RTO Insider
Your Eyes and Ears on the Organized Electric Markets
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McIntyre Takes FERC Chair; Wins Delay on NOPR

By Rich Heidorn Jr., Amanda Durish Cook and Michael Kuser

Kevin McIntyre, sworn in as FERC chairman Thursday, will have a month to build support for his response to the Department of Energy's controversial proposal for coal and nuclear price supports.

On Friday, Energy Secretary Rick Perry granted a 30-day delay from the Dec. 11 deadline set in Perry's Notice of Proposed Rulemaking. Saying they were needed for grid resiliency, Perry called for compensating coal and nuclear plants in regions with competitive markets that maintain 90 days of fuel on site.

In a letter to Perry, McIntyre said the delay was "critical to afford adequate time" for him and Democrat Richard Glick, who was sworn in Nov. 29, to review the more than 1,500 comments filed in the docket (RM18-1) "and engage fully in deliberations."

Perry agreed to the request Friday, setting a

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Photos Show Murray's Role in Perry Coal NOPR (p.33)

Murray Energy CEO Robert Murray (right) shakes hands with DOE Chief of Staff Brian McCormack as Energy Secretary Rick Perry looks on. | *Photograph obtained by In These Times*

Related News

PJM Unit Teaming with Peak Reliability to Develop Western Markets

By Rory D. Sweeney and Rich Heidorn Jr.

PHILADELPHIA — PJM and reliability coordinator Peak Reliability announced Thursday they will explore the development of markets and other services in the West, creating a potential competitor to the expansion ambitions of CAISO and SPP.

Peak, the NERC-designated reliability coordinator for most of the Western Interconnection, announced the agreement to "explore reliability services and markets in the West" with PJM Connext, a nonregulated subsidiary of PJM Interconnection LLC, operator of the world's largest wholesale electricity market and North America's largest grid.

"Peak and PJM Connext will begin review of potential reliability services, market design, governance, product suites, rules, technology and organization," they said in a press release, promising to report on their findings by the end of March 2018. "We believe that our partnership will lead to

Continued on page 44

Report: Costly Coal Undermining SPP Market, Bilking Consumers

MMU Agrees Self-Commitment 'Distorts' Market

By Tom Kleckner

A Sierra Club report released last week that said captive customers of SPP utilities are paying for uneconomical coal plants has drawn considerable pushback from the RTO and some of its members.

But the head of SPP's Market Monitoring Unit (MMU) says the environmental group has a point in its criticism of utilities that self-commit coal generators when the RTO's market prices don't cover their operating costs.

When a utility self-commits a unit, it operates the plant regardless of whether SPP's

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10837 Deborah Drive ▣ Potomac, MD 20854 ▣ (301) 299-0375 ▣ info@rtoinsider.com
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CAISO ERCOT ISO-NE MISO NYISO PJM SPP

Editorial

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

Deputy Editor / Senior Correspondent
Robert Mullin 503-715-6901

Production Editor
Michael Brooks 301-922-7687

Contributing Editor
Peter Key

CAISO/West Correspondent
Jason Fordney 571-224-8960

ISO-NE/NYISO Correspondent
Michael Kuser 802-681-5581

MISO Correspondent
Amanda Durish Cook 810-288-1847

PJM Correspondent
Rory D. Sweeney 717-679-1638

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

Subscriptions and Advertising

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

Account Executive
Marge Gold 240-750-9423

Marketing Assistant
Ben Gardner

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

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IN THIS WEEK'S ISSUE

Correction

Last week's newsletter incorrectly reported the date of former NERC CEO Gerry Cauley's arrest on domestic abuse charges. He was arrested Nov. 10.

GridCONNEXT

Investors Slam Congress; Say Economics will Trump Policy

By Rich Heidorn Jr.

Speaking on clean energy investment trends were (left to right) moderator Ron Pernick, Clean Edge; Puon Penn, Wells Fargo; David Yeh, Capitol Hill advisory; and Nancy Pfund, DBL Investors. | © *RTO Insider*

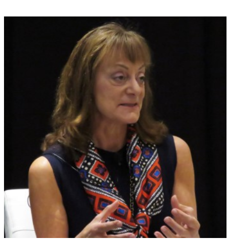
WASHINGTON — A panel on investing in grid innovation and clean energy infrastructure last week gave Congress low marks and said emerging economies are proving quicker to adopt some technologies. But speakers at the GridWise Alliance's GridCONNEXT conference said they are bullish on the future.

David Yeh, a White House adviser during the Obama administration who is now managing director of Capitol Hill, an advisory firm for high net worth individuals, global asset managers and start-ups, said he is not overly concerned with the Base Erosion Anti-Abuse Tax (BEAT) provision in the tax bill passed by the Senate earlier this month. Some renewable advocates fear the language, which is intended to prevent multinational corporations from moving profits and jobs out of the U.S., will reduce the value of wind and solar tax credits.

"Right now clean energy, especially at the utility scale, is competitive, if not cheaper than, fossil fuel energy. So, you can talk about regulation; you can talk about policy. But economics will trump all of that.

"This year, clean energy funds raised about $5 billion, while fossil fuels have raised about $2 billion. That's showing what the demands are from the … capital providers [and allocators] of this world. … These are sovereign wealth funds; these are pensions; these are large, super high net worth families. … This is how the capital markets — and these are capital markets that start with a 'T' — trillions — view clean energy infrastructure. When they move their allocation from 1% to 5%, that's a game changer. And they're moving towards that."

Have Peakers Peaked?



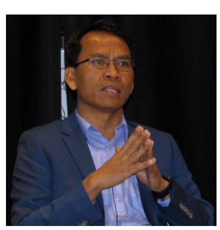
Nancy Pfund, founder and managing partner of DBL Partners, predicted that there will be few gas-fired peaking plants built in California in the future.

"They're expensive. People don't like them. They're [crude] compared to solar and storage or wind or demand response or any combination. That's an example that you have to let go of what the 20th century was all about. This is really different and if you stand in the way … of consumers who want their solar or want batteries, they are going to run you over."

An 'F' for Policymakers

Policymakers in D.C. haven't heard that message, however, she said, as reflected in "the $4 billion worth of annual subsidies that the fossil industry gets."

"If the people on Capitol Hill were in a public policy class or business school course, they would get an 'F' because [they are subsidizing] an industry that's 100 years old. I think anyone in our [clean energy] industry would say we would love a level playing field. Get rid of all incentives. But it's kind of a 'David and Goliath' story at this point."



Puon Penn, executive vice president and head of technology capital for Wells Fargo, said investors would be wise to look past the U.S. to China and other growing economies that have committed to abandoning the internal combustion engine in favor of electric vehicles.

"Do you think the [original equipment manufacturers] … the Fords and the GMs are looking at the United States as their primary market today? They sell more vehicles in China. And if you've got to make electric vehicles for the Chinese market, you're damn well not going to make a bunch of internal combustion vehicles for the United States. You're just going to build one platform that you're going to distribute across the planet. It's inevitable. But people are still behaving like we're still [the] Jolly Green Giant walking the earth and determining the order of things. We're not anymore."

Penn said new technologies are allowing greater capacity utilization in the electric industry than in the past. "There's no other industries where you have high [capital expenditures] and such low capacity utilization," he said. "Today we do have the wherewithal to increase capacity utilization and therefore benefit the entire economy."

"If the people on Capitol Hill were in a public policy class or business school course, they would get an 'F'…"

Nancy Pfund, DBL Partners

GridCONNEXT

Energy Storage Well Past the 'Tipping Point,' Panel Says

By Rich Heidorn Jr.

WASHINGTON — Speakers at the GridWise Alliance's GridCONNEXT conference last week left no doubt: Electric storage is long past the "tipping point."

Moderator Ram Sastry, vice president of infrastructure and business continuity for American Electric Power, had posed the question: "Are we going to see large-scale deployment of energy storage systems? And if not, what's stopping that?"

"I think we're at or past that tipping point," responded **Andy Marshall**, practice director for distributed energy resource management at Landis & Gyr. "I think you see the flexibility of storage and its ability to get deployed relatively quickly. You have not only the stuff that's going on down in Australia, but you also have the things that are happening most recently in California."

On Dec. 1 — the first day of summer for Australia — Tesla turned on a 129-MWh lithium ion battery, the world's largest, to help the nation's fragile electric grid. California deployed 100 MW of storage in just six months in response to natural gas constraints following the Aliso Canyon leak.

Praveen Kathpal, vice president of AES Energy Storage, said "the technology is mature," noting that his company entered the business a decade ago. AES claims 500 MW of storage already deployed or in development.

"There haven't been any components that needed to be invented for any of the deployments that we've done, because they're all based on lithium ion battery technology, which was commercialized 25 years ago and has benefited from its use in the consumer electronics and transportation sector," Kathpal said.

"The tipping point we see in storage is really meshing with some of the other megatrends facing our industry right now. We have the accelerated growth in renewables, and we also have the electrification of more sectors including transportation."

Kathpal predicted new storage technologies will break below the current pricing floor for lithium ion. "So, 10 years from now, do I think we'll have a commercially available storage technology that's below $100/kWh? Sure. And that's exactly why at AES the technology platform we've developed is forward compatible with technology change."

"I think you could argue that the tipping point was several years ago when big PJM systems started to come online," said **Luke Witmer**, lead research engineer for Wärtsilä's Greensmith Energy. "More and more markets continue to value the fast-ramping and bidirectional capability that energy storage provides. And I think as … systems continue to decline in cost, we will compete in more and more markets. A lot of the market prices basically clear according to the natural gas price. … So it's really just a matter of getting renewables plus storage to below that threshold in more and more places."

Richard Brody, director of sales and marketing for Lockheed Martin Energy's energy storage unit, said storage is still relatively expensive when compared with energy efficiency and demand response.

"Whether we're talking about a C&I customer or a distribution utility, when we come look at an energy problem, we look not just at storage, but we start with efficiency, permanent load reduction, load control, demand response, demand management, grid analytics — all the tools you can bring to solve an energy problem. … We tend to look at other things first because storage — despite the declining costs — remains the most expensive way to address these problems."

But he is nevertheless bullish on storage. "In terms of the tipping point — oh yeah, we're passed it. This is a rapidly growing market.

"We're seeing very strong growth in interest in doing large solar and wind coupled with storage. Most of the large developers we're working with aren't contemplating any large development of solar — and increasingly wind — without some way to firm it up with a fairly significant storage system."

Brody said the demands are exceeding the four-hour maximum life for lithium ion batteries. "We're looking at much more ambitious efforts that would require the attributes of a flow battery, which is a minimum of six to 12 hours of energy."

Appearing on a panel on energy storage were (left to right) moderator Ram Sastry, AEP; Andy Marshall, Landis & Gyr; Praveen Kathpal, AES Energy Storage; Luke Witmer, Greensmith Energy, and Richard Brody, Lockheed Martin Energy. | *© RTO Insider*

GridCONNEXT

Overheard

WASHINGTON — Almost 190 investors, utility officials, technology company executives and others gathered for the GridWise Alliance's two-day GridCONNEXT conference last week. Here's some of what we heard.

FERC Enforcement, Tx Investment, Cybersecurity

Philip Moeller (left) and Spencer Gray | *© RTO Insider*

Former FERC Commissioner Philip Moeller, a Republican, and Spencer Gray, a Democratic aide on the Senate Energy and Natural Resources Committee, talked about the newly reconstituted commission, transmission investment and the limited prospects for bipartisan action in Congress.

"We are at a low ebb in bipartisan relations," Gray said.

But he said there was one exception. "I think there's broad bipartisan consensus in the Senate to … focus more funds on cyber [security]," Gray said. "We've gotten [feedback] from a lot of groups in recent years that the federal government should have a more robust R&D program to develop new cyber tools and understanding of emerging cyber threats. That just seems like the lowest hanging fruit to me. It's not a partisan issue at all."

Moeller, who oversees the Edison Electric Institute's business operations group and regulatory affairs, said the industry is "actually doing a very good job" on cybersecurity through the Electricity Subsector Coordinating Council. "But I'm not sure as an industry we necessarily tell our story well, partly because of the sensitivity" of the subject matter.

Moeller lamented the court rulings that rejected FERC's "backstop" transmission siting authority in the 2005 Energy Policy Act. But he acknowledged the commission's efforts to encourage transmission investment haven't always been helpful.

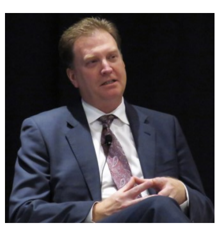
"Our feeling is that the capital is out there but perhaps some of the [investment] signals need to be clarified. Whether it's the [return on equity] mess at FERC, which I helped create unintentionally. But in trying to solve a problem, we've probably made it a little bit worse. I think there's some uncertainty on the future of Order 1000. And it took a while I think for people to, like it or not, have the Clean Power Plan more in the rear-view mirror before they could focus on the expansion of the transmission grid."

On Wednesday, EEI released a report suggesting changes to FERC's ROE calculations that ClearView Energy Partners said could increase the model's results by approximately 50 basis points.

Gray said Sen. Maria Cantwell (D-Wash.), ranking member of the ENR Committee, will be watching "what happens under the new leadership of FERC to the Enforcement office." In response to the abuses that contributed to the 2000-2001 Western Energy Crisis, Cantwell helped draft language in the 2005 Energy Policy Act that gave the commission increased authority over market manipulation.

Utility Execs Share Hurricane Lessons

Scott Prochazka, CEO of CenterPoint Energy and chairman of the GridWise Alliance, said Hurricane Harvey — "our third 500-year storm in two and a half years" — proved the "incredible" value of mobile substations. The company also is likely to add airboats and trucks able to drive through high water, he said. (See *Weeks Later, Utility Officials Still Awed by Scale of Hurricane Harvey*.)



Robert Schimmenti, senior vice president of electric operations for Consolidated Edison, recalled how the utility was "humbled" by the 14-foot storm surge that drenched parts of Brooklyn and Lower Manhattan during Superstorm Sandy in 2012.

"All the weather predictions were around 12 feet. We did all the math and all the projections, and we thought we were good for about a 12-and-a-half-foot storm surge. It was only until a bunch of bright engineers linked the buoy data in the East River to a map of storm projections that they created — and this is well before high tide — and as they created these projections, we were like 'Hey, wait a second. This doesn't look good.'"

More than 1 million Con Ed customers in New York City and Westchester County lost power during the storm. The company has spent $847 million to make its system more resilient, including the addition of "smart switches" to isolate and clear trouble on lines, flood gates, pumps and 3 miles of flood walls around critical equipment.

Recovery in the Caribbean

Hurricane Maria took down "only" 220 230-kV towers in Puerto Rico, said **Bruce Walker**, assistant secretary for the Department of Energy's Office of Electricity Delivery and Energy Reliability. But replacing each tower is a five- to seven-day project requiring ferrying of workers and equipment by helicopter, Walker said.

"One of the things that was striking to me regarding their system is their transmission lines; while very well built, [they're] built right through the mountains. There are no rights of way; there are no roads. There is no tree clearing in those areas."

Praveen Kathpal, vice president of AES Energy Storage, said his company recently outlined for the Puerto Rico Energy Commission "a vision of how 10 GW of solar plus 2.5 GW of storage, arranged in essentially sectionalized grids across the island, could provide both resilience and lower costs, because those [investments] break even with how much Puerto Rico would spend on burning oil for power generation over the next 10 years."

Kathpal said AES' 10-MW battery installations in the Dominican Republic "rode through all the grid disturbances of Hurricanes Irma and Maria" despite damage to transmission lines and generation outages. "A battery installation is physically resilient. It's not as subject to the factors that during an intense storm would cause other resources to disconnect. So even as 40 to 60% of the generation in the Dominican Republic tripped off, the batteries continued to operate. And as you can imagine with those kinds of generation trips, the frequency was flopping all over the place. So they actually did more work to restabilize the system."

— Rich Heidorn Jr.

CAISO News

California Proposes Resource Adequacy Obligations for CCAs

By Jason Fordney

California regulators are set to vote next month on a proposal that community choice aggregators (CCAs) be subject to the resource adequacy requirements of electric utilities.

The California Public Utilities Commission's approval would require CCAs to comply with resource adequacy rules "in order to ensure that sufficient energy supply for customers is being procured by the appropriate utility."

The proposal modifies the timelines for the creation of CCAs so that they are coordinated with the annual CPUC and CAISO resource adequacy and reliability programs. It would require CCAs to submit to a process that includes a timeline for submission of implementation plans; a 'meet and confer' requirement between the CCA and the incumbent utility that can be triggered by either; a registration packet including a CCA's service agreement and bond; and a commission-authorized date to begin service.

It also calls for "universal access" to CCAs, equitable treatment of all customers and compliance with state laws regarding aggregated service. All prospective and expanding CCAs would be subject to the requirements for implementation plans received after Dec. 8, 2017.

CCAs are growing rapidly, creating some controversy over the stranded costs for regular utility customers. California legislators expressed surprise last summer when they were told that utility customers will be on the hook for hundreds of millions of dollars in long-term energy contracts procured by investor-owned utilities for customers who have departed for CCAs. (See *California CCAs Spur Worry of Regulatory Crisis*.)

The idea has been embraced by cities surrounding the San Francisco Bay Area that promote CCAs as "green" electricity programs. It was municipalities in the San Francisco and Los Angeles areas that lobbied for CCAs in response to a failed deregulation effort that in part caused the Western Energy Crisis of 2000/01. AB 117, enacted in 2002, allows local governments to form CCAs by aggregating retail customers and securing electricity supply contracts to serve them. CCAs also exist in Ohio, New York, Massachusetts, New Jersey, Rhode Island and Illinois.

Pacific Gas and Electric, which has opposed CCAs, argued to state lawmakers in August that about $180 million has been shifted from CCA customers to IOU customers — an amount it said will grow to $500 million by 2020.

California CCAs include Apple Valley Choice Energy, CleanPower San Francisco, Lancaster Choice Energy, Marin Clean Energy, Peninsula Clean Energy in San Mateo County, Redwood Coast Energy Authority, Silicon Valley Clean Energy and Sonoma Clean Power.

CAISO News

WECC Finding New Direction in Old Mission

By Jason Fordney

SALT LAKE CITY — The Western Electricity Coordinating Council's board of directors last week endorsed a new three-year operating plan for the organization, part of a larger reinvention intended to more precisely define the organization's role in protecting electric grid reliability.

The Regional Entity is undergoing a transformation that began with its 2014 restructuring and bifurcation into WECC and Vancouver, Wash.-based Peak Reliability. WECC is the largest and most diverse of NERC's REs responsible for monitoring and enforcing compliance with reliability standards.

Peak Reliability, which counts utilities, transmission owners and CAISO among its six classes of members, now serves as reliability coordinator for the Western Interconnection, except the Canadian province of Alberta. The organization last week said it is exploring developing a new market structure with a division of PJM. (See *PJM Unit to Help Develop Western Markets*.)

"Really, [WECC] got kind of refocused on its core reliability assurance mission," WECC CEO Jim Robb told *RTO Insider*. The 2018-2020 operating plan endorsed by the board "is really just building a process that wasn't in place before, recognizing that we have a new kind of board, new management and a new relationship with the members."

WECC develops and implements reliability standards and regional criteria across 14 Western U.S. states, Alberta, Canadian province British Columbia and a small, northern portion of Baja California, Mexico. It is a 501(c)(4) "Social Welfare organization" with a current annual budget of $27 million.

Last week Robb detailed the company's many ongoing initiatives to the board at WECC headquarters, in a modernized former hardware store in downtown Salt Lake City. The discussion illustrated the many complexities in monitoring reliability on an electric grid that is rapidly changing in resource mix and market structure.

A year ago, the WECC board approved five areas of strategic focus for the next three to five years, including focusing on the reliability impacts of new and changing market structures, such as the Western Energy Imbalance Market (EIM) and Mountain West Transmission Group's effort to join SPP.

Other areas of focus include the reliability impact of changing load and energy resources, identifying and mitigating key vulnerabilities, and analysis of future events that could affect grid reliability that encompassed "high impact, low frequency" events.

What's in a Name?

WECC has recently revived a proposal to change its name to "Reliability West," which officials contend would complete the bifurcation efforts begun in 2014 and position the organization as "mission-driven" and "create separation from its history as a Registered Entity," according to a WECC white paper published last month to tackle issues around the name change, which has been under discussion for three years. The change has many implications regarding implementation costs, perceptions of what the organization does and possible confusion with other entities that share the WECC acronym, the document shows.

WECC CEO Jim Robb | *Kirha Quick for WECC*

"Some folks think this is just a branding effort," Robb said at the meeting, adding that the proposed name is more reflective of the company's mission and easier for employees to engage with.

WECC is also drawing up a three-way memorandum of understanding with NERC and the British Columbia Utilities Commission to better define the roles and responsibilities of each organization, and developing a reliability agreement with the Mexico's Energy Regulatory Commission (CRE). It is also taking comment through Feb. 5 on proposed changes to the operating rules for its Western Renewable Energy Generation Information System (WREGIS).

WECC is funded through allocations to end users in its footprint based on net energy for load, as described in its delegation agreement with NERC. It is not a resource planner, but assesses the reliability implications of resource decisions and identifies concerns to address.

The organization also produces reliability reports on the Western grid. Its June 2017 State of the Interconnection Report showed that, between 2015 and 2016, loss of generation or transmission in the U.S portion of the Western Interconnection increased by 50% to 24 events. (See *WECC Generation, Transmission Loss Events Spike*.)

In the area of assuring reliability, WECC said its second-quarter index score of reliability outcomes in the Western Interconnection was at or above the average of the past eight quarters, as was the score of indicators of entities building better compliance programs.

The WECC board and committees met Dec. 4-5 in Salt Lake City. | *Kirha Quick for WECC*

CAISO NEWS

California Fires Spark CAISO Transmission Emergency

By Jason Fordney

CAISO on Monday continued an electric transmission emergency in Ventura County because of raging wildfires in Southern California that have forced the evacuation of almost 200,000 people and destroyed more than 1,000 structures. The emergency was extended until midnight Dec. 12.

As of 9:30 p.m. Monday, Southern California Edison said, the Thomas fire was causing intermittent outages and power surges in the Santa Barbara area, potentially affecting up to 85,000 customers. In the Ventura area, 2,393 customers were without power.

On Thursday, ISO spokesman Steven Greenlee told *RTO Insider* that the Thomas fire was a threat to four 230-kV lines in the Ventura area "and the fire is burning underneath the lines as we speak. But the lines remain in service."

In response, CAISO invoked its capacity procurement mechanism (CPM) to dispatch about 614 MW of local generation positioned to provide power should the lines go down, Greenlee said. The CPM units came online at about 2:30 p.m. Dec. 5 and are compensated outside the ISO's normal market operations.

