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

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Trump Announces US Withdrawal from Paris Agreement

By Rich Heidorn Jr.

WASHINGTON — President Trump followed through on his campaign pledge to withdraw the U.S. from the Paris Agreement on climate change Thursday, a victory for economic nationalists and conservatives that prompted howls of outrage from other signatories, environmentalists and corporate leaders.

"I was elected to represent the citizens of Pittsburgh, not Paris," said Trump, who complained the agreement would do little to combat global warming but would cost the U.S. millions of jobs and leave the nation unable to produce enough power to support economic growth of "3 to 4%" — a pace the country has rarely seen.

"At 3 or 4% economic growth — which I expect — we need all forms of American energy," he said.

EPA Administrator Scott Pruitt speaks in the White House Rose Garden as President Trump listens. | © *RTO Insider*

California Senate Passes 100% RPS Bill
p.23

The U.S., the No. 2 producer of greenhouse gases after China, joins Syria and Nicaragua as the only countries not party to the 2015 agreement, which was largely brokered by the Obama administration and has been signed by more than 190 countries. The U.S. agreed to a nonbinding goal of cutting carbon emissions by at least 26% below 2005 levels by 2025.

Trump, who has previously called global warming a "hoax," did not address climate science, instead saying the U.S. would remain the "cleanest, most environmentally friendly" nation in the world and would seek to negotiate a new deal that doesn't penalize it. "We'll see if we can make a deal that's fair," he said.

Trump said the Paris Agreement would hamstring the U.S. economy while allowing India and China to increase emissions for

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Seeking Subsidy, Exelon Threatens to Close Three Mile Island

By Rich Heidorn Jr.

Exelon announced last week that it will retire Three Mile Island Unit 1 in September 2019 "absent needed policy reforms."

Three Mile Island | © *digitalduck / 123RF Stock Photo*

The announcement was not unexpected after the company acknowledged May 24 that the plant had not cleared the PJM capacity auction for delivery year 2020/21, the third year in a row it had come away empty-handed.

In a filing with the U.S. Securities and Exchange Commission, Exelon said the plant has lost money for the last five years as a result of "prolonged periods of low wholesale power prices," its failure to clear the last three PJM capacity auctions and "the absence of federal or state policies that place a value on nuclear energy for its ability to produce electricity without air pollution while contributing to grid reliability." As a single-unit plant, TMI also had high operat-

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EIM Expanding to LA, Canada

By Robert Mullin and Jason Fordney

The Los Angeles Department of Water and Power (LADWP) and Vancouver-based Powerex last week signed agreements with CAISO to join the Energy Imbalance Market (EIM), adding the country's largest municipal utility and the market's first non-U.S. participant.

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LaFleur Ready to Welcome New Members Ahead of Today's Senate ENR Vote (p.15)

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CAISO ERCOT ISO-NE MISO NYISO PJM SPP

Editorial

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

Deputy Editor
Robert Mullin 503-715-6901

Production Editor
Michael Brooks 301-922-7687

Contributing Editors
Julie Gromer 215-869-6969
Peter Key

MISO Correspondent
Amanda Durish Cook 810-288-1847

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

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

CAISO/West Correspondent
Jason Fordney 571-224-8960

PJM Correspondent
Rory D. Sweeney 717-679-1638

Subscriptions and Advertising

Chief Operating Officer / Co-Publisher
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Marge Gold 240-750-9423

Marketing Assistant
Ben Gardner

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

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The additions will bring the total members participating or announced their intent to participate in the CAISO-run market — designed to better balance supply and demand across the region by making more electricity resources available in real time — to 11.

Powerex markets the surplus generation of parent BC Hydro, Canada's third largest utility. The company's role is similar to that of U.S. federal power marketing agencies, such as Bonneville Power Administration and the Western Area Power Administration.

Mexican grid operator El Centro Nacional de Control de Energía (CENACE) last year announced that it was exploring having its Baja California Norte join the market, but it has not yet signed a participation agreement.

Powerex is slated to join the EIM in April 2018, an aggressive timeline compared with other utilities that have signed on to the market. Preparations typically take 18 months or longer, but the company has long experience selling into the ISO's real-time market.

"Powerex has actively participated in the ISO's five-minute market since 2005 through a dynamic scheduling arrangement, so joining the EIM is a logical extension of our intra-hour market participation," Powerex CEO Teresa Conway said in a statement.

Conway noted that Powerex's participation in the growing EIM footprint will allow the company to engage in sub-hourly transactions across multiple utility service territories, helping to integrate renewables and improve the region's grid reliability.

LADWP General Manager David Wright touted the benefits of joining with other utilities across the western U.S. to more reliably integrate renewable energy resources.

"We are pleased to enter the EIM in what will be a solid step forward in partnering with our neighbors to find benefits for the City of Los Angeles," Wright said in a statement.

While LADWP expects to begin participating in the market in April 2019, that timeline could be extended an additional year to accommodate the utility's unique configuration and required upgrades. A separate agreement will have to be made once the LADWP system is integrated into the EIM.

Total implementation costs are estimated at $15 million to $20 million, and recurring expenses are projected at about $2.3 million per year. Third-party analysis pegged annual savings for ratepayers at $2 million to $5 million.

About 40% of LADWP's 7,600 MW of capacity is coal-fired, 20% renewable, 22% natural gas-fired, 9% nuclear and 7% classified as "other." The municipal utility began distributing electricity in 1917 and serves about 4 million customers.

The utility also individually or jointly controls about 4,600 miles of transmission, which includes the Pacific DC Intertie connecting Southern California with the Bonneville Power Administration system in the Northwest and the Intermountain DC system that carries output from coal-fired generation in Utah.

With its access to BC Hydro's ample hydroelectric resources, Powerex is well-positioned to provide EIM participants with the flexible ramping capacity increasingly needed to firm up the growing number of variable renewable resources coming to the region's grid. That type of resource sharing is touted as a key benefit of the market.

The company also holds transmission rights on lines throughout the West, including the California-Oregon Intertie, a key transfer point between the Pacific Northwest and California. Constraints on that line periodically act as a chokepoint that isolates the PacifiCorp West and Puget Sound Energy balancing authority areas from the rest of the EIM, resulting in prices that diverge from the rest of the market.

Already participating in the EIM are PacifiCorp, NV Energy, Puget Sound Energy and Arizona Public Service. Portland General Electric is due to join in October; Idaho Power in April 2018; Seattle City Light and Balancing Authority of Northern California/Sacramento Municipal Utility District in April 2019; and Salt River Project in April 2020.

ERCOT NEWS

IMM Offers Additional Suggestions to Improve Markets

ERCOT's wholesale market performed "competitively" in 2016, the ISO's Independent Market Monitor, Potomac Economics, said in its annual State of the Market report filed last week with the Public Utility Commission of Texas.

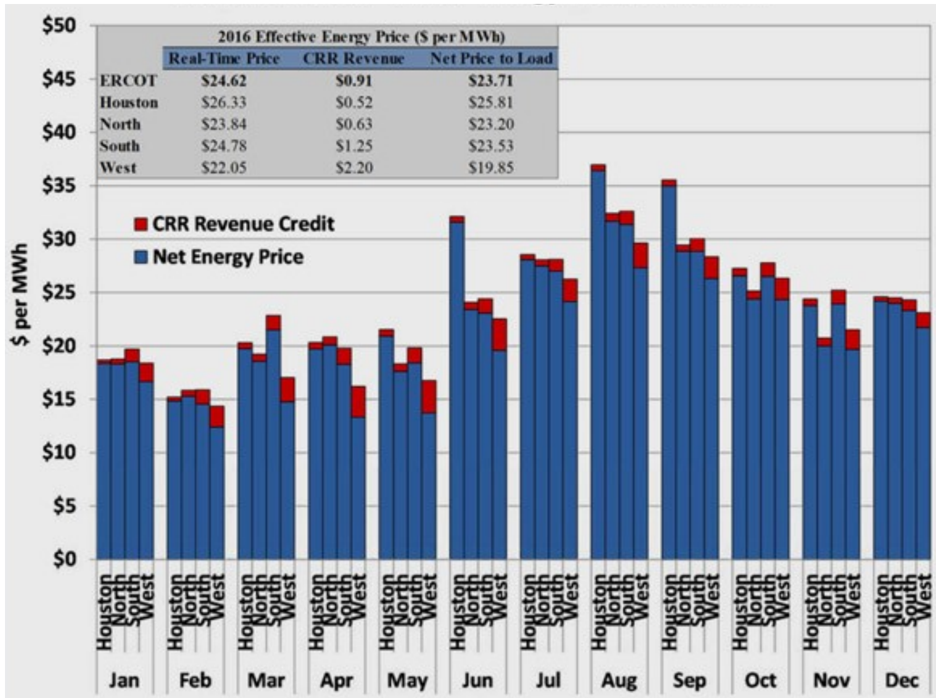
However, the Monitor recommended seven potential improvements to system operations and price formation in the energy and ancillary services markets. While some of the suggestions have been seen before, this year's report included three new recommendations, all focused on improving price formation.

