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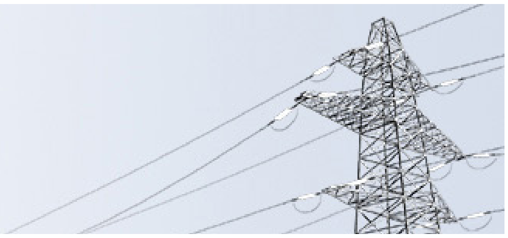

ISSN 2377-8016 : Volume 2019/Issue 5 January 29, 2019

PG&E Files for Bankruptcy

By Rich Heidorn Jr.

As expected, PG&E Corp. and its primary operating unit, Pacific Gas and Electric, *filed* for reorganization under Chapter 11 of the U.S. Bankruptcy Code this morning.

The company said the filing in the U.S. Bankruptcy Court for the Northern District of California is an effort to provide "the orderly, fair and expeditious resolution of its liabilities resulting from the 2017 and 2018 wildfires."

It said it made the filing after taking into account California officials' statements last week clearing it of liability for the 2017 Tubbs Fire. (See related story, *PG&E Cleared in Fire that Burned Santa Rosa*.)

The parent company listed total assets of $71.4 billion and debts of $51.7 billion. But those debts do not include all the expected wildfire claims. Its *list* of its 50 biggest creditors is dominated by banks, led by the Bank of New York Mellon and Citibank.

PG&E also filed a *complaint* asking the court to issue an injunction confirming its exclusive jurisdiction over the debtors' rights to reject power purchase agreements and other FERC-regulated agreements. The complaint was in response to FERC's orders last week asserting that it has concurrent jurisdiction

Continued on page 5

PJM Stakeholders Deadlock on Energy Price Formation

By Rich Heidorn Jr.

WILMINGTON, Del. — PJM members were unable to reach consensus on any of five proposals to improve price formation for energy and reserves Thursday, leaving the Board of Managers to decide itself on what will be included in its planned FERC filing.

PJM Board Members O.H. Dean Oskvig (left) and Terry Blackwell | *© RTO Insider*

A proposal by Calpine, which received a 73% support Wednesday in a vote by the Energy Price Formation Senior Task Force vote, garnered less than 42% support in a sector-weighted vote of the Markets and Reliability Committee on Thursday. Calpine's proposal was a modification of PJM staff's proposal, which won little more than 30% support Thursday.

The top-ranked vote was for a proposal by the Independent Market Monitor, which won 52% support — still well below the 66.7% threshold needed for approval.

Also failing was a compromise package by the D.C. Office of the People's Counsel (less than 12%) and a proposal by Vistra Energy that largely borrowed from PJM's proposal (44%).

The votes followed about three and a half hours of debate and parliamentary maneuvering by members and was observed by O.H. Dean Oskvig and Terry Blackwell, two members of PJM's board, which had set a Jan. 31 date for stakeholder action.

Continued on page 24

Western EIM Looks to Expand its Authority

By Hudson Sangree

The Western Energy Imbalance Market Governing Body heard from stakeholders Thursday about proposals to increase the market's say over its existing interstate real-time market and an expanded day-ahead market (EDAM), if it's eventually established.

The discussion was part of a governance review, required by the EIM's charter, that began in December with a *straw proposal* and issue paper drafted by CAISO staff. The main issues are the delegation of authority between the EIM and CAISO and the process and criteria for selecting body members.

"The ISO and the EIM Governing Body are hoping for robust stakeholder comments on all these issues," the straw proposal says.

On Thursday, EIM Governing Body members got an earful of comments from a half-dozen stakeholders at CAISO headquarters in Folsom, Calif.

Laura Trolese | *Public Generating Pool*

Laura Trolese, a senior policy analyst with the

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In this week's issue

AEP Reports Positive Earnings for Q4 2018

AEP's Columbus, Ohio, headquarters

American Electric Power on Thursday *reported* strong fourth-quarter and year-end earnings in line with analysts' expectations.

While results were dampened by the global trade wars and a stronger dollar, company executives said they expect the positive economic activity to continue in 2019.

AEP earned $363 million ($0.74/share) last quarter, compared to $401 million ($0.81/share) for the same period in 2017. Analysts had expected earnings of 72 cents/share, according to the Zacks Consensus Estimate.

Year-end earnings were $1.92 billion ($3.90/share), up from $1.91 billion ($3.89/share) the year before.

"Our strong earnings performance in 2018 was driven by a robust economy," CEO Nick Akins said during a call with analysts. "2018 has clearly been a great year, but we're even more pleased with our track record over the last eight."

Akins said that over the past five years, the Columbus, Ohio-based company has provided a total shareholder return of more than 92%, greater than both the S&P 500 Index (50%) and the S&P 500 Electric Utilities Index (65%).

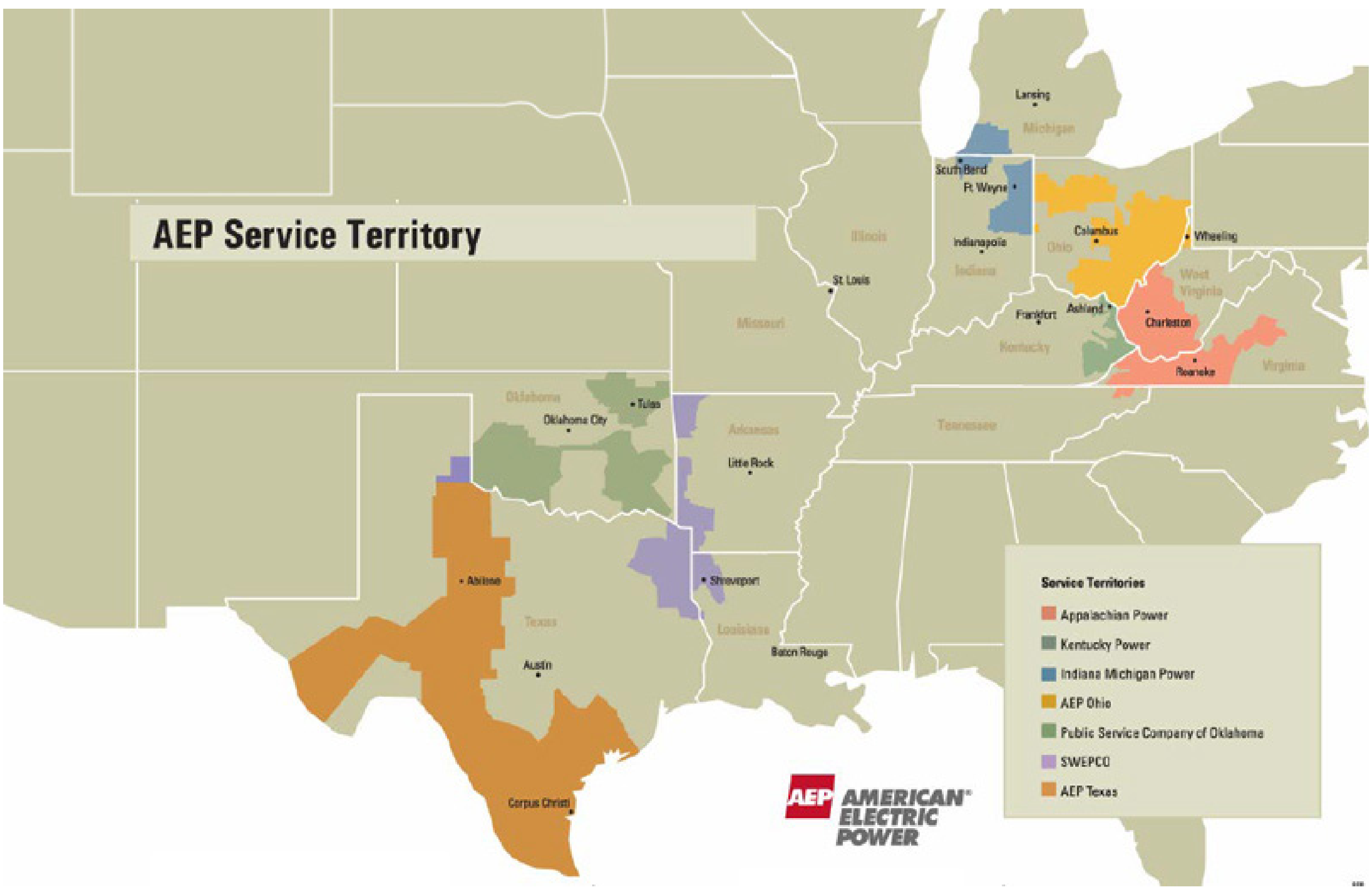
CFO Brian Tierney noted AEP's performance would have been even better had it not been for its service territory's higher exposure to tariffs. He said 38% of all U.S. exports originate in AEP's 11 regulated states.

"The early-year performance carried us through the headwinds," Tierney said, referring to the company's benefits from tax reform.

The company expects positive economic activity to continue in 2019, fueled by oil and gas development in its western footprint.

AEP's stock price opened at $77.10 on Thursday and closed at $77.74. It has gained 11.5% over the past year. ■

— Tom Kleckner



AEP's service territory | *AEP*

FERC & Federal News

NERC Standards Committee Briefs

"This may be the quickest meeting we've ever had," NERC Standards Committee Chair Andrew Gallo marveled after gaveling the committee to a close after a lickety-split 33-minute *conference call* Wednesday.

Team Gets Go Ahead on Standards Retirement Review

Members unanimously voted to authorize the standards drafting team (SDT) that arose from NERC's 2017 Standards Efficiency Review (SER) to consider the retirements of all or part of more than 30 reliability standards (Project 2018-03).

The SER used a risk-based analysis to identify duplicative, administrative and otherwise unnecessary reliability standards. The SER team submitted a standard authorization *request* (SAR), which the Standards Committee accepted in August, before appointing the SDT in October.

"The establishment of the standards drafting team started the formal process to modify the standards, which includes finalizing the SAR and balloting the retirements," NERC spokeswoman Kimberly Mielcarek explained.

In addition to retiring parts of existing standards, the SDT is considering the withdrawal of standard MOD-001-2, which was filed for regulatory approval in February 2014 and is still pending. The SAR says the standard is unnecessary because it concerns flowgates, transfer capability and congestion, "elements that impact transmission costs, rather than actual management of the" bulk electric system.

"Transmission operators, balancing authorities and reliability coordinators must operate the system in such a way that it's reliable, both for current operations and for contingency conditions, and must remain impervious (according to FERC Standards of Conduct) to cost-related issues," the SAR said.

Executive Committee Members Elected

Sean Bodkin of Dominion Energy; Linn Oelker of Louisville Gas & Electric; and Steve Rueckert of the Western Electricity Coordinating Council were elected to the SC's Executive Committee.

Errata OK'd on Canadian Revisions to TPL-007

The committee unanimously approved a correction to the Canadian revisions to TPL-007 (Transmission System Planned Performance for Geomagnetic Disturbance Events) to note that no NERC standards are effective in Canada until approved by a Canadian governmental authority.

Jan. 31 Call Set to Appoint Drafting Team on Inverters

Members agreed to schedule a *special call* Jan. 31 to discuss and vote on nominees for a SAR drafting team for Reliability Standard PRC-024-2.

Members decided to table the item after declining to waive the five-day notice rule before votes. NERC staff had submitted its recommended nominees after the nomination period closed Jan. 18.

The SAR was prepared by the Inverter-Based Resource Performance Task Force (IRPTF) based on disturbance analyses and the development of the PRC-024-2 Gaps Whitepaper.

The IRPTF identified potential modifications to PRC-024-2 to "ensure inverter-based generator owners, operators, developers and equipment manufacturers understand the intent of the standard." (See *NERC to Try Again on Inverter Rules*.)

Howard Gugel, NERC senior director of engineering and standards, requested the vote before the Board of Trustees meeting Feb. 6.

Election to Replace Luminant's Hampton

The committee will accept nominations through Feb. 18 for a replacement for Segment 6 representative Brenda Hampton, who has resigned from Luminant Energy.

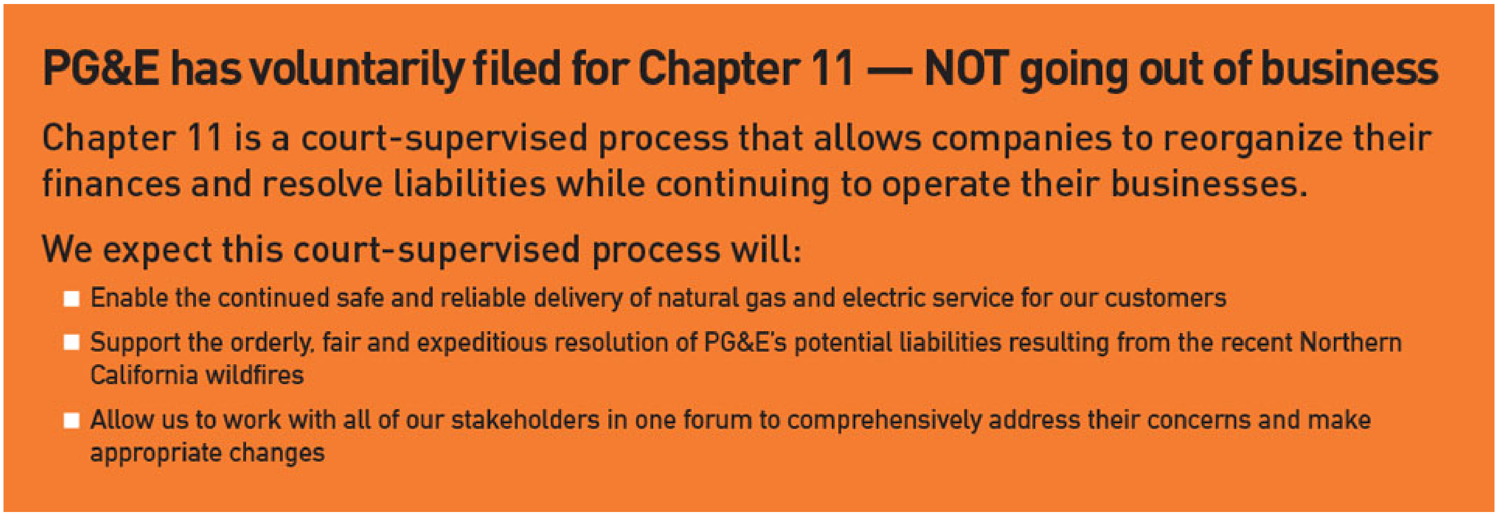
Hampton's replacement will serve for Segment 6 for the remainder of 2019 and 2020. The vote will be taken Feb. 25 to March 6. Hampton is moving to be closer to family, members were told. ■

— Rich Heidorn Jr.

NERC's D.C. offices | *© RTO Insider*

CAISO/WECC NEWS

PG&E Files for Bankruptcy



PG&E said it will continue operations during bankruptcy proceedings. | *PG&E*

Continued from page 1

with the court over the disposition of wholesale power contracts the company seeks to reject through bankruptcy. (See related story, *FERC Claims Authority over PG&E Contracts in Bankruptcy*.)

"Our most important responsibility is and must be safety, and that remains our focus. Throughout this process, we are fully committed to enhancing our wildfire safety efforts, as well as helping restoration and rebuilding efforts across the communities impacted by the devastating Northern California wildfires," interim PG&E Corp. CEO John R. Simon said in a statement released shortly after midnight. "We also intend to work together with our customers, employees and other stakeholders to create a more sustainable foundation for the delivery of safe, reliable and affordable service in the years ahead. To be clear, we have heard the calls for change, and we are determined to take action throughout this process to build the energy system our customers want and deserve."

PG&E asked the court's approval to sign a $5.5 billion in debtor-in-possession financing agreement to allow the company to continue maintenance and investments in safety and reliability during the bankruptcy proceedings. JPMorgan Chase, Bank of America, Barclays, Citi, BNP Paribas, Credit Suisse, Goldman Sachs, MUFG Union Bank and Wells Fargo will act as joint lead arrangers.

"We believe that this process will make sure that we have sufficient liquidity to serve our customers and support our operations and obligations," Simon said.

PG&E also filed motions seeking court approval to pay employees' wages and benefits and continue its support of existing customer programs for energy efficiency and low-income ratepayers. The company said it will pay suppliers in full for goods and services provided going forward.