The Rye and Creek fires in northern Los Angeles County were considered a minimal threat to high-voltage lines in those areas, but Greenlee said CAISO was watching them closely.

Those fires have since been 90% contained, but the Thomas fire has grown to engulf 230,000 acres, making it the fifth largest in state history.

"The [Thomas] fire experienced extreme fire behavior with rapid rates of spread due to the predicted strong Santa Ana winds," the state's Department of Forestry and Fire Protection (Cal Fire) said. Winds in the Santa Monica Mountains in Ventura County sustained speeds of 66 mph and gusted up to 85 mph. The agency is providing regular updates on the fires.


The Rye fire burns in Santa Clarita, Calif. | *SCE*

"Damage assessment teams have not been granted access to fire-damaged areas of the Thomas fire," SCE said in a statement last week. "When they gain access, progress of their work will be determined by weather conditions, terrain and the movement of the fires." The utility is also providing updates on its website.

The cause of the fires has not been determined.

Pacific Gas and Electric is facing lawsuits for a separate set of large fires in October, but the cause of those fires is still under investigation as well. (See *Wildfires Color California PUC Utility Decisions*.) The California Public Utilities Commission recently denied San Diego Gas & Electric cost recovery for other destructive fires in 2007. (See *Besieged CPUC Denies SDG&E Wildfire Recovery*.)

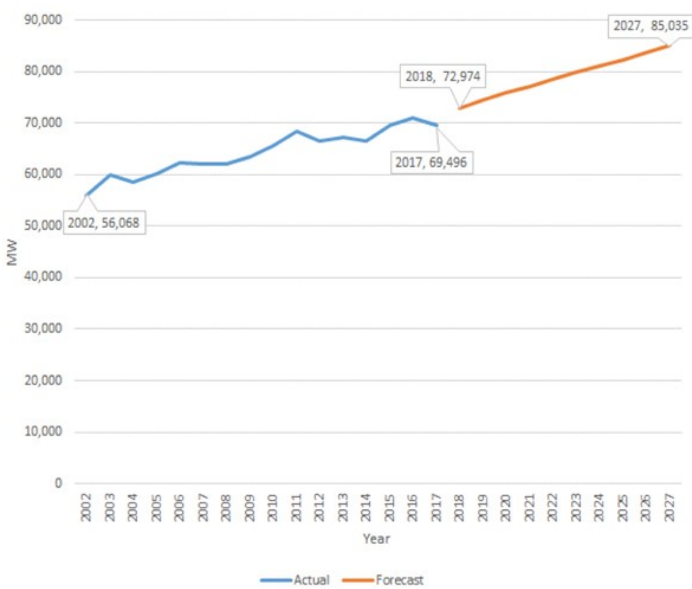
ERCOT NEWS

ERCOT Long-term Load to Reach 85 GW by 2027

ERCOT staff told members of the Supply Analysis Working Group (SAWG) on Friday that the Texas grid's summer peak demand is expected to reach 85 GW by 2027, a 22.36% increase over this summer's peak.

But ERCOT is in good shape to meet the coming demand. The ISO's November Generator Interconnection Status Report shows 20.6 GW worth of projects with interconnection agreements through 2020. Another 47.32 GW of capacity is being studied.

And despite the pending loss of more than 4 GW of coal-fired generation, ERCOT said it has more than 80 GW of available capacity to meet load this winter and spring. (See *ERCOT: Sufficient Capacity for Winter, Spring*.)



ERCOT summer peak demand | *ERCOT*

Staff's 2018 long-range load forecast sees stronger growth along the coast and in Far West and South Texas, compared to the 2017 forecast, but weaker growth in North Central and South Central Texas. Based on Austin Energy forecasts and the utility's focus on energy efficiency, staff project a 0.5% annual growth rate for the Austin area.

ERCOT's most recent Capacity, Demand and Reserves report indicated the ISO will have an 18.9% reserve margin for next summer, with margins remaining above 18% the following three years. A revised CDR report incorporating the latest retirements will be released Dec. 18.

Texas is the fastest growing state in the country, having registered the nation's largest annual population growth between 2010 and 2016, according to the U.S. Census Bureau. The state has been adding more than 200,000 people a year and will soon top 28 million.

NRG to Retire 806 MW of Mothballed Resources

NRG Texas Power notified ERCOT last week it plans to retire Greens Bayou Unit 5 and three other previously mothballed gas-fired units with a total capacity of 806 MW.

Greens Bayou Unit 5 dates back to the early 1970s and had a reliability-must-run agreement with ERCOT — the ISO's first since 2011 — that was terminated in May. The unit was mothballed in 2010 and 2011. (See *ERCOT Ending Greens Bayou RMR May 29*.)

NRG also said it would retire three gas units at its Houston-area S.R. Bertron plant. The company shut down two 230-MW units and a 13-MW quick-start unit in 2011 for economic reasons. All three units were more than 50 years old.

The retirements will be effective Dec. 31, NRG said in its Dec. 5 filing.

— Tom Kleckner

ISO-NE NEWS

FERC Won't Fall to Partisanship, Chatterjee Promises ISO-NE

By Michael Kuser

Neil Chatterjee | © RTO Insider

FERC Commissioner Neil Chatterjee addresses the ISO-NE Consumer Liaison Group. | © RTO Insider

BOSTON — FERC Commissioner Neil Chatterjee promised Thursday that the commission will not become part of what he called the "hyper-politicized" policymaking process in D.C.

Chatterjee made his remarks at a meeting of ISO-NE's Consumer Liaison Group on Dec. 7, which also included a panel on energy storage and a discussion of energy and capacity prices.

Chatterjee is among the four commissioners who have joined FERC since August. He spoke to ISO-NE hours after the swearing in of Kevin McIntyre, who replaced him as chairman. (See related story, *McIntyre Takes FERC Chair; Wins Delay on NOPR*, p.1.)

A former energy policy adviser to Senate Majority Leader Mitch McConnell (R-Ky.), Chatterjee said it's increasingly difficult to get any policy change through the legislative process, particularly regarding energy.

"Increasingly, energy policy is being made by provisions in the tax code, measures in big, year-end spending bills, or more so, more and more policy decisions are being made at agencies throughout the federal government," Chatterjee said. "As someone who now works in the executive branch and may be the short-term beneficiary of that increased authority in the executive branch, I don't think it's good for democracy or good for America."

Energy policy needs to be made in Congress to have lasting impact and avoid regulatory uncertainty, he said.

"For instance, in the EPA, the mission of the EPA today under Administrator [Scott] Pruitt is the polar opposite of what Administrators [Gina] McCarthy and [Lisa] Jackson had under the prior administration," Chatterjee said. "There's been a wholesale shift in direction, and that really leads to regulatory instability for consumers, for folks in the business of power generation and distribution. It creates just so much lack of clarity and uncertainty.

"One of the things I'm proud of is FERC provides stability. Not only is the nature of the work at FERC inherently technical, not political, but also because you have the bipartisan board structure — where the president's party never has more than three members — you're never going to lurch dramatically in a new direction. So even though there's new leadership at the commission today, and we may not go in the exact same direction as the prior leadership was going, we're not going to go in a dramatically different direction than the prior leadership."

Republicans now hold a 3-2 edge on the panel. Because of the commission's turnover and "what is perceived to be a political exercise" with the Department of Energy's call for price supports for coal and nuclear plants, Chatterjee said, he's heard concern that the commission will become more political. (See *FERC's Independence to be Tested by DOE NOPR*.)

"I have to tell you, that's not going to happen," he insisted. "If you look at the composition of the five of us who sit at the commission, you have Commissioner [Cheryl] LaFleur, who has seven years' experience on the commission but also decades in the energy space. She's a leader we all respect and look up to and she will provide that stability.

"Kevin McIntyre, who was sworn in as chairman today, is one of the top energy lawyers on the planet, let alone in the country. He's a serious, thoughtful leader who's got a great temperament who will provide that steady leadership.

"Both Commissioner [Richard] Glick and I come from the Senate, and the thing about the Senate ... is you work for the whole country ... and see things holistically. Commissioner [Robert] Powelson had been chair of a state commission and brings that very valuable state experience ... and state commissioners are very attuned to the interests of consumers."

Chatterjee said one reason he wanted a seat on the commission was to encourage new technologies such as energy storage, which he said could help improve grid resilience.

"We are currently working through a storage rule at the commission that will ... remove barriers to competition and access for storage, and enable storage to be properly compensated for the value it provides," Chatterjee said.

Working on Energy Storage

The Consumer Liaison Group meeting included a panel on energy storage moderated by Robert Espindola, energy systems program manager for Acushnet. On Thursday, his company won a $700,000 grant from Massachusetts for a storage project at the company's Titleist golf ball factory in New Bedford. (See related story, *Massachusetts Awards $20M in Energy Storage Grants*, p.11.)

Also on the panel were Christopher Parent, the RTO's director of market development; Massachusetts Department of Energy Resources Commissioner Judith Judson; Lewis Milford, president of Clean Energy Group, a nonprofit in Montpelier, Vt.; and

Continued on page 11

ISO-NE NEWS

Massachusetts Awards $20M in Energy Storage Grants

By Michael Kuser

MARLBOUROUGH, Mass. — Gov. Charlie Baker on Thursday announced nearly $20 million in grants for 26 energy storage projects.

"The opportunity for people to store energy when prices are low and to access that storage when prices are high could have huge positive benefit to everybody," Baker said. "There are times within the past few years when we have been paying the highest price in the world for our energy — up to $100/kWh."

Baker spoke at University of Massachusetts Memorial Hospital, which received a $686,000 grant to integrate a 400-kW solar canopy and a 300-kW/800-kWh flow battery with combined heat and power. The project will not only reduce energy use and costs, but also help the hospital better handle unexpected power outages.

The awards ranged from $221,000 for a project at the West Boylston Municipal Light Plant, to $1.25 million awarded to each of four projects proposed by EnerNOC, Tesla, Constellation Energy Group and the Taunton Municipal Light Plant.

The program received nearly 70 strong proposals, which prompted the state to double the funding from a planned $10 million to $20 million, Department of Energy Resources Commissioner Judith Judson said. The projects would also draw an additional $32 million in matching funds pledged by developers or by host municipalities, she said.

The state awarded the grants as part of its Energy Storage Initiative and Advancing Commonwealth Energy Storage program, funded by the DOER through alternative compliance payments and administered by the Massachusetts Clean Energy Center.

Baker could have declared it energy storage week in the state as ISO-NE hosted a storage panel in Boston later in the day, following a Northeast Energy and Commerce Association storage seminar last Tuesday. (See related story, *ISO-NE Preparing for Energy Storage Growth*, p.12.) The Massachusetts Institute of Technology also held a clean energy and storage event in Cambridge on Friday.

Judson also appeared on the ISO-NE storage panel, as did Christopher Parent, the RTO's director of market development. As of Monday, there are more than 470 MW in the ISO-NE interconnection queue, according to spokeswoman Marcia Blomberg.

Massachusetts also has a goal to have 300,000 electric vehicles registered in the state by 2025. The state's $2,500 rebates are helping drive EV sales, illustrated by the 282 rebates issued in November, up from 153 a year earlier. (See *Mass. Prepares for EV Growth, Alternative Energy Standard*.)

FERC Won't Fall to Partisanship, Chatterjee Promises ISO-NE

Continued from page 10

Ted Ko, director of policy at Stem, which pairs artificial intelligence with storage to automate cost savings.

Judson had appeared earlier that day at a ceremony marking the storage grants.

In July, DOER adopted a 2020 target of 200 MWh energy storage for the three electric distribution companies in the state. Judson said that the short-term target is line with the 2025 goal of 600 MW laid out in the state's State of Charge report last year.

From left to right: Robert Espindola, Acushnet; Christopher Parent, ISO-NE; DOER Commissioner Judith Judson; Lewis Milford, Clean Energy Group; and Ted Ko, Stem. | *© RTO Insider*

As of Dec. 1, the RTO had 400 MW of energy storage in the interconnection queue, or about 3% of all generation applying to interconnect, Parent said. (See *ISO-NE Preparing for Energy Storage Growth*.)

ISO-NE Prepares for FCA 12

ISO-NE Vice President for External Affairs and Corporate Communications Anne George, who presented an update on the RTO's activities, said it projects an energy market value of $3.9 billion for 2017. The value has been declining for a decade and is down more than two-thirds from the $12.1 billion posted in 2008, she said.

"But we also see the capacity market is ticking upwards," George said. "That's really because back in 2013 we saw … a large chunk of the resources retired in the region, and when they did that, in the eighth Forward Capacity Auction we saw prices rise. That's how markets behave." Prices continued to rise in the succeeding FCA, then dropped in FCA 10 and FCA 11, she said.

"So, you'll see some increase in the capacity market portion of wholesale market costs over the next couple of years, but then you'll start to see it level off and come back down," George said. "Right now, we are in a surplus situation."

FCA 12 is scheduled to take place for February 2018, covering the June 1, 2021, to May 31, 2022, capacity commitment period. In November, the RTO submitted a pre-FCA informational filing with FERC for review, which included all FCA-related calculations and determinations.

ISO-NE NEWS

ISO-NE Preparing for Energy Storage Growth

By Michael Kuser

ISO-NE is working to ensure that its wholesale markets can accommodate an expected exponential growth of energy storage resources, an RTO manager said last week.

"We want to be sure that our wholesale markets are favorable to all resource types equally, so when we think about energy storage, we want to make sure it fits in the box," Carissa Sedlacek, ISO-NE director of market development, said during a Dec. 5 energy storage seminar hosted by the Northeast Energy and Commerce Association in Boston.

With 20 MW of energy storage already interconnected in ISO-NE and more than 470 MW in the interconnection queue, the RTO is adjusting some of its market rules to accommodate the new and flexible resources coming online, Sedlacek said. (See *ISO-NE Plans for Hybrid Grid, Flat Loads, More Gas*.)

"How is that energy storage facility going to operate?" Sedlacek said. "Is it going to operate at full capacity for one hour, or is it going to operate at quarter-capacity for four hours? How is it going to respond if it's coupled with wind or solar? Is it going to be there for longer durations? Is it going to be used more in the winter than in the summer? These are the types of questions we ask in the planning department as we consider new resources, especially something like energy storage."

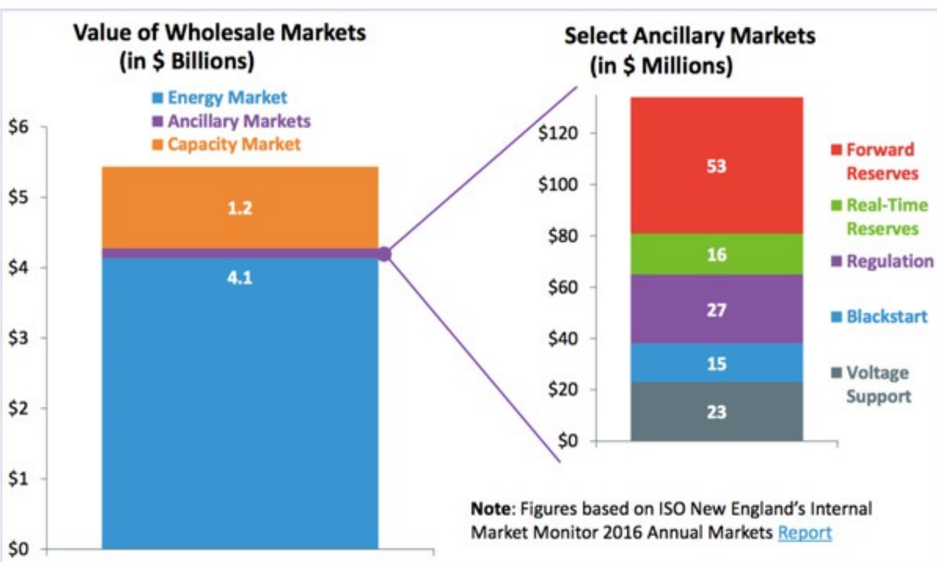
Spreading the Risk

ISO-NE predicts energy storage providers will largely focus participation in the RTO's ancillary services market because many of them are not prepared to assume the financial burden of qualifying for the Forward Capacity Market (FCM) — or to confront the risk of coming up short on a capacity supply obligation (CSO), Sedlacek said.

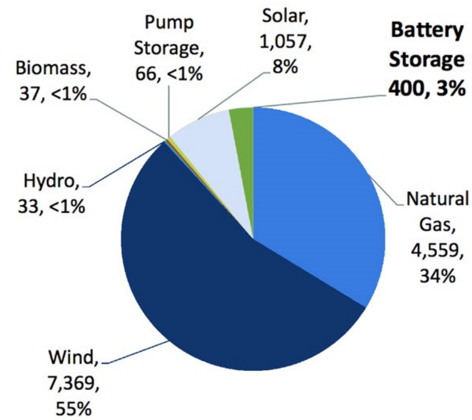
"If you get a megawatt CSO that you cannot achieve, there will be a financial penalty," Sedlacek said, noting that penalties go into effect June 1, 2018, leaving some storage developers "a little gun shy" about offering into the FCM. She noted that solar and wind participants in the FCM don't typically attempt to qualify for their nameplate capacity, but only a percentage of nameplate (usually 40 to 42%) to ensure their obligation is achievable.

"Because under the [FCM], you're on the hook to provide those megawatts," she said.

Sedlacek explained how energy storage developers might hedge their risk by pursuing incentives offered for over-performing in the FCM.



| ISO-NE



ISO-NE queue: capacity by resource, as of Dec. 1. Storage has since increased to more than 470 MW, as of Monday. | *ISO-NE*

"So you can figure out what your output would be over a four-hour period, because that's what you have done analysis on and you think might actually last for a shortage of that [capacity amount]," she said. "That's the megawatts you want to actually take on as the CSO, but be happy to take on additional megawatts or have more output on real shortage events, days or hours, and kind of scoop up the additional revenue."

Wholesale Market Revenue

ENGIE subsidiary Green Charge Networks recently signed a 20-year agreement to supply Holyoke Gas & Electric with power from the first combined solar and storage project in Massachusetts, according to Jonathan Poor, Green Charge's director of business development. While the 5-MW solar farm on the site of the retired coal-fired Mount Tom Station in Holyoke is currently in operation, the 3-MW battery will interconnect around May 2018, Poor said.

The storage project is particularly suited to organized markets in New England and New York because it will help firm up output from the solar farm and reduce capacity costs, he said.

"We see, at least in New York ISO and ISO New England, some of the business case coming from wholesale market revenue," Poor said.

Future solar projects will likely include storage in the interconnection request,

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ISO-NE NEWS

ISO-NE Preparing for Energy Storage Growth

Continued from page 12

given the value of storage, he said.

"We appreciate how holistic the [Solar Massachusetts Renewable Target] program is in Massachusetts for energy storage, and we see a real opportunity to deploy solar and storage and are looking for repeatable use cases that we can scale," Poor said.

Massachusetts Programs

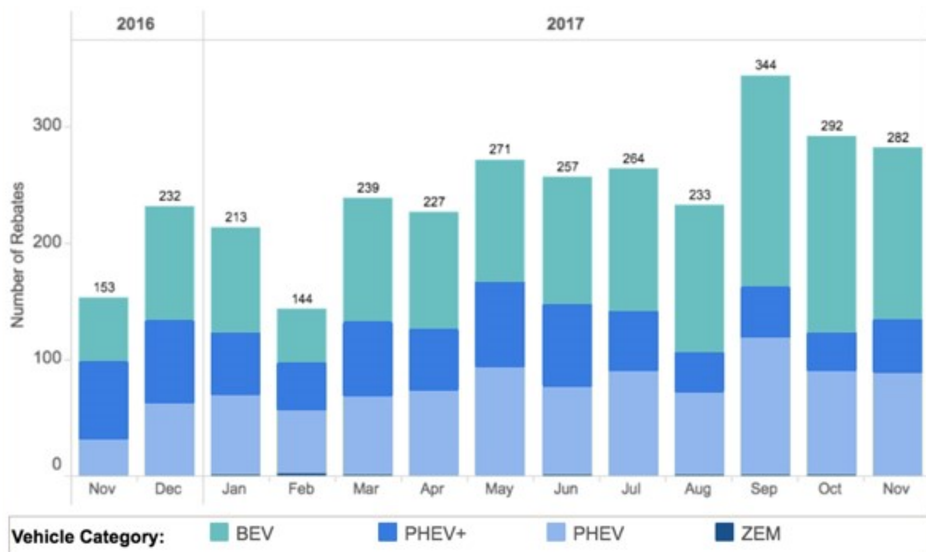
Massachusetts Clean Energy Center CEO Stephen Pike said that most people know the state's 2016 Energy Diversity Act for its solicitation for 9.45 TWh of clean energy, but the legislation also included an energy storage mandate, leading the state's Department of Energy Resources earlier this year to set a 200-MWh storage target for 2020.

While some industry participants considered that goal to be less than ambitious, Pike said there were only 2 MW of storage deployed in Massachusetts when the department began preparing its 2016 State of the Charge report and 4 MW by the time of publication. (See *Massachusetts Underwhelms with 200-MWh Storage Target*.)

"Batteries were $1,000/kWh a few years ago, and now they're $300/kWh," Stuebi said. "And, alongside declining cost of batteries, largely driven by the growing market demand for electric vehicles, the costs of all the other components of a complete energy storage system — inverters, control systems and racks — are falling too."

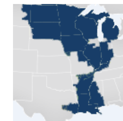
Most of the 700 MW of energy storage currently deployed in the U.S. is utility-scale, and California dominates with 60% of the installed base and a mandate for nearly 2 GW in storage to be operational by 2020, Stuebi said.

But even places like Florida and Michigan, which Steubi hadn't initially considered promising areas, could get interesting pretty quickly for behind-the-meter storage applications, he said.



Massachusetts electric vehicles by month | *Massachusetts Offers Rebates for Electric Vehicles (MOR-EV.org)*

MISO NEWS



MISO Board Promotes Moeller, Approves 2018 Budget

By Amanda Durish Cook

CARMEL, Ind. — MISO's Board of Directors last week stepped in to order a plan of succession for the RTO's executive leadership, while also approving its requested 2018 budget.

As part of the plan, the board immediately promoted Executive Vice President of Operations Clair Moeller to president, a permanent appointment. In the event of unforeseen circumstances related to CEO John Bear, Moeller would act as CEO, the board decided.

The RTO's board usually takes a "nose in, fingers out" approach except when it comes to matters of personnel succession and strategic planning, Chair Michael Curran explained during a Dec. 7 meeting. He said the appointment will ensure that MISO is spared uncertainty in the event that Bear leaves his post.

For example, Curran joked, "if John gets hit by a truck, wins the lottery [or] beamed up by a spaceship."

The board also approved a $321.7 million total operating budget and $29.6 million in capital spending for 2018.