The first calls for ERCOT to ensure that the price of a reliability-must-run unit's energy "reflects the shortage conditions that exist." The report notes that RMR units are currently required to submit energy offer curves with prices equal to the systemwide offer cap, but those units may also be needed to resolve local transmission constraints in the future. The Monitor said the RMR unit's energy offer price will likely be mitigated when the constraint is non-competitive, resulting in its dispatch before other competitively offered units.

"In the absence of any other market changes designed to reflect the reliability needs that caused the RMR," the Monitor said, "we believe that pricing the energy from the RMR unit such that its costs to resolve the relevant constraint are higher than the costs of other available market-based resources will establish more efficient economic signals in the ERCOT market."

The ISO's stakeholders have already taken steps to address RMR contracts, driven by a 2016 agreement with NRG Texas Power's Greens Bayou Unit 5 in Houston. The contract was terminated last month. (See *ERCOT Ending Greens Bayou RMR May 29*.)

ERCOT's Board of Directors has approved three protocol revision changes, including a requirement that RMR units only be procured when they have a material impact on expected transmission overloads. Other changes clarify ERCOT's commitment process for RMR units, update the contracting and reimbursement process for RMR units and create a mechanism to claw back capital contributions from an RMR unit if it returns to the market.



Effective real-time energy market prices | *Potomac Economics*

The Monitor also suggests that the ISO evaluate the need for a local reserve product, such as the localized 30-minute reserve product used by other RTOs. The Monitor contends that defining such an ancillary service product would allow the real-time energy and reserve markets to price local reserve shortages and provide the revenues necessary to satisfy local capacity needs, "eliminat[ing] the need to sign out-of-market RMR contracts."

The third recommendation asks for ERCOT to consider including marginal losses in LMPs and using a revenue-allocation methodology to address collecting more payments for losses than their aggregate cost. "Recognizing marginal losses will allow the real-time market to produce more from a higher-cost generator located electrically closer to the load, thus resulting in fewer losses," the Monitor said.

While the Monitor lauded ERCOT's competitive performance, it also noted an increase in negative pricing over the last five years, driven by additional wind generation and transmission infrastructure. It said ERCOT saw 131 hours of prices at or less than zero in 2016, compared with 55 in 2015 and 44 in 2014.

The Monitor also said the market's total congestion costs were $497 million in 2016, up 40% from 2015, primarily because of transmission outages.

The report also highlighted ERCOT's record-low average real-time energy prices — since the nodal market's implementation in 2010 — of $24.62/MWh, an 8% drop from 2015. It said real-time prices never exceeded their PUC-mandated limit of $3,000/MWh, and breached $1,000/MWh for only 3.9 hours.

ERCOT Approves Retiring 61 MW of Capacity

ERCOT has approved South Texas Electric Cooperative's request to retire its three gas-fired units in Pearsall, southwest of San Antonio. The units, with a combined capacity of 61 MW, will be decommissioned in August.

The co-op filed a notification of suspension of operations with the ISO in April. The Texas grid operator responded by saying the units "are not required to support ERCOT transmission system reliability" and said their operations may be suspended, effective Aug. 1.

— Tom Kleckner

ISO-NE NEWS

NESCOE Defends Role in Identifying Public Policy Tx Needs

By Michael Kuser

State officials in New England said last week that only they should have the ability to identify public policy-driven transmission needs for evaluation by ISO-NE.

"The plain language of [ISO-NE's Tariff] designates NESCOE as the entity that identifies whether there are state or federal public policies driving transmission needs and, in turn, whether a public policy transmission study should be commenced to evaluate potential solutions," the New England States Committee on Electricity said in a June 1 rebuttal to the Conservation Law Foundation.

CLF Senior Attorney David Ismay asked ISO-NE on May 16 to conduct a study to determine public policy transmission needs despite NESCOE's contention that there are currently no such needs. (See *CLF to ISO-NE: Override States, Order Public Policy Tx Study*.)

Ismay said a D.C. Circuit Court of Appeals ruling in April confirmed the responsibility of ISO-NE, "not the states, to evaluate transmission needs and potential solutions as part of its Regional System Plan process, regardless of whether those transmission needs arise from state public policy requirements or any other source" (*Emera Maine v. FERC*, No. 15-1139). (See *Court Rebuffs New England TOs, Upholds FERC ROFR Order*.)

> **"CLF misunderstands the Order 1000 process ... and has conflated the process for *evaluating* solutions to policy-driven transmission needs with the process of *identifying* if there are any needs in the first place."**
>
> **NESCOE**

Misreading of Order 1000

NESCOE responded that "CLF misunderstands the Order 1000 process ... and has conflated the process for *evaluating* solutions to policy-driven transmission needs with the process of *identifying* if there are any needs in the first place. *Emera* imposes no requirements on ISO-NE to determine public policy requirements driving transmission needs and directed no changes to the [Open Access Transmission Tariff].

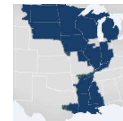
"CLF mistakenly claims that *Emera* requires 'ISO-NE to make its own determination ... regarding the existence of [public policy requirements] that are driving, or may drive, transmission needs relating to the New England transmission system.'"

NESCOE said that ISO-NE's rules on the identification of policy needs have never been in controversy, were not before the court and that FERC itself had affirmed to the court NESCOE's role in that process. "If anything ... *Emera* affirms the process reflected in the current OATT whereby NESCOE must first identify a state policy driving a transmission need before ISO-NE begins expending consumer dollars on evaluating a need. As *Emera* plainly states, 'ISO-NE has no role in setting public policy for the states.'"

The organization closed its response by bemoaning CLF's request as "precisely the kind of after-the-fact market participant action that causes the states serious pause in using a FERC-jurisdictional tariff to achieve their clean energy requirements."

ISO-NE Director of Transmission Planning Brent Oberlin had told the Interregional Planning Stakeholder Advisory Committee for New England, NYISO and PJM on May 19 that if the RTO decides to conduct a public policy transmission study, it will need to provide a scope to stakeholders by Sept. 1.

MISO NEWS



Reliability Subcommittee Briefs

3 Pipeline Companies to Receive Gas Profiles Before Winter

CARMEL, Ind. — Barring a FERC denial, MISO says it will begin sharing gas usage profiles of gas-fired generators with three natural gas pipeline owners before winter as part of a pilot program aimed at improving reliability.

Mark Thomas, MISO manager of gas-electric coordination, said the RTO will offer day-ahead hourly usage profiles to Northern Natural Gas, ANR Pipeline and DTE Energy in an effort to ensure adequate fuel supplies for gas-fired generators.

MISO filed with FERC last month for approval to share hourly burn estimates with select gas operators (ER17-1556).

The RTO doesn't have a fixed target date to begin sharing the profiles, but staff would like to begin before winter hits and gas usage spikes, Thomas said during the June 1 Reliability Subcommittee meeting. MISO will await FERC approval before sharing any data.

Thomas stressed that MISO will only communicate aggregated data, but he also said sharing nonpublic operational information is "consistent with FERC Order 787." He added that the RTO will "execute nondisclosure agreements and notify gas pipelines and utilities of existing FERC rules which enforce protection of nonpublic information."