The company named James Mesterharm and John Boken, managing directors at AlixPartners, as chief and deputy chief restructuring officers, respectively.

PG&E shares, which closed Monday at $12.01, were up slightly in pre-market trading today. ■

CAISO/WECC News

PG&E Cleared in Fire that Burned Santa Rosa

Embattled Utility Fighting Probation Case in Court

By Hudson Sangree

California fire investigators on Thursday said Pacific Gas and Electric was not responsible for the Tubbs Fire, a catastrophic blaze that leveled parts of the city of Santa Rosa in October 2017.

The blaze was a major source of the utility's anticipated $30 billion in wildfire liability that led it to announce it would file for bankruptcy by Jan. 29.

The news came as PG&E continued to fight proposed new probation requirements stemming from the San Bruno gas line explosion in 2010 and came under fire from shareholders who said it doesn't need to seek Chapter 11 reorganization.

"The news from Cal Fire [the California Department of Forestry and Fire Protection] that PG&E did not cause the devastating 2017 Tubbs fire is yet another example of why the company shouldn't be rushing to file for bankruptcy, which would be totally unnecessary and bad for all stakeholders," BlueMountain Capital Management, a major PG&E shareholder, said in a news release Thursday afternoon.

BlueMountain has argued in open letters to PG&E that the company is not insolvent and should postpone its bankruptcy plans. Shareholders would likely lose out to creditors in a bankruptcy proceeding. The firm said Thursday it was planning to run a slate of candidates to replace PG&E's current board members in May.

PG&E's battered stock price shot up after Cal Fire's announcement, going from around $7/share to $14/share in trading Thursday, but the utility remained wary about its prospects.

"Regardless of today's announcement, PG&E still faces extensive litigation, significant potential liabilities and a deteriorating financial situation, which was further impaired by the recent credit agency downgrades to below investment grade," the utility said Thursday. "Resolving the legal liabilities and financial challenges stemming from the 2017 and 2018 wildfires will be enormously complex and will require us to address multiple stakeholder interests, including thousands of wildfire victims and others who have already made claims and likely thousands of others we expect to make claims."

Cal Fire has cleared PG&E of starting the 2017 Tubbs Fire, the second most destructive in California history. | *Cal Fire*

California Gov. Gavin Newsom held a press conference in the state Capitol on Thursday to address the finding.

PG&E may not be liable for the Tubbs fire, Newsom said, but "it was found liable for 17 other fires in 2017." (Cal Fire found PG&E equipment was a cause of 17 major Northern California fires in October 2017.)

"This obviously begs the question, 'Now what?'" the governor said. "Do we anticipate that PG&E will move forward ... as they previewed this next week to file bankruptcy? That is an open-ended question, and that's a question for PG&E."

No Violations

Cal Fire said a private landowner's electrical equipment had sparked the Tubbs Fire, which killed 22 people, destroyed 5,636 structures and burned 36,807 acres. The fire was one of 21 major wildfires that tore through Northern California during weeks when high winds whipped the blazes into fast-moving infernos.

"After an extensive and thorough investigation, Cal Fire has determined the Tubbs Fire, which occurred during the October 2017 fire siege, was caused by a private electrical system adjacent to a residential structure," the agency said. "Cal Fire investigators did not identify any violations of state law ... related to the cause of this fire."

That was not the case for the San Bruno gas explosion and fire, which killed eight residents and wrecked a neighborhood in suburban San Francisco. Jurors in 2016 convicted PG&E of six felony counts for violating safety regulations and obstructing an investigation. The company has been on probation, with a federal judge and a monitor overseeing it, since January 2017.

The judge in the case recently pressed PG&E and federal officials for information on whether the utility may have violated the terms of its probation by sparking other wine country fires. The utility is also suspected of causing the Camp Fire, the deadliest fire in state history, which killed 86 people and wiped out the town of Paradise in November.

On Jan. 9, Judge William Alsup, of the U.S. District Court in San Francisco, ordered PG&E and federal prosecutors to show cause why he should not impose sweeping new probation conditions on PG&E. (See ***Judge, Gov., CPUC and Protesters Weigh in on PG&E Mess***.) The proposed conditions include requiring the utility to inspect its entire grid, to trim trees and branches encroaching on wires, and to fix problematic lines, poles and transformers — all before the start of the 2019 fire season this summer.

PG&E could only deliver electricity through parts of its system deemed safe under the judge's plan, which Alsup said is intended to "reduce to zero" the number of wildfires sparked by PG&E equipment during the coming fire season.

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Fire Victims' Attorney Doesn't Believe PG&E Will File for Chapter 11

Erin Brockovich Joins Protest

[Editor's Note: This article was originally published Jan. 22, before PG&E filed for bankruptcy on Jan. 29.]

By Hudson Sangree

SACRAMENTO, Calif. — Could PG&E's announcement that it plans to file for bankruptcy Jan. 29 be a ploy? A lawyer representing thousands of wildfire victims said she thinks it's quite possible.

On the steps of the California State Capitol last week, former State Sen. Noreen Evans, now a plaintiffs' attorney, said she believes PG&E won't go through with filing for Chapter 11 reorganization at the end of the month, as it has said it would.

The utility's move likely is an attempt to get California's new governor, Gavin Newsom, and lawmakers to intervene, Evans said.

"I think there's a very huge possibility they won't file as planned," Evans said. "It would open a can of worms."

If PG&E, the state's largest utility, were to enter bankruptcy, it would call into question billions of dollars in energy contracts and payments to CAISO, among other obligations. (See *PG&E Meltdown Could Cost CAISO Members, Generators*.)

Evans, whose former district includes areas of Santa Rosa, devastated by wildfires in 2017, is now part of a legal team representing 4,000

Erin Brockovich addresses a crowd of fire victims and reporters on the steps of the California state Capitol. | © *RTO Insider*

fire victims in the state's catastrophic blazes during the past two years.

The ex-lawmaker joined famed PG&E foe Erin Brockovich at the capitol to protest PG&E's alleged efforts to avoid financial liability for the Camp Fire, which killed 86 residents and destroyed the town of Paradise in November 2018. The wildfire was by far the deadliest blaze in state history.

Brockovich urged California leaders to do more than have a seat at the table in deciding PG&E's fate. "Be the head of the table and take control of this runaway monopoly," she said.

Brockovich gained movie fame after she helped build a case against PG&E in the 1990s for polluting the desert town of Hinkley, Calif., with hexavalent chromium. She has remained one of the utility's most prominent critics.

Brockovich, Evans and other victim advocates don't want PG&E to enter bankruptcy because it would put plaintiffs and their lawyers in line for payment behind PG&E's secured creditors. A bankruptcy judge would parcel out compensation, not jurors.

Investors are also arguing against PG&E's bankruptcy plan. BlueMountain Capital, a

Former state Sen. Noreen Evans, now a lawyer representing fire victims, says PG&E's planned bankruptcy filing is a ploy to get lawmakers to intervene. | © *RTO Insider*

Wildfire victims holding signs join Erin Brockovich on the steps of the state Capitol in Sacramento to protest PG&E's planned bankruptcy. | © *RTO Insider*

CAISO/WECC News

major shareholder, sent PG&E a second letter this week urging it to postpone filing for bankruptcy protection and arguing bankruptcy is unwarranted. PG&E shareholders would likely lose their investments in a Chapter 11 reorganization.

Evans and other PG&E critics, notably public interest group Consumer Watchdog, have said PG&E's bankruptcy is a ruse to get state lawmakers to do what they wouldn't do last year — get PG&E off the hook for billions of dollars in liability.

After the wine country fires of 2017 devastated Napa and Sonoma counties, PG&E lobbied lawmakers to overturn California's long-standing use of inverse condemnation to hold utilities strictly liable, regardless of negligence, for damage to private property caused by their equipment.

Gov. Jerry Brown sided with PG&E last year because he was worried the giant utility would renege on the billions of dollars it plans to invest in renewable energy. In passing SB 901 last year, lawmakers didn't alter inverse condemnation, but they provided a process by which utilities could seek long-term bond financing for wildfire debts. (See *California Wildfire Bill Goes to Governor*.)

Reporters surround Erin Brockovich on the steps of the state Capitol in Sacramento after she decried PG&E's planned bankruptcy filing. | *© RTO Insider*

The process, however, didn't apply to 2018 fires, including the Camp Fire. Lawmakers initially showed interest in amending SB 901 to include last year's fires but have recently backed off because of public anger against PG&E.

Though state officials have yet to determine the cause of the Camp Fire, PG&E has said its transmission line sparked flames near the start of the Camp Fire on the morning it began.

PG&E announced earlier this month it would file for bankruptcy because it faces at least $30 billion in financial exposure for the Camp Fire and wine country fires. Absent state intervention, it said, bankruptcy was its only viable option. ■

PG&E Cleared in Fire that Burned Santa Rosa

Continued from page 6

Last week, Alsup asked PG&E and government prosecutors to comment on his tentative finding that the "single most recurring cause of the large 2017 and 2018 wildfires attributable to PG&E equipment has been the susceptibility of PG&E's distribution lines to trees or limbs falling on them during high-wind events."

That has often happened in rural areas where uninsulated power conductors are pushed together by falling trees or limbs, dropping electrical sparks on the vegetation below. During California's dry wildfire season, "these electrical sparks pose an extreme danger of igniting a wildfire," the judge wrote.

Alsup scheduled a hearing for Jan. 30 to weigh the matters and required the parties to file their briefs by Wednesday.

Overlapping Oversight

In its response filing with the court, PG&E argued it has more than 100,000 miles of overhead lines, making Alsup's plan virtually impossible to comply with and extremely expensive, even if it could. Inspections, repairs and extensive tree clearing could cost between $75 billion and $150 billion, requiring PG&E to quintuple for one year the rates it charges its 16 million California customers, the utility contended.

The judge's plan could also undermine the regulatory authority of FERC and the California Public Utilities Commission, PG&E argued.

"The proposed modifications involve a host of policy decisions about how to address safety, reliability and cost, and, in particular, how to do so against the backdrop of both drastic climate change and a complex state and federal regulatory framework that requires the delivery of electricity to everyone in California through an interconnected grid," the utility's lawyers wrote. "The court's proposal would make these policy decisions in the context of a probation hearing, even though regulators are currently grappling with these very same issues.

"And the proposed modifications would do so by giving PG&E only two options: either remove an extraordinary number of trees across every segment of its electric grid within six months, or instead de-energize transmission and distribution lines, shutting off power across Northern California and potentially beyond."

Government lawyers said they too were worried about the court impinging on federal and state authority and did not support the proposed probation changes.

"While the United States shares the court's interest in imposing conditions of probation aimed at ensuring that the inhabitants of the Northern District are protected from the death and destruction caused by wildfires, on this record, the United States is not in a position to address the feasibility of implementing the conditions and the chance that they will effectuate that goal," lawyers from the U.S. Attorney's office wrote.

"As a threshold matter, the government does not believe the record supports imposition of the proposed conditions as they are currently drafted. Moreover, as drafted, the court's proposed conditions may overlap with state and federal regulations (e.g., the Federal Power Act and the California Public Utilities Code) and touch on the province of state and federal regulators (e.g., California Public Utilities Commission and the Federal Energy Regulatory Commission)."

They recommended that the judge ask the federal monitor overseeing PG&E to review and evaluate the proposed conditions. ■

CAISO/WECC NEWS

Western EIM Looks to Expand its Authority

Continued from page 1

Pacific Northwest's Public Generating Pool, recommended that the EIM Regional Issues Forum be given a more formal role, including being able to discuss and advise the Governing Body on CAISO stakeholder initiatives, which it currently isn't allowed to do.

Lea Fisher, representing Seattle City Light, called for public power providers to play more of a role in EIM governance, saying they are currently underrepresented.

Jennifer Gardner | *Western Resource Advocates*

And Jennifer Gardner, an attorney with Western Resource Advocates, said public interest lawyers and consumer advocates should also have more of a presence in the EIM.

Idaho Public Utilities Commissioner Kristine Raper briefed the Governing Body on the activities of the EIM's Body of State Regulators (BOSR). She said the BOSR recommends a governance revamp that "simplifies and shares [authority] more equitably" between the EIM and CAISO.

Kristine Raper | © *RTO Insider*

Altogether, the EIM had received more than 20 sets of *comments* from stakeholders on the governance review by a Jan. 11 deadline. Thursday's briefing was meant to give Governing Body members an overview of those comments and take comments over the phone and in person.

CAISO's Tariff delegates certain responsibilities to the EIM, including parceling out its decision-making and advisory duties. The EIM's Governing Body now has primary authority over market rules that are EIM-specific, meaning they apply uniquely to the EIM balancing area or apply differently within that area than in the ISO's California territory. The EIM can play an advisory role on a broader range of issues. (See *EIM Leaders OK Governance 'Guidance' Proposal*.)

The straw proposal would expand the EIM's decisional authority to Tariff amendments where it is the "primary driver," even if it is not solely affected by the changes under consideration. That piece could be approved separately as soon as this spring, CAISO staff told the Governing Body.

Commenters were divided over whether EIM governance changes should be adopted incrementally or all at once, and how the proposed EDAM should be factored into that decision.

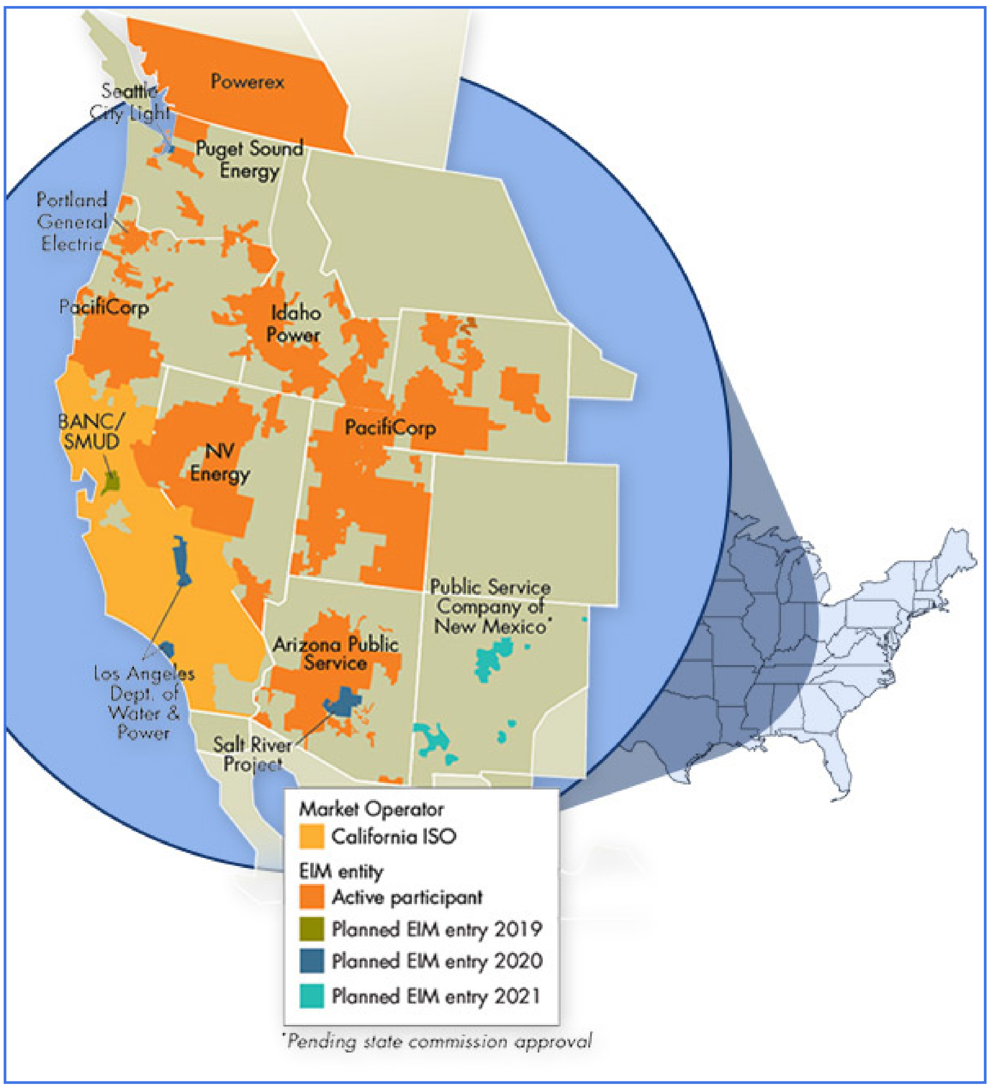
"'The improvements that you're asking for are all absolutely valid," Governing Body member Kristine Schmidt told the speakers.