As part of the budget, MISO will spend $21.7 million to begin replacing its aging market platform with a more adaptable modular market platform, a project it expects to complete by 2024. (See *Winter Launch for MISO Website, Market System Project*.) The RTO's existing market platform relies on technology from the late 1990s, while its day-ahead and real-time market systems were added around 2005. The age of the system is limiting the new market products MISO can pursue.

"It's approaching its teen years — God help us all," Dynegy's Mark Volpe joked during a Dec. 6 Advisory Committee meeting.

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MISO Upping Harassment Training for Managers

By Amanda Durish Cook

CARMEL, Ind. — MISO will require its managers to undergo training on handling harassment complaints amid heightened awareness over sexual misconduct in the workplace.

MISO Vice President of Human Resources Greg Powell announced the new training during a Dec. 5 Human Resources Committee of the Board of Directors meeting.

In response to a question from Director Mark Johnson, Powell also said HR and management will have additional discussions on sexual misconduct awareness in the first quarter of 2018. "What are we doing from an overall standpoint to make sure all employees feel safe?" Johnson asked.

The HR Committee also decided to reserve time during first-quarter meetings to take up the topic.

"News headlines in recent weeks remind all organizations of the importance of ensuring a respectful and professional workplace," Powell said, referring to the spate of sexual harassment and assault accusations that have roiled the media, politics and other industries. "Even some in our energy industry have fallen to this very bad situation in the headlines."

NERC CEO Gerry Cauley resigned last month after his arrest for assaulting his estranged wife after she allegedly discovered his relationship with a female subordinate. (See *Cauley Resigns; NERC Launches Search for Replacement*.)

Director Mark Johnson (left) and CEO John Bear | © *RTO Insider*

Powell said MISO will initiate a longer, more intense training for managers that will cover "all workplace harassment issues" in addition to the existing annual springtime sexual harassment training required of all employees.

Director Barbara Krumsiek has also been tapped to advise leadership and the MISO board on preventing sexual harassment and addressing accusations. Krumsiek has served as senior industry fellow of Georgetown University's Women's Leadership Institute and has given a TED Talk on women making their way to C-suites in "toxic" cultures.

MISO urges employees to contact managers, HR and its legal department with complaints. The RTO also maintains an anonymous hotline.

Powell said MISO will continue to concentrate on training and increasing awareness among its HR ranks and management.

"In addition to a strong, comprehensive sexual harassment policy and regular training required annually for all employees, we are working to extend beyond the expected actions to involve employees at every level to support a strong, open and inclusive way of life," Powell said. "This includes the recent launch of our Diversity and Inclusion Council and Women's Resource Group, which were created to ensure we continue our steadfast focus on diverse viewpoints in the organization and our communities."

The RTO currently has a 3.1 approval rating out of 5 on Glassdoor with a 36% CEO approval rating. Among more than 100 reviews by present and former employees are multiple references to MISO as an "old boys' club" with "top-heavy" management.

"Creating a Women's Resource Group and then promoting men who mistreat women (you know who I'm talking about) won't fix MISO," one anonymous reviewer identifying as a current MISO engineer said in a review posted in May.

MISO declined to say whether it has disciplined any employees for harassment or sexual misconduct, saying it considers all personnel-related information confidential.

MISO News

FERC OKs Changes to MISO Competitive Tx Process

By Michael Brooks

FERC last week approved several changes to MISO's competitive transmission developer selection process under Order 1000, which the RTO says will greatly improve its efficiency.

The most substantial of these changes eliminates MISO's facility-by-facility evaluation when considering a developer's bid, allowing the RTO to evaluate the project as a whole (ER18-44). Previously, the RTO had to individually assess a project's facilities, such as lines and substations, even if they were all part of the same project. MISO called this approach both "inefficient" and "analytically flawed."

MISO will now evaluate mixed-facility projects (those consisting of both competitive lines and substations) using the following weights:

- 35% for cost and facility design quality;
- 30% for project implementation capabilities;
- 30% for operations, maintenance, repair and replacement capabilities; and
- 5% for MISO transmission planning process participation.

Previously, the RTO used separate weighting for lines and substations.

Developers Midcontinent MCN and LS Power protested the new weighting. Both said the cost and description criterion, though increased by 5% for both types of facilities, should have significantly greater weight.

FERC rejected this, saying it agreed with MISO "that providing greater weight (35%) for cost and reasonably descriptive facility design quality appropriately accounts for the evaluation criterion that MISO anticipates will result in the greatest challenges for these types of projects, which include different types of facilities."

"Indeed, MISO's proposal to provide greater weight for the cost and reasonably descriptive facility design quality evaluation criterion for mixed-facility projects is consistent with LS Power's and Midcontinent MCN's general view that this evaluation criteria should play a greater role in the competitive developer selection process," the commission said.

Additionally, FERC accepted other noncontroversial changes to the selection process. One of these allows MISO to stagger its requests for proposals for competitive projects. The RTO had explained that, as its Board of Directors approves projects for bidding in packages, drafting RFPs for the projects at the same time created significant staffing crunches (ER18-41).

The commission also approved several revisions to MISO's governing documents to update terms and definitions related to the competitive process, as well as to improve their clarity, grammar and formatting (ER18-39).

MISO Board Sets CEO Succession, Approves 2018 Budget

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Alliant Energy's Mitch Myhre, chair of the MISO Finance Subcommittee, said his group will track spending on the project.

"This is a big deal. $130 million is half of MISO's annual budget," Volpe said.

To date, MISO is under its 2017 base operating budget by about $1.8 million and predicts it will end the year having spent $240.8 million instead of the budgeted $241.7 million.

Chief Financial Officer Melissa Brown said the savings will result from not implementing a previously planned forward capacity market for the RTO's deregulated areas, as well as lower-then-expected spending on building maintenance and employee travel.

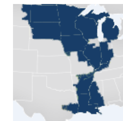
MISO is $500,000 overbudget on this year's capital spending but is poised to shrink the overage to $200,000 by year-end. The increase was mainly driven by the RTO's effort to replace its market settlements software.

CEO John Bear (left) and Director Michael Curran | © RTO Insider

Last week also marked Director Paul Bonavia's final meeting on the board, with his term expiring Dec. 31. In parting remarks, Bonavia called MISO a "civics lesson" and said the RTO was proof that decorum and cooperation could exist in an industry with several competing interests. "It's positively breathtaking, with how you come together representing different interests but still have goodwill and move billions of dollars in investment," he said.

Former Delta Air Lines Chief Information Officer Theresa Wise will replace Bonavia beginning Jan. 1. (See *New Director to Join MISO Board, 2 Keep Seats*.)

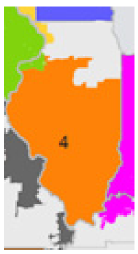
MISO NEWS



Zone 4 Players Still Divided over Resource Adequacy

By Amanda Durish Cook

The Illinois Commerce Commission heard two very different views of MISO's Zone 4 at a workshop last week, with some speakers claiming the region has sufficient reserves and others saying it is in dire straits.



The ICC convened the Dec. 8 workshop to hear continuing discussion on the future of resource adequacy in the RTO's Southern Illinois zone. The commission will hold another workshop next month and then issue a summary report of stakeholder positions to Gov. Bruce Rauner by Feb. 26. It was Rauner's office that in part sparked the workshop after sending the ICC an Oct. 26 letter asking the commission to produce a white paper and stakeholder comments on the structural challenges of Zone 4 within five days.

Dynegy representatives repeated warnings that the company could shutter one of its eight plants in Zone 4. The company operates about 6.5 GW of capacity in the zone, which contains 57 utility-scale generating stations with a combined 16 GW of nameplate capacity. Dynegy said unprofitable plants could shut down as early as the 2018/19 planning year unless changes are made to support local generation. Merchant generator owner Rockland Capital also warned in workshop comments that merchant plants will be forced to exit the market in Illinois without MISO capacity market improvements.

"We are the bearers of the risk of deregulation," said Dean Ellis, Dynegy executive vice president of regulatory and government affairs.

Ellis also criticized the short lead time MISO provides for its annual capacity auction, with the auction taking place in early April and the planning year beginning June 1. "We have to make investment decisions involving millions or tens of millions of dollars with as little as six weeks' notice," he said.

Dynegy said MISO and the Organization of MISO States' (OMS) projected capacity surplus through 2022 includes all of the company's at-risk downstate generating units — except for Baldwin Unit 3 near St. Louis — as available capacity. The OMS-MISO resource adequacy survey predicts Zone 4 will have an average 2.62-GW surplus through 2022.

The company also warned the ICC not to count on MISO's system support resource program, which enables the RTO to keep units online for reliability purposes: "It might be asserted that … MISO could invoke its system support resources tariff to require Dynegy to keep one or more of the retiring units in operation, while compensating Dynegy through cost-of-service-based payments under an SSR agreement. However, the MISO SSR tariff as written only provides for generating units to be designated as SSRs in order to maintain transmission system reliability (including compliance with thermal and voltage limitations under applicable NERC standards) and not to maintain resource adequacy."

MISO Executive Director Melissa Seymour confirmed Dynegy's assessment, saying the RTO could only pursue SSR agreements in cases where reliability is threatened, but not for resource adequacy.

Ameren Illinois said it didn't see an immediate need for action, arguing that only mid- and long-term resource adequacy is a concern for the zone.

"There are sufficient resources in the market today, and sufficient resources are forecasted to be available in the market in the next three to five years. Thus, the problem identified is mid- and long-term resource adequacy in MISO Zone 4," the company said in comments.

AARP Senior Legislative Representative Bill Malcolm said Illinois customers should "celebrate" because energy costs are low and the wholesale market is finally working as designed in Zone 4.

Malcolm urged a slower timeline to develop a resource adequacy solution and recommended a full independent study of capacity in all of Illinois, not just the downstate market.

"This seems to be a solution in search of a problem. There is no urgent issue; we have time," Malcolm told the commission.

Activist Tracy Fox, representing several community groups in the state, also argued for a measured response and called for an independent analysis. "If you watch these plants, they're always broke, there's always a fix on the horizon, and once they get it, they're broke again," Fox said.

Speaking on behalf of Rockland Capital, Travis Stewart of Gabel Associates cautioned against a study that relies solely on publicly available data, saying it might not paint a full picture.

RA not a Problem

Jim Dauphinais, representing Illinois Industrial Energy Consumers, said Southern Illinois does not have a resource adequacy problem.

"There has not has been a serious resource adequacy issue in the state since 1998," Dauphinais said, referring to the premature shutdown of Commonwealth Edison's two large Zion nuclear reactors.

Malcolm said supplies in the Midwest are so plentiful that We Energies is shutting down its Pleasant Prairie plant in southeastern Wisconsin.

Direct Energy said, if anything, there's an oversupply issue in Zone 4, noting the $1.50/MW-day clearing prices in MISO's most recent capacity auction. The retail electric supplier urged the ICC not to "disrupt the entire market and potentially subject customers to escalating and uncontrolled capacity costs."

"I don't mean to be critical, but [MISO CEO] John Bear's letter was weak. It doesn't present any evidence at all of a resource adequacy problem," Fox said, referring to a May letter Bear penned to Rauner, urging the state to continue to seek solutions to a possible capacity shortfall after FERC rejected MISO's separate three-year capacity auction proposal for retail choice areas. She conceded Bear's point that Zone 4's resource adequacy conditions change from year to year.

No Greener Pastures

Last month, Dynegy drafted legislation that would have the Illinois Power Agency hold a separate competitive capacity auction for Central and Southern Illinois, but the pro-

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MISO NEWS

MISO Board, Monitor Seek Response to PJM M2M Missteps

By Amanda Durish Cook

CARMEL, Ind. — The MISO Board of Directors last week learned about the recent discovery that PJM had been committing two market-to-market errors that have likely cost MISO millions of dollars over a period of years.

They also heard that MISO may have little recourse to recover those losses.

At issue was PJM's longtime practice of overstating its own transmission loading relief (TLR) because of a calculation error and its failure to order mandated tests required to define M2M constraints between the two RTOs. (See *MISO Monitor Blames PJM for Market-to-Market Errors*.)

During a Dec. 5 meeting of the board's Markets Committee, Independent Market Monitor David Patton said MISO has anted up millions in unnecessary congestion costs stemming from PJM's mistakes.


David Patton | © *RTO Insider*

The untested M2M constraints led to $84 million worth of congestion in 2016 and $187 million in 2017, Patton said, adding a disclaimer that his firm probably couldn't perfectly duplicate the constraint test that the RTOs perform, and that they may show different congestion values. Delays in defining constraints resulted in $44 million worth of congestion last year and $25 million this year.

"If they don't define the constraint, they basically get to a free pass to use the transmission system," Patton told the board.

Patton said one flowgate that wasn't tested or defined as M2M led to $43 million in congestion in September alone.

"A unit was running, overloading the constraint, and we did not tell PJM to back it down," Patton said. "We need to be vigilant. … We don't always ask our neighbors to test the constraints."

Willful Neglect?

Patton said PJM's failure to order these tests was deliberate: "In our mind, this is a pretty gross violation of the Tariff, particularly since they knew they weren't doing the test."

Director Baljit Dail asked how Patton could be sure PJM knowingly neglected the test.

Patton said at the beginning of the RTOs' M2M process nearly a decade ago, PJM was aware it needed to devise a new constraint model that included an actual representation of MISO system outages with shift factors, but it failed to create such a model. "They never did it, and they knew they didn't do it." Patton said.

"I'll hold the rest of my questions for closed

Continued on page 29

Zone 4 Players Still Divided

Continued from page 16

posal failed to advance in the Illinois House of Representatives after hearings. (See *Dynegy Auction Proposal Fails to Gain Ill. Lawmaker Support*.) In workshop comments, Exelon said it generally supported the plan, contending it "would have ensured that Illinois would no longer be subject to the annual one-year cycle of capacity auctions and the volatility that ensues."

A recent ICC white paper concluded that state has four options: continue to rely on existing competitive forces and market structures; impose additional capacity requirements on load-serving entities; create a reliability portfolio standard; or encourage or require utilities to switch RTOs.

Fox criticized the white paper as too heavy on MISO Zone 4 backstory and light on an examination of the solutions. "We came out with four solutions, but the solutions aren't analyzed at all," Fox said.

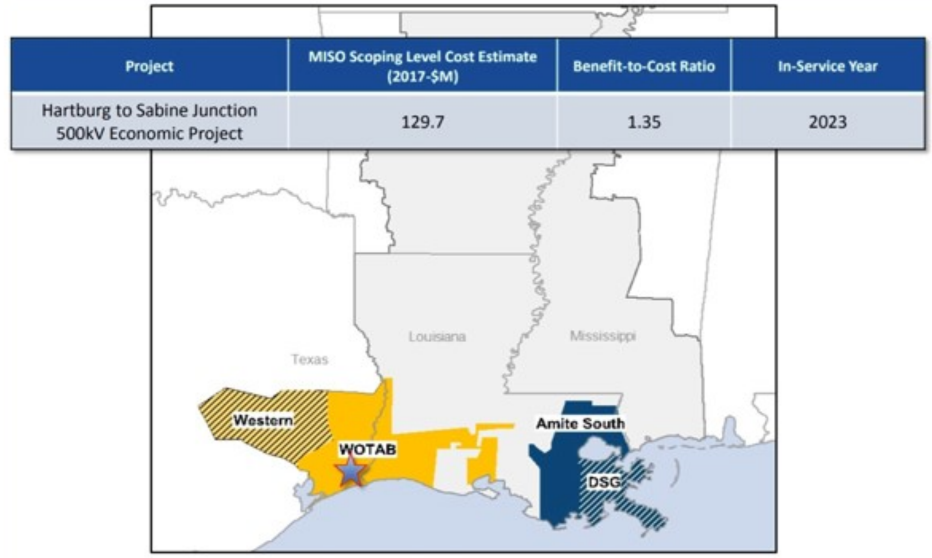
During a Dec. 4 conference in Indianapolis hosted by EUCI, ICC Commissioner John Rosales said it was interesting that the white paper offered RTO defection as an option while other Illinois generators outside of Zone 4 are considering moving from PJM to MISO. "The grass is always greener on the other side. I hate for that to be the end-all option. That's the North Korea option. There's a lot of repercussions to move from one RTO to the other, and I'd hate for that to happen."

Ameren has also said it believes that reconfiguring RTO participation will "not necessarily guarantee long-term resource adequacy for downstate Illinois."

MISO News

MISO Board Approves $2.6B Transmission Spending Package

By Amanda Durish Cook



Project	MISO Scoping Level Cost Estimate (2017-$M)	Benefit-to-Cost Ratio	In-Service Year
Hartburg to Sabine Junction 500kV Economic Project	129.7	1.35	2023

The Hartburg-Sabine project, postponed by MISO's board | *MISO*

CARMEL, Ind. — MISO's Board of Directors on Thursday unanimously approved the RTO's annual Transmission Expansion Plan, including 353 new transmission projects valued at $2.6 billion.

But a Texas project subject to shifting cost allocation was benched for at least two months before approval.

MTEP 17 contains $1.4 billion of projects driven by transmission owners' local needs, including reliability, replacement of aging equipment and upgrades for environmental requirements. Almost $1 billion will be spent on baseline reliability projects, while nearly $240 million will go to generator interconnection projects. The proposed projects have expected in-service dates through 2024.

"The bulk of the dollars are being driven by local needs," MISO Vice President of System Planning Jennifer Curran said.

Although nearly the same price as MTEP 16, this year's plan has 29 fewer projects. An earlier version of MTEP 17 called for just 10 fewer projects. (See *MTEP 17 Proposal: 343 New Transmission Projects at $2.6B*.)

MISO South represents 41% of spending under the new plan, in keeping with a trend that increasingly allocates more spending to the southern portion of the RTO's footprint, which is experiencing load growth — unlike the Midwest region.

Texas Project Delay

The board postponed approval of the $130 million Hartburg-Sabine 500-kV line market efficiency project (MEP) in eastern Texas for two months because of a late change to cost allocation for the projects. Last month, regulators from both Texas and Louisiana asked MISO to create separate zones for the two states to allow for a more specific cost allocation.

MISO has since filed with FERC to rename Local Resource Zones as "Cost Allocation Zones" for the purposes of allocating MEP costs only, with Louisiana becoming Zone 9 and Texas becoming Zone 11 (ER18-364). The proposal does not eliminate LRZs, which are used to determine resource adequacy needs, nor does it change their boundaries.

"Out of an abundance of caution, MISO does believe that a short delay would be prudent," Curran said. A board vote on the project has been put off until Feb. 5, allowing FERC time to respond to MISO's filing.

"The change to the zonal requirement makes sense," Curran said. "Most of our other cost allocation zones are based on state lines."

MISO policy requires that 80% of the costs for MEPs be allocated to local resource zones based on their relative share of adjusted benefits.

Curran said the delay would not affect MISO's timeline for issuing a request for proposals for the project.

The Hartburg-Sabine project will be MISO's second-ever competitively bid transmission project and the first such project to include a substation, and the RTO plans to add two new staff members to oversee the competitive process behind the project. The line is intended to alleviate constraints in MISO South's West of the Atchafalaya Basin load pocket area straddling Texas and Louisiana.

"There's a significant amount of aging infrastructure in this area," MISO interregional adviser Adam Solomon said.

The Texas project has already frustrated some stakeholders, who last month considered requesting a longer delay over concerns about the project's cost estimates. (See *MTEP 17 Advances with Disputed Texas Project*.)

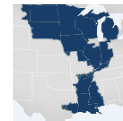
MTEP 17 also includes five targeted market efficiency projects, smaller interregional projects meant to relieve historical congestion on seams shared with PJM, whose Board of Managers also approved the TMEP portfolio last week. (See related story, *New Wave of PJM Transmission Upgrades Rankles AMP*, p.27.)

All five TMEP projects this year are upgrades to existing systems. The projects, which have individual $20 million cost caps, will coincidentally cost $20 million combined.

TMEP project costs will on average be allocated 69% to PJM and 31% to MISO, based on projected benefits, which are expected to reach $100 million within four years of going into service.

TMEPs are designed to address cost-effective and congestion-relieving seams projects that might otherwise be overlooked because of their low cost and small size. To qualify, projects must cost less than $20 million, be in service within three years of approval and provide historical congestion relief that is equal to or greater than construction costs within the first four years of operation.

MISO News



Grid Future is Storage, Threats and 'Fog,' MISO Members Say

By Amanda Durish Cook

CARMEL, Ind. — While MISO sector representatives express uncertainty about the next stage in the evolution of the grid, they do think it will involve energy storage, distributed resources and heightened security measures.

But they're hesitant to speculate about the size of future investments driven by the developments.

MISO Executive Director of Strategy Scott Wright last week said the RTO believes the grid is facing its biggest change "perhaps in a hundred years." It envisions the grid becoming a two-way delivery system and generation becoming more distributed and intermittent, he said during a MISO "hot topic" discussion on the grid's future during a Dec. 6 Advisory Committee meeting.

Staying 'Happy'

Discussion facilitator Julia Johnson, president of regulatory advising firm Net Communications, opened the discussion with positivity, playing Pharrell Williams' "Happy" music video and displaying screenshots featuring people dancing with transmission lines in the background.

MISO's Advisory Committee members generally agreed that low bills are keeping customers content for now, but a changing resource mix will mean future grid investment. No stakeholders, however, are comfortable yet in guessing the cost or predicting what technology advances will reign.

"Consumers are happy because their electric bills are the lowest percentage of their income, I think, ever," said Arkansas Public Service Commission Chair Ted Thomas. But he cautioned that consumers' preference for renewables isn't static in the market. "If you double electric bills and double unemployment, the number of customers willing to pay more for sustainability drops."

Alcoa's DeWayne Todd, representing MISO's Eligible End Use Customers sector, said customers are generally happy and are demanding renewables for future pricing certainty and independence. However, while energy costs have decreased, the costs of transmission have "almost doubled."

Beth Soholt | © RTO Insider

"I've seen my transmission percentage go from a whopping 7% to a whopping 10%," said Wind on the Wires' Beth Soholt of MISO's Environmental sector. "What benefits does the grid provide to me? We need to make it clearer to our customers. I think the grid is the enabler of all of these choices and options. … I think there's a misnomer that if you have the grid, you can't do distributed energy options. The grid is the enabler; it ties it all together."

Matt Brown (left) and Paul Kelly | © RTO Insider

'FOG'

MISO's Competitive Transmission Developers sector agreed that the ability of the transmission system to deliver will only become more important as customers use more types of generation. In written comments, the group warned that the energy industry may be undervaluing transmission: "Today … the transmission grid often goes unrecognized in planning and policy decision-making. This increases the risk of costly future outcomes, driven by repeated 'just-in-time' incremental grid investments."

Northern Indiana Public Service Co.'s Paul Kelly said that while distribution-level changes are rapidly evolving, MISO has time to plan changes to the transmission system. He said NIPSCO is now training employees to be aware that generation installed at the distribution level may be live and not simply there for back-up purposes — a sign of the times.