In April, some stakeholders voiced reservations about the pilot, saying the sharing of estimated day-ahead data could harm reliability if gas operators begin to make burn rate decisions relying solely on partial data. (See *MISO Stakeholders Question Electric-Gas Info Sharing*.)

Work Group Produces MISO Resilient Operations Plan

MISO is putting emphasis on resilient operations in the response to stepped-up NERC Critical Infrastructure Protection standards.

Kim Sperry, liaison to the Resilient Operations Work Group (ROWG), presented the RSC with a work plan outlining short-term reliability goals . In one to two years, MISO wants to establish better threat procedures for areas under greater risk for outages and work with local balancing authorities to specify alternatives for balancing during extended outages. She said that the ROWG will submit the balancing authority resiliency topics to the Steering Committee for issues assignment.

By 2019, the RTO also hopes to automate the entry of large volumes of data and identify alternative methods of communications when traditional means are not functions, Sperry said.

MISO's outage restoration plans will focus on "black sky" outage situations — larger regional outages that last considerably longer than average operational or weather outages, she said.

The work plan also states that in two to five years, MISO will expand training on high-impact, low-probability events. Ongoing resiliency efforts expected to last beyond five years include cybersecurity improvements and gas-electric coordination, Sperry said.

MISO: Frequency Response Modeling Needs Work


Manjure

MISO has performed a review of its reliability modeling in order to study the decline in its frequency response capability. One result: The RTO has learned there's room to improve its dynamics modeling, according to Resource Adequacy Manager Durgesh Manjure.

Preliminary results show that seven of MISO's 35 local balancing authorities contain generators that do not appear in the dynamics model, accounting for about 1% of generation, Manjure said. In addition, 31 local balancing authorities contain generators that do have governors appearing in the model, totaling 25%. Dynamics modeling, along with power flow modeling, is a key component of the RTO's transmission planning.

Manjure said MISO will reach out to individual generators to confirm the absence of equipment or determine if the RTO is overlooking the equipment in its modeling inventory.

"This is a very preliminary review," Manjure said. "We're trying to get to a point where our models are useful."

MISO earlier this year committed to studying its deteriorating frequency response and will later this year review performance based on collected data and compare results to actual events. (See *MISO Begins Study on Declining Frequency Response*.)


Swan

MISO's Steve Swan shared the frequency response statistics supplied to NERC. Frequency response averaged -563.30 MW/0.1 Hz in 2014, -477.39 MW/0.1 Hz in 2015 and -336.30 MW/0.1 Hz in 2016.

MISO's current frequency response obligation under NERC's frequency response reliability standard (BAL-003-1) is -211 MW/0.1 Hz.

"We're getting to a point where this is real and our margin isn't as big as it was a few years ago," RSC Chair Tony Jankowski said. "I think we need to keep this a focus. It's getting risky."

Manjure also said MISO cannot use frequency measurements from supervisory control and data acquisition (SCADA) software for study data as originally hoped because the measurements aren't produced quickly enough, despite the ability for SCADA to produce one measurement every four seconds. He said the RTO is investigating other means of data collection.

MISO Says Solar Eclipse No Big Deal; Energy Storage Meeting Planned

This summer's total solar eclipse will not threaten MISO's operations, but it can provide lessons for the future, according to RTO staff.

"It does cross through MISO's footprint, but it's not expected to be a significant reliability event," RSC liaison Mike McMullen said.

Solar installations from Oregon to North Carolina will be in the path of the Aug. 21 eclipse, and portions of Illinois within MISO

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MISO NEWS

MISO Asks FERC for Pseudo-Tie Technical Conference

By Amanda Durish Cook

CARMEL, Ind. — MISO is asking FERC to schedule a technical conference to clarify the rules governing the implementation and use of pseudo-ties.

The RTO made the request in a May 26 filing under two dockets: PJM's proposal to apply more stringent requirements on external capacity resources (ER17-1138) and MISO's proposed *pro forma* pseudo-tie agreement (ER17-1061). FERC sent deficiency notices seeking more information in response to both initiatives.

MISO said a technical conference could "provide a foundational understanding of pseudo-ties, their application, and the challenges they pose" and help FERC "better understand the benefits of pseudo-ties, the potential impacts pseudo-ties have on reliability and efficiency of market operations, and the current status of coordination between neighboring RTOs."

Zwergel

"We talked about these things for two years now, and there are still questions," MISO Senior Director of Regional Operations David Zwergel said at a June 1 Reliability Subcommittee meeting.

MISO's Independent Market Monitor, who wants FERC to eliminate PJM's requirement that external resources be pseudo-tied, joined in the call for a technical conference. "What we would like the technical conference to make clear is … there are potential alternatives that should be considered to pseudo-ties. What we hope comes out of this conference is a full hearing of the cost and the benefits," said Michael Wander of IMM Potomac Economics.

The request comes as PJM and MISO are still working on draft joint operating agreement changes to create a standard pseudo-tie definition and rule set. (See *MISO, PJM to Try Again on FERC Pseudo-Tie Filings*.)

The joint language, which has not been released to stakeholders, will remove the need for MISO to sign off on PJM's proposed *pro forma* pseudo-tie agreement. Late last year, MISO staff said there was no need to write standardized pseudo-tie definitions into the RTOs' JOA; by early spring, the RTOs had agreed to add coordinated pseudo-tie policies to their JOA.

Zwergel said MISO is hoping to file the JOA in the next few months. "Good progress has been made," he said.

While it awaits FERC's decision on a technical conference, MISO will respond to the deficiency letter on its *pro forma* filing by June 12, he said.

Reliability Subcommittee Briefs

Continued from page 6

will be affected, McMullen said, adding that the RTO will monitor distributed energy resources during the event. He said this eclipse can serve as a learning experience in preparation for the next total solar eclipse on April 8, 2024, when he expects there to be greater solar penetration in the footprint.

"Certainly, we'll see changes to the system between now and then," he said.

McMullen also noted that MISO has set a tentative date of July 24 to hold a common issue meeting on energy storage.

Kim Sperry | *© RTO Insider*

At the April Steering Committee meeting, Consumers Energy, DTE Energy, Ameren, Xcel Energy and Indianapolis Power and Light, which all own storage resources, submitted a joint request that MISO create a model for storage's participation in the market and track its growth using the RTO's Market Roadmap list of market revisions. Staff also said a task team dedicated to energy storage could follow the common issues meeting. (See *MISO's Next Step on Storage: 'Common Issues'; Task Team?*)

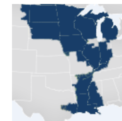
MISO Ends Manitoba Hydro Reserve Support

MISO successfully carried Manitoba Hydro's usual contingency reserves throughout May during the utility's spring maintenance outages, Swan reported.

Swan said three separate contingency events occurred during the month while MISO cleared the utility's 150-MW share of contingency reserves. The RTO stopped carrying Manitoba's reserves May 29, when the Canadian utility's dams returned from the outages that reduced its transfer capability. (See *MISO to Make Up Manitoba Hydro Reserves During Spring Outages*.)

— Amanda Durish Cook

MISO NEWS



MISO Interregional Plans with SPP Echo PJM Efforts

By Amanda Durish Cook

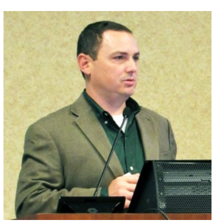
Officials from SPP and MISO met in the latter's headquarters in Carmel, Ind., to discuss the RTOs' joint operating agreement. | © *RTO Insider*

CARMEL, Ind. — After two years, MISO and SPP have negotiated a memorandum of understanding to address overlapping congestion charges, implement a small interregional project type and swap flowgate control to account for power flows.

RTO officials say the MOU, which borrows elements from MISO's coordination efforts with PJM, provides market-to-market specifics where the joint operating agreement is vague. The document won't result in major changes in coordination, officials said.

The MOU addresses exchanging control of market flows, correcting errors in firm-flow entitlements, studying the impacts to entitlements when facility ratings are changed, capping entitlements at the security operating limit and making market-to-market hold-harmless reimbursements. (See "MISO, SPP Agree to M2M Improvements," *SPP-MISO Briefs*.)