Another member, John Prescott, said his takeaway from the comments was that staff should move forward quickly with the recommendation to expand the EIM's decisional authority.

Prescott's colleague, Travis Kavulla, said that before any changes are made, he'd like to see a clearer delineation of authority between the EIM and ISO than the subjective process the straw proposal recommends.

"It shouldn't be like a priest asking in the confessional, 'What is in your heart?'" when deciding if a sin is venial or mortal, Kavulla said. "It serves everyone better when the lines of authority are drawn more clearly."

An EIM Regional Issues Forum is *scheduled* for March 11 in Albuquerque, N.M., followed by a Governing Body meeting on March 12 in the same location. The last forum was held in Phoenix in October. (See *Western States to Tackle Wildfires, Renewables, EIM Told*.) ■



The Energy Imbalance Market currently has seven participants in addition to CAISO. | *CAISO*

CAISO/WECC NEWS

Newsom Names 2 New CAISO Governors

Governor also Appoints PUC Commissioner, Members of Wildfire Panel

By Hudson Sangree and Robert Mullin

California Gov. Gavin Newsom named new members to the CAISO Board of Governors last week, along with a new member to the Public Utilities Commission and members of the state's newly created commission on catastrophic wildfires.

Severin Borenstein | *University of California Berkeley*

To the CAISO board, Newsom appointed University of California Berkeley Professor Severin Borenstein and Los Angeles Business Council President Mary Leslie. He also reappointed current CAISO Chairman David Olsen to a second two-year term.

The five-member CAISO board will have to grapple with major issues this year, including the ISO's new reliability coordinator role for much of the West. Service on the CAISO board pays $40,000 per year.

David Olsen | © *RTO Insider*

Borenstein has been a professor at Berkeley's Haas School of Business since 1996. He serves as the faculty director of the business school's Energy Institute. Previously he was a professor at the University of California Davis.

Leslie has been president of the LABC since 2002. She was the deputy mayor of Los Angeles under Mayor Richard Riordan from 1994 to 1995 and a commissioner at the Los Angeles Department of Water and Power from 2001 to 2003.

Mary Leslie | *U.S. Dept. of Energy*

Challenges also await the PUC as it tries to deal with the fallout from PG&E Corp.'s collapse because of massive wildfire liability.

Genevieve Shiroma | *ALRB*

Newsom named Genevieve Shiroma, an elected director of the Sacramento Municipal Utility District, to fill the seat on the PUC left vacant when Commissioner Carla Peterman's term expired in December.

Shiroma was a longtime member of the state Agricultural Relations Board and its former chairwoman. She was chief of the Air Quality Branch at the California Air Resources Board from 1990 to 1999 and an air quality engineer from 1978 to 1990.

The PUC position pays $153,689. Newsom's nominees to the PUC and CAISO require State Senate approval.

Newsom appointed Peterman to an unpaid seat on the state's new Commission on Catastrophic Wildfire Cost and Recovery, established as part of last year's Senate Bill 901 to examine wildfires caused by utility infrastructure and "to produce recommendations on changes to law that would ensure equitable distribution of costs among affected parties."

The six-member panel is required to hold at least four public workshops and provide recommendations to the governor and State Legislature by July 1.

In her last meeting with the CPUC in December, Peterman emerged as a strong proponent of giving utilities leeway to de-energize transmission lines under dangerous weather conditions. De-energization "is an option we don't want to exercise often, but we do want the option to exercise," she said at the time. (See *Calif. Regulators to Scrutinize De-energization*.)

Joining Peterman on the panel is former State Assemblyman Dave Jones, the state's insurance commissioner from 2011 until earlier this month. Jones previously served as counsel to U.S. Attorney General Janet Reno and worked from 1989 to 1995 representing low-income families and individuals for Legal Services of Northern California.

The commission will also include Crowell & Moring attorney Michael Kahn, who was CAISO chair from 2001 to 2005 and head of the California Electricity Oversight Board from 2000 to 2001. Kahn was also a member of the California State Insurance Commissioner Task Force on Environmental Liability Insurance from 1993 to 1994.

The legislature will fill the other three seats on the wildfire panel. Appointees do not require Senate approval. ■

Klamath Dam Licensing Must Proceed, Court Rules

By Robert Mullin

A Northern California Native American tribe scored a key victory Friday after a federal appeals court ruled that FERC must act on a long-delayed licensing review for a series of aging hydroelectric dams that straddle the California-Oregon border (14-1271).

The D.C. Circuit Court of Appeals ruling in favor of the Hoopa Valley Tribe could force PacifiCorp to proceed with plans to decommission four of the seven dams that compose its 169-MW Klamath Hydroelectric Project before the utility is in a position to transfer the assets to a new owner.

In 2012, the Hoopa petitioned for a declaratory order asking FERC to find that PacifiCorp had "failed to diligently pursue relicensing" of the Klamath project. The tribe asked the commission to dismiss the utility's relicense application and direct it to file a plan for decommissioning.

FERC rejected that petition in June 2014 and denied a request for rehearing a month later (P-2082-058).

The D.C. Circuit's Jan. 25 ruling vacated both 2014 orders and remanded the issue back to the commission.

"FERC shall proceed with its review of, and licensing determination for, the Klamath Hydroelectric Project," the court ordered.

In Limbo

The four dams at issue in the dispute are slated for removal in 2020, pending FERC approval. But a complex set of developments over the last decade has prompted the commission to postpone any action on relicensing the facility until a consortium of interested parties in the region can hash out more details about the decommissioning.

PacifiCorp decided to remove the four dams 15 years ago following a long-running dispute over water rights and the health of salmon runs in the Klamath Basin.

Two years before the project's license was set to expire in 2006, the utility filed a proposal with FERC to relicense the three upper dams while decommissioning four lower dams deemed too costly to modernize. Since then, the project has been operating under a series of annual interim licenses while approval of the broader license sits in limbo, largely because of PacifiCorp's own efforts.

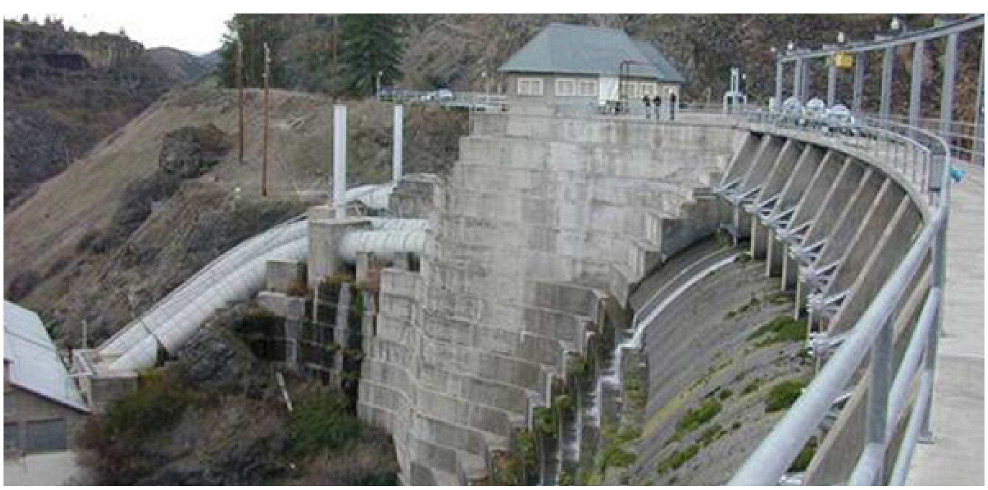
The cause for that delay is embedded in the 2010 Klamath Hydroelectric Settlement Agreement (KHSA) reached by the consortium, which includes California, Oregon, area tribes, farmers, ranchers, fisherman, environmental groups and PacifiCorp.

The KHSA imposed a set of interim environmental measures and funding obligations on PacifiCorp ahead of the targeted 2020 decommissioning date. It also contained a provision that California, Oregon and PacifiCorp would agree to sidestep the one-year statutory limit for states to issue water quality certifications under Section 401 of the federal Clean Water Act (CWA) — a prerequisite for FERC's licensing review — until decommissioning details were worked out.

To circumvent the CWA's requirement that a state waive its certification authority if it fails to respond within a year (allowing FERC to proceed with relicensing without certification), PacifiCorp has annually withdrawn and resubmitted its certification requests. That measure was intended to provide cover for California and Oregon over its response time requirements while also buying the company time to secure federal funding to remove the dams before having to obtain new licenses from them.

After the funding effort fell through, a subset of the KHSA parties in 2016 signed an amended agreement that would transfer the licenses for the four dams to a newly formed Klamath River Renewal Corp. (KRRC). FERC last March approved PacifiCorp's request to split the lower dams into a separate license, but it declined to rule on transferring the license until the KRRC could prove that it was capable of managing decommissioning (P-2082-062).

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



J.C. Boyle Dam and fish ladder, one of four Klamath dams slated for removal in 2020 | *U.S. Fish and Wildlife Service*

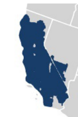
Single Issue

The Hoopa tribe, which lives downstream from the dams, was never a party to the KHSA. Instead, it petitioned FERC for the declaratory order in 2012 in an effort to jump-start the process of restoring the salmon that have traditionally fed its people. After the FERC's rejections of its petition and rehearing request, the tribe asked for a review by the D.C. Circuit.

The court said its Jan. 25 ruling pivoted on a single issue: "whether a state waives its Section 401 authority when, pursuant to an agreement between the state and applicant, an applicant repeatedly withdraws and resubmits its request for water quality certification over a period of time greater than one year."

The judges authoring the decision found the language of Section 401 clearly demonstrates that states must make their water quality determinations within "reasonable time" not to exceed one year.

CAISO/WECC News



"The pendency of the requests for state certification in this case has far exceeded the one-year maximum," the court said. "PacifiCorp first filed its requests with the California Water Resources Control Board and the Oregon Department of Environmental Quality in 2006. Now, more than a decade later, the states still have not rendered certification decisions."

The court said PacifiCorp entered into an agreement with the reviewing states to delay certification and never intended to submit a "new request" each year.

"Indeed, as agreed, before each calendar year had passed, PacifiCorp sent a letter indicating withdrawal of its water quality certification request and resubmission of the very same … in the same one-page letter … for more than a decade," the court said. "Such an arrangement does not exploit a statutory loophole; it serves to circumvent a congressionally granted authority over the licensing, conditioning and developing of a hydropower project."

The court pointed out that while the CWA does not define "failure to act" or "refusal to act," the states' actions as directed by the KHSA "constitute such failure and refusal within the plain meaning of these phrases."

"Thus, if allowed, the withdrawal-and-resubmission scheme could be used to indefinitely delay federal licensing proceedings and undermine FERC's jurisdiction to regulate such matters," the court found.

Seat at the Table

The court also rebuffed FERC's contention that finding the states had waived their review rights would set off a cycle of "futility," requiring the commission to deny PacifiCorp's license, which would force the utility to file a decommissioning plan subject to its own set of "oft-delayed" state certifications.

"However, such practical concerns do not trump express statutory directives. … Had FERC properly interpreted Section 401 and found waiver when it first manifested more than a decade ago, decommissioning of the project might very well be underway," the court said.

The judges also pointed to FERC's "critical role" in protecting the public interest with respect to hydropower projects, including soliciting input from affected parties and performing in an "advisory role" in settlement discussions for the development or decommissioning of hydro projects.

"Here, it did neither," the court found. "Hoopa's interests are not protected directly as it is not a party to the KHSA or amended KHSA, nor are its interests protected indirectly through any participation by FERC in those same settlement agreements. Therefore, we disagree that a finding of waiver is futile because, at a minimum, it provides Hoopa and FERC an opportunity to rejoin the bargaining table."

PacifiCorp spokesman Bob Gravely told RTO Insider that the company is still reviewing the D.C. Circuit ruling to "fully understand its implications."

"In the meantime, we're continuing to operate under the settlement agreement that is in place," he said. ■

CAISO/WECC News

FERC Claims Authority over PG&E Contracts in Bankruptcy

By Hudson Sangree

NextEra is concerned about its solar and wind power purchase agreements with PG&E if the utility enters bankruptcy. | *NextEra*

FERC said it shares authority with the federal bankruptcy court over any power purchase agreements Pacific Gas and Electric seeks to modify after filing for bankruptcy, as the utility did on Tuesday.

The commission ruled Friday in a petition by NextEra Energy (*EL19-35*) and on Monday in response to one by Exelon (*EL19-36*).

As part of its bankruptcy filing, PG&E *asked* the U.S. Bankruptcy Court on Tuesday to issue an injunction confirming its exclusive jurisdiction over the debtors' rights to reject PPAs and other FERC-regulated agreements. (See related story, *PG&E Files for Bankruptcy.*)

The issue arose after NextEra Energy and Exelon petitioned FERC for declaratory orders against PG&E because it was concerned, as many generators have been, that the utility would try to get out of high-cost contracts it had signed with owners of solar, wind and other renewable electricity sources.

NextEra's and Exelon's subsidiaries sell wind and solar energy to PG&E.

In its petition, NextEra asserted that the Federal Power Act created "a comprehensive regulatory framework for protecting the public interest" and entrusted the commission with "the authority to implement that framework."

"According to NextEra, the core of the commission's regulatory responsibilities under the FPA is the exclusive authority to regulate the rates, terms and conditions for interstate transmission and wholesale sales of electric energy under FPA Sections 205 and 206.8," FERC wrote.

The commission explained that to protect its wholesale PPAs, "NextEra requests that the commission issue an order finding PG&E may not abrogate, amend or reject its commission-jurisdictional wholesale power purchase agreements with NextEra in any bankruptcy proceedings that may be initiated by PG&E without first obtaining approval from the commission under FPA Sections 205 or 206.6."

NextEra cited the filed-rate doctrine to argue that rates filed and approved by FERC have the authority of federal regulations and cannot be undone except with FERC approval.

Dozens of generators and other entities filed motions to intervene and comments in support of NextEra's petition. They include the 550-MW Topaz Solar Farms, in central California, one of the nation's largest solar installations. Topaz, owned by Berkshire Hathaway Energy, saw its credit rating cut to junk status this month because it had an exclusive 25-year PPA with PG&E. (See *PG&E Credit Woes Spread, Worrying CAISO Members.*)

PG&E argued that a FERC order limiting its rights prior to its bankruptcy filing would violate the FPA and the U.S. Bankruptcy Code.

PG&E also contended that "NextEra's petition is speculative and hypothetical because PG&E's bankruptcy has not yet occurred and no action has been taken with regard to any particular contract. Additionally, PG&E claims that the commission's jurisdiction under the FPA applies to the sale, but not the purchase, of power, and by extension, to sellers, but not buyers, of power. Accordingly, PG&E states that the commission is not authorized to order a buyer to continue to purchase power."

FERC acknowledged that the law was unsettled when it came to contested authority between the FPA and Bankruptcy Code and between FERC and the courts. It took a middle road, saying the commission and courts share authority in cases like PG&E's.

"Against this background, and given the unsettled state of the law, we have reviewed the FPA and Bankruptcy Code in light of the arguments raised in the petition and conclude that this commission and the bankruptcy courts have concurrent jurisdiction to review and address the disposition of wholesale power contracts sought to be rejected through bankruptcy," FERC wrote.

"We find that to give effect to both the FPA and the Bankruptcy Code, a party to a commission-jurisdictional wholesale power purchase agreement must obtain approval from both the commission and the bankruptcy court to modify the filed rate and reject the contract, respectively."

In a research note issued to its clients Saturday, ClearView Energy Partners said FERC's order did not bar PG&E from seeking to reject its PPAs before obtaining the commission's approval.