"Making big bets right now about what the grid is going to look like is extremely fraught with risk," Entergy's Matt Brown said. "There's definitely a balance to be struck between big-goal visions with big-goal price tags and making sure that our customers are served at the lowest reasonable cost.

"We need to realize that everyone at this table is thinking something that will prove to be wrong," he added.

Dynegy's Mark Volpe pointed out that, two years ago, MISO held a hot topic discussion in which members were certain the Clean Power Plan was going to become the law of the land. "None of us really know what the grid is going to look like. When you look at

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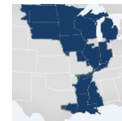
MISO NEWS



Grid Future is Storage, Threats and 'Fog,' MISO Members Say

Continued from page 19

the phrase 'future of the grid,' if you shorten that up a bit and ignore the 'the,' you have 'FOG.'"

Soholt also cautioned about the "cost of inaction," where generation and transmission developers, after not adopting new technologies, will be faced with obsolescence or hurried investments.

Avangrid Renewables' Adam Sokolski, of the Independent Power Producers sector, said MISO should look to its own interconnection queue to gauge future grid trends. "The queue is really the barometer of the grid."

MISO's queue currently contains about 60 GW of proposed generation, which includes about 30 GW of wind, 15 GW of solar, 12 GW of natural gas and 600 MW of other resources. The queue also holds about 140 MW of prospective battery storage capacity.

Predictions and Suggestions

The Environmental, Public Consumer Advocates and End Use Customers sectors, and sole Coordinating Member Manitoba Hydro, all predicted future penetration of clean energy, storage, distributed resources, demand-side management, home automation gadgets and energy efficiency.

End Use Customers expect that the growing prominence of demand management, self-generation, energy storage and a focus on environmental sustainability will afford customers "more independence from the utility." Manitoba Hydro predicted use of coal will continue to decline "despite efforts to maintain its historical importance" and said state-originated carbon pricing may be enacted. The Consumer Advocates sector said it's expecting microgrids and AC-DC transmission lines. The Transmission Owners sector said saturation of distributed resources will not be consistent across the footprint, grouped instead in states with distributed energy resource-friendly policies and incentives.

IPPs called for more customized interconnection procedures for a more diverse assortment of generation types. "MISO should be prepared to offer tailored interconnection processes based on operating parameters such as DER capability to inject energy onto the system vs. service limited to on-site only," the sector wrote.

The one-in-10 planning standard may become obsolete as the grid and new technology accommodate a variety of energy resources that deliver energy on different schedules, Brown said. He contended that the most challenging circumstances may become a certain time of day rather than the hottest week of the summer.

"Maybe we'll no longer plan for that one hour of that one day in August," Brown said.

Manitoba Hydro predicted increasingly severe weather disturbances impacting the grid as well as increasingly critical cyber threats. TOs also expect security issues to increase as smart devices connect to the grid.

The Environmental sector said MISO could monitor grid reliability by using dynamic and predictive transmission line ratings, where operators see real-time data on line ratings. The sector also asked MISO to consider "the diversity exchange that could be gained" by developing transmission that connects MISO Midwest to MISO South, which would allow "MISO South states to have enhanced opportunities for economic development of new generation resources."

NIPSCO's Kelly pointed to Amazon's parade of products, with some enjoying success while others have flopped, suggesting that experimental grid investment could follow a similar boom-and-bust pattern.

EUCI Transmission Expansion in the Midwest

EUCI Panelists: Midwest Tx Plans Must Address Wind, Seams

By Amanda Durish Cook

| © RTO Insider

INDIANAPOLIS — Two topics dominated the discussion last week among industry leaders, RTO officials and transmission planners attending EUCI's Transmission Expansion in the Midwest conference.

One: The region must focus its transmission expansion efforts on moving wind output from vast resource areas in the west to population centers in the East.

And two: To support that effort, industry participants must overcome ineffective interregional processes among RTOs.

"You've got a lot of cheap wind resources where not a lot of people are — Minnesota, the Dakotas, Iowa — and you have to get this clean, affordable energy to where the people are," Betsy Beck, director of transmission policy for the American Wind Energy Association, said during a Dec. 4 panel discussion. "There's not enough transmission capacity to move it east where it's needed."

Beck said 35 GW of wind capacity is expected to come online in the U.S. by the end of 2020, joining the nearly 85 GW of current wind capacity. She noted that 20-year power purchase agreements are being signed in the Great Plains for less than $20/MWh.

Adam McKinnie, chief economist with the Missouri Public Service Commission, said he has observed a pattern of central states trying to push wind energy toward Eastern states where power is more expensive. The Eastern states, in turn, claim they can solve their resource adequacy and public policy goals by building new generation and won't need the imports.

"How do you solve that?" McKinnie asked.

"That's kind of the million-dollar question," Beck laughed. "D.C. and the East don't have a lot of space in their backyards for renewable development, and I think these states are starting to realize that."

MISO interregional adviser Adam Solomon said the RTO's 2018 Transmission Expansion Plan will include a new study on the impacts of renewables while also focusing on wind development needs and seeking to predict where future projects are likely to be sited. "We'll try to find the trend within our footprint and better predict how that's going to move in the future," he said.

Seams and Order 1000

An effective wind transmission network in the Midwest will require interregional projects, conference panelists agreed.

Over the past year, MISO has worked with both PJM and SPP to identify large interregional projects, but the two separate efforts failed to produce a viable candidate after identifying just two serious contenders. (See *MISO, PJM Reverse Support for Lone Interregional Tx Project* and *MISO Confident in Tx Process with SPP Despite Lack of Projects*.)

"Interregional projects have remained elusive," Solomon said.

PJM Manager of Interregional Planning Chuck Liebold said MISO and PJM will try again next spring to identify a large interregional project, commencing another two-year coordinated system plan between the RTOs. Officials from both RTOs have announced that the next Order 1000 project submission window will open in November 2018.

"All that study, hours and hours of analysis, and we have yet to pass a big interregional project," Liebold said. "We have 200-something joint coordinated flowgates on the MISO-PJM seam. … It seems like there's a natural area where there could be joint coordination on a project, but that hasn't happened yet. There are some issues with our process that we keep ironing out over the years." He also reminded attendees that "there's no measuring stick that says you have to have an interregional project."

"I don't think people understand how jagged the seams are," McKinnie said.

"I think it's safe to say that meeting the goals of Order 1000 so far today have been elusive," said Alan Meyers, ITC Holdings director of regional planning.

Order 1000 has failed to "uniformly encourage" transmission development and may actually be stifling it, he said. "I think there's a tendency to focus on the competition rather than the planning and cost allocation. The competition is only the sizzle, but the planning and cost allocation is the steak." ITC has transmission holdings in MISO, PJM, SPP and NYISO.

Meyers criticized RTOs' past "arbitrary" cost allocations and voltage thresholds on interregional projects but said practices are improving. He said that while RTOs excel at regional transmission planning, they come up short when trying to plan interregional projects. "It may be the biggest area we can improve on," he said.

Some audience members asked about the next steps for the $2.3 billion Grain Belt Express, a 780-mile HVDC transmission line that would move wind energy from the Midwest to Eastern markets. Developer Clean Line Energy Partners has asked the Missouri Supreme Court to review state regulators' decision to refuse a development permit. The Grain Belt Express did not result from an RTO process and is not seeking cost allocation.

Mark Lawlor, Clean Line's vice president of development, said that while SPP and MISO are creating small west-to-east lines, those projects don't go far enough — literally.

"They're needed, but they're not connected. There's failure to create a process that allows for interregional projects such as the one Clean Line is developing. There's not a place for us. … Perhaps that's for Order 1001," he joked. "I don't want to say this hasn't gone right, but there's no mechanism

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EUCI Transmission Expansion in the Midwest

EUCI Panelists: Midwest Tx Plans Must Address Wind, Seams

Continued from page 21

to facilitate these projects."

Lawlor added that Order 1000 is still young and "really only created competition for a fraction of the transmission projects out there. There could be more room for competitive projects."

TMEPs

MISO and PJM are poised to approve a five-project interregional portfolio this year, but it doesn't contain the extended HVDC lines for which some in the industry had hoped.

This month, the RTOs' boards of directors are expected to individually approve their targeted market efficiency project (TMEP) portfolio, composed of smaller, congestion-relieving interregional projects. PJM and MISO worked for three years to define the project type before getting FERC approval this year. (See FERC Conditionally OKs MISO-PJM Targeted Project Plan.)

All five TMEP projects this year are upgrades to existing systems. The projects, which have individual $20 million cost caps, will coincidentally cost $20 million combined.

On average, project costs will be allocated 69% to PJM and 31% to MISO, based on projected benefits, which are expected to reach $100 million.

"I think what MISO and PJM have done with TMEPs is prove that they can get something done. And I hope they're not too discouraged that they don't yet have a large interregional project," Beck said.

However, Beck maintains that large, public policy interregional projects are going to be vital for the future of the Midwest, but unwieldy seams criteria and differing public policies will hold them back. "By having different rule sets, they create a lot of impediments," she said.

"A lot of consensus will be needed," Solomon said.

"As soon as they solve public health care, they'll start in on public transmission policy," Liebold joked.

"In the future though, we need to really look at what the Eastern Interconnect looks like and how we can move large amounts of power," Beck said. She predicted that a handful of new HVDC lines will begin to take shape in the next few years, with others to follow.

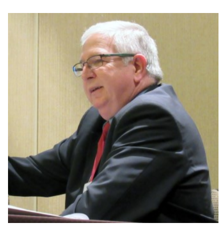
"There's a lot of folks out there that also think that microgrids are the wave of the future, and we don't need any more transmission projects, and we should begin to take lines down, so I'm not betting just yet," Liebold said.

McKinnie asked why MISO and SPP haven't created their own TMEP process to deal with smaller congestion issues along their seam. Solomon said the TMEP process was largely driven by Northern Indiana Public Service Co.'s 2013 complaint against the MISO-PJM interregional planning process, but that MISO would like to implement a similar smaller interregional project type with SPP.

"So if I went back to commission and said the 'squeaky wheel gets the grease,' would that be correct?" McKinnie asked.

Solomon said that SPP is a relatively young RTO with less historical data, and while he thinks some SPP stakeholders might not be ready for such a cross-seams project type, he is hopeful they will be convinced of the benefits by observing the progress between MISO and PJM.

"I don't want there to have to be a FERC complaint for this to get attention. We used to joke that the MISO stakeholder process was a FERC comment period. ... We sometimes feel that we're the kid sibling over on the SPP-MISO seam," McKinnie said.



Bob Pauley, chief technical adviser with the Indiana Utility Regulatory Commission, urged gentler treatment of RTOs that must plan transmission systems with sometimes limited information.

"I don't know of any empirical evidence where an RTO developed transmission where there was a better option available.

"I think it behooves us to remember the time before RTOs," he reminded attendees, before adding jokingly, "When I worked with Thomas Edison and others, each utility had to plan their own needs as if they were an island."

Pauley said "everyone would be better off" if utilities used the same degree of candor with RTOs as they do with their respective state regulatory bodies. He also said states should take a more active role in forecasting load.

Wind Catcher

American Electric Power's **Raja Sundararajan** said his company's $4.5 billion Wind Catcher project in Oklahoma is also bypassing the RTO transmission planning process in favor of self-funding to ensure it is realized. The project includes what will be the largest wind energy facility in the U.S at 2 GW and a dedicated 350-mile, 765-kV tie-line from the panhandle to Tulsa.

"This is the largest investment AEP has ever made; $4 billion is a massive amount, and we understand that," Sundararajan said. He pointed out the project circumvented the RTO process because AEP did not have enough time to mount a complex transmission planning process for an expensive 765-kV line before wind production tax credits expire in 2020.

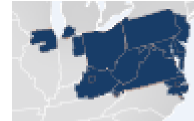
AEP settled on a 765-kV rating because it minimizes transmission line losses and doesn't require converters, he said. Although AEP has not yet established a preferred route, most of the 350-mile stretch is located on farmland in Oklahoma, Arkansas, Louisiana and Texas. The company is planning to use 25-year extendable land leases with landowners. Regulatory approval is needed in all four states, which AEP hopes to obtain by April.

"Are we the only ones doing this? No. Especially in the Midwest, wind farms are so economical, especially for the ratepayer," Sundararajan said, pointing to current wind projects by Public Service Company of Colorado, Northern States Power, Southwestern Public Service, MidAmerican Energy, PacifiCorp and Empire District Electric.

One audience member asked how AEP balances the massive wind project with apparently competing support for coal and nuclear subsidies.

"I'm not aware of it. I'm a transmission guy," Sundararajan replied.

PJM NEWS



On Remand, FERC Rejects PJM MOPR Compromise

By Rich Heidorn Jr. and Rory D. Sweeney

FERC last week again rejected PJM's 2012 compromise on the minimum offer price rule (MOPR), saying that eliminating unit-specific exemptions and subjecting generators to the offer floor for three years is unreasonable (ER13-535-004).

The commission originally rejected PJM's proposal in 2013, saying it discouraged new entry because the exemptions were too narrow and the mitigation period was too long. However, it indicated it would accept the proposal if the unit-specific review were retained and the mitigation period remained unchanged. PJM agreed in a compliance filing adopting FERC's changes, but a handful of stakeholders petitioned the D.C. Circuit Court of Appeals to review the order.

In July, the D.C. Circuit said the commission had overstepped its authority in undoing the compromise. The court determined that FERC exceeded its "passive and reactive role" under Section 205 of the Federal Power Act, which requires it to accept proposed rate changes if they are just and reasonable and suggest only "minor" changes. (See *PJM MOPR Order Reversed; FERC Overstepped, Court Says*.)

PJM's proposal would have replaced the unit-specific MOPR exemption with two new categorical exemptions and extended the mitigation period from one to three years before a unit could bid below the price floor. The change was prompted by generators' concerns that the unit-specific review, which allowed units to prove confidentially to PJM that its costs were below the required minimum offer, lacked transparency and allowed below-cost bids.

In exchange for eliminating the exemption, load-serving entities won an agreement for two new exemptions: a competitive-entry exemption for units that are unsubsidized or subsidized through a nondiscriminatory, state-sponsored procurement process; and a self-supply exemption for units intended to meet a portion of an LSE's needs.

The compromise proposal was widely supported by PJM stakeholders — the first time that a significant MOPR revision had won a two-thirds sector-weighted vote, the court noted.

> ***"We continue to find that PJM has failed to show that its proposed categorical exemptions ... are just and reasonable..."***
>
> **FERC**

Following the court ruling, the RTO asked FERC in October to "simply accept PJM's original Section 205 proposal, unchanged, as just and reasonable." (See *PJM Stakeholders Split on Request to OK MOPR Compromise*.)

Although the commission's membership has changed since 2012, its opinion of the PJM proposal did not.

"We continue to find that PJM has failed to show that its proposed categorical exemptions, standing alone, are just and reasonable … because there would be no means for nonexempted resources with lower costs than the MOPR offer floor to have a competitive bid considered in the auction," Commissioners Cheryl LaFleur, Neil Chatterjee and Richard Glick wrote in the 3-0 order. "We also continue to find that PJM failed to show that extending the mitigation period from one year to three years is just and reasonable. … Accordingly, we reject PJM's December 2012 filing in its entirety and reinstate its previously approved market design, i.e., a MOPR without categorical exemptions but with a unit-specific review process and a one-year MOPR mitigation period."

Chairman Kevin McIntyre and Commissioner Robert Powelson did not participate in the ruling.

The commission said a unit-specific exemption was necessary because "the benchmark price that is used to set the MOPR is an *estimate* of the net [cost of new entry]. This derived price may exceed the actual costs of individual generators and such generators should have an opportunity to demonstrate as much."

The fact that unit-specific reviews are more complicated than categorical exemptions did not justify their elimination, the commission said. "We concur with the [Independent Market Monitor], and we disagree with the notion that the unit-specific review is an unworkable method to prevent buyer-side market power, as evidenced by its effective use in ISO-New England Inc. and NYISO."

It said the three-year mitigation period was improper because it would prevent resources from bidding based on their going-forward costs.

"Before a resource is built, its incremental cost would reflect the unit-specific net CONE, but once the resource has cleared in one auction, its developer would need to begin construction to meet its obligation three years later in the delivery year. At that point, the construction costs incurred prior to subsequent auctions become sunk costs, and they are not part of the resource's incremental costs going forward," the commissioners said. "But under a three-year mitigation period, developers whose offers are mitigated and clear in the auction would be prevented from offering at their going-forward costs for at least two years beyond the first auction in which they clear and would instead have to offer at … an artificially inflated price."

The commission said, however, that it would not order PJM to rerun its capacity auctions under the rules in effect before the 2012 filing, saying it "would cause significant disruption and burdens that are not warranted."

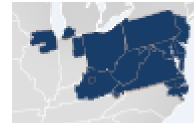
The situation may soon become moot as PJM completes its yearlong examination of its capacity construct. A proposal from the Monitor to extend the current MOPR process — the only plan to receive endorsement by the task force investigating the issue — is set for a vote at the Dec. 21 meeting of the Markets and Reliability Committee.

The proposal would expand the MOPR to all units indefinitely but would include exemptions for self supply, competitive entry, public power and state renewable portfolio standards programs.

The Monitor is holding a question-and-answer session following Tuesday's Operating Committee meeting to address stakeholder questions ahead of the vote.

PJM has not confirmed it would file the proposal for FERC approval should it win endorsement, but Monitor Joe Bowring confirmed he would file it himself if the RTO refuses. (See related story "Stakeholders Have Questions Before Approving MOPR-Ex," *MRC/MC Briefs*, p.25.)

PJM NEWS



MRC/MC Briefs

Markets and Reliability Committee

Questions Remain as PJM Continues Push for Price Formation Revisions

PHILADELPHIA — Stakeholders hoping to influence PJM's plans for revising its price formation methodology had better move quickly. RTO staff unveiled their problem statement and issue charge on the topic at last week's Markets and Reliability Committee meeting and hope to have it approved at the next one on Dec. 21.

"If you are going to follow up … please do so soon," PJM's Stu Bresler said of the proposal, which would create a senior task force "investigating energy and reserve price formation enhancements [to] … more transparently reveal the true cost of meeting system reliability needs."

PJM has set up an email — price_formation@pjm.com — to compile comments on the proposal.

In advance of a decision looming at FERC to provide price supports for nuclear and coal-fired units, PJM has been campaigning for support of an alternative. It would remove the prohibition on letting inflexible generators — often large coal and nuclear plants — be the price-setting marginal unit in its real-time and day-ahead energy markets. It would also factor in start-up and no-load costs, which are currently set aside.

PJM says these "simplifications" were used during the development of LMPs to reduce the time necessary to successfully dispatch the system. Large inflexible units are often dispatched despite clearing prices that are below their offers and receive uplift payments that compensate them for their costs. Out-of-market uplift payments have been a source of stakeholder frustration for years. (See *PJM MRC OKs Uplift Solution over Financial Marketers' Opposition*.)

"From the initial implementation of locational marginal pricing, given that it is an optimization … we made some simplifying assumptions up front," Bresler said.

PJM's plan wouldn't eliminate uplift and calls for making additional lost opportunity cost (LOC) payments for flexible units with lower offer prices to reduce their output to balance load and generation. But the RTO argues that the reduced uplift and LOC payments combined would be a fraction of the current uplift payments.

Still, stakeholders have been cautious to endorse the plan and asked that it not be rushed into implementation.

James Wilson of Wilson Energy Economics, who consults with several consumer advocates within PJM's footprint, said the RTO's proposed timeline for completing the task force before the fourth quarter of 2018 is too ambitious.

Joe Bowring, PJM's Independent Market Monitor, echoed that.

"This is a massive change. There's no reason to not have thought it through carefully," he said, listing other market components beyond the energy and reserve prices that would be "impacted" by the change, including financial transmission rights and rules for Capacity Performance, market-power mitigation and uplift.

"I ask you to get stakeholder input and consider other options," said Greg Poulos, the executive director of the Consumer Advocates of the PJM States (CAPS).

Bob O'Connell of Panda Power Funds asked PJM to "reserve judgments" about what causes and solutions the task force could discuss.

"Impairing flexibility because of the way we're paying suppliers, that's something we need to talk about," he said.

Gabel Associates' Mike Borgatti requested education for market participants to update their modeling assumptions.

Susan Bruce, who represents the PJM Industrial Customer Coalition, asked that load receive "fair notice" of the changes and a way to measure what the impact will be. "We have a lot of load that's locked in because of low energy prices," she said.

DER Charter Endorsed

After several contentious discussions at previous MRC meetings, members endorsed by acclamation the charter for the Distributed Energy Resources Subcommittee, which will consolidate PJM's efforts on DER.

The charter had been contentious because of an addition that required all rules to

> **"This is a massive change. There's no reason to not have thought it through carefully."**
>
> **Joe Bowring, PJM Monitor**

"adhere to all pertinent jurisdictions" and regulators. Some stakeholders saw it as stating fact, while others were concerned it could be used to stifle discussion.

Bruce asked the group to be "extremely cautious" and that its proposals could result in costly requirements for "people who are not represented in this effort because they have chosen not to be in the PJM markets."

PRD Rules Deferred

Stakeholders voted to defer a planned vote on new rules for price-responsive demand (PRD) pending the deliberations of the recently formed Summer-Only Demand Response Senior Task Force.

The RTO wants to change the PRD rules to comply with its CP requirements. PJM's Pete Langbein attempted to characterize it as "just another [supply-side] option that would be out there that folks could elect to choose." But state representatives complained that the proposed changes fail to acknowledge PRD's value.

"It's not a capacity product. It's a mechanism to refine the load forecast," said Morris Schreim of the Maryland Public Service Commission. "It's not competing with supply."

He argued against a change in the PRD rules that would "close the door" on solutions in the task force and suggested tabling the vote pending the outcome of the task force. Gregory Carmean, executive director of the Organization of PJM States Inc. (OPSI), agreed with Schreim that "it is time to take a pause," saying it's "hard to reconcile" the RTO's justifications.

Langbein clarified that PRD displaces resources, either generation or demand response, with year-round capacity on a one-for-one basis. "That is the reality," he said.

Calpine's David "Scarp" Scarpignato called PRD "inferior" to generation in the context of CP and urged a vote. Waiting will make it

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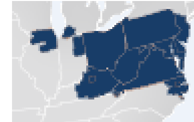

MRC/MC Briefs

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harder to adjust the rules later as companies make decisions based on the current rules, he said. "We need this in place for the next [Base Residual Auction]."

EnerNOC's Katie Guerry said it's "alarmist" and "unproductive" suggest that all DR on the system would convert to PRD without the rule changes and said she was "looking forward to analyzing the opportunities" through the task force.