Complex Topics



Kelley

SPP Director of Interregional Relations David Kelley said the RTOs have been working to improve M2M coordination since early 2015. "These are some very complex topics that often involve months or years of negotiations," he said.

Staff say the memo is meant to target problems the RTOs have experienced since the start of the M2M process, including ineffective real-time congestion management on flowgates and errors in settlement calculations. Kelley said the memo documents the RTOs' "common agreement" on how to handle M2M issues. "There were honestly some different interpretations of the JOA," Kelley said at a May 31 meeting between the two RTOs at MISO's headquarters, the first JOA meeting in a year. MISO's Jeremiah Doner said that given the complex interregional goals the RTOs have laid out, another JOA meeting would be scheduled soon.

Kelley said the memo's objectives aren't written out verbatim in the JOA, but the "intent" of the memo is in the JOA.

Ron Arness, of MISO's seams management division, said a few of the items outlined in the MOU, such as swapping control of flowgates, will require JOA changes. Arness said the agreement still needs approval from representatives of both RTOs' legal departments and executive leadership.

Kelley said the document won't necessarily be filed or become public. He said the RTOs want to execute the MOU in the next few weeks and file with FERC a revised JOA to allow limited resettlements during the summer.

Swapping Flowgate Control

"The longest pole in the tent is the market flow control change. We have software being delivered for that," added MISO Director of Forward Operations Planning Kevin Vannoy.

The memorandum allows MISO and SPP to use an alternative flowgate control at certain times when power swings are significant, so predominant market flow dictates relief control on a flowgate, and not solely which RTO has monitoring control, Kelley said.

There have been situations in the past where MISO has had 95% of the flow on a flowgate but SPP still controls it, and it's difficult to manage, Kelley said. He added that the RTOs will only swap control of flowgates when both agree that it's the best course of action, either resulting in better price convergence or better congestion constraints. All instances where the RTOs trade monitoring roles will be reviewed after-the-fact.

At MISO's last Board of Directors meeting in March, MISO Market Monitor David Patton appealed for MISO, PJM and SPP to become more active in transferring monitoring of constraints. (See *Tornadoes, Wind Generation Drive MISO Tx Congestion*.)

Resettlements

MISO and SPP will also form a technical committee by early October to address M2M issues and resettlements, but the RTOs said they will not retroactively provide resettlements more than six months prior to the MOU except for three 2015 cases, in which SPP will refund MISO more than $600,000.

Kelley said the RTOs will not pursue any other resettlements. "While we would love to chase down every penny, we don't think that's effective. We don't think that's a good

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NYISO NEWS

MC Briefs

Summertime, and the Grid is Easy

RENSSELAER, N.Y. — NYISO and adjacent grids will likely be able to serve load throughout summer based on historical performance of generation and transmission infrastructure, the ISO reported last week.

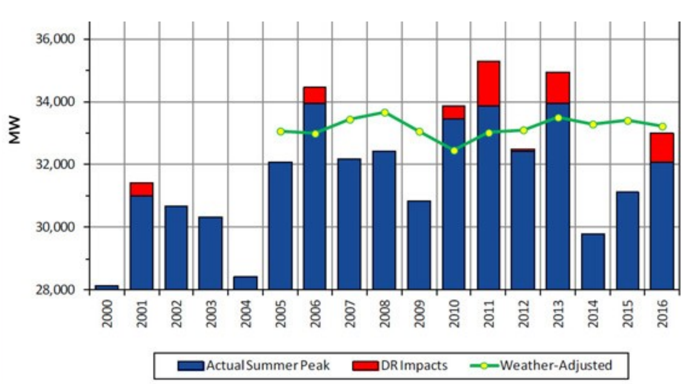
However, an unlikely scenario of extreme heat could pose challenges for system capacity reserves, if not the system itself, according to the ISO's Summer 2017 Capacity Assessment.

Under a baseline scenario in which this summer's load peaks at 33,178 MW, NYISO expects to have a capacity margin of 386 MW, down 746 MW from the 2016 baseline forecast. The positive margin represents the amount of surplus generation available after factoring in peak load plus a required 2,620 MW of operating reserves.

Under extreme weather conditions — the 90th percentile forecast — the ISO predicts a capacity shortfall of 1,924 MW, compared with a 1,191-MW shortfall in last summer's forecast.

"That's taking the 90th percentile peak forecast, which is a very large peak, adding 2,620 of reserve requirement, saying that's the requirement on a day-ahead basis, and then comparing it to that available capacity," Wes Yeomans, NYISO vice president of operations, said during a May 31 meeting of the Management Committee.

Despite the expected deficiency under those conditions, the ISO expects it could avoid involuntary load curtailments by relying on up to 3,083 MW of demand resources available under emergency procedures.



New York Control Area summer peaks | *NYISO*

NYISO activated demand response during its all-time summer peak of 33,956 MW in July 2013, which would have hit 34,900 MW without DR, Yeomans said.

Yeomans explained that the 90th percentile projection slightly exceeds NYISO's all-time high. For an extreme heatwave, the capacity requirement would reach 38,000 MW.

"If we compare that against the capacity resources assuming 4,800 MW of derates — and we may or may not have that amount in a very hot heatwave — on paper we would be short on capacity by about 1,900 MW ... but we have at least 3,000 MW of emergency operating procedures we would activate to make up that difference," he said. (See *New York Geared for 2017 Summer Load*.)

MC Approves Funding 2nd PAR at Ramapo

The Management Committee approved a Tariff modification to fund Consolidated Edison's replacement and operation of the Ramapo 3500 phase angle regulator, destroyed in a fire last June, as well as the operating expenses for the existing PAR at the substation close to the New Jersey border. The estimated $5.5 million in annual costs will be allocated statewide across all New York load-serving entities, but they would be reimbursed with any monies eventually paid by PJM, PJM transmission owners or refunded by Con Ed.

Mark Younger of Hudson Energy Economics asked for a definite commitment from either Con Ed or NYISO on the timeline for installation.

Jane Quinn of Con Ed said that upon an affirmative vote, the company will begin moving the PAR into place, which should take three to four weeks. Installation should take an additional eight to 10 weeks.

"We anticipate having the PAR, absent contingencies, in place on or around September 15," Quinn said. (See "Con Edison Gets Approval to Install 2nd PAR at Ramapo," *NYISO Business Issues Committee Briefs*.)

Market Participants to Review Monitor's Performance

Shaun Johnson, NYISO director of market mitigation, asked market participants to join in an annual review of the Market Monitoring Unit's performance.

NYISO last year signed a three-year contract with Potomac Economics to perform monitoring functions through March 31, 2019. The MMU's duties include ensuring that the markets administered by NYISO function efficiently and appropriately, as well as identifying market violations, market design flaws and market power abuses. The Monitor also produces annual and quarterly State of the Market reports assessing the performance of the New York electrical markets.

The budget for the MMU for 2017 is $3.5 million, up $400,000 over last year. Most of the additional costs cover additional work related to cybersecurity and new requirements mandated by reliability-must-run and FERC Order 1000 filings.

One participant said that Potomac sometimes shows up at FERC and protests what NYISO is doing.

"Something just seems at odds there, that we're paying a company $3.5 million a year and we're fighting with them at FERC," he said.

Such action is part of the duties of an MMU, according to NYISO, and one thing FERC cited in a recent review of the SPP Monitor was the lack of reporting on disagreements with the grid operator.

Tariff Changes on Tx Cost Recovery

The Management Committee approved proposed Tariff revisions to add a mechanism to recover and remit costs associated with regulated transmission projects eligible under the ISO's Congestion Assessment and Resource Integration Study or the public policy transmission planning process. Following board approval in July, the revisions to the cost recovery mechanism for regulated transmission projects under Rate Schedule 10 — and related amendments to the Tariff's Attachment Y — would be filed with

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MC Briefs

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FERC under Section 205 of the Federal Power Act.

The Rate Schedule 10 revisions establish a new regulated transmission facilities charge (RTFC) to LSEs, with payments allocated to developers of such projects.