"Instead, we read last night's order as FERC asserting that as a generic matter such contract abrogation in the bankruptcy context would eventually require its approval," the research firm said.

ClearView said the commission was taking the position established in the *Boston Generating* bankruptcy proceeding, where the litigating parties agreed that FERC and the U.S. district court had concurrent jurisdiction over changes to PPAs.

It concluded that "we continue to expect that PG&E may not have a free hand to reject the PPAs it currently holds," specifically those signed with renewable resources needed to meet California's public policy objectives. ■

ERCOT News

NextEra's Earnings Disappoint Despite Increase

By Tom Kleckner

NextEra Energy's quarterly and year-end earnings surpassed 2017 but came up short of analysts' quarterly expectations, the company revealed Friday.

The Florida-based company *reported* fourth-quarter GAAP earnings of $422 million ($0.88/share), compared to $2.16 billion ($4.55/share) the year prior. Adjusted earnings came in at $718 million ($1.49/share) for the period, a nickel short of analysts' projections of $1.54/share, according to Thomson Reuters.

For the year, NextEra's 2018 earnings were $6.64 billion ($13.88/share), compared to $5.38 billion ($11.39/share) in 2017.

Investors reacted to the results by driving the company's stock price down by almost 3.5% from Thursday's close of $180.41. Shares closed at $174.17, and gained only 3 cents in after-hours trading.

CEO Jim Robo called 2018 a "terrific year" for the company. Ticking off a list of achievements during a call with financial analysts, he said the company was able to reach its 2018 adjusted earnings-per-share target of $7.70, about a 15% increase over 2017's results.

Robo said he would be disappointed if NextEra is unable to deliver financial results at or near the top end of its 6 to 8% adjusted EPS compound annual growth rate range through 2021.

Wholesale electricity supplier NextEra Energy Resources (NEER) nearly doubled the amount of megawatts it originated the year before, adding 6.5 GW of renewable projects to its backlog, including energy storage and repowering. The NextEra subsidiary commissioned nearly 2.7 GW of wind and solar projects in the U.S. last year and expects to have as much at 16.5 GW in operation through 2020.

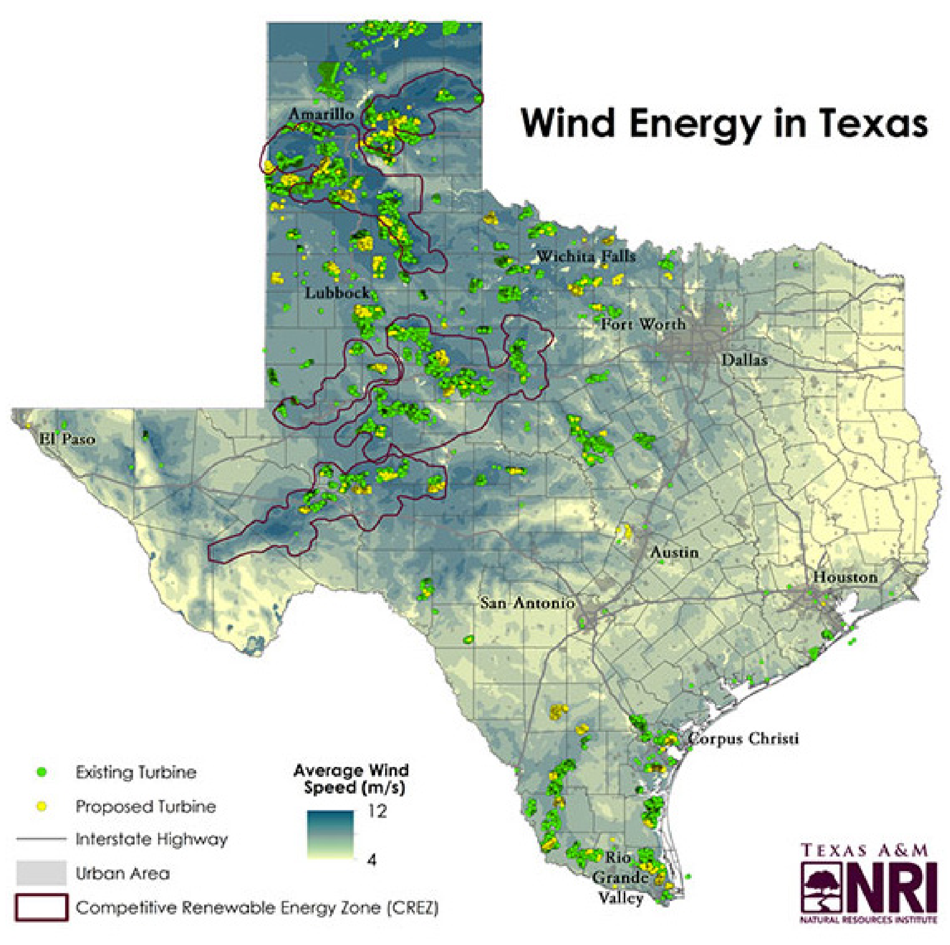
More than 40% of those solar projects included a battery storage component, which Robo said is the beginning of the next play in renewable development — pairing low-cost wind and solar energy with low-cost storage solutions. The company expects wind to be a 2- to 2.5-cent/kWh product, and solar to be 2.5 to 3 cents/kWh, within the next three to four years.

"We continue to believe that this will be massively disruptive to the nation's generation fleet and create significant opportunities for renewable growth well into the next decade," Robo said.

Before the call began, NextEra *announced* the retirement of Armando Pimentel as CEO of NEER, among several other organizational changes.

NextEra CFO John Ketchum will replace Pimentel. Rebecca Kujawa, vice president of business management for NEER, has been promoted to replace Ketchum. ■

ERCOT Sets New Marks for Wind Production



Wind turbine locations in Texas | *Matt Crawford, Texas A&M Natural Resources Institute*

ERCOT set a new record for wind generation last week, just two days after breaking its mark for penetration.

Wind generators in ERCOT territory — about 90% of Texas — produced 19.7 GW at 7:19 p.m. on Jan. 21, breaking the old mark of 19.2 GW set on Dec. 14, according to market reports. Wind energy accounted for 46.89% of ERCOT's production at the time.

The grid operator also set a new record for wind penetration at 56.16% on Jan. 19. The new mark came at 3:10 a.m., when wind produced 17.4 GW of energy.

The previous high for wind penetration was 54.64%, set Dec. 27. ■

— Tom Kleckner

ISO-NE News

Momentum Continues to Build for NE Offshore Wind

By Michael Kuser

BOSTON — The offshore wind industry is poised for a wave of growth in the Northeast with expanding solicitations, falling contract prices and increasingly competitive auctions for new project sites, Massachusetts officials and wind developers shared Wednesday.

Matthew Beaton | © *RTO Insider*

"We're seeing more action in the industry, and we're seeing more projects being developed in the multiple lease areas that we have," Massachusetts Energy and Environmental Affairs Secretary Matthew Beaton said at a meeting of the Environmental Business Council of New England.

Beaton said he was excited to see New York expand its offshore wind target to 9,000 MW and joked that his state would now have to go for 50,000 MW. (See *New York Boosts Zero-carbon, Renewable Goals*.)

The state does want to solicit an additional 1,600 MW of offshore wind energy, and "we will be doing our additional procurement [800 MW] at least by June, and could be sooner," Beaton said. (See *Mass. Looks to Double Down on OSW, Clean Goals*.)

Michael Ernst | © *RTO Insider*

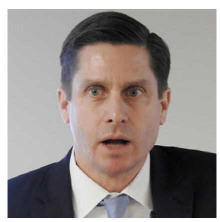
The partial federal government shutdown forced James Bennett, chief of renewable energy at the U.S. Bureau of Ocean Energy Management, to cancel his speech about federal oversight of offshore wind leasing and regulation, said meeting chair Michael Ernst, executive adviser at energy consultancy Power Advisory.

However, Ernst showed *slides* of lease areas off the East Coast held by different developers and highlighted the December auction by BOEM that brought in $405 million for three wind energy sites off the Massachusetts coast — about six times the revenue from all previous auctions combined. (See *Mass. Offshore Lease Auction Nets Record $405 Million*.)

"We're reaching the crest of that giant Hawaiian wave and heading for shore," Ernst said.

The Environmental Business Council of New England held a conference on offshore wind development at the law office of Wilmer Hale in Boston on Jan. 23. | © *RTO Insider*

Jobs, Tx and Wildlife



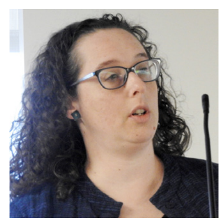
Bruce Carlisle | © *RTO Insider*

The Massachusetts Clean Energy Center will next month announce its first workforce *solicitation* awards for several training programs, said Bruce Carlisle, the center's senior director for offshore wind.

The state estimates that deploying 1,600 MW of offshore wind will create up to 317 jobs during construction and indirectly support up to 985 jobs over the next 10 years.

The CEC also worked to "get the lay of the land in terms of where potential interconnection transmission landfall might be in order to inform state siting processes and what the basic grid was looking like," Carlisle said. The center is "looking at where there were 345-kV high-voltage substations available for tie-in ... stepping up from increments of 500 MW and looking at upgrades and what estimates of cost might be."

Asked about expanding the target, Carlisle said authorization for an additional 1,600 MW requires the state's Department of Energy Resources to look at the benefits and tradeoffs. Eric Steltzer, deputy director of DOER's renewables division, noted his agency was aware that the offshore wind report had a legislative deadline of July, and also that Gov. Charlie Baker had made a pledge during the recent election campaign for it to be published in May.



Rachel Pachter | © *RTO Insider*

Rachel Pachter, vice president of permitting affairs for Vineyard Wind, announced the company's *agreement* with the Conservation Law Foundation, National Wildlife Federation and Natural Resources Defense Council to protect the right whales off Nantucket and Martha's Vineyard.

A partnership between Avangrid Renewables and Copenhagen Infrastructure Partners, Vineyard last May won the contract to supply Massachusetts with 800 MW of offshore wind energy. (See *Mass., R.I. Pick 1,200 MW in Offshore Wind Bids*.)

"I personally spend about 50% of my time on fisheries issues," Pachter said.

The company will base its operations in the Port of New Bedford but is looking at other ports as well.

"We've been working very hard to do our operations and maintenance on Martha's Vineyard, particularly in Vineyard Haven, as ... year-round jobs are a big thing for folks on the Vineyard," she said.

"Stakeholder engagement is very important," said Matthew Morrissey, head of New England markets for Deepwater Wind, which was

ISO-NE News

acquired by Ørsted US Offshore Wind last year. "As it relates to commercial fishing, I am a fifth-generation New Bedford resident, and I represented the commercial fishing industry for a long time ... which has legitimate concerns.

Matthew Morrissey | © *RTO Insider*

Morrissey said some of this engagement, however, is becoming taxing for the fishermen: "They just can't show up," so several different organizations have emerged to represent them. He cited the Responsible Offshore Development Alliance having "emerged as a true representative of many constituencies."

Vineyard in October signed an agreement with the town of Barnstable to bring its power onshore there, and in November it signed an agreement with MHI Vestas for 9.5-MW turbines, "which was the largest commercially available turbine last time I checked a week ago," Pachter said.

Ruth Perry, marine science and regulatory policy specialist for Shell Exploration and Production, said subsidiary Mayflower Wind is looking to set up a joint venture office with EDP Renewables.

Ruth Perry | © *RTO Insider*

Competitive Pricing

The hot competition for offshore wind contracts has "led to strikingly low prices in the first rounds," Morrissey said.

Vineyard's 800-MW contract with Massachusetts runs 20 years and has two 400-MW tranches. The first tranche starts at $74/MWh and the second at $65/MWh, with the prices increasing by 2.5% per year. Partially redacted contract summaries from the state's Department of Public Utilities show an average nominal price of $64.97/MWh in 2017 dollars.

"Those low prices will further embolden state leaders along the Atlantic seaboard to push forward on increasing levels of commitment and as a result it will be a cyclical dynamic," Morrissey said.

The combination of Deepwater Wind and Ørsted has a substantial footprint in the wind energy lease areas, he said, pointing out the "extremely exciting" wind targets in the region.

"We anticipate Connecticut coming forward in this legislative session with 2,000 MW or thereabouts," Morrissey said. The company also expects Virginia to raise its target to 3,200 MW, which follows New Jersey's 3,500 MW and New York's new commitment to 9,000 MW.

"We're seeing now the confidence in the industry build as a result of these procurements," he said. "The challenges of today are nothing compared to the challenges five years ago when there was no marketplace." ■

MISO News

MISO Moving Quickly on Initial SATA Rules

By Amanda Durish Cook

CARMEL, Ind. — MISO and stakeholders are hoping to complete policies allowing storage to qualify as transmission for the RTO's 2019 Transmission Expansion Plan (MTEP 19).

The RTO hopes to file its first plan to allow storage as a transmission asset (SATA) with FERC by June. Initially, proposed SATA will only be allowed to solve transmission reliability needs and will be ineligible to simultaneously participate in MISO's energy markets. The RTO currently has one reliability-based storage project proposal lined up for evaluation in MTEP 19.

John Fernandes | © RTO Insider

"This storage-as-transmission [development] process is really short. … Folks want to get this right. Backtracking on policy once it's been filed and accepted isn't impossible, but it's a really heavy lift," Energy Storage Task Force Chair John Fernandes said during a Jan. 24 meeting. Fernandes commended MISO's initiative on envisioning storage in the transmission realm, saying it is one of the first markets nationwide to do so.

"Storage might be able to go in where others can't due to permitting," Customized Energy Solutions' David Sapper said.

The Energy Storage Task Force will hold a *workshop* on storage functioning strictly as transmission on Feb. 14. Ahead of the workshop, Fernandes urged stakeholders to think about how such projects would advance through the MISO stakeholder process and what criteria they might have to meet.

No Mixed-mode SATA, yet

MISO Director of Planning Jeff Webb said the RTO is choosing to "carve up" the SATA concept into less complex uses so it can better understand it and plan incremental approaches.

For now, MISO is proposing that SATA function solely as transmission — solving thermal, voltage or stability issues — and precluding it from energy market participation. MISO said it will develop rules for mixed-mode SATA use later. "We don't know how to mix those two just yet," Webb said.

Because mixed-use storage will not be permitted at first, the RTO will not require SATA to enter its generation interconnection queue. However, MISO does ***plan*** to model previously approved SATA in its interconnection studies. It said it will consider SATA's "capabilities to inject or withdraw energy as needed to best mitigate reliability issues" as part of the network upgrades study during the definitive planning phase study in the queue.

SATA will also be modeled in MTEP reliability studies. MISO said it will gauge a proposed SATA project's ability to "resolve the identified transmission issue at specified critical system conditions, consistent with the facility design capabilities."

MISO said it will also create a special interconnection agreement among it, the storage owner, and the transmission system that the SATA is connected to. SATA operators must also complete MISO's market participant registration.

MISO in Functional Control

MISO proposes SATA be compensated like other transmission owners, with the storage facilities under the functional control of the RTO. MISO said keeping functional control of SATA will be practical as storage owners inevitably transition to mixed-mode use.

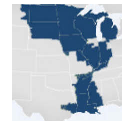
"MISO contemplates that most SATA will eventually desire to participate in markets in addition to providing cost-based transmission services. The ability to coordinate use of the asset in this mixed mode requires MISO as market operator to instruct the charging and discharging of the SATA for the provision of transmission services," the RTO said. "Independent market operator control of the device for transmission service purposes will enable accounting for energy injections and withdrawals whether such transactions are instructed by MISO for transmission service purposes or as cleared market transactions. Further, control of the device by MISO for transmission purposes will mitigate concerns about inappropriate use of the device to the advantage of any particular market participant."

Hisham Othman, of transmission and distribution consulting firm Quanta Technology, said reliability should always take precedence over any market benefits for mixed-mode SATA. He also said reliability requires very fast SATA controls, able to respond within a millisecond following a contingency to restore voltage and mitigate line overloads.

After stakeholder questioning, Webb said MISO will seek to quantitatively evaluate the benefits of SATA in the MTEP process as it's able to recognize them. "If we can understand them and repeat them, then we'll document them," he said.