"Please participate in that process regardless of what sector you're in," she said, because that is where she sees any "real solution" being developed for summer-only DR that can no longer qualify as a capacity resource.

The deferral passed with just enough votes to clear the two-thirds threshold, receiving a 3.44 score (out of 5) in a sector-weighted vote.

Stakeholders Have Questions Before Approving MOPR-Ex

The Monitor will hold a question-and-answer session Tuesday to address stakeholder concerns on its proposed revisions to the capacity construct. The changes to the minimum offer price rule (MOPR) are expected to be brought to a vote at the Dec. 21 MRC meeting.

The IMM's proposal was the only one to receive more than 50% approval in a poll of the Capacity Construct/Public Policy Senior Task Force, which has been meeting throughout the year to address concerns about market distortions from subsidized generators. The proposal would extend the MOPR to cover all units indefinitely, though it would include several exemptions.

Bowring said the proposal is meant to create an incentive for subsidized units "not to exist in the first place." He fielded enough questions that stakeholders asked for a separate forum before voting. Jason Barker of Exelon, which had submitted its own proposal to the task force, questioned Bowring's contention that the proposal is nondiscriminatory.

"Why do you think it's appropriate to allow an overbuild?" he asked of one of the rule exemptions.

"I hear the point, and you're right," Bowring responded. "Let us think about that; it's a good point."

"You don't have an answer to that? We're going to have to vote on this," Barker pressed.

"You're not going to have to vote today," Bowring replied. "We'll have something out well ahead of the vote."

PJM agreed to shorten today's Operating Committee meeting to make time for the Q&A.

Stakeholders Move IA Proposal

For the second time in three months, no proposal from the Incremental Auction Senior Task Force received enough support to be proposed at the MRC, a fact that American Municipal Power's Steve Lieberman argued should preclude PJM from automatically bringing its proposal for MRC review, even if it was just seven votes shy of the threshold at the task force. But Exelon's Sharon Midgley moved for a vote on PJM's Proposal A'' and Bruce seconded it. The proposal received a first read and will be voted on at the next MRC.

"This is a compromise … but it's all in the interest to try to get something before FERC so the issue of excess capacity and the sellback can get addressed, favorably for load," Bruce said.

CPower's Bruce Campbell argued the proposal doesn't maximize the value of IA returns for load and said he was prepared to back another proposal "if others are interested," but he received no support.

Other Voting Results

Stakeholders endorsed by acclamation several manual revisions and other operational changes:

- Manual 11: Energy & Ancillary Services; Manual 18: PJM Capacity Market; Manual 27: Open Access Transmission Tariff Accounting; Manual 28: Operating Agreement Accounting; and Manual 29: Billing. The revisions implement PJM's transition to five-minute settlements under FERC Order 825.
- 2018 day-ahead scheduling reserve (DASR) requirement. The final DASR calculation dropped to 5.28%, which was even lower than PJM's preliminary estimates in October. The 2017 DASR was 5.48%. PJM attributed the year-over-year drop to reductions in average seasonal load forecast errors and the forced-outage rate. (See "DASR Requirement Drops Again," *PJM Operating Committee Briefs: Oct. 10, 2017*.)
- Tariff and Operating Agreement revisions to modify credit requirements for regulation and FTRs:
  - ◊ Regulation credits are accrued daily and billed monthly, while energy charges are accrued daily and billed weekly. Although the regulation-only resources' credits are much greater than the charges, the weekly bills for charges create a credit requirement, even though the much larger credit is due to the provider at the end of the month. Daily regulation credits will now be included in weekly instead of monthly activity for calculating credit requirements. The change will apply to all resources, not just regulation-only resources.
  - ◊ FTR credit requirements for prevailing paths currently are based on weighted historical congestion on those paths, but transmission system upgrades can reduce congestion, decreasing the value of prevailing-flow FTRs. PROMOD simulation results will now be incorporated into the FTR credit calculator prior to the bid window to incorporate consideration of major upgrades and reduce default exposure to PJM's members. (See "Give Them Some Credit," *PJM Market Implementation Committee Briefs: Oct. 11, 2017*.)

Bruce Campbell | © RTO Insider

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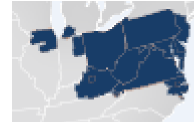
PJM News



Opponents Assemble as PSEG Seeks NJ Nuke Subsidy

By Rory D. Sweeney

Public Service Enterprise Group CEO Ralph Izzo last week asked New Jersey legislators to approve subsidies for the company's three in-state nuclear facilities, warning they may otherwise be shuttered.

Testifying at a joint session of the General Assembly's Telecommunications and Utilities Committee and the Senate Environment and Energy Committee on Dec. 4, Izzo said PSEG's three nuclear units at the Salem and Hope Creek facilities remain profitable but are threatened by low natural gas prices and could become uneconomic within two years. He said the plants' finances have been propped up by hedging over the past three years, but most of those contracts are set to expire by the end of next year.

"Unless market prices change, we will no longer be covering our costs within the next two years. Without intervention — without a thoughtful economic safety net — PSEG will be forced to close its New Jersey nuclear plants," he said. "It would be an extraordinarily painful decision because of how much we value the importance to New Jersey, but it is a cut-and-dry decision."

A Brattle Group study produced for PSEG and Exelon found that allowing the facilities to close would increase New Jersey power bills by $400 million annually over the next decade while reducing state tax receipts by $37 million, eliminating 1,400 jobs and increasing carbon dioxide emissions by 13.8 million metric tons annually.

Izzo requested state subsidies like the zero-emission credits approved in Illinois and New York for units owned by Exelon, which also owns 43% of the two Salem units.

New Jersey State House

Opposition Coalescing

Opponents questioned Izzo's prediction that the plants will become unprofitable.

"It is not enough to simply accept PSEG's assertions regarding the plants' profitability, and that even if the plants are shown to be at risk of losing money in the future, the solutions must be found within the federally administered markets and not through out-of-market payments for plants that are already profitable," said Stefanie Brand, the director of New Jersey's Division of Rate Counsel. "Just because nuclear plants in other parts of the country are not profitable, doesn't mean that plants in New Jersey — the state with the highest prices in PJM — are also unprofitable."

PSEG's units benefit from constraints in New Jersey's EMAAC locational deliverability area (LDA) that traditionally put its clearing prices near the top in PJM. Capacity prices for delivery year 2020/21 during May's Base Residual Auction fell to $76.53/MW-day in most of the RTO, while EMAAC jumped to $187.87 from less than $120 for 2019/20. (See *Analysts See End to New Builds in PJM Capacity Results*.)

Brand urged legislators to wait for FERC to act on the U.S. Department of Energy's proposed price supports for nuclear and coal plants. (See related story, *McIntyre Takes FERC Chair; Wins Delay on NOPR*, p.1.) PJM responded to the DOE plan with a proposal to allow inflexible units to set clearing prices. (See related story, "Questions Remain as PJM Continues Push for Price Formation Revisions," *MRC/MC Briefs*, p.24.)

PJM sent identical letters to Sen. Bob Smith, chair of the Senate committee, and Wayne DeAngelo, chairman of the Assembly committee, urging lawmakers to consider a regional approach rather than having the state act on its own. "As a state within PJM, New Jersey need not address these challenges alone or in a vacuum. Being located within PJM — a regional organization with a multi-state market — allows for solutions and alternatives that can augment, enhance and amplify the means by which you meet your state policy priorities."

"There is no evidence that PSEG's nuclear plants are uneconomic and facing a retirement signal from the PJM markets," said Joe Bowring, PJM's Independent Market Monitor. "Neither plant is defined as at risk according to the criteria that the IMM applies

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Members Committee

Stakeholders Endorse Consent Agenda

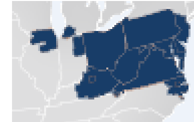
Stakeholders endorsed by acclamation the committee's consent agenda along with several other OA and Tariff changes:

- OA revisions associated with PJM sharing of restoration planning generator data with transmission owners. (See "TOs to Receive Confidential Generation Data for System Restoration," *PJM Operating Committee Briefs: Sept. 12, 2017*.)
- Tariff revisions related to a proposed change in credit requirements for regulation resources. (See "Other Voting Results" above.)
- Tariff revisions to FTR credit requirements to reduce exposure posed by congestion changes resulting from major transmission upgrades. (See "Other Voting Results" above.)

Nominees Approved

Members elected new representatives to the Finance Committee, sector whips and the Members Committee vice chair for 2018. It is the Transmission Owners sector's year to choose a vice chair, and Chuck Dugan of the East Kentucky Power Cooperative was nominated.

— Rory D. Sweeney



New Wave of PJM Transmission Upgrades Rankles AMP

By Rory D. Sweeney

The PJM Board of Managers last week authorized $348 million in transmission projects. Coming two months after it greenlit $1 billion in projects, the approvals irked American Municipal Power, the RTO's biggest critic when it comes to its Regional Transmission Expansion Plan.

"There was another $186 million of supplemental projects that will move forward in the PJM process. In other words, over a third of the transmission projects reviewed in this time frame were not approved by the PJM board," American Municipal Power's Ed Tatum said in an email. "These projects were not subjected to the same level of rigorous review afforded baseline projects, yet the cost of these facilities will ultimately be borne by the consumers in the constructing transmission owners' zone."

Tatum was referring to the separation within PJM's RTEP between different types of projects: baseline projects requested to address reliability issues that receive significant RTO scrutiny; and "supplemental" projects proposed by TOs to address their own internal criteria that aren't subject to the same level of analysis.

PJM must make recommendations and receive board authorization before assigning baseline projects, but TOs do not need RTO approval for supplementals.

"Another half-billion dollars of more supplemental projects are waiting in the wings. The sheer volume of projects moving forward absent adequate review for need and alternatives should be a grave concern to the PJM board," Tatum said.

Last week's decision by the board authorized 26 projects, most of which were reliability upgrades or replacements. There were three market efficiency proposals PJM staff recommended for authorization, though they accounted for less than $10 million. Twelve of them are in the Mid-Atlantic region of PJM's footprint; 10 are in the Western area and four are in the Southern area.

The board also approved PJM's installed reserve margin (IRM) of 15.8% for 2021/22. The IRM dropped from 16.6% thanks to an anticipated fleet-wide equivalent forced outage rate (EFORd) reduction from 6.59% to 5.89%. (See "IRM Results Approved," *PJM Planning/TEAC Briefs Oct. 12, 2017*.) An IRM study earlier this year also created updated margins for other delivery years, which the board also approved: 16.1% for 2018/19 and 15.9% for 2019/20 and 2020/21.

The board also approved five targeted market efficiency projects (TMEPs) in conjunction with MISO that traverse the grid operators' borders. The smaller, congestion-relieving interregional projects were also approved last week by MISO's board. (See related story, *MISO Board Approves $2.6B Transmission Spending Package*, p.18.)

The portfolio of system upgrades has a combined cost of $20 million. On average, project costs will be allocated 69% to PJM and 31% to MISO, based on projected benefits, which are expected to reach $100 million.

Opponents Assemble as PSEG Seeks NJ Nuke Subsidy

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to all units in the IMM's annual PJM State of the Market Report."

He argued that subsidizing the units would also deter investment in newer technology.

"Subsidies suppress energy and capacity market prices and therefore suppress … investment incentives for innovation in the next generation of energy supply technologies and energy efficiency technologies. These impacts are large and long lasting," he said. "If subsidies are provided to one generating plant, this will suppress prices for all generating plants and create a need for additional subsidies for the remaining units. Competition in the markets will be replaced by competition to receive subsidies."

Other Opponents

Also opposing PSEG's proposal are AARP, which launched an anti-subsidy ad campaign, and the New Jersey Coalition for Fair Energy — whose members include Calpine, Dynegy, NRG Energy and the Electric Power Supply Association — which released a TV spot.

The New Jersey Coalition Against Nuclear Taxes includes AARP, environmental groups, the New Jersey Petroleum Council and other groups. Over the summer, one of its members — Dennis Hart, executive director of the Chemistry Council of New Jersey — criticized PSEG for "trying to build support in the New Jersey Legislature for another government handout that may cost all New Jersey ratepayers about $350 million annually over a 10-year period, or $3.5 billion."

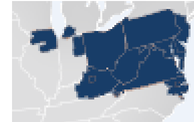
In a press release announcing its formation about a week before last Monday's hearing, the Coalition for Fair Energy upped that estimate to "the range of $475 million a year or more, or in excess of $4 billion total" based on analysis of the New York and Illinois initiatives.

"There is no need for the Legislature to rush to pass a bill of such magnitude in a lame duck session without a full and thoughtful examination of a subsidy and its implications on the cost of electricity and its impact on a fair, level and competitive electric marketplace," coalition spokesman Matt Fossen said in the release. "The public deserves complete transparency and a review of PSEG's finances to see if there is any basis for a ratepayer-financed subsidy." In his testimony, Izzo promised to open his company's financial books for an independent examination.

After the Dec. 4 hearing, Smith said that legislation supporting the plants could be enacted during the lame-duck session, which ends early in January. "I learned enough today to begin the discussion," he told NJ Spotlight.

Outgoing Gov. Chris Christie said he would sign a bill to save the nuclear plants, but only if it does not include incentives sought by environmentalists.

PJM NEWS

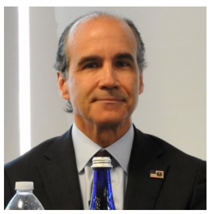


DOE: German Energy Struggles Sparked NOPR

Powelson Promises 'Defensible' Decision

By Rory D. Sweeney

PHILADELPHIA — The U.S. Department of Energy's proposal to save coal and nuclear generating plants is intended to avoid a repeat of Germany's energy woes, Under Secretary Mark Menezes told a PJM General Session on Wednesday.



Mark Menezes | © *RTO Insider*

Menezes recounted an international energy meeting this spring, where he said Energy Secretary Rick Perry and Secretary of State Rex Tillerson listened as German officials recounted economic hardships created after the country renounced nuclear power following the 2011 Fukushima nuclear disaster. To mitigate the price spikes, Germany built plants to burn lignite, a lower-quality coal than the traditional anthracite used at most coal-fired facilities.

"They are digging up lignite all over Germany. I have nothing against lignite, but you've got to dig up an awful lot of lignite to get the BTU content to produce [power]," Menezes said.

He said German officials told Perry: "If in fact you believe in what you're saying in [using] 'all of the above' [energy resources], please stick to 'all of the above.' Try to avoid what happened here."

FERC Commissioner Robert Powelson, speaking after Menezes, said PJM looms large in his deliberations on DOE's Notice of Proposed Rulemaking. The NOPR called for additional compensation for "fuel-secure" power stations that sell electricity into organized energy markets and maintain a 90-day fuel supply.

"I think [the commissioners are] working constructively to put forth a potential solution and really work with our RTOs around problem-solving. … We'll be able to address this issue in a way that, as I said, respects the balance within the organized markets … continues to deliver the value proposition of these organized markets" and maintains a balanced resource portfolio.

Robert Powelson | © *RTO Insider*

He said he discussed the issue with Perry and guaranteed an eloquent solution.

"I said to him, 'I took high school calculus,' and he said, 'I didn't.' But, I said, 'I hopefully can solve this one.' … I've been in this rodeo long enough. I know how to calibrate and make decisions, and those decisions will be defensible.

"We are now seeing what we never thought we'd see, and even Democratic DOE secretaries have admitted it," Powelson continued. "We're seeing nuclear plants close, and we're seeing them close at a rapid pace. And we've got to look at those issues. … I agree with the secretary when he says these markets aren't pure. … As a state commissioner, I didn't understand that back then until Mark gave me this homework assignment.

"I sat through plant closure announcements; it's not a fun thing," he added. "You're going to see more state interventions. Get ready."

Jason Stanek | © *RTO Insider*

Jason Stanek, senior counsel for the House Subcommittee on Energy and a former FERC staffer, said the committee isn't planning a hearing on the issue, but it's "looking forward to [FERC's] thoughtful and deliberative process."

"We have yet to have a hearing on that topic, and it's one that has split our members not necessarily by party but by region," he said. "They recognize that the entire industry is in a state of flux right now."

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MISO Board, Monitor Seek Response to PJM M2M Missteps

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session," Dail replied, referring to a closed session on the matter following the board's open meeting.

"What is it that we can do as a board?" Director Thomas Rainwater asked.

Patton said there weren't many options available to the board. It could urge enforcement by FERC, "which to be honest, hasn't been very active in enforcement on violations of RTOs."

"I don't think there's a lot you can do other than telling PJM how serious you think this is," Patton said. He also said MISO stakeholders could pursue resettlement of prices related to the TLR miscalculations, although no precedent exists for such resettlements. PJM has been overstating its TLR response since 2009, "inappropriately" raising the relief obligation of MISO and other balancing authorities, Patton said.

Patton said it's up to stakeholders to decide whether to pursue TLR resettlement at FERC.

"We've certainly resettled for less," Patton said.

"These are serious issues with big dollar amounts," Director Barbara Krumsiek said.

MISO Executive Vice President of Operations Richard Doying said strategies for resettlement would "certainly be a closed discussion item."

PJM Responds

PJM Chief Communications Officer Susan Buehler told *RTO Insider* that PJM acknowledges it had "an internal process issue regarding the flowgate tests as well as a calculation error with respect to relief obligations," but it disagreed that the issues amounted to a Tariff violation. She also said the MISO Monitor is possibly overstating the monetary impacts.

"PJM has corrected both issues and is evaluating the potential impacts, but at this time we do not believe the impacts are what the MISO IMM has indicated," Buehler said.

She also said the congestion impacts and monetary values the Monitor has disclosed

| © RTO Insider

are projections and not solely a consequence of PJM's "internal process issues" and "potential M2M inefficiencies" with constraints. PJM cannot confirm Patton's numbers, she said.

JOA with TVA

Patton also urged the board to consider entering a joint operating agreement with the Tennessee Valley Authority over the TLR issue. MISO discovered PJM's incorrect TLR values while investigating a northeastern Tennessee constraint, and Patton said TVA often calls TLRs on its 500-kV Volunteer-Phipps Bend line, which leads to price increases in the Midwest and corresponding reductions in the South. The TLR constraint contributed to higher prices during a late September emergency event, Patton said.

He said MISO has incurred 100 dispatch violations of its own constraints in responding to the competing dispatch effects of the Volunteer-Phipps Bend constraint.

"We'll violate our own constraints in order to provide TLR to TVA," Patton said. He also said TVA's generation is almost always more effective and economic for managing a TVA constraint than MISO's.

Patton originally complained about the excessive amount of relief MISO is asked to provide the Volunteer-Phipps Bend more than two years ago. (See *External Constraint Vexing MISO, Market Monitor Says*.) Now he thinks the RTO could lower its transmission constraint demand curve for TLR requests to avoid incurring costs to provide "very small amounts of relief." He said MISO should instead pay TVA for economic relief on constraints pursuant to a JOA.

Doying said MISO is not in 100% agreement with the Monitor's suggestions. "We value the reliability of our neighbor's systems as much as we value the reliability of our own," Doying said.

However, Doying said MISO is currently drafting a narrow JOA with TVA that would govern certain flowgates. He said MISO has had similar agreement with TVA in the past.

Patton also noted that TVA at times orders TLRs on Volunteer-Phipps Bend as a proxy to obtain relief on a nearby 161-kV constraint, and he questioned the efficiency of TVA's process.

Director Paul Bonavia asked MISO executives if it was appropriate under NERC rules to use the 500-kV line as a proxy for a 161-kV line. Doying said the practice doesn't violate NERC policies.

MISO General Counsel Andre Porter then reminded the board that further discussion was best left for a closed session.

"We're not going to solve all of this today, but we'll grapple with it, get it on the table," Bonavia said. "How do we approach the resettlement issue. … How do we help our neighbors without being overzealous?"

"I do think we have a lot of issues to untangle with PJM and TVA," Doying said.

SPP NEWS

Board of Directors/Members Committee Briefs

Directors Approve 1-cent Hike in Admin Fee

LITTLE ROCK, Ark. — SPP's Board of Directors and Members Committee on Dec. 5 approved a 1-cent increase in the RTO's administrative fee, keeping an eye on projected future reductions with the expected integration of the Mountain West Transmission Group.

Finance Committee Chair Larry Altenbaumer said the committee expects the fee to peak in 2019, "before we realize the benefits that would come from the potential integration with Mountain West."

SPP and Mountain West have targeted Oct. 1, 2019, as the latter's membership date.

The RTO's administrative fee shot up 13.2% for 2017, from 37 cents/MWh to 41.9 cents, compensating for a lack of load growth. With this year's increase, the 2018 fee will stand at 42.9 cents, just under its Tariff cap of 43 cents.

Last year it projected annual fee increases through 2021, topping out at 49.9 cents/MWh in 2021. This year's budget forecasts flat load through 2020 and a corresponding admin fee of 47.7 cents, without assuming any benefits from Mountain West's integration.

"We're sensitive to the concerns of our members," Altenbaumer said.

The 2018 increase is based on a net revenue requirement of $164 million, compared to the 2017 budget of $160.9 million. The Finance Committee said the increase is driven by the dissolution of the SPP Regional Entity and associated NERC funding — the committee assumes the RE will terminate its services after June — and by increases in various operating expenses.

Altenbaumer said the Finance Committee would bring back another budget once a memorandum of understanding is signed with Mountain West.

SPP is budgeting 383 million MWh in annual billable energy through 2022, after having previously projected as much as 407 million MWh for 2017. The RTO saw a 1.6% year-over-year growth in average monthly peaks through July 2017 but is modeling 2% reductions in monthly peaks for August through November and a 12% reduction in December peak demand compared to 2016.

The board and stakeholders also approved the committee's recommended budget, which reduces expenses by 2.85% to $190.8 million. Net income is forecast at $194.2 million, within $100,000 of this year's budget and up from $176.2 in 2016.

Using SPP's three-year budget as the basis for a five-year forecast, the Finance Committee assumed capital expenditures to be consistent with the 2020 forecast, adjusted for inflation. The committee projects income will increase to $204.2 million in 2019, and then again to $215.6 million in 2021 and $222.8 million in 2022, with expenses reaching $210.2 million in 2022.

The RTO estimates a headcount of 609 employees, reflecting the loss of the 17 RE positions.

Larry Altenbaumer (right) provides details behind the 2018 budget and administrative fee as SPP CEO Nick Brown (left) and Board Chair Jim Eckelberger listen. | © *RTO Insider*

Stakeholder Committee 'Fully Expects' Mountain West's Integration

Golden Spread Electric Cooperative's Mike Wise, chair of the Strategic Planning Committee, told the board and members that he and his committee "fully expect" SPP to integrate Mountain West.

"Nobody's trying to rush it. We want to get it right," Wise said.