John P. Buechler, NYISO regulatory policy adviser, said the revisions do not in any way "affect or change the cost allocation provisions, which, relevant to our transmission planning process, are in Attachment Y, Section 31.5."

Eligible projects include:

- Regulated backstop transmission solutions proposed by a responsible transmission owner;
- An alternative solution NYISO selects as a more efficient or cost-effective solution to a reliability need;
- A regulated transmission gap solution proposed by a responsible TO;
- An alternative regulated transmission gap solution determined by an appropriate state regulatory agency;
- An approved regulated economic transmission project;
- A public policy transmission project selected by NYISO;
- Costs incurred by a developer in preparing a proposed transmission solution in response to a request by the Public Service Commission or Long Island Power Authority; and
- The portion of an interregional transmission project selected by NYISO in the Comprehensive System Planning Process that is allocated to the NYISO region.

NYISO will calculate and bill an RTFC separately for each eligible project.

NYISO to Enhance Buyer-side Mitigation

The committee approved proposed Market Services Tariff changes to improve inflation forecasting and how mothballed units are treated in the capacity and energy forecast used to make buyer-side mitigation determinations.

The committee recommended that the Board of Directors authorize revisions to buyer-side mitigation rules in the Market Services Tariff, which would then be filed with FERC under Section 205 of the Federal Power Act.

In FERC docket ER13-1380, filed in 2013 to create NYISO's G-J locality, the commission determined that such an enhancement was outside the scope of the docket but encouraged the ISO to work with stakeholders on the issue.

NYISO analyst Lorenzo Seirup presented the rationale for mitigation enhancements and said that, since the topic first arose in 2013, "we discussed this *ad nauseam* and also had a vote that failed and then a vote that passed — that's the 30-second highlights."

The proposal would include in the forecasts existing units as well as additional units, "which is the more complicated" category, Seirup said. Units that would be excluded are those transferring their capacity resource interconnection service (CRIS) or that have expired CRIS.

Additional units include mothballed facilities, units under forced outages, retired units and those in similar condition with unforced capacity deliverability rights. These additional units either must have CRIS or show positive indicators of repair or have a new present value greater than $0 in the "inclusion test" performed for resources that have the ability to re-enter the market under more favorable conditions.

The Tariff changes on inflation would call for use of the most recently published 10-year inflation projections from the Survey of Professional Forecasters, or if no longer available, a similar source to identify net cost of new entry projected for the mitigation study period, and the price on the installed capacity demand curve projected for such a period.

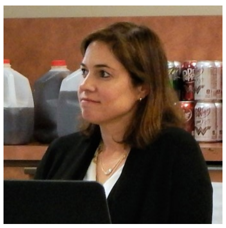
— Michael Kuser

SPP NEWS

SPP Advances KCP&L Cost Shift Proposal

By Tom Kleckner

DALLAS — SPP's Strategic Planning Committee last week ended more than nine months of discussion on cost shifts within existing transmission pricing zones, agreeing unanimously to let the Markets and Operations Policy Committee take up the issue when it meets in July.



Buffington

The agreement represented a victory of sorts for Kansas City Power & Light's Denise Buffington, who has drafted a revision request that would create a process for choosing the zone for a new SPP transmission owner's facilities, and how to submit the TO's annual transmission revenue requirement (ATRR) or formula rate to FERC for inclusion in the Tariff.

RR172 has been sidelined since October, when it was pulled from the Regional Tariff Working Group (RTWG) and placed on the SPC's agenda for discussion. (See SPP Moves to Head off KCP&L Measure on Tx Cost Shifts.)

While Buffington will get her long-awaited up-or-down vote on the measure, she told *RTO Insider* she was still disappointed RR172 had been delayed and that KCP&L's concerns about "unnecessary and unfair" cost shifts to existing TOs were not addressed.

"I expect a robust debate at MOPC," she said. "But I expect the ultimate resolution will need to be addressed by FERC and, potentially, the courts."

The committee, meeting at American Electric Power's Dallas office, accepted a motion from Heather Starnes, legal counsel for the Missouri Joint Municipal Electric Utility Commission, to conclude the discussion as it became apparent stakeholders could not agree on anything beyond directing staff to use a process document to codify previously approved steps for notifying affected parties of zonal placement decisions. The communications process was approved when the SPC last met in April. (See No Consensus for SPP on Zonal Price Shifts.)

"It's clear there are issues we can agree on and issues we can't agree upon," Starnes said, reminding the committee that KCP&L's proposal is still "technically" on the RTWG's agenda. "Ending discussions of those issues allows RR172 to move directly to MOPC."

SPP COO Carl Monroe stressed the need to provide a structure for the MOPC to debate KCP&L's request, suggesting bringing the request up through the stakeholder process and the RTWG. Among Monroe's concerns were having the MOPC vote on Tariff language that had not already cleared a working group.

Buffington noted RR172 includes proposed Tariff language that she said would be revised to include the discussions before the SPC.

SPP's Michael Desselle (left) and SPC Chair Mike Wise | © *RTO Insider*

"MOPC can vote on the Tariff language," she said. "RR172 includes not just the policy issue, but Tariff language that solves the policy problem."

American Electric Power's Richard Ross, who seconded Starnes' motion, pointed out SPP's working groups don't decide policy but recommend it.

"There's only one group that decides policy. It stops at the board, or it goes all the way to FERC," he said. "I'm all for letting KCP&L have their shot at the process. … Kansas City or John Doe or whoever submits a revision request has their right … to put it through the stakeholder process. They shouldn't be put in limbo indefinitely. If KCP&L doesn't get their way at MOPC, they can appeal it to the board."

"It seems like a member has been allowed to bring an issue directly to MOPC before when a working group failed to approve a request," said the Nebraska Public Power District's Paul Malone, who also chairs the MOPC. "I would think that's the case here too."

Larry Altenbaumer, one of three SPP directors present at the meeting, weighed in on the issue as well. He advocated having RR172 presented to the MOPC, "where there's better representation and broader membership."

"MOPC can decide where it goes," Altenbaumer said. "I don't think sticking it in some

Stakeholders gathered at AEP's offices in Dallas for the SPC meeting. | © *RTO Insider*

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SPP NEWS

Waiting on FERC, SPP Members Cut Reserve Margin

By Tom Kleckner

SPP stakeholders approved a revision request last week that allows the RTO to lower its planning reserve margin as it waits on a quorum-less FERC to act on a proposed Tariff change.

The Markets and Operations Policy Committee approved RR230 during a special conference call, changing SPP's criteria to allow it to reduce the planning reserve margin to 12% from 13.6% effective June 1.

The new reserve margin was included in SPP's March filing asking FERC to approve the changes effective June 1 (ER17-1098). SPP COO Carl Monroe said the RTO had yet to hear from the commission, necessitating a vote on an interim solution.

"We don't know why they haven't acted … we assume because of a lack of quorum," Monroe said during the hour-long conference call.

On Wednesday, FERC responded by saying SPP's resource adequacy requirement filing was deficient and that additional information is required to process the request. The commission listed 18 questions to be addressed related to:

- SPP's firm power, firm capacity and net peak demand requirements;
- How market participants may assign their obligations and responsibilities to other market participants;
- The RTO's annual deliverability study that determines the load a resource may deliver to the balancing authority area without effecting reliability or requiring additional transmission upgrades; and
- Deficiency payments and distributions of revenues.

FERC has been operating with only two commissioners since February, when former Chairman Norman Bay resigned and left the commission with three vacancies. The Trump administration only recently nominated two commissioners, who went through confirmation hearings last month. (See *No Fireworks for FERC Nominees at Senate Hearing*.)

SPP stakeholders resisted staff's initial request to approve RR230 by an email vote, made when it became likely FERC was not going to act by the effective date. American

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working group is the right answer."

"I want a policy decision from MOPC and the board," Buffington said. "I want an up-and-down vote, where all members have an opportunity to vote on it. If the board ultimately approves it, or through modifications, my expectation is SPP will file it at FERC. … I would ask this group complete its work so I can move forward with my proposal."

By codifying SPP's zonal selection criteria in the Tariff, KCP&L says RR172 strikes a balance between attracting new transmission-owning customers to SPP and eliminating the ability for them to shift costs to existing members. The revision is intended to establish a bright line between the costs of legacy transmission and new facilities planned by SPP.