Some stakeholders asked if MISO might evaluate storage projects based on how mobile they might be. But Othman said there's upgrade costs to be considered when a storage asset is physically moved to serve another area. "The reality is there's a cost to picking it up and moving it." ■

Invenergy's 31.5-MW Grand Ridge Energy Storage project | *Invenergy*



MISO News

Status Quo for MISO Committee Despite Diversity Push

By Amanda Durish Cook

November Steering Committee meeting | © *RTO Insider*

CARMEL, Ind. — MISO's Steering Committee will retain its current membership structure despite the lack of a sector diversity guarantee among representatives.

During a Wednesday conference call, committee members took no action to change the membership structure in a way that would enforce more equitable representation across MISO's 10 stakeholder *sectors*.

Chair Tia Elliott said the committee received *comments* from six member entities that all supported no change. After reviewing comments, the membership considered the item closed.

In advocating for broader representation late last year, Rhonda Peters with Clean Grid Alliance pointed out that the Steering Committee currently has voting members from just four MISO sectors, but it could feasibly have as little as two stakeholder sectors represented in committee votes.

Peters contended that MISO and the committee should work to ensure at least six sectors are represented in voting, calling it a "gatekeeper" of stakeholder issue assignment and subsequent discussion in other stakeholder groups.

Committee members bristled at the "gatekeeper" characterization, with some noting that members represent the stakeholder groups that they were elected to lead, not their individual sectors. Steering Committee membership comprises the chairs of MISO's main committees and is charged with administrative stakeholder duties — not policy decisions — which include routing new policy discussions to the appropriate stakeholder group for discussion.

Peters called for a special nomination process when a majority of stakeholder sectors are not represented on the Steering Committee, where the full RTO membership would vote to add more voting members to the committee.

"There are now more players than the traditionally integrated utilities," Peters said during a November committee meeting. "We're seeing changes in stakeholders, and we're seeing more changes in the grid. There are more voices now."

However, multiple companies emphasized that Steering Committee membership merely reflects MISO committee chairs, who can come from any sector and are themselves elected by a vote open to all members.

"Each chair and vice chair position is freely elected by the stakeholders within each respective sector," Duke Energy's Jay Rasmussen said. "If a stakeholder does not like the representation within the sector, they should get involved more in the nomination process and campaigning process within their sector. The individual is also free to throw their name into the nominating process. The current process works well, and there is no need to change it."

However, MISO's load-serving entity coalition said it was "supportive of diversity in MISO stakeholder entity leadership" and suggested that the RTO make sure chair elections for stakeholder groups are held within the same month so members have the opportunity to factor sector diversity into their votes. ■

MISO Issues Cold Weather Alert

| *Otter Tail Power*

MISO has issued a cold weather *alert* for several balancing authorities in its North and Central regions for Jan. 29 through Feb. 1.

The RTO said temperatures are expected to dip to -20 degrees Fahrenheit during the week in some northern portions of its footprint.

MISO North spans parts of the Dakotas, Montana, Nebraska, Minnesota and Iowa. Central includes Wisconsin, most of Michigan and portions of Indiana, Illinois, Missouri, Kentucky and Ohio.

The RTO told operators on Jan. 25 to expect to be contacted about fuel restrictions during the cold snap. It also said as the cold front moves in, more of Central and even MISO South could become affected.

Spokesperson Mark Brown said MISO will continue to closely monitor the weather forecast and available generation and resources for the week ahead.

Brown also said the RTO would work closely with "members and neighboring operators to manage reliability as temperatures enter more extreme territory across the region." ■

— Amanda Durish Cook

MISO News

MISO, SPP Regulators Continue Seams Talks

MISO Seeks Stakeholder Advice on Seams Issue

By Amanda Durish Cook

CARMEL, Ind. — State regulators in MISO and SPP are making progress on the seams issues that continue to vex the RTOs, but much work remains, MISO stakeholders learned last week.

The Organization of MISO States (OMS) and SPP's Regional State Committee (RSC) have been meeting since mid-2018 to discuss interregional coordination, which has never produced a major project, frustrating some stakeholders and causing market inefficiencies. Regulators last year initiated meetings with RTO officials to ask for solutions. (See *Regulators Examine MISO, SPP Seams Issues at NARUC*.)

The RTO's market-to-market process has resulted in more than $51 million in payments from MISO to SPP since March 2015, compensation paid to manage congestion at the seam. The grid operators also face possible renegotiation next year of the 2016 settlement agreement addressing compensation for energy transfers between MISO Midwest and South above the current 1,000 MW of contract path capacity on SPP transmission.

Daniel Hall | © *RTO Insider*

Speaking during a Jan. 22 update at MISO's Informational Forum, Missouri Public Service Commissioner Daniel Hall said the RTOs experience "significant inefficiencies on the seams" that are both "philosophical and structural."

"There's a growing awareness that these seams issues are becoming more significant due to the diminishing reserve margins," Hall said, adding that some "personality issues" between MISO and SPP staff may have contributed to past difficulties.

Hall said regulators from both regions have outlined goals of improving seams coordination through:

- Better market-based transactions and operations across the MISO-SPP seam;
- Equal consideration of "beneficial regional and interregional projects in transmission planning";
- "Timely interconnection of new resources that includes consideration of the dynamics of the interconnection queue in both RTOs"; and
- Improved inter-RTO relations through state-led cooperation.

MISO's neighbors | *MISO*

"There's nothing earth-shattering here," Hall said of the OMS-RSC coordination *effort*. "We want to reduce transmission constraints to benefit ratepayers."

"No one is right or wrong where viewpoints don't align. We strive to understand the drivers behind our differences. It's not personal. … The best outcome for customers is the best outcome. Customers in all portions of an RTO footprint should benefit from RTO membership," Hall *said*.

While Hall said the RTOs are already working on several coordination issues such as better emergency coordination and easing interregional project criteria, some seams issues — including regional through-and-out rates and pseudo-tied generation — are being left unaddressed.

OMS and RSC representatives will meet again in D.C. on Feb. 10 in conjunction with the National Association of Regulatory Utility Commissioners winter meeting. Hall said the two groups will discuss the need for additional questions for MISO and SPP and explore the possibility of requesting a FERC analysis or commissioning an independent analysis on the MISO-SPP seam.

MISO Plans Seams 'Hot Topic' Talk

RTO seams issues will feature as MISO's first 2019 "hot topic" in-depth stakeholder discussion in March. Staff said the goal is to get policy-level input from stakeholders on how to best approach coordination with its neighbors.

Jeremiah Doner, MISO director of seams coordination, said the RTO's physical central position in the Eastern Interconnection "introduces a number of different regulatory and structural models that we have to work with." He cited the 11 separate RTOs, independent utilities, cooperatives and federal agencies that border MISO territory and have varying seams coordination agreements with the RTO.

Doner said MISO is looking for stakeholders to offer views on what they would consider optimal coordination and a more consistent model for seams coordination with both RTO and non-RTO neighbors. MISO would look to improve price formation, transmission planning and cost allocation along all its seams, he said.

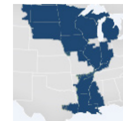
Customized Energy Solutions' David Sapper asked how MISO might improve its transmission sharing with SPP so that South capacity is not trapped because of the contractual limit on SPP transmission connecting that region with Midwest.

Doner said MISO is open to discussing changes to the contract governing the Midwest-South contract path, which can be altered beginning in 2021.

In a separate monthly market operations report delivered at the meeting, MISO said it is monitoring additional generation committed for capacity that became trapped behind the contractual constraint in December. MISO Executive Director of System Operations Renuka Chatterjee said the capacity wasn't ultimately needed because load did not materialize.

MISO load averaged 75.5 GW in December and load peaked at 94.2 GW on Dec. 11. Chatterjee said it was a mild month for the RTO, except for a few cold days at the beginning. Rising coal and natural gas costs lifted real-time prices to an average $31/MWh, he said, up 21% from a year earlier. ■

MISO NEWS



MISO Plans for New Uninstructed Deviation Rules

By Amanda Durish Cook

MISO will this March begin testing new rules to deal with generators' uninstructed deviations from dispatch orders, stakeholders learned last week.

The RTO announced its plan to move ahead with implementing a new deviation threshold during a Jan. 25 conference call — coincidentally the same day FERC approved its filing in a delegated order (*ER19-199*). The new standard will be based on comparing real-time performance with day-ahead offer ramp rates.

During the call, MISO said it was preparing for the new thresholds despite not yet receiving FERC approval. Hours later, FERC issued a brief order approving MISO's proposal just in time to meet the RTO's requested decision date. The commission said it did not receive any "adverse comments" to the filing.

MISO Market Quality Manager Jason Howard said the RTO is on track to start testing the new threshold by the first week of March and have a full implementation by mid-spring.

"As long as we don't see something or run into any issues of this testing phase ... we'll implement this by May 1," Howard said.

MISO will test the new system using singular past operating days with forecast data from market participants, Howard said. He said MISO is using singular operating days instead of running full weeks of data because the testing represents "a significant amount of work" for RTO staff. The testing approach will be similar to that used prior to implementing five-minute market settlements.

Jason Howard | © *RTO Insider*

MISO's proposal calculates a generator's uninstructed deviation with a tolerance based on the minimum of five times the real-time ramp rate or 12% from the average set point instructions. Currently, generators in MISO are flagged after they deviate by more than 8% from dispatch signals over four consecutive intervals.

The proposal eliminates the RTO's current "all or nothing" eligibility for make-whole payments, instead allowing generators to collect full payments when they respond to dispatch instructions at a performance rate of 80% or higher over an hour, while excluding payouts when performance rates fall below 20%. Units operating between those two thresholds would earn make-whole payments in proportion to performance. The change means that a generator that fails four or more consecutive five-minute dispatch intervals within an hour by either providing excessive or deficient energy will not automatically lose its eligibility for make-whole payments.

Additionally, MISO only plans to assess excessive or deficient energy charges on dispatchable intermittent resources during intervals when the market participant's forecast is provided or when the resources are economically dispatched below the RTO's forecast. ■

NYISO NEWS

NYISO Issues 5-Year Strategic Plan

NYISO last week released a *Strategic Plan* outlining how it will incorporate market and regulatory trends into its planning processes for 2019 to 2023.

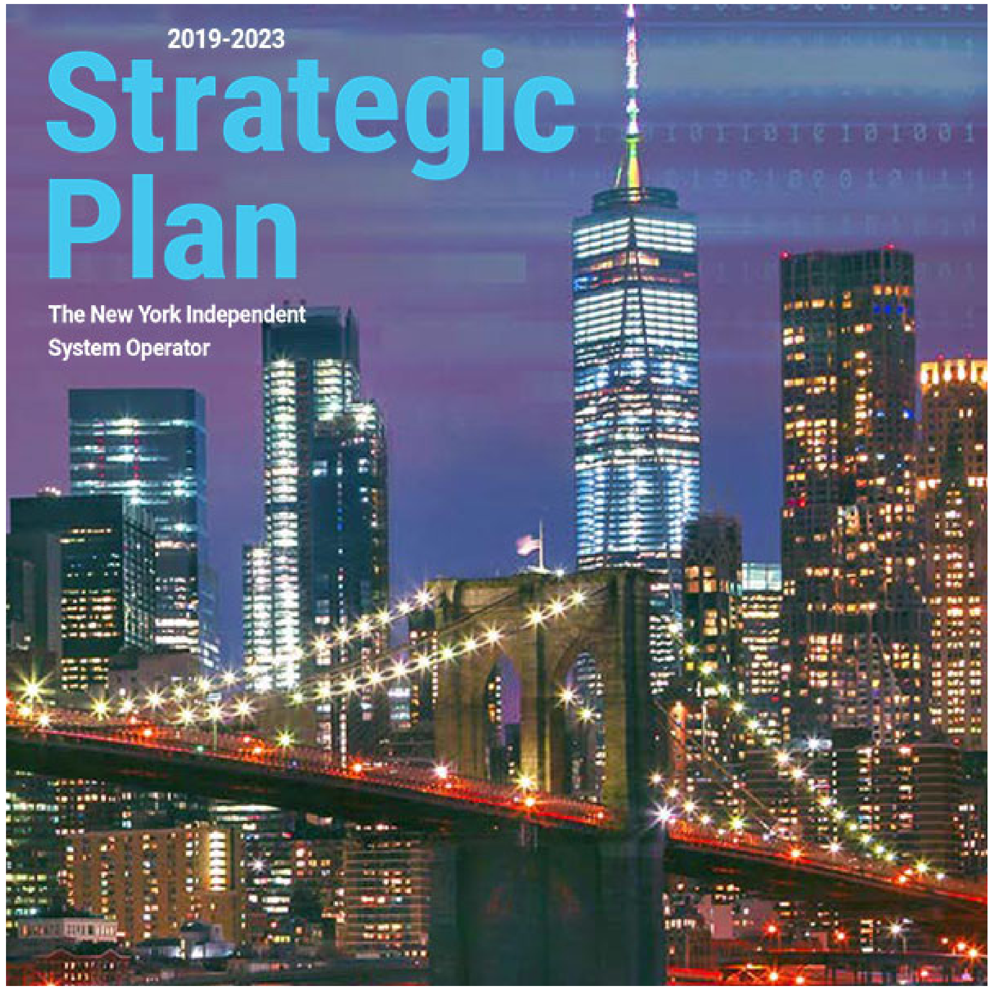
"Our updated Strategic Plan is a living document that embraces the challenges and opportunities of the grid's ongoing transformation," interim President and CEO Robert Fernandez said in a statement. "The plan reflects the NYISO's essential role in harmonizing public policy with technological innovation in a manner that delivers economically efficient and reliable energy to consumers."

The document identifies key strategic initiatives in addition to the ISO's core responsibilities and ongoing project plans.

To address its changing resource mix, NYISO said it will review market products and operational and planning practices. Taking "a deeper dive into evolving focus areas" will require significant study work, it says.

New York's Clean Energy Standard and other policy initiatives, such as Reforming the Energy Vision, are ramping up adoption of renewable and distributed energy resources, creating a need to balance intermittent generation with other resources such as storage.

"Incenting resource flexibility, which includes the ability to respond rapidly to dynamic system conditions, providing controllable ramp with fast response rates and providing frequent start-up/shutdown capability, will be key to future market enhancements," the plan says.



.| *NYISO*

The plan also highlighted steps to harmonize the wholesale market design with state public policy goals, particularly the task force created by the state's Public Service Commission and NYISO that last month produced a proposal to price carbon into the wholesale energy market.

The ISO and its stakeholders are now refining the proposal. (See *Imports/Exports Top Talk at NYISO Carbon Pricing Kick-off*.) ■

— Michael Kuser

NYISO News

NYISO Looks at Carbon Charge Tariff Impacts, Residuals

By Michael Kuser

RENSSELAER, N.Y. — NYISO stakeholders last week discussed how pricing carbon in the wholesale market will impact the ISO's Tariff, while additional materials posted by the ISO provided insight into how it will handle residual allocations stemming from carbon charges.

"Tariff revisions will be necessary to effectuate carbon pricing in the ISO's markets," Ethan D. Avallone, NYISO senior energy market design specialist, told the Market Issues Working Group (MIWG) on Jan. 22.

Avallone provided an *overview* of the Tariff sections impacted by a carbon charge and that will be reviewed over the coming months, mainly related to the social cost of carbon (SCC), emissions data reporting, emission rates in reference levels, credit requirements and the carbon component of locational-based marginal prices (LBMPc).

Stakeholders will begin discussions on revisions to credit rules, if necessary, this fall, Avallone said. To avoid delays, any related Tariff changes will be separate from the second-quarter vote on implementing the carbon charge.

Several stakeholders said that if there's a chance that a carbon charge will have a material impact on suppliers' credit requirements, they have a right to know ahead of time what that impact will be.

"Our approach here is to assess the credit impact once we know the market design," Avallone said.

Sheri Prevratil, NYISO manager of corporate credit, said that while carbon pricing "will affect the LBMP, we don't see any changes in the credit methodology as it relates to energy credit requirements. ... Where we see a possible change is in the projected true-up exposure credit requirement. Based on what we understand the market design to be right now, those are the only changes we currently foresee."