Wise said the SPC has met five times behind closed doors with Mountain West members since the formal integration stage began in September. Two more meetings have been scheduled: one on Dec. 19 in Dallas and another in the first week of January in Denver. Staff has developed a list of issues to be discussed, some of which are likely to drop off the list, he said.

"Some [issues] are more difficult than others, in that there is a gap between what Mountain West desires and things it needs, and what our current Tariff and members agree to," he said. "The committee is interested in balancing the benefits and the costs, and to ensure we fully weigh those in the decisions that are made. We want to very jealously protect our culture. It's been developed over the years, and we know what it means to be a member. It's a very important ingredient in this discussion."

SPP has projected a total net present value benefit to its current members of approximately $209 million, much of it from reduced administrative fees, for the first 10 years of Mountain West's membership. Separate studies for Mountain West have determined the group could save up to $71 million annually through 2024 by participating in SPP's day-ahead market and replacing its nine tariffs with one, along with annual net production cost savings ranging from $11.7 million to $28.8 million. (See *SPP, Mountain West Integration Work Goes Public*.)

Board Approves New MOPC Vice Chair, SPC Members

The board approved a consent agenda that

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SPP NEWS

Board of Directors/Members Committee Briefs

Continued from page 30

included several nominations for stakeholder groups and their leadership positions, as submitted by the Corporate Governance Committee (CGC).

Northeast Texas Electric Cooperative's Jason Atwood was selected from several candidates as vice chair of the Markets and Operations Policy Committee. He replaces Todd Fridley, who resigned from the position in October. His term commences Jan. 1.

Other organizational group chairs, all incumbents unanimously approved by their groups, were confirmed for two-year terms also beginning Jan. 1:

- Grant Wilkerson, Westar Energy (Business Practices Working Group)
- Eric Ervin, Westar (Security Working Group)
- Jennifer Flandermeyer, Kansas City Power & Light (Event Analysis Working Group, Reliability Compliance Working Group)
- Allen Klassen, Westar (Operating Reliability Working Group)
- David Kays, Oklahoma Gas and Electric (Regional Tariff Working Group)
- Jim Jacoby, American Electric Power (Seams Steering Committee)
- Brad Hans, Municipal Energy Agency of Nebraska (Supply Adequacy Working Group)
- Travis Hyde, OG&E (Transmission Working Group)

The committee also nominated Westar's John Olsen and AEP's Richard Ross to the SPC. They replace Southwestern Electric Power Co.'s Venita McCellon-Allen, who resigned from the committee, and OG&E's Jake Langthorn, who has retired.

The CGC's annual review of each group resulted in a name change for the Critical Infrastructure Protection Working Group, which now becomes the Security Working Group. The committee recommended the change to differentiate between NERC critical infrastructure protection standards and cyber and physical security infrastructure protection.

The committee also recommended minor tweaks to the scopes of the Finance and Human Resources committees.

Two Industry Experts Added to SPP's Order 1000 Panel

The board and members also approved two new candidates for SPP's Industry Expert Pool (IEP), which will evaluate and recommend competitive-upgrade projects. Joining the 12 incumbents approved in October 2016 are Sriram Kalaga, a Fellow of the American Society of Civil Engineers and holder of a doctorate in structural engineering, and Tom Bozeman, a director with civil engineering firm Atwell who has long experience designing and building transmission and substation projects.

SPP will select three to five experts from the IEP to evaluate and recommend competitive upgrades under FERC Order 1000. Two previous panels have recommended one project, which was eventually withdrawn in 2016. (See SPP Awards First Order 1000 Project — But it May Not be Needed.)

Stakeholders welcomed Jody Sundsted, vice president of market for Western Area Power Administration-Upper Great Plains Region, to the Members Committee. Sundsted gives the committee 20 members.

— Tom Kleckner

SPP NEWS

SPP Sets New Records for Wind Generation

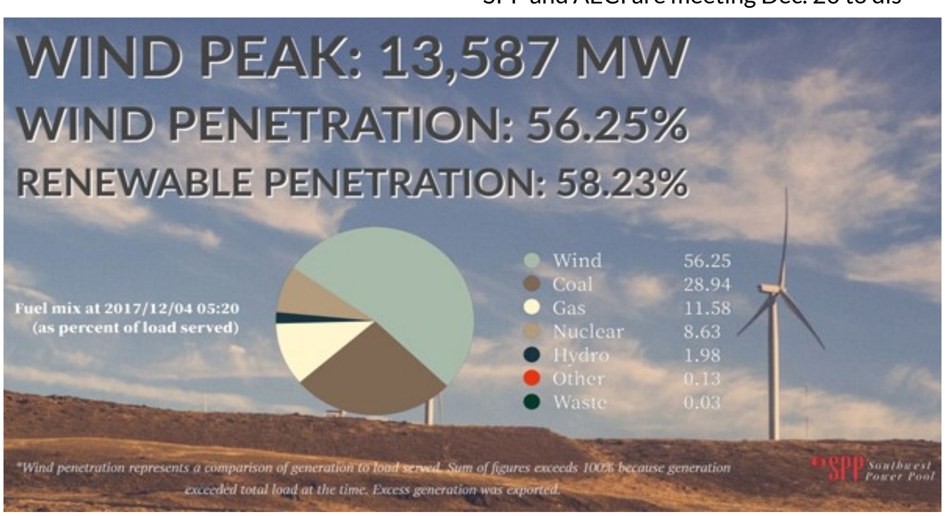
SPP set several new records for wind generation last week, lending further credence to its claims that it can handle wind-penetration levels as high as 75%.

Wind resources peaked at 13,587 MW at 7:55 a.m. on Dec. 4 and then again at 14,150 MW at 9:55 p.m., bettering the old record of 13,342 MW, set on Feb. 9.

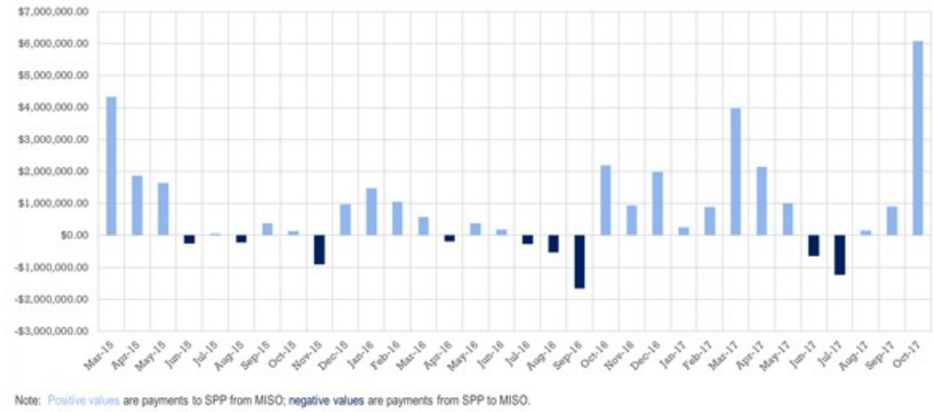
SPP also set new standards for wind penetration (56.25%) and renewable energy penetration (58.23%) Dec. 4. Coal accounted for 28.94% of the energy produced at that time and gas for 11.58%.

The RTO has nearly 18 GW of wind capacity in service and almost 44 GW of additional capacity in all stages of development. Staff said earlier this year it could serve up to 75% of its load with wind energy and other renewable resources. (See *SPP Eyes 75% Wind Penetration Levels*.)

SPP in February became the first North American RTO to produce more than 50% of its energy from wind resources. (See *SPP First RTO to 50% Wind Energy Penetration Level*.)



Staff to Meet with FERC on Rejected Seams Project



M2M settlements since go-live | *SPP*

SPP staff told the Seams Steering Committee (SSC) last week they plan to meet with FERC staff in January to resolve a seams project recently rejected by the commission.

FERC in October nixed SPP's proposal for regionwide/load-ratio share funding for its portion of two projects with Associated Electric Cooperative Inc. (AECI) and City Utilities of Springfield, Mo. The commission ruled SPP had not shown they were "roughly commensurate with the projects' benefits." (See *FERC Rejects Cost Allocation for SPP-AECI Seams Project*.)

SPP Interregional Coordinator Adam Bell said staff would perform additional analysis on the AECI project before meeting with commission staff. SPP and AECI agreed to build a new 345/161-kV transformer at AECI's Morgan Substation and uprate an existing transmission line, with the RTO covering $17.1 million of the $18.75 million cost.

"Once we have direction from that meeting, we'll come back and make a decision on the best way forward," he said.

A second seams project with City Utilities, the installation of a new 345-kV 50-MVAR reactor at the city's Brookline substation that was also rejected by FERC, has been included in the 2018 Integrated Transmission Planning Near-Term (ITPNT) assessment.

SPP and AECI are meeting Dec. 20 to discuss a joint and coordinated system planning study. Under terms of their joint operating agreement, the two systems are to conduct such a study every other year.

Bell said the study scopes have varied in the past, from "full-blown joint models to participating in a study SPP is already doing."

MISO Incurs $5M Hit on Single M2M Flowgate

MISO is on the hook for $6.1 million in market-to-market (M2M) payments to SPP for October, the largest bill in the 32 months since the two grid operators began the coordination process.

A single flowgate in the Empire District and Westar Energy control zones that was binding for 329 hours in October was responsible for $5.1 million alone. SPP said high wind flows from MISO and local outages made the flowgate difficult to control.

Several stakeholders expressed confusion as to why MISO is not taking steps to resolve the situation on its side of the seam.

"MISO has not come to us and suggested we consider any joint transmission projects to mitigate the congestion," said David Kelley, SPP's director of interregional relations. "If it was us, we would go to them."

Asked for comment, MISO spokesman Mark Brown responded, "As part of MISO's ongoing planning process, we regularly evaluate historic congestion and assess feasible ways to address those issues."

Through October, MISO has paid $27.7 million to SPP. The two RTOs began the M2M process in March 2015.

— Tom Kleckner

FERC NEWS

Photos Show Murray's Role in Perry Coal NOPR

Newly revealed photographs show Energy Secretary Rick Perry and Murray Energy CEO Robert Murray meeting in late March to discuss the coal mining company's "action plan" — the apparent basis for Perry's controversial call for price supports for coal generating plants.

The photos, obtained by magazine *In These Times* and *The Washington Post*, appear to contradict Murray's statement to Greenwire in November that "I had nothing to do with" the DOE Notice of Proposed Rulemaking.

One photo shows the action plan's cover letter, printed on Murray Energy letterhead. Another shows Perry embracing Murray.

In These Times reporter Kate Aronoff said a confidential source provided the magazine with the photos, as well as additional, unpublished photos showing pages in the document, which propose, among other things, cutting EPA's staff by half and replacing members of FERC, the Tennessee Valley Authority's Board of Directors and the National Labor Relations Board.

Aronoff said her magazine had only obtained photographs of the meeting and of the document, not the document itself.

Murray and Perry embrace. | *Photograph obtained by In These Times*

The action plan contains language regarding the need for "immediate action" to support struggling coal plants like that in the DOE NOPR issued to FERC on Sept. 28 (RM18-1).

Andrew Wheeler, President Trump's nominee for EPA deputy administrator, is seen on the far right, as Murray speaks with Perry. | *Photograph obtained by In These Times*

One section of the plan calls for "immediate action … to require organized power markets to value fuel security, fuel diversity and ancillary services that only baseload generating assets, especially coal plants, can provide," according to *In These Times*.

The DOE NOPR says "immediate action is necessary to ensure fair compensation in order to stop the imminent loss of generators with on-site fuel supplies, and thereby preserve the benefits of generation diversity."

Murray had referenced the document in an Oct. 11 episode of PBS's "Frontline," "War on the EPA."

"I gave Mr. Trump what I called an 'action plan' very early," said Murray, whose company's political action committee donated $100,000 to President Trump's campaign last year, according to the Federal Election Commission. "It's about three-and-a-half pages … of what he needed to do in his administration. He's wiped out page 1," which apparently included repealing the Clean Power Plan.

Several other officials are portrayed in the photos: Perry's chief of staff, former Edison

Continued on page 34

Photos Show Murray's Role in Perry Coal NOPR

Continued from page 33

Electric Institute Vice President for External Affairs Brian McCormack, is pictured shaking hands with Murray. Also seen is Andrew Wheeler, at the time a registered lobbyist for Murray Energy, now Trump's nominee for EPA deputy administrator.

At his confirmation hearing in early November, Wheeler testified to the Senate Environment and Public Works Committee that he had only briefly seen the document. Sen. Sheldon Whitehouse (D-R.I.) has called for its release. Wheeler has cleared the committee, and his nomination is pending a vote by the full Senate.

DOE did not dispute the authenticity of the photos. "Industry stakeholders visit the Department of Energy on a daily basis," a department spokeswoman told Politico.

The March 29 meeting at DOE headquarters occurred just weeks after Perry was sworn in as secretary, and weeks before he

Cover letter of Murray Energy's "action plan" | *Photograph obtained by In These Times*

would order a study on the effect of federal policies on the reliability of the grid.

Later in July, according to a letter from Murray to Trump obtained by the Associated Press, Murray met with the president and Perry in Youngstown, Ohio, where he asked that the secretary declare an emergency on the grid under Section 202(c) of the Federal Power Act in order to protect coal-fired plants owned by FirstEnergy, Murray's biggest customer.

Trump was receptive to the proposal and, according to Murray, told Perry three times that "I want this done." On Aug. 3, Murray again met with the president, along with FirstEnergy CEO Charles Jones, in Huntington, W.Va., where Trump told personal aide John D. McEntee III to tell Gary Cohn, director of the White House's National Economic Council, "to do whatever these two want him to do."

Perry, however, rejected the emergency order, the AP reported on Aug. 22. The next day, the department released its grid study. And a month later, Perry issued his NOPR, ordering FERC to consider fully compensating plants with a 90-day supply of on-site fuel their operating costs. (See *Perry Orders FERC Rescue of Nukes, Coal*.)

On Friday, Perry reluctantly agreed to FERC Chairman Kevin McIntyre's request to delay action on the NOPR for 30 days. (See related story, *McIntyre Takes FERC Chair; Wins Delay on NOPR*, p.1.)

— Michael Brooks

FERC News

Pruitt Confirms EPA Working on CPP Replacement

By Michael Brooks

| © RTO Insider

WASHINGTON — EPA Administrator Scott Pruitt on Thursday confirmed that the agency is working on a replacement to the Obama administration's Clean Power Plan.

The revelation came in response to a question from Rep. Raul Ruiz (D-Calif.) at a House Environment Subcommittee hearing on the agency's activities. Pruitt had previously only committed to considering a replacement plan.

Ruiz had asked whether EPA had relied on any new peer-reviewed studies on pollution to support the proposed repeal of the CPP, criticizing Pruitt for reversing the agency's stance on climate pollution.

Pruitt denied that he had. "Moreover, we are going to be introducing a replacement rule too," he said.

His statement came at the very end of an hourlong session of the subcommittee in which he answered questions from six members before he left to attend a meeting with President Trump.

Pruitt would return three hours later to resume the hearing, but no subcommittee members followed up on his statement regarding replacement of the CPP or pressed for details about a new plan. Instead, the members' questions covered a wide array of topics, including Superfund sites, pesticides, water quality, vehicle emissions and fuel standards, hurricane recovery and Pruitt's frequent travel to his home state of Oklahoma. Pruitt declined to take questions from reporters after the hearing.

He also gave no indication of plans to overturn the agency's endangerment finding on carbon dioxide.

Earlier in the morning session, Rep. Joe Barton (R-Texas) encouraged Pruitt to revisit the finding, which both agreed EPA had rushed to put out in 2009 in the wake of *Massachusetts v. EPA*, the Supreme Court decision confirming the agency's authority to regulate carbon dioxide as a pollutant.

Pruitt also said that he is still working on a "red team/blue team" debate regarding the science of climate change and hoped to announce it at the beginning of next year "at the latest."

"I think one of the most important things we can do for the American people is provide that type of discussion, because it hasn't happened at the agency," Pruitt told Barton. "We need to ensure that type of discussion occurs, and it occurs in a way that the American people know that an objective, transparent review has taken place."

EPA Administrator Scott Pruitt gives an opening statement to the House Environment Subcommittee. | © RTO Insider

Thursday's hearing was predictably partisan in nature. Pruitt received a warm welcome and pats on the back from Republicans, who praised his work at the agency and his so-called "back to basics" approach. Democrats, on the other hand, lambasted him for his rollback of numerous Obama-era regulations, including the CPP.

Many of Pruitt's answers mirrored those he gave at his Senate confirmation hearing in January. He talked about the importance of the "rule of law" and process, saying EPA had overstepped its bounds under President Barack Obama. (See *Dems Unmoved by EPA Pick's Charm Offensive*.)

On Wednesday, EPA announced that it would hold three additional hearings on the CPP after what Pruitt called "the overwhelming response" to the agency's hearing in Charlestown, W.Va. (See *No Unanimity in 'Coal Country' Hearing on CPP Repeal*.) The agency said the hearings will be in San Francisco, Kansas City, Mo., and Gillette, Wyo., though it did not provide specific dates or venue locations.

FERC NEWS

FERC Claims Jurisdiction on EE, OKs Ky. Opt-Out

By Rich Heidorn Jr.

FERC has waded into yet another state-federal jurisdictional dispute, claiming "exclusive authority" over the participation of energy efficiency in wholesale markets but preserving a carveout it approved earlier for Kentucky utilities.

The commission's ruling came in response to Advanced Energy Economy's request for a declaratory order on FERC's authority over energy efficiency resources (EER). AEE, which represents companies such as General Electric, Nest and Johnson Controls, filed the petition in June after the Kentucky Public Service Commission ruled that retail customers cannot participate in any PJM wholesale market without the state's permission.

The PSC's order was in response to a filing by East Kentucky Power Cooperative, which said it was buying more capacity than needed because of providers bidding EER products from its service territory into PJM's capacity auction.

AEE's concerns focused on third-party EERs, such as those created when an aggregator contracts with the manufacturer and retailer of high-efficiency appliances, light bulbs or heating and cooling systems.

FERC sided with AEE, saying the commission "has exclusive jurisdiction over the participation of EERs in wholesale markets," and that relevant electric retail regulatory authorities (RERRAs) "may not bar, restrict or otherwise condition the participation of EERs in wholesale electricity markets unless the commission expressly gives RERRAs such authority." Commissioner Richard Glick, who was sworn in Nov. 29, did not participate in the Dec. 1 order (EL17-75).

> **"We agree with AEE that any such impacts should be addressed through PJM's tariff provisions and not through a broad prohibition on EER participation in wholesale markets."**
>
> **FERC**

PJM Integration

However, FERC said it would honor its 2004 order approving Kentucky Power's integration into PJM, which granted the utility the right to prevent its customers from participating in the RTO's demand response or load interruption programs. The opt-out stipulation was later extended to Duke Energy Kentucky and EKPC when they joined PJM.

FERC rejected opponents' claims that AEE's petition was premature. "We agree with AEE that the novel issues of federal and state jurisdiction presented here warrant commission guidance," FERC said, noting that PJM also asked the commission to weigh in.

The commission also said that FERC Order 719 "does not provide for a RERRA to exercise an opt-out and bar or restrict the sale into the wholesale electricity markets of EERs originating in their state or local area." The 2009 order required RTOs and ISOs to permit aggregators to bid DR on behalf of retail customers directly into the grid operators' markets unless the RERRA bars participation by retail customers.

"Although in Order No. 719 and Order No. 745 the commission granted RERRAs an opt-out from allowing resources to participate as wholesale demand response, we find that the commission was not obligated to do so," FERC said, citing the Supreme Court's 2016 ruling in *FERC v. Electric Power Supply Association*. The *EPSA* ruling upheld Order 745, which required RTOs to pay DR the same LMPs as generation. (See *Supreme Court Upholds FERC Jurisdiction over DR*.)

The commission also said the effects of EER participation on the retail markets "are not substantial."

"Unlike demand response resources, EERs are not likely to present the same operational and day-to-day planning complexity that might otherwise interfere with [a load-serving entity's] day-to-day operations. Even if PJM's add-back mechanism failed to ensure that an LSE's procurement obligation was unaffected, we agree with AEE that any such impacts should be addressed through PJM's tariff provisions and not through a broad prohibition on EER participation in wholesale markets."

But FERC said it was "appropriate" to allow the Kentucky opt-out "as a longstanding agreement relied upon by the parties and entered into prior to the clarification of jurisdiction over wholesale demand-side management in *EPSA* and this order."

The commission said although some EERs originating in Kentucky have cleared in PJM capacity auctions, "we find that any necessary market changes should be implemented in a manner that does not require changes to the [auction] results."

The commissioners declined to state the requirements they would impose in the future if a retail regulator seeks to restrict third-party EER sales.

Back to the Courts?

The Supreme Court has issued three rulings interpreting state-federal jurisdiction under the Federal Power Act since 2015. The commission's preservation of the carve out would seem to foreclose a court challenge by Kentucky regulators. But it's no guarantee that other states lacking such agreements won't seek to overturn the ruling. (See *Court's Reticence Frustrates Energy Bar*.)

AEE nevertheless praised FERC's ruling as a "win for advanced energy innovators and consumers alike."

FERC's assertion of jurisdiction "is critical for maintaining free and open competition, with all technologies competing on price and performance," the group said.

COMPANY BRIEFS

Solar Developer ZPT Completes 31 MW in Mass.

ZPT Energy Solutions, a joint venture between Massachusetts-based developer Zero-Point Development, and New Jersey-based energy services company Pro-Tech Energy Solutions, has finished building 19 solar projects totaling 31 MW in central and southeast Massachusetts.

John Hancock Life Insurance, 38 Degrees North and Tax Equity Advisors provided more than $100 million to finance the projects.

The projects participate in Massachusetts' Community Shared Solar program and will sell net metering credits to more than 90 municipalities, public housing authorities, nonprofits, homeowners and businesses.

More: *Solar Industry*

Xcel to Pay Boulder $3.6M For Chemical Cleanup

Xcel Energy has agreed to pay $3.6 million to Boulder, Colo., to remove dangerous chemicals in the 13th Street Plaza, which was the site of a coal gasification plant owned by an affiliate from 1902 to 1952.

The agreement settles a lawsuit filed by Boulder in U.S. District Court last summer. The Boulder City Council approved the settlement last week.

More: *Daily Camera*

Siemens Gamesa Consolidates Regions, Names New Execs

Siemens Gamesa Renewable Energy has consolidated its North America and Latin America regions into one and selected executives to run the new region's operations.

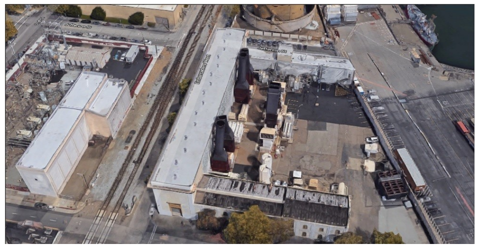
Walker

The company named Jose Antonio Miranda to be CEO of the new region's Onshore business. He succeeds Jacob Andersen, CEO of Siemens Gamesa's North America Onshore business, who has left the company.