The SPC's eventual agreement helped short-circuit a series of examples for how staff would handle zonal cost shifts under various scenarios. Staff's suggestion that there was value in walking through six more examples following a lunch break left one stakeholder wide-eyed and slack-jawed in apparent horror.

Left to right: Beth Emery, Sarah Galioto and Conor Ward, all of GridLiance, listen to SPP's Charles Locke (far right). | © *RTO Insider*

Staff has proposed zonal-placement criteria that included:

- Whether the facilities' ATRR is less than the minimum zonal ATRR;
- The extent to which the facilities substantively increase the SPP footprint; and
- The extent to which the load served by the transferring facilities received network or long-term, firm point-to-point (PTP) service within existing zones before the transfer.

If not placed in a new zone, the facilities would be placed in an integration zone according to:

- The extent to which the facilities are embedded within an existing zone;
- The extent to which the facilities are already integrated with an existing zone; and
- The extent to which the load served by the transferring facilities received network or long-term, firm PTP service within each existing zone prior to the transfer.

Staff will continue working on assessments to determine whether a new member's facilities meet minimum system reliability requirements, and whether they are similar in design to the integration zone's facilities and are eligible for inclusion in the existing zonal TO's ATRR.

SPP NEWS

MISO Interregional Plans with SPP Echo PJM Efforts

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use of your dollars," Kelley said.

Going forward, when market participants dispute settlement amounts in the M2M process, Kelley said they will have to fill out a standardized form for RTO staff to review.

Stakeholders asked if the MOU's resettlement provisions will extend to overcharges on pseudo-tied resources from double-counting congestion. Vannoy said those charges are not in the scope of the memo, and the issue will probably be handled with FERC-ordered refunds.

Adam McKinnie, chief utility economist for the Missouri Public Service Commission, asked whether the MOU is permanent or will be continually revised depending on future resettlements.

"Is this going to be some interminable, shifting document that we're never quite sure of?" he asked.

Kelley said SPP's resettlements are discussed at monthly Seams Steering Committee meetings.

"You're not my problem as much as the other RTO in this room," McKinnie said.

"Shots fired," Kelley jokingly replied.

Arness said MISO presents resettlement payments exceeding $250,000 at the Seams Management Working Group, but McKinnie countered that not all seams issues are routed through the group.

"I know where to go when there's a seams issue at SPP. … It's frequently difficult to follow seams issues at MISO," he said.

Flowgate Management Criteria

MISO and SPP staff also revealed new flowgate management criteria in the memo and said M2M flowgates will be removed when a non-monitoring RTO does not have at least a 5% forward or dispatchable 5% reverse impacts. Flowgates can be reinstated once they pass the 5% threshold.

Vannoy said he imagined that the RTOs would address which flowgates are used in their weekly M2M staff meetings. A more formal review to remove flowgates will take place at monthly meetings between SPP and MISO staff.

Overlapping Congestion

The RTOs are currently monitoring interface pricing and are asking for stakeholder advice on how to reduce their overlapping congestion charges after a joint analysis.

The RTOs analyzed price incentives using current interface definitions, comparing them to "ideal" incentives with no congestion overlap. An analysis of binding constraints in 2015 and 2016 showed congestion pricing was 1.85 times the ideal, said Dustin Grethen of MISO's market evaluation design group. Vannoy said the RTOs are over-incentivizing impacts of transactions, paying 85% more than necessary when congestion pricing is used.

The RTOs are considering resolving the modeling problem using either a MISO Monitor-endorsed solution in which the monitoring RTO prices the entire path from the non-monitoring RTO area with zero payments made by the non-monitoring RTO, or use a common bus interface definition in which each RTO sets its interface price "relative to a common set of interface points," the solution MISO and PJM elected to use. (See *PJM, MISO Go Quiet on Pseudo-Ties; Reach Interface Pricing Accord*.)

SPP's Tanzila Ahmed said the RTOs don't have to use the common interface definition

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Waiting on FERC, SPP Members Cut Reserve Margin

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Electric Power, Westar Energy, Kansas City Power & Light, Oklahoma Gas & Electric and Duke Energy were among those requesting further discussion.

"I feel like we're pushing something through that would be better in a thought-out process," Westar's John Olsen said. "It's a little item, but I don't know what the unintended consequences are. If FERC doesn't approve [the proposed Tariff] language, then where are we at?"

"Had this been advanced as an issue by OGE rather than staff … I would have worked with [OGE] beforehand," AEP's Richard Ross said.

As it was, Ross worked with OGE Energy's Greg McAuley, Omaha Public Power District's Joe Lang and Midwest Energy's Bill Dowling to hammer out the final motion's language. A key addition was language making RR230 effective for only 10 business days after FERC rules on SPP's filing.

Members overwhelmingly approved the motion, with only five opposing votes and two abstentions.

RR230 earlier cleared the Supply Adequacy, Transmission, and Regional Compliance working groups with two opposing votes and three abstentions.

SPP's filing came after the MOPC and the Board of Directors in January approved a package of policies that included the 12% planning reserve margin, which translates to a 10.7% capacity margin.

A task force spent two years on that package, which it says will reduce the RTO's capacity needs by about 900 MW and save members $1.35 billion over 40 years. (See "Stakeholders Endorse 12% Planning Reserve Margin, Policies," *SPP Markets and Operations Policy Committee Briefs*.)

The original revision request incorporated previously approved policies defining a resource adequacy requirement, identifying who is responsible for resource adequacy, and how and when the requirement should be met. The policies are to become effective this summer, with the exception of an assurance policy requiring entities short on their planning reserve margins to make payments to entities with excess capacity, based on forecasted information.

Members agreed to use 2017 as a "dry run" for the resource adequacy process.

SPP News

MISO Interregional Plans with SPP Echo PJM Efforts

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just because it worked for PJM and MISO. "We'll possibly see if there are other solutions. These two solutions might not work perfectly with SPP and MISO."

MISO and SPP currently charge or credit congestion for the entire path of pseudo-ties, even when the path crosses into another balancing authority.

The RTOs are also considering varying levels of rebates depending on whether they adopt a common bus definition and the eventual scheduling of pseudo-ties in the day-ahead market to address the double-charging problem, Vannoy said. They're also still analyzing pseudo-tie data and the RTOs' separate modeling methods and have not yet arrived at any solution, he said.

Replacing Freeze Date, Implementing TMEPs

As with PJM, MISO is aiming to replace the freeze date by which firm-flow entitlements are calculated with SPP with four tranches based on generator in-service date, and implement a targeted market efficiency project (TMEP) type for cost-effective and congestion-relieving seams projects that might otherwise be overlooked because of their low cost and small size. (See "Four Categories for Freeze Date," MISO, PJM to Try Again on FERC Pseudo-Tie Filings; MISO-PJM TMEP Projects Drop to Five.)


Ahmed

MISO and PJM filed to implement TMEPs in their JOA on Dec. 30 (ER17-721); the two have identified $17.25 million worth of upgrades in five TMEP candidate projects. By September, both RTOs hope to finish evaluation of TMEP candidates and ask for board approvals by the end of the year.

MISO and SPP could begin drafting JOA and Tariff language to create the project type while looking for small project candidates that could relieve historical congestion on the seam, said Davey Lopez, MISO adviser of planning coordination and strategy. He said the RTOs could determine regional and interregional cost allocation throughout 2018 and have board-approved projects ready for construction by early 2019.

Entergy's Yarrow Etheredge said she was apprehensive that the RTOs will begin selecting projects before the JOA language is finalized. She wondered if MISO and SPP had considered that their TMEP would have different criteria than a MISO-PJM TMEP. "The needs on the PJM-MISO seam are so different than the needs on the SPP seam, so an entirely different process could be warranted," she said.

Lopez said the RTOs built enough time into the project creation and selection timeline for multiple rounds of stakeholder reviews. Kelley also said there is room for "commonalities" between the two types of TMEPs, and SPP stakeholders have signaled that there is appetite for a similar TMEP project type creation.