New York's Implementing Public Policy Task Force last month turned its carbon pricing *proposal* over to the ISO's stakeholder process through the MIWG, which began its work earlier this month. (See *Imports/Exports Top Talk at NYISO Carbon Pricing Kick-off*.)

The MIWG has *scheduled* meetings to review the carbon pricing Tariff revisions for Jan. 31, Feb. 15 and March 18.

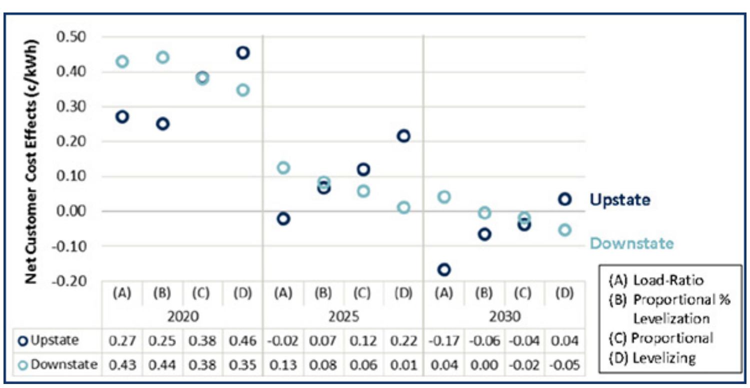
Allocating Residuals

NYISO is recommending that the carbon charge residual resulting from levying suppliers for their emissions be allocated proportionally to consumers across all zones to ensure an equitable impact, consistent with the current allocation of renewable energy credit costs, Avallone noted in *slides* not presented to the MIWG because of time constraints.

The carbon residual is the total dollar amount of carbon charges collected by the ISO from suppliers and allocated to load.

At an Oct. 29 meeting of the IPPTF, the ISO revised its proposal on carbon residual allocation after a Brattle Group analysis showed that the proportional allocation methodology minimizes cost shifts among consumers. (See *NY Task Force Talks LBMPc, Residuals, Hedge Effects*.)

According to Avallone's presentation, load-serving entities would pay the full LBMPc to suppliers, who would then pay NYISO the carbon component. The ISO would then allocate the carbon residual to each zone based on its LBMPc.



The above chart shows the results of allocating the carbon residual to load using consumer impact analysis data, after considering the impact to the LBMP from dynamic effects brought about by carbon pricing.| *NYISO*

The allocation would use the LBMPc from the binding real-time interval (nominally five minutes) to calculate the time-weighted integrated (TWI) LBMPc, according to the presentation.

i	ii	iii	iv
Total Carbon Residual	Location	Load-MWH	LBMPc ($/MWh)
200,000	A	3,000	23.00
	B	800	0.00
	C	1,600	5.00
	D	700	20.00
	E	1,000	1.00
	F	2,000	7.00
	G	500	20.00
	H	700	11.00
	I	1,000	5.00
	J	7,000	0.00
	K	3,500	10.00
	Total	21,800	

The above example assumes a positive carbon residual.| *NYISO*

Supplier emissions would be reported on an hourly basis, so the carbon residual would therefore be on an hourly basis, and the ISO would use TWI LBMPc, the hourly carbon residual and real-time actual internal load to determine the allocation.

NYISO is considering how to calculate the carbon residual allocation under two scenarios thought to be unlikely, according to the presentation: if the LBMPc for a given zone is less than zero, and if the carbon residual is less than zero.

The ISO expects the LBMP to increase slightly under carbon pricing to reflect the emissions of the marginal unit, and carbon-free opportunity cost resource bids are likely to increase as a result of carbon pricing in some hours.

Opportunity cost resources represent those carbon-free resources able to store energy and structure their bids to achieve delivery schedules during the most economic periods of the day. In periods of the day with lower prices, the bids of such resources therefore reflect the estimated opportunity cost of profit from periods of the day with higher prices. (See *NYISO Plan Revises Treatment of Carbon-Free Resources*.)

The MIWG will discuss calculating the LBMPc and identifying the marginal units on Feb. 15, and on March 4 will cover carbon bid adjustment for opportunity cost resources. ■

PJM News

PJM Rejects Stakeholder Language on Supplemental Projects

By Christen Smith

Wilmington, Del. — PJM riled stakeholders Thursday when it rejected manual language approved by more than two-thirds of members on transmission owners' supplemental projects.

Steve Herling, PJM | © *RTO Insider*

PJM Vice President of Planning Steve Herling said the RTO would not implement the proposed changes because they were "not consistent" with FERC rulings. "We don't do this often, but we're going to have to not implement what the members have approved," he said immediately after the Markets and Reliability Committee approved the changes in a sector-weighted vote of 3.46 out of 5.

The proposal by American Municipal Power won unanimous *support* from the Electric Distributors and End-Use Customers sectors, 80% of Other Suppliers and 58% of Generation Owners. But it was opposed by all but one of the Transmission Owners.

2 Paragraphs

Most of the *revisions* to Manual 14B: PJM Region Transmission Planning Process, including those on the planning process work flow and supplemental projects, were not in dispute.

Aaron Berner, PJM | © *RTO Insider*

What PJM rejected were two paragraphs *proposed* by AMP and backed by Old Dominion Electric Cooperative to increase the transparency of TOs' supplemental project planning process.

Aaron Berner, PJM's manager of transmission planning, *called* the disputed text an "*overreach*" of the RTO's Regional Transmission Expansion Plan, which he said is limited to studies of load flows, short circuits and stability.

AMP's proposal said supplemental projects "should be based on written articulable criteria, models and guidelines that are measurable and, to the extent available, quantifiable (e.g., asset replacement prioritization) so stakeholders can replicate TO planning decisions and validate their proposed solutions." AMP cited the transparency principles in FERC Order 890, saying TOs should disclose asset-specific condition assessments and the criteria and models supporting supplemental projects.

'Useful'

The RTO also declined AMP's proposal to strike the word "useful" from references to "end of useful life."

Ed Tatum, AMP | © *RTO Insider*

Ed Tatum, AMP's vice president of transmission, said the word could be interpreted as an accounting term associated with the depreciable life an of asset. AMP proposed using "operational" instead.

"We don't replace facilities just because they've depreciated," he said. "If people aren't going to replace things until their operational life is done, I think it's OK to say that."

PJM officials said they did not interpret the word under its accounting definition but rather as an indication of a facility's reliability and operational effectiveness.

"That language has been accepted by FERC in discussions around this topic," Berner said. "We don't believe a clarification is necessary."

After further discussion, however, PJM committed to insert language indicating that "useful life" is not intended to indicate that facilities might be replaced solely based on them being fully depreciated.

Removing Supplemental Projects

PJM's rejection of the AMP proposal rendered moot LS Power's *amendment* requiring PJM to remove supplemental projects from the RTEP model if they are rejected by state regulatory commissions or their need has been eliminated by other PJM projects. AMP had agreed to accept the LS Power language — which said supplemental projects rejected by state commissions or siting agencies "will generally be removed from the RTEP" — as a friendly amendment.

"There is no place in the current manual that addresses the issue of how supplemental projects get removed from the plan," said Sharon Segner, vice president of LS Power, who also called for Operating Agreement changes to address broader issues with supplemental projects. Given the increasing spending on TO projects, she said, "That's too big of an oversight."

Segner also said that the manual could blur the line between the supplemental and regional planning processes.

According to AMP, TOs added $7.2 billion in projects in 2018 ($5.7 billion in supplemental projects and $1.5 billion in TO baseline projects) while PJM added only $560 million in baseline projects.

Herling opposed the LS Power language.

"There's a lot of different outcomes that can follow the denial of the [certificate of public convenience and necessity], and it doesn't make any sense that the manual should have black-and-white rules about when it should be removed from the process," Herling said. "We feel we have received very clear guidance from the commission as to what goes into the RTEP and what does not."

Supplemental projects — managed by TOs and not deemed necessary for compliance under PJM's reliability, operational performance or economic criteria — have tripled over the last 13 years, accounting for 62% of the submitted RTEP project costs since January 2017, according to AMP.

"It is a staggering statistic," Segner said of the supplementals' growth. "This is a key issue — that the supplemental process does not dwarf the regional planning process."

Deferral

After Herling rejected the AMP revisions, Segner pressed for a separate vote to add her amendment to the manual changes the RTO will implement. Her request was opposed by some stakeholders as a circumvention of the committee process.

"To me procedurally what it is saying is 'I want to bring manual changes straight to the MRC; I don't want to go through the lower committees,'" said Alex Stern, manager of transmission strategy and policy at Public Service Electric and Gas. "I think everyone needs to look at themselves around the room and think about that."

Stern's motion to remand the issue to the Planning Committee failed. But Segner then moved to delay a vote until the Feb. 21 meeting. It passed with 3.69 in favor. ■

PJM News

PJM Stakeholders Deadlock on Energy Price Formation

Continued from page 1

PJM CEO Andy Ott said after the MRC meeting that the board will decide on its path forward at its Feb. 12 meeting, based on input from Thursday's debate and a Feb. 11 Liaison Committee meeting.

David "Scarp" Scarpignato, Calpine | © *RTO Insider*

Although none of the proposals won consensus at the MRC meeting, Calpine's David "Scarp" Scarpignato still held out hope that an agreement could be reached before the board meeting. In a meeting later Thursday, the Members Committee agreed to hold a special conference call no later than Feb. 8 if additional discussions yield a potential compromise.

Adam Keech, PJM | © *RTO Insider*

PJM Board's To-do List

Before the votes, Adam Keech, executive director of market operations, *outlined* PJM's proposal, which sought to address six issues identified by the board:

- Consolidating Tier 1 and Tier 2 synchronized reserve products;
- Improving use of existing capability for locational reserve needs;
- Aligning market-based reserve products in day-ahead and real-time energy markets;
- Setting operating reserve demand curves (ORDCs) for all reserve products;
- Increasing penalty factors to ORDCs to ensure utilization of all supply prior to a reserve shortage; and
- A transitional mechanism to the capacity market's energy and ancillary services (E&AS) revenue offset to reflect expected changes in revenues in the determination of the net cost of new entry (CONE).

PJM's proposal replaces the current stepped ORDC with a sloped curve; the first horizontal segment would represent the minimum reserve requirement, with the downward sloping curve based on the probability of reserves falling below the minimum reserve requirement (PBMRR) in real time based on uncertainties. The PJM proposal would increase the price for the initial horizontal segment of the curve to $2,000/MWh, up from the current $850.

Calpine's *proposal* was identical to PJM's except that it excluded the transitional E&AS offset.

The Calpine and PJM proposals won no votes from the End-Use Customer segment and only 3% of Electric Distributors. Ninety percent of Generation Owners supported the Calpine plan.

Monitor's Alternative Plan

In contrast, End-Use Customers and Electric Distributors unanimously supported the Monitor's proposal, which won only 11% of Generation Owners' votes.

The Monitor's *proposal* would replace the current two-step penalty factor ($850 and $300) with a single penalty factor equaling the safety net energy offer cap of $1,000/MWh. If PJM approves a cost-based offer above that price, the penalty factor could increase in $250/MWh increments to a maximum of $2,000/MWh. It also combines the Tier 1 and Tier 2 synchronized reserve products.

Monitor Joe Bowring contends the IMM's proposal addresses PJM's concern over operators' real-time actions suppressing prices better than the RTO's proposal.

He also says his plan would protect consumers from overpaying during the three-year transition period through a true-up mechanism for already-cleared capacity auctions and modify the capacity demand curve to ensure the efficiency of the energy offset.

It does not include an ORDC for 30-minute reserves unless operators define a need for them. Unlike the PJM proposal, it does not limit the provision of reserves by demand-side resources.

Bowring also has been critical of PJM's proposal for a new five-minute uplift payment for buying back day-ahead reserve positions, saying it will inflate uplift payments. Moreover, he said, PJM is unable to accurately determine when units are following dispatch, raising questions about uplift calculations.

Load interests expressed most support for the Monitor's proposal. But Erik Heinle of the D.C. OPC also offered a *proposal* that he said was a compromise including elements from both the PJM and IMM plans.

After the initial four proposals failed in their MRC votes, members also considered a *pro-*

Auction Execution Date	Delivery Year	Revenue Year	Revenue Calculation
May 2020	2023/2024	2017	Scaled
		2018	Scaled
		2019	Scaled
May 2021	2024/2025	2018	Scaled
		2019	Scaled
		2020	Half Scaled + Half Actual
May 2022	2025/2026	2019	Scaled
		2020	Half Scaled + Half Actual
		2021	Actual
May 2023	2026/2027	2020	Half Scaled + Half Actual
		2021	Actual
		2022	Actual
May 2024	2027/2028	2021	Actual
		2022	Actual
		2023	Actual

PJM proposed adjusting the energy and ancillary services (E&AS) revenue offset used in the capacity market based on simulations of energy and reserve market outcomes. | *PJM*

PJM News

posal by Vistra Energy based on the PJM plan. It was similar to the Calpine proposal in not adjusting the E&AS offset. It also differed from the RTO's proposal in limiting the top penalty factor to $1,000/MWh for all products except during hot or cold weather alerts, when the cap would be $2,000/MWh. It would have used a phased approach, with the penalty factor remaining at $850/MWh for the first two years following FERC approval, reflecting PJM's three-year forward capacity auctions.

In a Dec. 5 letter to members, PJM's board said action was needed to minimize out-of-market payments resulting in uplift and ensure that energy and reserve prices accurately reflect RTO operator reliability actions during stressed conditions.

The board said the current reserve market rules "do not accurately align the procurement of reserves with their reliability value or incentivize consistent response when deployed. The lack of alignment in the reserve markets mutes price transparency, shifts costs unfairly to consumers who have prudently hedged, and limits competition to secure reserves at the least cost to consumers."

But load interests are not convinced. In a *letter* to the board on Wednesday, the Organization of PJM States Inc. (OPSI) asked PJM to delay action until stakeholders have time to evaluate additional data.

"PJM has detailed its concerns with current energy and operating reserve pricing mechanisms but has not justified the urgency of resolving these concerns, established the operational and cost effectiveness of its solutions, or adequately evaluated the risks and rewards of its proposed reforms," wrote OPSI President Michael Richard, of the Maryland Public Service Commission. "It seeks to institute new market structures under an unnecessarily rushed timeline, allowing little opportunity for its staff to generate the analyses necessary for stakeholders to fully understand the potential impacts these proposals will have on market sellers and consumers, gauge the reasonableness of the proposals or develop alternatives."

Procedural Skirmishes

Under PJM's "truncated voting" rules in the MRC, only the top-ranked proposal from the EPFSTF — Calpine's — was guaranteed a vote. If it had received a two-thirds vote, the other three proposals would not have been considered.

As a result, several members called for suspending the rules to allow votes on all four plans, saying it would provide more information to the board. Bruce Campbell of CPower said it was important that every proposal receive a vote at the MRC, noting that the task force votes weren't sector weighted.

CAPS' Greg Poulos (left) with consumer advocate Erik Heinle, of the D.C. Office of the People's Counsel | © *RTO Insider*

Bruce Campbell, CPower | © *RTO Insider*

John Horstmann of Dayton Power & Light protested, saying it was "unfortunate" to allow circumventing the voting rules in Manual 34, which he said resulted from an "incredibly complicated series of compromises."

Bob O'Connell, representing Panda Power Funds, unsuccessfully challenged a procedural ruling by Chair Suzanne Daugherty, contending that only the MC could suspend the rules.

Members supported Daugherty's interpretation, but in a second vote rejected suspending the rules. As it turned out, the point was moot: Because none of the four proposals won a supermajority, each of them was voted on in turn.

Before the votes, Heinle made an unsuccessful motion to defer votes on any of the proposals and hold a special MRC meeting before Feb. 12.

Exelon's Jason Barker opposed the delay, saying "we've been at this for more than a year" and that further discussions were unlikely to change any minds. "PJM has put forward a just and reasonable proposal," he said. "The time is now to move forward."

Data Sought

Several members reiterated their call for more simulation data on the potential impact of the rules, saying PJM had failed to provide enough modeling to ensure the new rules would not result in excessive costs.

OPSI Executive Director Gregory Carmean asked whether PJM would produce simulations on the impact of "cascading" penalty factors for multiple reserve products.

