmed to ICC

Carrie Zalewski and Maria Bocanegra were confirmed by the state Senate as the newest members of the Commerce Commission. Zalewski will serve as chairman, while Bocanegra will be a commissioner.

Zalewski, who has served on the Pollution Control Board since 2009, was appointed to a five-year term on March 29 by Gov. J.B. Pritzker. Bocanegra most recently served as arbitrator at the Illinois Workers' Compensation Commission and was appointed to a four-year term on April 8.

More: *Illinois Commerce Commission*

State Passes Tougher Rules on Coal Ash

Lawmakers last week passed legislation that would amend the Environmental Protection Act to set stricter requirements for coal ash cleanup and to mandate public comment periods prior to closing coal ash sites. It also would give the state Environmental Protection Agency funding to run cleanup programs through permit fees.

Coal plant owners would have the option to cover the ash pits with soil and leave the waste where it is, known as "cap in place." Operators would first have to conduct an environmental review to show the method would be equally protective as removing the coal ash.

Advocates expect Gov. J.B. Pritzker to sign the bill and said that the governor's office was encouraging throughout the process. Once signed, the EPA would next write specific, site-by-site rules for ash pit closures.

More: *InsideClimate News*

MICHIGAN

AG Will Move to Shut Pipeline this Month if no Deal

Attorney General **Dana Nessel** said last week she will move to shut down a Great Lakes oil pipeline by the end of the month if Gov. Gretchen Whitmer cannot reach a resolution with operator Enbridge, saying the state is in "great peril" the longer the oil continues to flow under a sensitive waterway.

Nessel revealed her timeline in an interview with The Associated Press at the Detroit Regional Chamber's policy conference, near where Line 5 runs under the Straits of Mackinac. Whitmer has irked environmentalists by saying she is open to the construction of a tunnel beneath the lakebed to house a new segment of Line 5 in the channel where Lakes Huron and Michigan meet. Her administration is talking with Canada-based Enbridge after Nessel said the 2018 law authorizing the tunnel is unconstitutional.

Nessel said she personally does not support building a tunnel but added: "I'm not the governor, and I'm not a policymaker, and I am not in the state Legislature. That's not my decision to make. What is my job, though, is to defend the Michigan Constitution, which very plainly and very specifically calls for the defense of the sanctity of the Great Lakes and to protect our drinking water and to protect Michigan's natural resources."

More: *The Associated Press*

MINNESOTA

Xcel Energy Issues Millions in Bill Credits to Customers

Xcel Energy is distributing more than $133 million in credits to all of its electricity customers in the state because of the federal Tax Cuts and Jobs Act of 2017.

Xcel said gas and electric rates will be reduced moving forward to account for the ongoing federal tax cuts. The average refund per residence is about $43, and customers will see a credit on their statement in the coming weeks. Xcel will issue another $5 million in credits to natural gas customers.

More: *WCCO*

NEVADA

Raiders Reconsidering Alternative Supplier for Future Stadium

Months after receiving approval from state regulators to pre-emptively leave NV Energy's electric service, the Oakland Raiders and their future stadium are reconsidering leaving the utility.

According to filings made with the Public Utilities Commission in May, attorneys for the Raiders have requested and received permission to suspend compliance with the terms of the under-construction stadium's departure from its planned exit from NV Energy in order to assess an alternative offer by the utility.

In a letter sent to the commission last month, the Raiders stated that after the commission approved their requested "exit" from NV Energy and be granted the right to purchase electric service from another provider in January, the organization was approached by the utility to enroll in a special tariff program "similar to how service is provided under" the current process for companies that have left, but with the utility still providing the electricity.

More: *The Nevada Independent*

OKLAHOMA

NextEra Energy Cancels Plans for 2 Wind Power Projects

Following Gov. Kevin Stitt signing a law that ensures wind turbine construction does not interfere with low-level military training routes, NextEra Energy Resources has withdrawn plans to construct two wind farms in the state.

The $270 million Minco project was a 220-MW wind farm that would have used 90 turbines in Caddo County. Minco would have contributed almost $50 million in property taxes and more than $60 million in landowner payments.

Crowder was a $300 million, 250-MW project that would have featured 100 turbines in Washita County. It was estimated to generate $54 million in property taxes and $57 million in landowner payments during the first 30 years in operation.

More: *KGOU*