McKinnie asked if MISO and SPP assume that no TMEPs would be opened to competitive bidding because of the short timeline. MISO engineer Adam Solomon said MISO expects that "99%" of TMEP project candidates — including all five current MISO-PJM TMEP candidates — will be upgrades to existing facilities and therefore not open to competitive bidding.

FERC NEWS

LaFleur Ready to Welcome New Members as FERC Backlog Grows

By Rich Heidorn Jr.

CARROLL, N.H. — Acting FERC Chair Cheryl LaFleur expressed relief Monday that the restoration of the commission's quorum is within sight.

"What we know for sure is we'll have a different FERC at the end of 2017 than we did going into the year," LaFleur told the New England Conference of Public Utilities Commissioners' (NECPUC) 70th Annual Symposium at the Omni Mount Washington Resort.

The Senate Energy and Natural Resources Committee is scheduled to vote today on approving nominees Robert Powelson and Neil Chatterjee to two Republican vacancies on the commission. The committee questioned the two nominees at a mostly cordial hearing May 25. (See *No Fireworks for FERC Nominees at Senate Hearing*.)

In addition, LaFleur said, there are "rumblings" that Trump will name a Democrat to replace Commissioner Colette Honorable along with a third Republican nominee.

The five-member commission has been without a quorum since February, when then-Chairman Norman Bay resigned after President Trump stripped him of the chairmanship and promoted LaFleur.

LaFleur said the commission has issued only a fraction of the 100 commission-authorized orders it averages a month.

Without a quorum, FERC staffers have been able to issue only delegated orders. Contested dockets and rulemakings have been at a standstill.

"So we are piling up quite a few cases for potential voting when [new] folks come in," LaFleur said. "On some of these bigger policy issues … it's not a matter of striking up an order. We're looking to shape the policy choices in as transparent a way as possible for the incoming commissioners.

"We do have several dozen open rulemakings or generic dockets … multiple rulemakings on price formation in the electric markets, interconnection rules, [the Public Utility Regulatory Policies Act], hydro licensing terms, taxation [and] master limited partnerships in the pipeline area are some of the big ones that come to mind.

"But nothing's higher on the mind than the issue *du jour* of harmonizing wholesale market rules and state policy initiatives," she added, citing an issue that was the subject of a two-day technical conference in May. (See *RTO Markets at Crossroads, Hobbled FERC Ponders Options*.)

LaFleur said Trump's decision to pull the U.S. from the Paris Agreement "could only accelerate the extent to which climate policy is increasingly being made in the states." More than a dozen states — including Connecticut, Massachusetts, Rhode Island and Vermont in New England — have joined the U.S. Climate Alliance, with pledges to meet the Paris commitments on carbon emission reductions. (See related story, *Trump Announces US Withdrawal from Paris Agreement*, p.1.)

LaFleur | © RTO Insider

"There always seems to be one topic that sucks a lot of the air out of the room. I remember back when it was integrated resource planning and whether it worked. When I first came to FERC it was demand response," she said. "Well now it's this. … I do think this is one of the bigger things that FERC will be facing when FERC reconstitutes itself."

Powelson, a member and former chair of the Pennsylvania Public Utility Commission, is the current president of the National Association of Regulatory Utility Commissioners. Chatterjee, of Kentucky, is a senior energy policy adviser to Senate Majority Leader Mitch McConnell (R-Ky.).

Assuming the nominees clear the committee vote, how soon they join the commission will be dependent on when their nominations are scheduled for a Senate floor vote.

The commission canceled its open meeting for June 20, as it has all previous meetings since February. The July 20 meeting is still listed on FERC's calendar.

LaFleur repeated her promise to remain on the commission until the expiration of her term in June 2019.

"I'm very optimistic that we will keep the bipartisan and collegial tradition that has really characterized the commission. I think cultures are slow to change. There's a lot of swirl in Washington right now, but I believe that FERC is very strong."

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FERC NEWS

FERC Staff Says 2-Year Hydropower Licensing Feasible

By Jason Fordney

Developers of certain hydroelectric projects can feasibly get federal approval within two years under current regulations, FERC staff said last week.

With the passage of the Hydropower Regulatory Efficiency Act of 2013, Congress directed FERC to study the feasibility of implementing a two-year process for issuing hydropower licenses to non-powered dams and closed-loop pumped storage projects.

After conducting a pilot program, FERC staff determined the time frame is doable, noting that "site selection, a well-defined project proposal, thorough pre-filing consultation and a complete application" are the most important elements.

Staff said that updating and improving the "small/low-impact hydropower" portion of its website would expedite the process.

Kentucky Lock and Dam No. 11 | *Rye Development*

"Staff also commits to providing more frequent processing updates, when appropriate, to provide additional clarity and certainty during the licensing process," the report said.

Eligible projects under the program were required to be at a non-powered dam or closed-loop storage project, have a well-developed proposal, result in little environmental impact and be in areas with substantial information on environmental resources and effects.

FERC staff determined in August 2014 that Rye Development's Kentucky Lock and Dam No. 11 project met the criteria and issued the project a license in May 2016. The 5-MW capacity project will generate about 19,000 MWh annually.

Staff also examined processing times for 83 projects that were issued licenses or small hydropower exceptions between 2003 and 2016. Evaluations of 28% of these projects were completed in two years or less, with a median processing time of 1.4 years. Projects that were not licensed in two years tended to be larger, more complex and had more issues to examine.

A majority of commenters agreed the pilot was a success and that it is feasible to implement a formal two-year licensing program, staff said. Changes to the Federal Power Act are not required, but factors outside of FERC's control, such as the actions of other agencies, could affect permitting timelines, according to the report.

Seeking Subsidy, Exelon Threatens to Close Three Mile Island

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ing expenses, the company added.

The 837-MW reactor near Middletown, Pa., directly employs 675 workers.

"Today is a difficult day, not just for the 675 talented men and women who have dedicated themselves to operating Three Mile Island safely and reliably every day, but also for their families, the communities and customers who depend on this plant to produce clean energy and support local jobs," CEO Chris Crane said in a statement. "Like New York and Illinois before it, [Pennsylvania] has an opportunity to take a leadership role by implementing a policy solution to preserve its nuclear energy facilities. … We are committed to working with all stakeholders to secure Pennsylvania's energy future and will do all we can to support the community, the employees and their families during this difficult period."

A Successful Strategy

In threatening to close the plant, Exelon is repeating the strategy that won approval of zero-emission credits for its troubled nuclear plants in New York and Illinois.

Last June 2, Exelon announced it would close the Clinton and Quad Cities plants in 2017 and 2018, respectively, because of "the lack of progress on Illinois energy legislation." The company said the plants had lost a combined $800 million over the prior seven years, "despite being two of Exelon's best-performing plants."

Six months later, the Illinois legislature approved the ZEC program on the last day of its veto session. Gov. Bruce Rauner signed the bill Dec. 7. Following the passage of the Illinois legislation, Exelon revised the expected economic lives to 2027 for Clinton and 2032 for Quad Cities.

On June 12, Exelon told the New York Public Service Commission it would close its Nine Mile Point Unit 1 nuclear plant in spring 2017 if the state did not guarantee it a financial lifeline by September.

The company had also told regulators in October 2015 that its R.E. Ginna nuclear plant would not be financially viable following the expiration of a reliability support services agreement with Rochester Gas & Electric.

The PSC approved ZECs for Nine Mile Point and Exelon's R.E. Ginna nuclear plants last Aug. 1. Receiving payments under the program in addition to Ginna and Nine Mile Point is the James A. FitzPatrick plant, which Entergy sold to Exelon in March after saying it would also close.

Next Steps

Exelon said it will send PJM and the Nuclear Regulatory Commission deactivation notices within 30 days. It complained that nuclear generation produces 93% of Pennsylvania's emissions-free power but is not included in Pennsylvania's Alternative Energy Portfolio Standard, which benefits solar, wind and hydropower.

The Pennsylvania General Assembly's Nuclear Energy Caucus said in a statement that Exelon's announcement shows "there are serious and consequential underlying issues in Pennsylvania's energy sector that must be addressed."