PJM News

Susan Bruce, PJM Industrial Customer Coalition | © *RTO Insider*

Susan Bruce, attorney for the PJM Industrial Customer Coalition, asked whether the RTO planned to simulate the impact of the new rules on the 2014 polar vortex.

Keech's answer to both was "no."

He said PJM could not replicate the polar vortex because it occurred before the current Capacity Performance rules. For example, he said, although the RTO had about 9,000 MW of demand response then, only about 3,000 MW of DR "showed up," because, unlike under CP, it wasn't required to deploy.

Any simulation would show higher energy prices than were experienced in 2014, Keech acknowledged.

Direct Energy, one of the largest retail suppliers in PJM, had opposed the RTO's initiative but has since been convinced of the need to move revenues into the energy market, the company's Marji Philips said.

Although Direct is concerned about PJM's proposed handling of DR, and it would like the RTO to share Tariff language with members before filing, Philips said it was "disingenuous" for stakeholders to request more data, calling it a delay tactic. "I'm hard on PJM, but they have been more than forthcoming with data," she said.

"Just say you disagree" with PJM's plan, she said. "It's going to increase prices, no question."

$1.92 Billion

PJM's last simulation, included in a *paper* published earlier this month, projected a net increase in energy and reserve market revenues of $1.92 billion annually, resulting from increasing annual energy revenues by $1.8 billion (increasing average LMPs by $2.27/MWh) and reserves by $190 million, while trimming $70 million in uplift (up to 42%).

The RTO expects the additional costs will be at least partially offset by reduced capacity costs. In addition to a $280 million reduction in the net CONE value that is the basis for the variable resource requirement (VRR) curve, PJM said the increases in energy and reserve revenues should reduce capacity market offers. But it acknowledged the savings "will be dependent on bidding behavior."

Including projected reductions in retail providers' risk premiums, PJM said the most optimistic case — which assumes capacity resources reduce their offers by $30/MW-day — would result in annual cost savings to consumers of $350 million.

"A potentially more realistic outcome is that these changes will increase costs to loads in the range of $700 million," the RTO said. "PJM believes these changes are justified because much of the reserve capability PJM has today is either undercompensated or not compensated at all."

Start Over

Campbell said CPower, which aggregates DR resources, would not support any of the proposals and urged the board to start over.

He said PJM's deadline would result in an "incomplete market design" in which DR was an "afterthought," as he said it was in the CP design. Because they are rarely deployed, DR resources obtain most of their revenues through the capacity market.

"While increases to energy and AS revenues are expected to be offset by decreases to RPM [Reliability Pricing Model] costs, only in PJM's most optimistic scenarios are the cost increases to load fully offset," Campbell said. "Moreover, the RPM benefits to load are overstated because PJM has incorrectly assumed that all reduced capacity revenues will reduce revenues only to generators — thus ignoring the substantial portions of load that provide capacity via demand response and overstating the benefit of the changes to load.

"The effect of the changes is to increase consumer costs, and to transfer revenues from a moderately competitive capacity market to an administrative energy scarcity construct for the benefit of generators."

Bruce said PJM's initiative must be viewed along with other rule changes pending before FERC on fast-start pricing (EL18-34) and expanding the generators that can include variable operations and maintenance costs in cost-based offers (EL19-8, ER19-210). "That adds up to about a 25% increase in LMPs," she said.

She criticized PJM's "unduly conservative" ORDC, citing an analysis by the Monitor that suggested the RTO was overestimating outage risks.

Carl Johnson, of the PJM Public Power Coalition, noted that the RTO is also proposing fuel security compensation, which will further increase prices. "It's not like this is the last 3.5% or 4, 5 or 6% increase," he said. (See *Full PJM Study Makes Case for Fuel Security Payments*.)

Calpine's 'Compromise'

Scarp promoted Calpine's proposal as a "compromise," saying PJM's $2,000/MWh maximum penalty factor is far below the value of lost load.

He said Calpine could not support PJM's capacity transition plan, saying the recently completed quadrennial review will reduce net CONE by 25% (ER19-105).

"That is a major, major shock" to the capacity market, he said. "We are very uncomfortable with reducing capacity revenues based on what you think [energy and ancillary services] prices are going to be."

Old Dominion Electric Cooperative and American Municipal Power backed the Monitor's proposal.

"We think the IMM's proposal addresses the concerns of PJM and does so while preserving the equity of other stakeholders," ODEC's Mike Cocco said.

He said PJM's proposed ORDC curve "is way above the value to consumers."

Greg Poulos, executive director of the Consumer Advocates of PJM States (CAPS), said the Monitor proposed only changes that had broad agreement "and goes no further."

5th Proposal

After the four proposals that the task force reviewed failed to win a supermajority, GT Power Group's Tom Hysinski moved for a vote on a proposal by Vistra Energy that would eliminate the E&AS offset (like Calpine) while using a $2,000 penalty factor during hot and cold weather alerts and $1,000 at other times.

Monitor Bowring said the Vistra proposal had "all the negative aspects" of the PJM proposal and fails to address excessive payments to generators.

It was backed by more than 80% of Generation Owners and Transmission Owners and about half of Other Suppliers, but it found little support with customer representatives and distributors.

Although members agreed to continue talking, most appeared resigned that PJM will make a unilateral Section 206 filing with FERC.

"If you're looking for a [Section] 205 filing, it would [require] an ORDC that's not so generous," Bruce said. ■

PJM News

PJM MRC/MC Briefs

Markets and Reliability Committee

Revisions on Incremental Capacity Transfer Rights Endorsed

WILMINGTON, Del. — The Markets and Reliability Committee on Thursday endorsed a change to align PJM's Tariff with manual language on the process for requesting incremental capacity transfer rights (ICTRs) calculations.

Steve Herling, PJM vice president of planning, said the "very limited" *change* requires new service customers to request the calculations during the facilities study phase and limits each request to no more than three locational deliverability areas.

The change comes in response to a FERC order that found PJM had not been following section 234.2 of the Tariff for assigning ICTRs. The RTO had clarified the procedure in Manual 14E: Upgrade and Transmission Interconnection Requests, but FERC said it must also be added to the Tariff (*EL18-183*).

The Tariff requires the RTO to identify the increase in the capacity emergency transfer limit (CETL) resulting from an interconnection, merchant transmission facility or customer-funded upgrade.

"As a practical matter, it would be impossible for us to calculate the increased CETL for every generator in the queue," Herling said, citing estimates that it would take 54 hours per case to study deliverability to all 27 load delivery areas. "Bottom line is, for us to keep putting out system impact studies in compliance with the Tariff, we have to make to a change. Either we will have to stop putting out studies, or projects will be significantly delayed."

The MRC on first read unanimously endorsed the change, which also was approved unanimously by the Members Committee later Thursday.

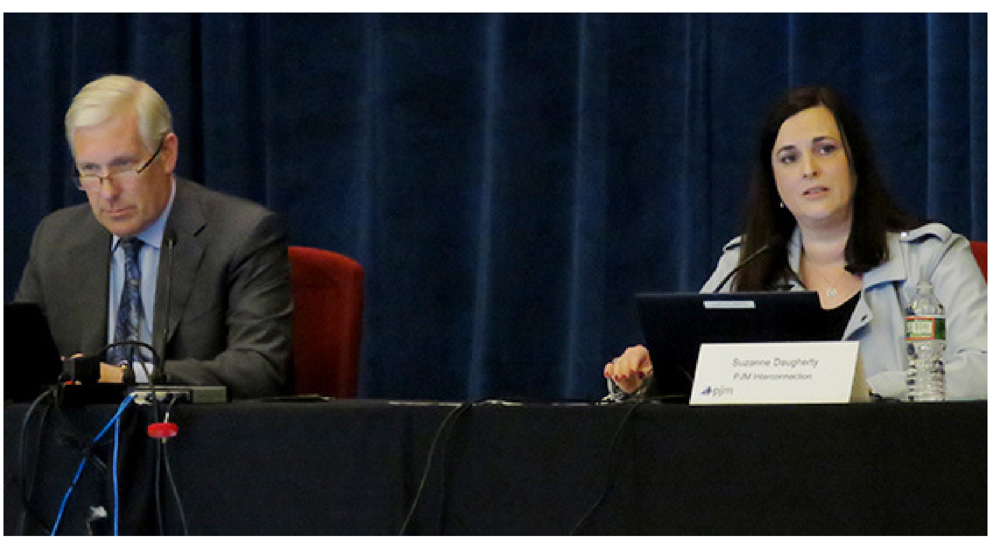
Fuel Security Issue on Tap for Feb. MRC

PJM will present the first read of a problem statement and issue charge on Phase 2 of its fuel security initiative at the February MRC, with a vote targeted for March, PJM's Tim Horger *said*.

The RTO will recommend assigning the issue to a new senior task force reporting to the MRC. Among the issues to be discussed will be attributes that define a fuel-secure resource, whether a minimum quantity of fuel-secure resources is necessary, and market and operational mechanisms that could ensure fuel security.

Horger said PJM will be seeking a market-based solution, potentially through changes to the capacity market.

In mid-January, the RTO published 324 scenario templates from the fuel security analysis it released in December, which concluded that it should take "proactive measures" to value fuel security attributes of its generators.



Markets and Reliability Committee Secretary Dave Anders and Chair Suzanne Daugherty | © *RTO Insider*

The analysis found that "on-site fuel inventory, oil deliverability, availability of non-firm natural gas service, location of a pipeline disruption and pipeline configuration become increasingly important as the system comes under more stress." (See *Full PJM Study Makes Case for Fuel Security Payments*.)

The RTO hopes to make a FERC filing in December or early 2020, Horger said.

The issue is likely to spark a renewed battle between supply and load interests. Tom Rutigliano, representing the Natural Resources Defense Council, said the issue should first be dealt with under the Capacity Performance program, noting that many risk factors listed in PJM's analysis are unit-specific and thus part of generators' CP obligations.

Although PJM acknowledged no individual generator could address systemic risks such as pipeline breaks or cyberattacks on supply systems, "the risks found in their study are mostly interruptible fuel contracts and lack of trucks, both of which can be solved by individual generation owners," Rutigliano explained later. "Pipeline breaks play a relatively small component in the study results."

Manuals Approved

The MRC unanimously endorsed the following manual changes:

- *Manual 38: Operations Planning*: Periodic review and update to procedures.
- *Manual 40: Training and Certification Requirements*: Cover-to-cover periodic review.
- *Manual 14G: Generation Interconnection Requests Planning Process*: Cover-to-cover review.

PJM's Adam Keech also notified members of a change made earlier this month to *Manual 11: Energy & Ancillary Services Market Operations* to clarify the current procedure regarding transient shortage pricing.

Keech said the manual did not fully describe the process for determining reserve shortages. He said the RTO became aware of the issue following a July 10 incident in which its area control error fell to -2,942 MW with a low frequency of 59.903 Hz.

PJM determined the low frequency resulted from several causes, including multiple unit trips, non-approved cases from real-time security-constrained economic dispatch and poor synchronized reserve response.

PJM News

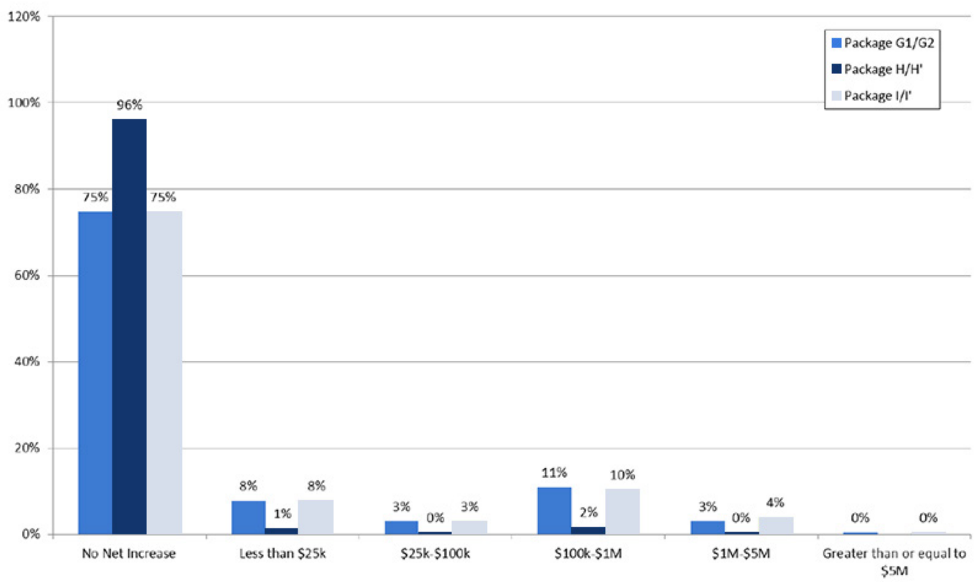
Members Committee

Members approved a revised *definition* of "on-site generators" in the market participation rules in the Tariff and Operating Agreement. The new definition recognizes that behind-the-meter resources can participate as both demand response to reduce load and as generation to inject power.

FTR Mark-to-auction Credit Requirements OK'd

With one objection, the committee approved a new a *mark-to-auction* component for financial transmission rights credit requirements, a change prompted by the GreenHat Energy default.

Although a decline in market value can indicate increasing FTR risk, PJM's rules do not provide for a collateral call when an FTR portfolio's value is deteriorating. The change would consider the difference between the FTR purchase price and most recent market price. It cleared the MRC in December. (See "FTR Collateral," *PJM Market Implementation Committee Briefs: Dec. 12, 2018*.)



The mark-to-auction rules chosen by PJM stakeholders (package G1) would affect only 4% of accounts, excluding GreenHat Energy. | *PJM*

Opportunity Cost Calculator Manual Revisions

Members endorsed *revisions* to Manual 15: Cost Development Guidelines governing generators' use of the Independent Market Monitor's calculator as an alternative method of calculating energy market opportunity costs.

A vote on related revisions to Schedule 2 of the OA was deferred again, until February. (See "Opportunity Cost Calculator Vote Deferred," *PJM MRC/MC Briefs: Oct. 25, 2018*.)

Liaison Committee Meetings to Change

Members heard the first read of a charter *revision* that would require the scheduling of Liaison Committee meetings with the Board of Managers before the board's regular meeting. Under current rules, Liaison Committee meetings alternate between before and after the board meeting. The change came out of discussions at the Stakeholder Process Forum. ■

— Christen Smith and Rich Heidorn Jr.

SPP

MMU Report: Wind Forecast Errors Drive SPP Price Spikes

By Tom Kleckner

SPP saw an increase in price spikes and overall prices during October and November thanks to above-normal scarcity pricing, according to the Market Monitoring Unit's fall State of the Market *report*.

The Monitor attributed the scarcity increases to higher volatility in wind output, pointing to an increase in mid- and long-term wind forecast errors as the primary culprit. It also said a 72% increase in natural gas spot prices at the Panhandle hub ($2.13/MMBtu to $3.67/MMBtu) and unplanned generator outages or derates contributed to the uptick.

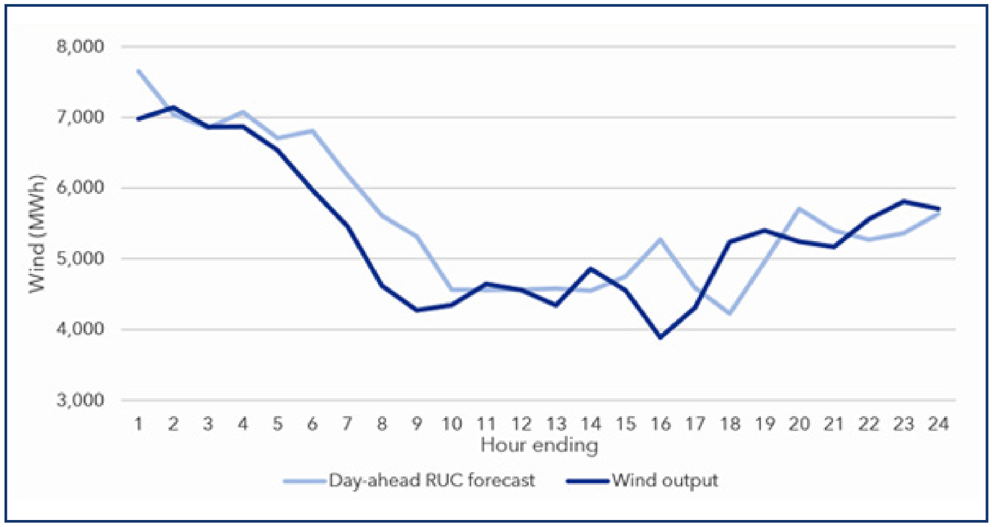
Redispatch costs increase faster with more expensive gas until scarcity occurs, the MMU said, driving up the number of scarcity events.