Siemens Gamesa named Darnell Walker to be CEO of the new region's Service business. He succeeds Leandro Nunez, head of the Service Latin America region, who will also at the end of 2017.

More: *Siemens Gamesa*

PG&E to Replace Fossil Plant with Clean Energy



Dynegy's Oakland Energy Facility | *Google*

Pacific Gas and Electric on Wednesday announced a proposal to replace a 40-year-old, jet-fuel-burning power plant in Oakland, Calif., with local clean-energy resources, including energy storage and energy efficiency, and upgrades to its grid.

PG&E submitted the proposal to CAISO through the annual Transmission Planning Process. CAISO is scheduled to decide on it in the first quarter of 2018.

CAISO has a reliability-must-run contract with the plant's owner, Dynegy, to purchase up to 165 MW from the plant during peak periods.

More: *PG&E*; *The Mercury News*

GE Power Cutting 12,000 Jobs

GE Power said Thursday it plans to cut 12,000 jobs as part of an effort to reduce its structural costs by $1 billion next year.

The job cuts also align with efforts by its parent, General Electric, to reduce structural costs by $3.5 billion this year and next.

GE Power said the job cuts are driven by challenges in the power market worldwide.

More: *General Electric*

National Grid Customers Mistakenly Get Collection Notices

National Grid told WNYT in Albany, N.Y., that some customers who closed their accounts with it on Sept. 28, Sept. 29 and Oct. 3 mistakenly had their accounts reported to a collection agency.

A National Grid spokesman said the company is conducting an audit to determine how many customers were affected and urged customers that receive mistaken collection notices to contact it. The company said customers' credit reports won't be affected by the error.

The company responded to WNYT after a viewer contacted the station about a notice.

More: *WNYT*

Wind Turbine Blade Plant Closing in South Dakota

Molded Fiber Glass said Wednesday it is closing its wind turbine blade plant in Aberdeen, S.D.

The company said the plant's one client, General Electric, had stopped ordering blades from it. The closing will put 409 people out of work.

More: *Aberdeen News*

Westinghouse Knew VC Summer's Extra $4.7B Price Tag

Westinghouse Electric, the main contractor on the project to build two nuclear reactors at the V.C. Summer Nuclear Station in South Carolina, was given a report that said completing them would have cost at least an additional $4.7 billion.

Westinghouse was given the report by its preparer, Fluor, nine months before July 31, when SCANA and Santee Cooper, which own the nuclear plant, halted the project.

The utilities said they didn't learn about the report until Westinghouse, a unit of Toshiba, filed for bankruptcy protection. The South Carolina Office of Regulatory Staff recently reviewed it.

More: *The State*

Georgia Power Says Toshiba Will Speed up Payments on Vogtle

Georgia Power last week said that Toshiba has agreed to speed up its guaranteed payments to help support completion of the Vogtle nuclear project.

Toshiba has agreed to pay $3.2 billion to Georgia Power and its three utility partners on the Vogtle project by Dec. 15. Georgia Power's share of the payments will be about $1.47 billion.

Toshiba is the parent of Westinghouse

Continued on page 38

COMPANY BRIEFS

Continued from page 37

Electric, which was the main contractor on the project. Westinghouse filed for bankruptcy protection in March, claiming huge losses incurred at Vogtle and from trying to build two nuclear reactors at the V.C. Summer Nuclear Station in South Carolina.

More: Atlanta Business Chronicle

Hedge Funds Poised to Profit On Westinghouse Claims

Hedge funds led by the Baupost Group are poised to make a $170 million profit in less than three months from a bet tied to Westinghouse Electric, Toshiba's bankrupt nuclear unit, according to three people familiar with the matter.

In September, Baupost and GSO Capital Partners, the credit arm of private equity firm Blackstone Group, bought at a discount claims that South Carolina utilities had against Toshiba stemming from Westinghouse's failure to finish two nuclear reactors at the V.C. Summer Nuclear Station.

The funds expected to be repaid over five years, but Toshiba last week secured roughly $5 billion in financing, which it will use to immediately repay settlements related to the Summer project and the Vogtle project it couldn't finish in Georgia. The shortened time frame for the repayments will boost the expected returns of the group of hedge funds, the sources said.

More: Reuters

Exelon, Albemarle Investing In Energy Storage Startup

Exelon and lithium supplier Albemarle are investing in Volta Energy Technologies, a startup that plans to evaluate and test new energy storage technologies.

Volta has an agreement to test the technologies it develops at the U.S. Energy Department's Argonne National Laboratory. Volta's CEO declined to reveal how much Exelon and Albemarle invested in his company.

More: Bloomberg

Duke Buys Rest of Renewable Company REC Solar

Duke Energy last week it has purchased the part of REC Solar, a renewable energy project developer, that it didn't own for an undisclosed cash sum.

Duke bought a majority interest in REC in February 2015. REC will continue to be a part of Duke Energy Renewables, Duke's commercial renewables organization.

"Duke Energy Renewables' experience in offsite solar and wind energy generation, microgrid, battery storage and other emerging technologies will supplement REC's onsite solar expertise," Duke said in a statement.

More: Duke Energy

Duke Customer Info Potentially Compromised

Duke Energy Carolinas customers that paid a bill at one of the company's 550 authorized walk-in payment processing centers between 2008 and 2017 may be affected by a potential compromise of personally identifiable information, the company said last week.

Duke said it was informed about the problem by PayPal Holdings, which recently bought the company that owns the network used to process payments made at those locations. Duke said 374,000 customers could be affected.

More: Duke Energy

Eversource Finishes Merrimack Tx Line

Eversource Energy has finished the Merrimack Valley Reliability Project, a 25-mile, 345-kV transmission line between Londonderry, N.H., and Tewksbury, Mass.

Eversource paid less than a third of the project's cost of $129 million, with National Grid covering the rest. The line will go into service on Dec. 20.

More: New Hampshire Public Radio

Gas Peaker Plant in NYISO to Close

Wellhead Electric has told NYISO that it will close its 48-MW, natural gas peaker plant based in Binghamton on Jan. 9.

Wellhead's Joe Wagda said the plant has lost money since being returned to service two years ago. "The location and its service territory is over-served by generation," he said.

More: Press & Sun-Bulletin

PG&E Submits Storage Procurement Contracts to PUC

Pacific Gas and Electric said last week it has presented six contracts for 165 MW of energy storage to the California Public Utilities Commission for review and approval.

The contracts are with subsidiaries of EDF Renewable Energy, Enel Green Power, LS Power and Tesla, as well as a venture between IHI Power Services and Enel.

California requires investor-owned utilities to procure 1,325 MW of storage by 2020. PG&E's share is 580 MW. Since 2015, PG&E has signed contracts for 79 MW of storage, the company said.

More: Pacific Gas and Electric

PG&E Corp. Chairman, Former CEO to Retire Dec.15

The Board of Directors for PG&E Corp., the holding company parent of Pacific Gas and Electric, said last week that Executive Chair Tony Earley Jr. will retire from both companies' boards and as an employee effective Dec. 15.

Earley Jr.

The board elected Richard C. Kelly, former Xcel Energy CEO, to serve as its independent, nonexecutive chair, effective Dec. 16.

"It has been a privilege to work with Tony Earley," said Geisha Williams, who succeeded Earley as CEO on March 1. "He has been an inspiring leader, mentor and friend, and all of us at PG&E wish him many years of happiness."

More: Pacific Gas and Electric

FEDERAL BRIEFS

FERC OKs Sempra Acquisition of Oncor

FERC on Monday approved Sempra Energy's $9.45 billion acquisition of bankrupt Energy Future Holdings and its 80% interest in Texas utility Oncor (EC18-2).

Sempra announced the deal in August. It was approved by the U.S. Bankruptcy Court in Delaware in September but still requires further approvals by the court, as well as the Public Utility Commission of Texas. On Oct. 16, the PUC said it would complete its review within 180 days, by early April 2018. (See *Texas Regulators Seek More Details on Sempra Oncor Bid*.)

The Texas commission has changed since the unsuccessful attempts by Hunt Consolidated and NextEra Energy to acquire Oncor. Chair DeAnn Walker and Commissioner Arthur D'Andrea have replaced Donna Nelson and Ken Anderson, respectively, with Brandy Marty Marquez the only holdover.

More: *Sempra Energy*

Zinke Spent $53,000+ on Summer Helicopter Trips

Interior Secretary Ryan Zinke spent more than $53,000 on three helicopter trips this summer, according to records released by the Interior Department in response to a Freedom of Information Act request from the Associated Press.

The records show Zinke spent more than $39,000 on a July helicopter tour above two national monuments in Nevada that he was considering downsizing; $8,000 on a round trip to an emergency management exercise in Shepherdstown, W.Va.; and $6,200 on a round trip to Yorktown, Va., to tour a Revolutionary War battlefield and attend a boating industry roundtable.

Immediately after returning from Virginia, Zinke went horseback riding with Vice President Mike Pence and other officials, according to the records.

More: *The Associated Press*

Report: Q3 Storage Deployments Up 46% from Year Ago

A report issued Thursday by GTM Research and the Energy Storage Association found that 41.8 MW of energy storage was deployed in the U.S. in the third quarter.

That was up 46% from the third quarter of last year and 10% from the second quarter of 2017.

"U.S. Energy Storage Monitor" said that more than two-thirds of the deployed capacity came from a single, 30-MW project in Texas.

More: *Greentech Media*

EPA Inspector General to Investigate Pruitt Meeting

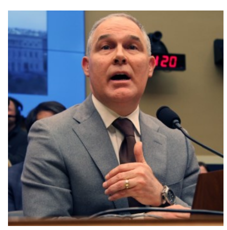
EPA's inspector general will investigate Administrator Scott Pruitt's April meeting with the National Mining Association.

At the meeting, Pruitt reportedly urged association members to tell President Trump to pull the U.S. out of the Paris Agreement.

Critics of the meeting say that violates laws preventing government officials from lobbying.

More: *The Hill*

Pruitt Says EPA Scientists Free to Publicly Discuss Work


Pruitt | © *RTO Insider*

EPA scientists will be free to publicly discuss their work from now on, Administrator Scott Pruitt said in a letter last week to Sen. Sheldon Whitehouse (D-R.I.).

Pruitt didn't say in the letter why the agency had canceled the presentations of two EPA scientists and one consultant who were scheduled to speak in Providence, R.I., in October about the health of the Narragansett Bay, nor did he address whether the agency had acted improperly.

"Procedures have been put in place to prevent such an occurrence in the future," Pruitt wrote.

More: *The New York Times*

Emera Applies for Presidential Permit for Atlantic Link

Emera said last week that its Clean Power Northeast Development subsidiary has applied to the Department of Energy for a presidential permit for the Atlantic Link subsea electric transmission project. Emera said the application was deemed complete and the submission notice for the project was published last week in the *Federal Register*.

Atlantic Link is a proposed 375-mile, 1,000-MW, HVDC underwater line that would deliver wind and hydro power from Atlantic Canada directly to Massachusetts. Emera proposed Atlantic Link in response to the Massachusetts Clean Energy request for proposals.

More: *Emera*

ITC Holdings' Plaushin Named Transmission Group President


Plaushin

Nina Plaushin, ITC Holdings' vice president of regulatory, federal affairs and communications, was named president of WIRES for 2018 at the transmission industry trade group's annual meeting. She will succeed Kathleen Shea of Eversource Energy.

Joining Plaushin as WIRES officers next year will be President-elect Paul Dumais, of Avangrid; Vice President Brian Gemmell, of National Grid; Treasurer Brian Drumm of American Transmission Co.; and Secretary Tom Hestermann of Sunflower Electric Power.

More: *WIRES*

Perry Signs MOU with Saudis to Work on Clean Fossil Fuel Projects

Energy Secretary Rick Perry last week signed a memorandum of understanding with Saudi Arabia to work on clean fossil fuel projects that had the support of the Obama administration.

The agreement, which Perry signed while visiting Saudi Arabia, would advance a number of technologies, including a way of burning coal more cleanly called oxy-combustion that was a favorite technology of his predecessor, Energy Secretary Ernest Moniz.

More: *Washington Examiner*

STATE BRIEFS

CALIFORNIA

BART Board Approves 45-MW Solar PPA

The Bay Area Rapid Transit's Board of Directors on Thursday approved an agreement to buy 45 MW of solar power from Recurrent Energy, the U.S. subsidiary of Canadian Solar.

The power purchase agreement is BART's first for utility-scale solar power and was the result of a renewable energy procurement process that it launched in May as part of its Wholesale Electricity Portfolio Policy, which requires it to get all its power from renewable resources by 2045.

Recurrent will provide power to BART from its 45-MW Gaskell West 2 PV project in southern California, which it expects will reach commercial operation in 2020.

More: *PV-Tech*

ILLINOIS

Commerce Commission Approves Ameren Rate Decrease

The Commerce Commission on Wednesday approved a plan by Ameren Illinois that will reduce the bill of the company's typical residential customer by $1.70/month starting next month, the company said.

The rate decrease is the second in a row and fifth overall rate decrease for Ameren since the Energy Infrastructure Modernization Act, or Smart Grid Bill, was passed in 2011, the company said.

More: *Ameren*

MASSACHUSETTS

National Grid Details Response to October Storm

National Grid said in a final event report filed with the Department of Public Utilities last week that the wind storm that hit the Merrimack Valley overnight between Oct. 29 and 30 knocked out power to 330,610 of its customers in 166 of the 172 communities it serves in the state.

The company said it had to replace 311 poles, 90 transformers and 32,000 feet of electrical wire during the restoration effort.

The DPU directed National Grid to file the report by last Monday; it became publicly available late the next day. The department demanded the report on Nov. 7, just over a week after the storm hit.

More: *The Salem News*

Savoy Residents to Decide on Wind Farm Ban

Residents of Savoy will decide at meetings on Dec. 20 and 21 whether to ban wind farm development.

Their decision will not affect a $31 million, five-turbine, 12.5-MW wind farm proposed by Minuteman Wind. That project, however, is in limbo after Savoy residents in September rejected Minuteman's request for a bylaw change that would have allowed it to increase the height of the turbines by 30 to 455 feet.

It was Minuteman's request for a bylaw change that prompted residents to begin a drive to ban wind farms.

More: *The Berkshire Eagle*

NEW JERSEY

Federal Grant to Fund EV Charging Station Installations

| New Jersey DEP

The state has received a $9.5 million grant from the U.S. Department of Transportation to accelerate the installation of electric vehicle charging stations at workplaces, reduce diesel emissions from refrigerated trucks unloading and loading shipments, and reduce emissions from passenger ferries.

The departments of Transportation and Environmental Protection will administer the programs funded by the grant, which are designed to curb air pollution that contributes to ground-level ozone (smog) and greenhouse gas emissions.

The funding could result in to up to 500 new charging stations being deployed in a program that builds upon the "Pay$ to Plug In" EV program launched last year by the DEP and Board of Public Utilities. That awarded nearly $850,000 to fund 180 workplace charging stations at 66 locations.

More: *NJ Spotlight*

NEW YORK

Verizon Uses State Rebate Program to Buy 234 EVs

Verizon has replaced 234 gasoline-powered vans with hybrid-electric vans it bought using rebates provided by the New York Truck Voucher Incentive Program, which is administered by the New York State Energy Research and Development Authority (NYSERDA). The telecommunications giant plans to use the vans in New York City.

The program provides point-of-sale rebates to businesses and municipalities that purchase new clean vehicles or retrofit commercial vehicles and buses into hybrids, natural gas vehicles or zero-emission vehicles. NYSERDA said Verizon's purchase was the largest in the program's history.

More: *NYSERDA*

Clean Energy Competition Accepting Apps for 3rd Round

Gov. Andrew Cuomo said last week that the 76West Clean Energy Competition has begun accepting applications from emerging clean energy companies for its third round.

The competition is administered by the New York State Energy Research and Development Authority and is part of a strategy to boost the economy of the state's Southern Tier, which consists of the counties west of the Catskill Mountains along the northern border of Pennsylvania. It will accept applications through April 16, 2018.

The six winners, which will be announced next year, will receive a total of $2.5 million in prizes ($1 million grand prize, one $500,000 prize and four $250,000 prizes), provided they move to the Southern Tier or establish a direct connection with the region, such as contracting for supplies with a Southern Tier company, that creates jobs in it. Companies already in the Southern Tier must commit to substantially growing their business and employment in the region.

More: *Gov. Andrew Cuomo*

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STATE BRIEFS

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NORTH CAROLINA

Duke Could Recover $300M from Insurers for Coal Ash Cleanup

Duke Energy Progress told the Utilities Commission in a filing Wednesday that it could recover as much as $300 million from insurance companies for coal ash liability, which would reduce the amount it would need to charge its customers for cleanup.

The filing was in response to a request from the commission in a rate case in which Duke is seeking to charge its customers $190 million a year for coal ash clean up.

The insurance companies deny owing Duke any money for the cleanup. The company is suing them over the issue.

More: *Charlotte Business Journal*

OHIO

Senator Introduces Bill to Revive Wind Farm Development

State Sen. Matt Dolan (R) has introduced legislation meant to revive wind farm development, which has been stymied since 2014 by restrictive zoning rules added to an unrelated budget bill.

Dolan

Dolan's bill would reduce the setback distances for wind turbines, as would a bill introduced earlier this year. Unlike the earlier bill, however, Dolan's bill references the state tax code, which gives counties the authority to negotiate lower property taxes for developers in exchange for whatever the county or its residents want.

The reference is meant to reassure local governments that they have the ability to control wind projects, thereby alleviating the need for the 2014 rules.

More: *The Plain Dealer*

Cincinnati Signs Clean Energy Contract with Dynegy

Cincinnati has signed a contract with Dynegy to procure 100% green energy to power its police and fire stations, health clinics, recreation centers and most of its administrative buildings.

The contract, which begins in January and runs through 2021, doesn't include Metropolitan Sewer District or Cincinnati Water Works facilities or city streetlights.

The agreement is expected to reduce the city's utility rates by more than $100,000 and cut its greenhouse gas emissions by 9.1%.

More: *Cincinnati Business Courier*

SOUTH DAKOTA

PUC Declines to Reconsider Wind Farm Application

The Public Utilities Commission last week denied the request to reconsider its Oct. 25 decision to reject an application to build the Crocker Wind Farm in Clark County.

One reason for the rejection was that company that wants to build the wind farm had submitted multiple layouts for it.

A lawyer representing Clark County landowners said state law requires an application to build a wind farm to contain one design for it.

More: *The Daily Republic*

TENNESSEE

Survey: Voters Support Retail Choice, Solar

A statewide survey of 600 voters found that 83% think municipalities or power cooperatives in the Tennessee Valley should be able to buy power from generators other than the Tennessee Valley Authority in order to get cheaper or renewable power. TVA prohibits third-party power sales in its seven-state area.

The survey, which was commissioned by groups interested in promoting solar generation, also found that 81% of respondents want the state to increase its use of solar power, and 88% would use more solar energy in their home if it cost the same as or less than their current power source.

More: *Times Free Press*

VIRGINIA

Mountain Valley Pipeline Gets Water Quality Certification

The Water Control Board voted 5-2 Thursday to issue a water quality certification for the Mountain Valley Pipeline, which would move natural gas through six counties in the Roanoke and New River valleys.

The board was charged with determining whether there was "reasonable assurance" that the pipeline's construction would not contaminate water along the pipeline's route.

More: *The Associated Press*

New Hearings Announced for Controversial Dominion Tx Project

The State Corporation Commission said Wednesday it will hold new hearings on Dominion Energy's proposal for new power lines in Prince William County, postponing a decision on the project that has been opposed by nearby residents for nearly two years.

Dominion wants to install 230-kV lines between Haymarket and Gainesville to serve a new computer data center.

The commission ruled earlier this year that the 5.1-mile route could go through a neighborhood where the descendants of a former slave have lived for nearly 120 years. In September, however, Dominion said that route was no longer feasible, after county officials refused to grant it permission to use county-owned land.

More: *The Washington Post*

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Report: Costly Coal Undermining SPP Market, Bilking Consumers

Continued from page 1

market clearing prices are sufficient to cover the plant's marginal costs. Although self-committed units are ineligible to receive make-whole payments from SPP, the Sierra Club says, some units are apparently recovering losses from captive customers through state ratemaking proceedings.

The Sierra Club report, "Backdoor Subsidies for Coal in the Southwest Power Pool," alleges that utilities in the footprint operate coal plants outside the wholesale markets, generating $300 million in excess costs that consumers were forced to pick up in 2015 and 2016.

SPP and its members responded by saying the Sierra Club's analysis relied heavily on wholesale rates, which aren't the same as retail rates that are subject to public policy and regulations. Nor do wholesale rates consider the cost of long-term supply contracts or ensuring grid reliability, they said.

MMU Sees Problem

Keith Collins, executive director of the MMU, says that while the report took some of the MMU's observations out of context, self-commitment is a problem in the RTO's markets. MMU staff raised the issue in their

SPP MMU Executive Director Keith Collins | © RTO Insider

2016 State of the Market report, which Collins reviewed with SPP's Board of Directors and Members Committee in July.

The Sierra Club said it conducted a "high-resolution analysis" of 14 coal plants in SPP's footprint. It used hourly market data to develop each plant's cash flow analysis.

"All 14 units operated for extended periods of time when, objectively, it would have been less expensive for the electric bills of utility customers for the plants to sit idle," the group's report said. "The utilities that own each of the 14 coal units we examined would have saved its customers money if the coal units had operated less often."

The report said all but one of the 14 units studied were owned by state-regulated utilities, municipal utilities or an electric cooperative with captive customers.

Utilities should be purchasing electricity for its captive customers in the SPP Integrated Marketplace (IM), the report said. But it said some utilities "appear to be going back to state commissions and using rate cases and other dockets to obtain ratepayer-funded subsidies for costs incurred in operating otherwise uneconomic coal plants."

"In the SPP market, where nearly half of the resources are self-committing, how much of an energy market can SPP really be claiming to operate?" the report asked. "The consequence of these facts is that the SPP Integrated Market is possibly a market in name only. The impact of utility self-commit and underbidding energy offers within the SPP IM might be the most anticompetitive and anti-consumer behavior in any integrated electricity market anywhere in North America."

The report also says self-committed coal units are denying revenues to independent merchant generators. "RTOs are supposed to create nondiscriminatory rates, but allowing coal units to self-commit discriminates against those operators that don't have captive customers to fund a ratepayer subsidy. Moreover, it is discriminatory and unreasonable for the market to ask one subset of customers to pay above-market costs while all other customers pay market costs."

Collins told the board and members that self-commitment of resources has declined but is "still very big."

"When resources are self-committing, it can put downward pressure on prices also," he said at the time, referring to the effects of incorporating uneconomic resources in wholesale prices.

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State Briefs

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Dominion Exec Says Time to Move on from Rate Freeze Law

Dominion Energy Chief Legal Officer and Senior Vice President for Corporate Affairs Mark Webb last week told the General Assembly's Commission on Electric Utility Regulation that "it's time to transition away" from a 2015 law that froze the base rates of Dominion and Appalachian Power as a hedge against carbon regulation.

The law has been controversial because it has prevented state regulators from ordering the utilities to refund money to their customers. The State Corporation Commission said in September that Dominion, which serves 67% of the state's electric customers, would owe them between $133 million and nearly $176 million for 2015 and 2016 if rate reviews were in place.

"Under any regulatory construct, there will be years with excess earnings due to favorable weather, the absence of severe storms, economic growth and business efficiencies," Webb said. "The General Assembly may wish to consider a reinvestment model, where in years when there are such excess earnings, they are reinvested in modernizing and transforming the electricity grid."

More: *Richmond Times-Dispatch*

WASHINGTON

UTC Approves Colstrip Closure Settlement

The Utility and Transportation Commission last week approved a settlement in a Puget Sound Energy rate case that outlines how the company will fund the closing and cleanup costs of the Colstrip coal-fired power plant in Montana, which it owns a large stake in.

The settlement does not set closure dates for Colstrip's two newer and larger units, but it moves up the year by which PSE can recover the costs of those units to 2027 from 2045.

Colstrip's two older units are already required to close by July 1, 2022, under an agreement reached last year between environmentalists and PSE and Talen Energy, which has a stake in Colstrip. The settlement establishes "a financing mechanism" for decommissioning and cleaning up the older units.

More: *The Associated Press*

Report: Costly Coal Undermining SPP Market, Bilking Consumers

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"The point of the [Sierra Club's] report is consistent with what we noted in the 2016 annual report," Collins told *RTO Insider*. "Self-commitment can distort the market. It's a message we've been presenting as well."

The MMU report noted generation offers in the day-ahead market averaged 48% as "market" commitments and 35% for "self-commit" in 2016. Those numbers were 46% and 39%, respectively, in 2015. Outages accounted for the remainder.

The Sierra Club report quoted the MMU report, which said plants self-commit because of contract terms, low gas prices "that reduce the opportunity for coal units to be economically cleared in the day-ahead market," long start-up times, and "a risk-averse business practice approach."

Collins took exception to the Sierra Club's claim that "reliability isn't one" of the reasons why a unit might self-commit.

Although the MMU's report didn't cite reliability, Collins said, "reliability could play a factor where some of these resources self-commit. Our report identified a set of reasons for self-committing, rather than a complete list.

"We have been discussing this essentially since I've been here," said Collins, a former FERC staffer who joined SPP in June from CAISO. "What are the factors [behind self-commitment]? What can we do to promote more market commitment? Some of it is education and creating awareness. At least there's a dialogue there that's begun."

SPP Disagrees

SPP General Counsel Paul Suskie said in a statement that the RTO disagreed with the report's fundamental assertion that "utilities' option to either self-commit resources or purchase from the market equates to a subsidy and undermines the effectiveness and cost-efficiency of SPP's Integrated Marketplace."

Suskie said that "assessing the market's fairness and effectiveness based on whole-sale cost of electricity to consumers does not take into consideration a number of factors that may lead utilities to self-commit." He listed contractual obligations, capital investments, public policy and fossil fuels' contribution to renewable resources' deliverability as among those factors.

"Our day-ahead market has functioned successfully for four years and, in that time, has reduced the cost of energy in our region by more than $1.25 billion while continuing to ensure the reliability of the grid," Suskie said.

Peter Main, a spokesman for SPP member Southwestern Electric Power Co., said the company bids its generation into the RTO's markets under its market protocols and will continue "to seek opportunities" to produce net energy revenues benefiting its customers.

"The Sierra Club report does not provide an accurate portrayal of the incremental (variable) costs and revenues associated with offering generation into the SPP Integrated Marketplace," Main said in a statement.

Plant Operators Dispute Findings

According to the report, SWEPCO's Dolet Hills and Pirkey plants in the East Texas-Louisiana region burdened customers with $210 million in costs in 2015 and 2016. However, SPP said the plants serve load in "locations in northeast Texas without significant wind."

Oklahoma Gas and Electric, which owns two of the plants identified in the study, has said the units stopped self-committing into the market more than two years ago. Two other generators — Entergy-owned or co-owned plants in Arkansas — serve load in MISO.

Al Armendariz, with the Sierra Club's Lone Star chapter, said he was confident the group has a "good handle on the cost to run these coal plants in SPP."

Armendariz, who worked in EPA under President Barack Obama, said the Sierra Club compared the SPP LMPs paid to power plants in the immediate vicinity of the coal plants studied. The organization obtained operating data from S&P Global Market Intelligence, the U.S. Energy Information Administration and SPP in running its analysis.

"Our report is really a comparison of the revenue for electricity, compared to what it costs to actually run the power plant," Armendariz said.

Rule Changes Sought

The Sierra Club would like to see several things happen, Armendariz said. "We think SPP should clarify its rules to require power plants to bid in their real cost of fuel and other variable [operations and maintenance] … in the day-ahead market."

"Self-commitment can distort the market. It's a message we've been presenting as well."

Keith Collins,
SPP Market Monitoring Unit

Armendariz also said the Sierra Club would like to see state commissions in SPP's footprint "investigate this problem of self-commitment and disallow the recovery of costs borne by consumers when uncompetitive coal plants are operating."

"Vertically integrated utilities should not be forcing their customers to pay the variable costs," he said. "State commissions should not allow the recovery of those costs through the rate base."

Asked whether the group planned to file a complaint with FERC, Armendariz told *RTO Insider* that the Sierra Club "is evaluating all avenues of legal recourse that may be available to rectify the problems."

Both Armendariz and Collins agreed the problem of self-commitment is not unique to SPP. Collins said he saw self-dispatch at CAISO and "knows" it occurs in other markets. Armendariz said although uncompetitive coal plants are running in "virtually every market … the problem seems most acute in SPP."

The MMU believes that will change as market participants continue to familiarize themselves with SPP's day-ahead and real-time markets, which have been in operation for less than four years.

"It appears that resource owners are becoming more confident in the market and allowing the market to commit the resource instead of self-committing their resource," the State of the Market report said.

The Monitor also said the market systems' optimization algorithm is restricted to a 48-hour window. "Hence, large baseload resources with long-lead time and substantial start-up costs may not appear economic to the day-ahead market commitment algorithm," the report said.

Collins said SPP's Market Working Group has discussed a potential multiday optimization approach. A Tariff change has yet to materialize, he said, "but that could help address some of the concerns."

PJM Unit Teaming with Peak Reliability to Develop Western Markets

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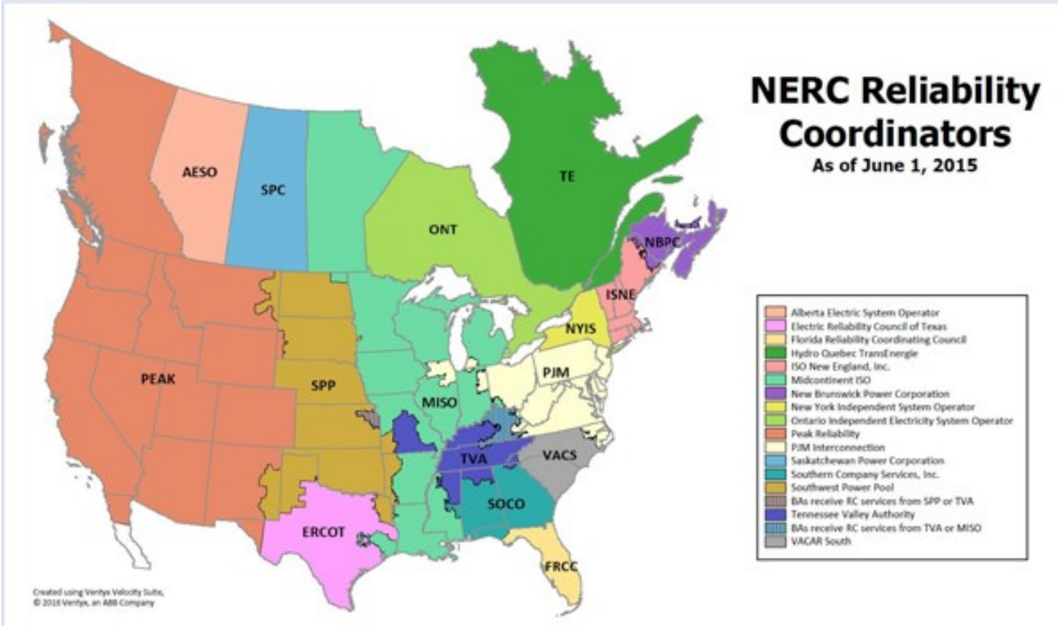

a viable and credible alternative structure in the West," the release quoted PJM CEO Andy Ott.

"I think it's a good fit," Ott said in an interview after a meeting of the PJM Members Committee on Thursday.

Ott said the initiative resulted from requests Peak had received about whether it could provide more services. "They're geared toward reliability services. We could provide the market-oriented and operational services," he said.

"At this point, it's exploratory," Ott added. "The notion of having this separate company allows us to do that and keep risk off of PJM members."

"PJM has an established track record as an innovative and cost-effective provider of system operations and market services," Peak CEO Marie Jordan said in a statement. "Our partnership seeks to leverage Peak's West-wide system model, PJM's markets expertise and our combined processes, people and tools. Both Peak and PJM share a strong commitment to developing solutions tailored to the Western Interconnection."

The two said their research will include an "outreach program" to Western Interconnection "industry leaders and stakeholders."

The announcement led Montana regulator Travis Kavulla to tweet Thursday afternoon that PJM and Peak "just sent a letter to regulators announcing they're exploring how to form a new RTO in the West."

"Big stakes here," added Kavulla, a member of the Montana Public Service Commission and former chair of the National Association of Regulatory Utility Commissioners. "If Peak against the odds pulled this off, it'd be a huge coup. But Peak's funders (including those championing rival RTO efforts) probably aren't going to be very warm on this."

Kavulla told *RTO Insider*: "I took the liberty of describing it as an RTO because I figured they are using a euphemism to avoid that description."

Asked about Kavulla's interpretation, PJM spokeswoman Susan Buehler said, "The agreement allows PJM and Peak to explore opportunities in the West. We are looking at market services, but it's too early to predict anything else."

Later, Kavulla tweeted a quote from Gary Ackerman, executive director of the Western Power Trading Forum, who weighed in with a report in the *Friday Burrito*, his weekly newsletter.

Ackerman said he spoke with Jordan and asked her "if the new venture was contemplating a full market, including day-ahead, real-time energy and ancillary services? She assured me it was.

"She also said although no anchor balancing authorities have yet come forward, she has been in discussions with many … and there is widespread interest," Ackerman wrote, according to Kavulla.

Kavulla also shared a portion of the letter to regulators, in which Peak called the announcement "an exciting opportunity to address challenges facing the West and the issues we have been hearing about as we've met with many of our stakeholders. We believe that Peak and PJM's complementary strengths can lead to a viable and credible alternative option at the time when the West is looking at markets to reduce costs."

RTO Requirements

Any effort to create a full-fledged RTO would require PJM and Peak to meet the requirements of FERC Order 2000. The order sets four minimum requirements for an RTO: "independence from market participants; appropriate scope and regional configuration; possession of operational authority for all transmission facilities under the RTO's control; and exclusive authority to maintain short-term reliability."

Headquartered in Vancouver, Wash., Peak runs reliability coordination offices there and in Loveland, Colo., which provide situational awareness and real-time monitoring of all or parts of 14 western states, the Canadian province of British Columbia and a small, northern portion of Baja California, Mexico. Its region totals 1.6 million square miles and includes 110,129 miles of transmission and a population of 74 million.

The venture is the latest development to indicate the West is warming to the notion of organized markets.

Eight members of Mountain West, including Xcel Energy's Public Service Company of Colorado, are considering joining SPP. Peak is Mountain West's current reliability coordinator.

SPP Chief Operating Officer Carl Monroe did not seem concerned about the prospect of competition. "We're supportive of markets and collaboration between reliability coordinators in the West and welcome the opportunity to work with PJM and Peak Reliability to bring reliability and economic benefits to ratepayers in the West, just as we have been successfully doing in the East for many years," he told *RTO Insider*.

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McIntyre Takes FERC Chair; Wins Delay on NOPR

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new deadline of Jan. 10. "The commission is nevertheless authorized to act at any time prior to this deadline and I urge the commission to act expeditiously," Perry wrote. "I continue to believe that urgent action must be taken to ensure the resilience and security of the electric grid, which is so vitally important to the economic and national security of the United States."

New commissioners often choose not to vote on issues subject to deliberations before their arrival. Glick, for example, did not participate in a Dec. 1 order on a state-federal jurisdictional dispute over energy efficiency. (See FERC Claims Jurisdiction on EE, OKs Ky. Opt-Out.)

Although McIntyre and Glick have had access to the comments in the docket, McIntyre has not had time to build a consensus around his own response.

FERC Chief Administrative Law Judge Carmen A. Citron swears in Kevin McIntyre as his wife, Jennifer Brosnahan McIntyre, holds a Bible. | *FERC*

What McIntyre may have in mind is not apparent. His only prior public comments on the NOPR came at his confirmation hearing in September. (See McIntyre to Senate: 'FERC does not Pick Fuels'.)

A Republican, McIntyre joins FERC after 22 years at Jones Day, where he was coleader of the law firm's global energy practice. His former Jones Day colleague Don McGahn is President Trump's White House counsel.

Perry acted within his legal authority in ordering FERC to consider his NOPR. But he has no power to make FERC provide the relief he is seeking, legal experts say. (See FERC's Independence to be Tested by DOE NOPR.)

McIntyre did not appear to have signaled his plans to fellow commissioners Cheryl LaFleur or Rob Powelson, who indicated in public appearances Wednesday and Thursday that they expected to rule on Monday, as promised by interim Chairman Neil Chatterjee. DOE Under Secretary Mark Menezes had said Wednesday that the ruling was likely to be pushed back one day to today. (See DOE: German Energy Struggles Sparked NOPR.)

FERC's website was briefly overwhelmed by traffic after the agency tweeted out a link to McIntyre's letter at 6:35 p.m. Thursday.

Analysts at ClearView Energy Partners had said before news of the letter that the

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PJM Unit Teaming with Peak Reliability to Develop Western Markets

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California enacted a law in 2015 that requires CAISO and state energy agencies to explore expanding the ISO to help the state meet its 50% renewable energy mandate. CAISO's Western Energy Imbalance Market (EIM), which includes PacifiCorp, Arizona Public Service, Puget Sound Energy and NV Energy, has produced more than $213 million in gross benefits since commencing operation in November 2014.

But governance concerns have hampered efforts to build the EIM into a full-fledged RTO. One contentious issue for coal-burning states is California's requirement that its utilities track carbon emissions from generation serving their loads to ensure compliance with emissions caps. (See CAISO Expansion in Question as EIM Grows.)

The Western Electricity Coordinating Council (WECC) said it had no comment on Peak's plans. CAISO did not immediately respond to a request for comment.

Peak was formed in 2014 when WECC bifurcated, with it becoming a NERC Regional Entity and Peak becoming the reliability coordinator. FERC approved the bifurcation in February 2014, making Peak independent of WECC.

WECC was formed in April 2002 from the merger of the Western Systems Coordinating Council and two regional transmission associations.

NERC REs are responsible for reliability compliance monitoring and enforcement activities, while reliability coordinators maintain reliability in real time, coordinating or directing actions to mitigate system issues.

WECC is in the midst of a separate rebranding and restructuring to focus more on its core reliability mission. (See related story, *WECC Finding New Direction in Old Mission*, p.7.)

Evolution of PJM Technologies

PJM Connext, formerly known as PJM Technologies, was formed in 2000 under PJM's "other activities protocol," Ott said.

"We were one of the first RTOs, so some of the concept back then was if we were to monetize any of that intellectual property or groundbreaking ideas, then that feeds back to the membership. That would lower the stated rate," Ott said.

PJM Technologies includes PJM EIS (Environmental Information Services), which operates the Generation Attribute Tracking System for tracking renewable energy credits. PJM is also looking to license its Dispatcher Interactive Map Application (DIMA) to transmission owners. (See "TOs Must Approve PJM Licensing of DIMA," PJM Operating Committee Briefs: Nov. 7, 2017.)

In October, PJM announced the unit had signed a contract to help the Chinese province of Zhejiang develop a real-time energy market. That effort will involve three to four full-time equivalent PJM staffers for 18 months. The province, south of Shanghai, has a load equal to almost half of PJM's.

PJM is consulting with the Chinese on market design, whereas the deal with Peak is for market operation, Ott said.

"There's more opportunities presenting themselves" now, Ott said.

"In this case, we see several popping up at once. Just so happens there are more of them, and we're being more transparent" about announcing the work, he added. "It's an opportunity for us to further the advance of competitive markets around the world."

Tom Kleckner contributed to this article.

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commission appeared to lack a consensus for responding to the NOPR. "Over the course of this week, Commissioner Neil Chatterjee conceded that he has not [been] successful in persuading his other colleagues to support the interim solution he prefers," the analysts wrote in an email to the firm's clients Friday morning. "Last night's action indicates to us that the new chairman may not be persuaded that closing the docket and issuing a Notice of Inquiry to the FERC-jurisdictional regional transmission organizations — the option purportedly preferred by Commissioners Cheryl LaFleur and Rob Powelson — is necessarily a course of action he prefers."

LaFleur told MISO's Board of Directors meeting in Carmel, Ind., on Thursday that the commissioners were "busily scurrying to get something out on Monday."

"I'm actually to the point where I'm relieved [the deadline] is Monday because if it was March 11, we'd talk about it until March 11," she said.

Republicans Chatterjee and Powelson have indicated support for Perry's proposal. On Wednesday, Powelson told the PJM General Session that the commission would craft a "defensible" response to the NOPR that does not upend competitive markets.

LaFleur Previews Ruling

LaFleur, a Democrat, has been noncommittal in her public statements. (See *DOE, Pugliese Press 'Baseload' Rescue at NARUC*.) She told MISO's board meeting Thursday that if customers are made to pay for generation attributes, it should be done based on data through a transparent market process.

She also said considerations of resilience should include severe weather, cyber threats and transmission. "It probably shouldn't be confined to the areas with mandatory capacity auctions because their resilience isn't more important," she added.

LaFleur said the commission has reached a saturation point on dissecting the resiliency rule. "Finally, last week, even I had too much, and I said, 'That's it; pencils down.'"

She said the NOPR interrupted commission work on the backlog of filings that built up during the six months the commission was without a quorum after the resignation of former Chairman Norman Bay. "It's as if we had all of our jets lined up for takeoff and someone took the airspace," she said.

Chatterjee, speaking to a meeting of ISO-NE's Consumer Liaison Group in Boston on Thursday, reiterated his call for providing "interim" relief to at-risk generators while FERC considers the NOPR. (See *Chatterjee: 'We've Moved Past' DOE NOPR*.)

Chatterjee also sought to calm those who fear the new commission, now dominated 3-2 by Republicans, will be more partisan and less independent than in the past. (See related story, *FERC Won't Fall to Partisanship, Chatterjee Promises ISO-NE*, p.10.)

Advice for McIntyre

Among those offering McIntyre congratulations was interim NERC CEO Charles Berardesco. "We have a long and productive relationship with FERC," he said in a statement. "NERC looks forward to continuing work on the key priorities impacting grid reliability, including the changing resource mix, essential reliability services and security challenges."

Some of those issuing statements welcoming McIntyre also gave advice on how he should rule on the NOPR and other issues.

The Affordable Energy Coalition, an *ad hoc* group that includes industrial customers and the American Wind Energy Association, urged McIntyre to reject the NOPR. "Chairman McIntyre joins the commission at a critical moment in the agency's history," the group said, adding that the ruling on the DOE proposal "will determine the affordability of electricity for tens of millions of American consumers."

John Moore, director of the Natural

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McIntyre Takes FERC Chair; Wins Delay on NOPR

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Resource Defense Council's Sustainable FERC Project said the commission "is at a crossroads."

"As an independent commission, FERC has largely avoided pressure from the White House and Congress in recent years, and hewed mostly to a nonpartisan (if not always harmonious) path," Moore wrote in a blog post. "In the last several months, however, FERC has faced unprecedented pressure from the Trump administration to subsidize coal plants and nuclear for their claimed 'resilience' attributes. McIntyre's leadership will be a test of the extent to which he can withstand pressure from the White House to bend to its political ends."

Clients, Contributions

McIntyre replaces Chatterjee, a former aide to Senate Majority Leader Mitch McConnell (R-Ky.), whose nearly four months as interim chair have been marked by his advocacy for the coal industry and sparring on social media with actor James Cromwell.

It is the first time FERC has had a full complement of five members since October 2015, when Republican Philip Moeller left the commission. The panel faces decisions on ways to harmonize RTO markets with state subsidies for nuclear plants, rulemakings on energy efficiency and distributed energy resources, and pipeline licensing.

During his two decades at Jones Day, McIntyre represented clients in administrative and appellate litigation, compliance and enforcement matters, and corporate transactions. According to his Jones Day biography, McIntyre's clients have included American Electric Power (negotiations to settle claims in connection with the California energy crisis); SCANA (settlement of Calpine bankruptcy claims); South Carolina Electric & Gas (FERC-jurisdictional rates for electric transmission service); Public Service Company of North Carolina (litigation before FERC concerning the Atlantic Coast Pipeline); and E.ON AG ($1.9 billion acquisition of the North American operations of Irish wind farm operator Airtricity).

McIntyre has been a regular contributor to Republican candidates. In the 2016 presidential primaries, he initially backed both Wisconsin Gov. Scott Walker and Sen. Marco Rubio (R-Fla.), giving each $1,000 in July 2015. He gave Rubio another $1,700 in February 2016. He also has contributed to the Republican National Committee, Sens. Tom Cotton (R-Ark.), Pat Toomey (R-Pa.) and Rob Portman (R-Ohio), and Republican presidential nominees Mitt Romney and John McCain.

McIntyre is a graduate of San Diego State University (A.B., political science) and Georgetown Law. His wife, Jennifer Brosnahan McIntyre, a former deputy general counsel for the U.S. Department of Transportation and associate counsel to President George W. Bush, became chief counsel of Boeing's Washington Operations in 2010. Married in 2008, the couple have three children.

Cook reported from Carmel, Ind. Kuser reported from Boston.