"Since the scarcity caps are price-based, they are reached more frequently due to increased gas prices," the report said.

The long-term wind forecast, used for the day-ahead reliability unit commitment's wind output, had an average error rate of 7.8% in 2018, almost double the 2016 average of 4.3%. The midterm load forecast, used four hours ahead of the intraday RUC processes, had an average error rate of 4.5% last year, 28% higher than 2016's average of 3.5%.

When large wind dips are not accurately forecasted, the market will often be short rampable capacity, the MMU said. This forces SPP operators to manually force more capacity online.

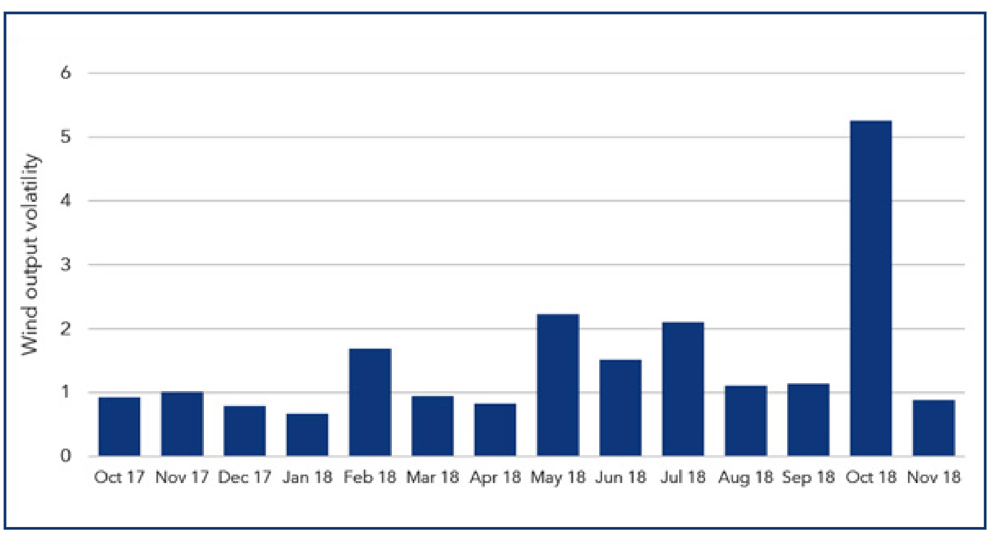
The real-time marginal energy price peaked at $1,575/MWh at 2:40 p.m. on Sept. 3. Operators responded to an unexpected sudden drop in wind output by adjusting the load offset and manually committing quick-start units. It took three intervals before prices dropped back below triple digits.



Wind output versus day-ahead RUC wind forecast, Sept. 3 | *SPP*

The Monitor said there is no "current answer for better forecasting" fluctuations in wind energy but noted a ramp product would "help abate these price spikes" by reducing their frequency and effects.

"By reserving ramp for unexpected conditions, such as wind drops or unit trips, the market will be better positioned when these events occur," the MMU said.



Volatility of wind output | *SPP*

MMU Executive Director Keith Collins | © *RTO Insider*

SPP's Market Working Group is coordinating staff's development of a ramping product. Staff is currently testing different alternatives.

The fall report covers September, October and November. The MMU will host a *webinar* on Friday at 1 p.m. CT to discuss the report.

The report also indicates the following:

- Energy prices have climbed slightly, with fall prices averaging around $27/MWh.
- The number of intervals with negative energy prices continues to decline.
- Overall congestion across the SPP footprint has declined. ■

Company Briefs

Business Groups Lobbying Against Fla. Retail Choice

A ballot measure that would allow retail electricity customers in Florida to choose their suppliers is being opposed by two of the state's most powerful business groups.

Florida Chamber of Commerce CEO Mark Wilson said in a statement last week that other states with retail choice have had "buyer's remorse" because of issues such as increased power prices. "This proposal is a false promise wrapped in a too-good-to-be-true wrapper that has no place in our state's Constitution," Wilson said. "Despite claiming to promote choice, it would prohibit Floridians from choosing the very Florida companies that currently serve them." Associated Industries of Florida CEO Tom Feeney said deregulation would lead to increased electricity costs and market uncertainty.

As of press time, political committee Citizens for Energy Choices is very close to gathering the 76,632 signatures necessary to submit the measure's wording to the state Supreme Court. If the court approves it, the group would need a total of 766,200 signatures to get the measure on the November 2020 ballot.

More: *Tampa Bay Business Journal*

Entergy Announces Job Openings at Nuke HQ, Grand Gulf

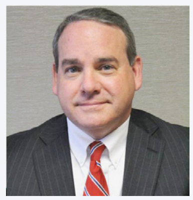
Entergy Nuclear last week announced that it is hiring for 250 job openings at its headquarters in Jackson, Miss., from engineers to project managers to training and maintenance.

The company will also add about 70 new jobs at the Grand Gulf Nuclear Station in Port Gibson.

Entergy made the announcement in a press conference attended by Mississippi Gov. Phil Bryant, Speaker of the House Philip Gunn, and Public Service Commissioners Brandon Presley and Sam Britton.

More: *Mississippi Today*

Entergy Names Twomey SVP of Fed Policy



Entergy last week announced it has promoted **Mike Twomey**, vice president of external affairs for Entergy Wholesale Commodities, to senior vice president of federal policy, regulatory and governmental affairs, effective March 1.

In his new role, Twomey will lead Entergy's Federal Government Affairs, Federal Regulatory Affairs, Sustainability and Environmental Policy, Corporate Social Responsibility and Entergy Wholesale Commodities External Affairs teams. He will also retain his current duties.

Twomey replaces Kim Despeaux, who retired in November. He has been with the company since 2002, starting as assistant general counsel in the New Orleans corporate headquarters, then as Entergy Louisiana's vice president for regulatory affairs from 2004 to 2009. He worked briefly as vice president of utility strategy in 2009 before moving to his current role in 2010.

More: *Entergy*

No Buyers for Bankrupt Westmoreland Coal's Assets

There were no qualified buyers for Westmoreland Coal's mines last week, leaving the assets to creditors pending a February court hearing.

Westmoreland, which filed for bankruptcy in October, identified more than 40 parties last summer that it considered potential buyers, but no purchase offers resulted.

The transfer to creditors is not a done deal, however. Westmoreland needs to convince the U.S. Bankruptcy Court for the Southern District of Texas on Feb. 4 to discard the coal company's roughly $329 million in unsecured pension and benefits obligation, which creditors aren't interested in assuming.

More: *Billings Gazette*

Toyota, Panasonic Form Joint Venture to Make EV Batteries

Toyota and Panasonic last week announced that they will establish a joint venture next year to produce prismatic lithium ion, solid state and next-generation batteries for electric vehicles.

"As vehicle electrification accelerates toward the solving of such environmental issues, batteries are a most important element," the companies said in a joint statement.

Equity participation in the joint venture will be split 51% for Toyota and 49% for Panasonic. Pending approval from competition law authorities, the partnership will officially launch by the end of 2020.

More: *Greentech Media*

Avista, Hydro One Cancel Merger Plans

Avista and Hydro One last week announced the cancellation of their proposed $5.3 million deal for Hydro One to acquire Avista, after it was rejected by regulators in Idaho and Washington state.

As required by the sales agreement, Hydro One will pay Avista a $103 million termination fee. Avista will use the money to offset expenses from the proposed sale and for other company purposes.

Both state utility commissions cited concerns about Hydro One, owned by the Canadian province of Ontario, having control over a domestic utility. Ontario Premier Doug Ford, citing campaign promises, fired Hydro One's board of directors in July and asked for the CEO's retirement. "I did not foresee the political upheaval, and it changed the tenor of the deal," Avista CEO Scott Morris said.

More: *The Spokesman-Review*

Federal Briefs

Longest Government Shutdown in US History Ends

After 35 days, the longest government shutdown in U.S. history came to an end Friday after President Trump and Congress agreed to temporarily reopen shuttered federal agencies, including the Interior Department and EPA, without providing any money for a wall along the Mexican border.

Soon after Trump announced the deal Friday afternoon in the Rose Garden, the House of Representatives and Senate quickly passed legislation on voice votes to fund the government until Feb. 15 in a bid to let negotiators try to work out a larger immigration and border security compromise. The president signed the legislation later that night.

As the shutdown's fifth week came to a close, the East Coast was riven with airline delays and federal workers missed their second paycheck. Senate Majority Leader Mitch McConnell (R-Ky.) said Congress will concentrate on border security in the next three weeks and that "negotiations on [the Department of Homeland Security] will be prioritized over consideration of any other funding bills."

More: *Politico*

Senate Republicans Concerned About DOE Nuke Deal

Energy Secretary Rick Perry's decision to award a $115 million no-bid contract to develop an advanced nuclear enrichment facility in Ohio is drawing scrutiny from Senate Republicans.

The Department of Energy said this month it would award the contract to Centrus Energy, a former government-owned contractor that ceased enrichment operations in 2013 before declaring Chapter 11 bankruptcy.

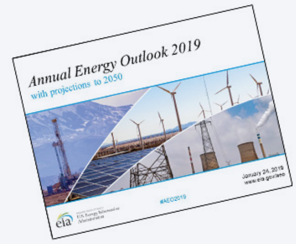
In a letter to Perry this week, Sen. John Barrasso (R-Wyo.), chairman of the Senate Environment and Public Works Committee, said the company had a mixed history in fulfilling federal contracts for nuclear fuel and questioned whether the money it received would end up supporting the Russian state-owned firm TENEX, from which Centrus buys enriched uranium.

More: *Houston Chronicle*

EIA: US to Become Net Energy Exporter in 2020

The boom in oil and natural gas production will make the U.S. a net energy exporter in 2020 — a feat the country has not achieved in nearly 70 years, the Energy Information Administration said in its Annual Energy Outlook last week.

The U.S. will start exporting more energy products than it imports as crude output continues to grow and domestic oil consumption declines. Growing shipments of



natural gas and petroleum byproducts will also boost the country's role as a major energy exporter.

Coal will produce 17% of the country's electricity in 2050, while natural gas will provide 39%, according to EIA's reference case, which doesn't take into account policy changes. As such, the agency predicts carbon emissions from the energy sector will fall only 2.5% from 2017 levels by 2050.

More: *CNBC*; *Ars Technica*

DOE Announces $38M for Coal Plant Improvement R&D

The Energy Department last week announced up to $38 million in federal funding for cost-shared research and development projects enhancing technologies that improve the overall performance, reliability and flexibility of the nation's existing coal-fired power plant fleet.

"Coal is vital to the nation's energy security," the department said.

"By improving the efficiency of our baseload generation, we are strengthening the reliability of all our electricity generation," Undersecretary of Energy Mark Menezes said.

More: *Department of Energy*

State Briefs

ILLINOIS

State Joins US Climate Alliance

Gov. J.B. Pritzker last week signed an executive order to make the state the 18th member of the U.S. Climate Alliance, a group of states committed to following the 2015 Paris Agreement on climate change.

The agreement, from which President Trump has said he intends to withdraw the U.S., aims to hold the increase in the global average temperature to well below 2 degrees Celsius above pre-industrial levels. The state will try to reduce its emissions by 26% below 2005 levels by 2025, the U.S.' goal under the agreement.

The state has already set a goal of relying on renewable energy for 25% of its energy consumption by 2025.

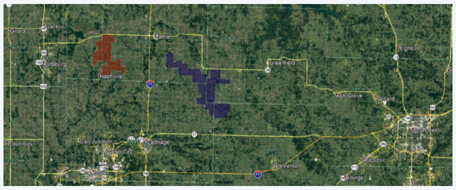
More: *The Associated Press*

MISSOURI

Residents Mostly Approving of Empire Wind Project

Although some residents raised and voiced concerns about issues such as setback distances, noise and safety, the majority of feedback and testimony at a public hearing last week on Empire District Electric's proposed 300-MW wind project was supportive of the project.

The hearing was held by the Public Service



Commission at Missouri Southern State University. Of the 10 attendees who offered public testimony on the matter, eight made clear they were in favor of the project.

The project would be split into two 150-MW sites called King's Point and North Fork Ridge, and turbines would be built in parts of Jasper, Dade, Barton and Lawrence counties.

More: *The Joplin Globe*

MONTANA

Renewables, EE Advocates Rally at State Capitol

About 100 clean energy advocates last week rallied at the State Capitol on a snowy afternoon to push for renewable energy programs and laws.

The central piece of legislation the rally pushed for is the Commercial Property Assessed Clean Energy bill, which would allow private capital firms to fund renewable or energy efficiency projects on commercial buildings. Local governments would then place an assessment on the property, allowing the owners to repay the project through their property taxes for up to 20 years.

"We need to put power back into the hands of people like you and I to reclaim energy as a resource that advances economic, social and environmental needs of our communities and our families," state Rep. Emma Kerr-Carpenter said at the rally.

More: *Independent Record*

NEW HAMPSHIRE

PUC Approves Home Battery Pilot Program

The Public Utilities Commission last week approved a home battery pilot program that will use a network of small batteries in homes, owned by a utility and third parties, to lower system-wide demand during peak hours.

The program is intended to lower costs for ratepayers overall while saving money for the host customers based on a time-of-use rate.

The PUC's approval allows Liberty Utilities to own and install up to 200 Tesla Powerwalls in the homes of customers, who will pay $2,433 per system upfront, or $25/month for 10 years.

More: *Greentech Media*

OKLAHOMA

OCC Rejects Company's Supplier Switch Request

The Corporation Commission last week rejected a request by iodine manufacturer IOCHEM to switch the electricity supplier for one of its brine wells from Northwestern Electric Cooperative to Oklahoma Gas and Electric.

IOCHEM obtains electricity for 17 of its wells from OG&E, and from Northwestern for nine others. The company contended the contract it had executed with Northwestern in 1997 gave it the right to make the switch for one of the wells. But Northwestern disagreed, asking the commission to require IOCHEM to continue using its power to supply the well.

The commission based its decision on the Retail Electric Supplier Certified Territory Act, which allows customers who expect to use more than 1 MW to choose its supplier. But the law does not allow customers to switch after that. "State law is very clear," said attorney Deborah Thompson, who represented Northwestern before the commission. We don't have customer choice in Oklahoma. There's no switching."

More: *The Oklahoman*

Senator Proposes Expanding Corporation Commission

State Sen. **Mark Allen** last week introduced a resolution proposing to ask voters to expand the number of commissioners on the Corporation Commission from three to five.

OCC commissioners are elected by voters to six-year terms and are limited to serving two terms. Under the proposal, that would not change, but the two additional commissioners would be nominated by the governor and approved by the Senate, and they would serve indefinitely, unless the governor fires them.

Allen said the resolution is connected to a study the National Academy of Public Administration made for Gov. Mary Fallin's Second Century Corporation Commission Task Force, to which he belonged.

More: *The Oklahoman*

VERMONT

BED Introduces Discounted EV Charging Rate

The Burlington Electric Department last week announced a discounted residential electric vehicle charging rate that will allow customers to charge their vehicles for the equivalent of 60 cents/gallon of gasoline.

The utility also launched a new, residential charging station incentive that will provide customers who purchase all-electric vehicles an additional $400 rebate on the purchase of eligible Level 2 home charging stations. It also increased its incentives on the purchase and lease of plug-in hybrid vehicles to $1,000, with an enhanced rebate increase to $1,500 for low- and moderate-income customers.

"Through lease and purchase incentives, partnerships with vehicle dealers and a new charging rate, BED is showing the country how an innovative, 21st century utility can push forward the decarbonization of transportation," Burlington Mayor Miro Weinberger said.

More: *Vermont Business Magazine*