"As state lawmakers, we take seriously our obligation to set energy policies that help promote Pennsylvania's economy," the legislators said. "We equally are concerned about meeting the commonwealth's environmental goals. The closure of Three Mile Island will make meeting these challenges even more difficult."

The 79-member caucus has yet to introduce legislation.

Gov. Tom Wolf's press office released a statement in which it "expressed a willingness to engage in conversations with state lawmakers about possible energy policy reforms."

"Like New York and Illinois before it, [Pennsylvania] has an opportunity to take a leadership role by implementing a policy solution to preserve its nuclear energy facilities."

Chris Crane, Exelon CEO

"Pennsylvania is a major supplier of energy and we need a diverse energy sector," Wolf spokesman J.J. Abbott said. "As we move forward, we expect a robust conversation about the state's energy sector. Gov. Wolf is open to these conversations and looks forward to engaging with the General Assembly about what direction Pennsylvania will go in regards to its energy sector, including the future of nuclear power."

But the state Nuclear Energy Caucus will face stiff opposition from the natural gas lobby, according to Shahriar Pourreza, a New York-based analyst for Guggenheim Securities. Pennsylvania is the largest gas-producing state behind Texas, and a glut of the fuel from its prolific Marcellus Shale has worsened Three Mile Island's situation, he said.

Legal Challenges

The ZECs in both Illinois and New York are being challenged in the courts and before FERC by plaintiffs including the Electric Power Supply Association, Dynegy, Eastern Generation, NRG Energy and Calpine.

Exelon's motion to dismiss a federal lawsuit filed last October challenging the New York ZECs was the subject of oral arguments March 29 (U.S. District Court, Southern District of N.Y., 1:16-cv-08164). Thus far, the court has approved Exelon's request to intervene, as well as requests to file amicus briefs by the Natural Resources Defense Council, the Environmental Defense Fund, PJM Independent Market Monitor Monitoring Analytics and a group including the New York Public Interest Group.

Independent power producers filed suit in February alleging that the law authorizing Illinois' ZECs violates FERC jurisdiction over the wholesale electricity market (U.S. District Court, Northern District of Illinois,1:17-cv-01164). (See *IPPs File Challenge to Illinois Nuclear Subsidies*.)

The judge in the case has delayed action on a motion for a preliminary injunction while he receives a full briefing on Exelon's motion to dismiss the cases. On April 24, the court invited FERC to file an amicus brief on the jurisdictional question.

In February, the IPPs also sought expedited rulings against the ZECs in FERC dockets initiated over earlier disputes.

Docket EL16-49 had been opened in 2016 to challenge subsidies Ohio regulators had

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Seeking Subsidy, Exelon Threatens to Close Three Mile Island

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awarded to FirstEnergy and American Electric Power fossil fuel generators. In EL13-62, opened in 2013, the IPPs asked FERC to broaden the use of the minimum offer price rule in New York.

FERC has been without a quorum since February and thus unable to take substantive action on the cases.

At a FERC technical conference May 1-2, NYISO CEO Brad Jones told the commission that the ISO is working on a plan that would incorporate the social cost of carbon into generation offers and reflect it in energy clearing prices. Observers differ on whether FERC — expected to have at least two new commissioners nominated by President Trump soon — will approve Tariff changes to implement the initiative. (See *Carbon Adder to Test FERC's Independence, IPPNY Panelists Say*.)

TMI's Place in History

Whether or not Three Mile Island shuts down in 2019, it will occupy a special place in nuclear power history.

The partial meltdown of TMI Unit 2 on March 28, 1979, the most serious accident in U.S. commercial nuclear power history, effectively ended nuclear power construction for decades and resulted in major changes regarding emergency response planning, operator training and radiation protection.

Unit 2, owned by FirstEnergy, never reopened following the accident. Exelon purchased half of Unit 1 in 1999 and became sole owner of the plant in 2003. The plant received a 20-year extension in 2009, allowing it to operate until 2034.

Financial Repercussions

Exelon said it is taking a one-time charge of $65 million to $110 million for 2017, and accelerating approximately $1 billion in depreciation and amortization through the shutdown date, terminating capital investment projects and canceling 2019 fuel purchases and outage planning, impacting about 1,500 outage workers.

It said there could be as much as $25 million in additional charges in each of 2018 and 2019.

Company Briefs

Karen Glitman Named Director of Efficiency Vermont

Glitman

Former Vermont Rep. Karen Glitman has been hired as director of Efficiency Vermont, the first energy-efficiency utility in the U.S. She replaces Liz Gamache, who accepted a position at the Vermont Community Foundation.

Glitman most recently served as director of strategy, policy and public affairs for the Vermont Energy Investment Corp. She additionally has worked at the University of Vermont's Transportation Research Center and at the Vermont Agency of Transportation.

She served in the Vermont House of Representatives from 1985 to 1990.

More: *VTDigger*

NRC Issuing License to Dominion for North Anna 3

Dominion

The Nuclear Regulatory Commission will issue a license within the next few days to Dominion Energy for a proposed third nuclear reactor at its North Anna nuclear power station.

Dominion has spent about $600 million to date on planning, engineering and developing the 1,600-MW General Electric-Hitachi-designed reactor. Building the reactor is estimated to cost about $19 billion.

The project has not yet been approved by Virginia regulators, and it is unclear as to whether Dominion will go forward with it.

More: *Richmond Times-Dispatch*

Former FERC Officials Join New Jenner & Block Energy Practice

Kelly

Law firm Jenner & Block has announced the formation of an energy practice that will include three former high-ranking FERC officials.

Former FERC Commissioner Suedeen Kelly, who joined the firm as a partner, will co-chair the practice with partner Randall Mehrberg, who rejoined the firm in March 2016 after serving as executive vice president at both Exelon and Public Service Enterprise Group.

Max Minzner, former general counsel of FERC, will join the firm as a partner, effective July 3. Jeffery Dennis, a former FERC Division of Policy Development director, joined the firm as special counsel.

More: *Jenner & Block*

Crius to Acquire US Gas & Electric

U.S. Gas & Electric has been sold to Crius Energy Trust, a change in plans from April when MVC Capital announced its intention to merge USG&E, its largest portfolio holding, with Equus Total Return, which it also controls.

Under the terms of the deal, Crius will pay $172.5 million as well as the repayment of all debt and all transaction costs. The aggregate of the $172.5 million consists of $95 million in cash; $47.5 million in Crius notes due in June 2025 bearing interest at 9.5% and which may be called before maturity; and $30 million in Crius trust units, which are currently yielding 7.5% and subject to a six-month lock-up provision.

The transaction is expected to close on or about July 5, 2017.

More: *MVC Capital*; *Seeking Alpha*

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COMPANY BRIEFS

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Xcel Cuts Carbon Emissions 30% from 2005

Xcel Energy cut carbon emissions by 30% between 2005 and 2016, the company said last week.

In its Corporate Responsibility Report, Xcel said it expects to cut carbon emissions by 45%, compared with 2005, by 2021.

Renewables made up 25% of its electricity supply in 2016. By 2021, Xcel expects more than 40% of its electricity to come from renewables.

More: Denver Business Journal

James Owen Named Executive Director of Renew Missouri

James Owen, a former Missouri public counsel who represented consumers on issues of utility regulation, was named executive director for Renew Missouri last week.

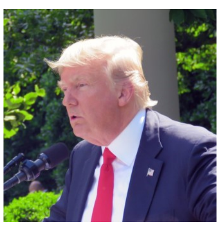
The move comes as co-founder P.J. Wilson steps down from the position.

The renewable energy advocacy group began as a part of the Missouri Coalition for the Environment and later partnered with the Earth Island Institute. Wilson helped it begin to operate independently in 2016.

More: St. Louis Post-Dispatch

FEDERAL BRIEFS

US Exit from Paris Barely Impacts Clean-Energy Shares



Trump | © RTO Insider

Clean energy investors showed little response to President Trump's announcement Thursday that the U.S. would exit the Paris Agreement.

The WilderHill New Energy Global Innovation Index of companies in renewable and low-carbon energy gained less than 0.1% on Friday. Solar stocks saw a slight uptick, with the Bloomberg Intelligence Global Large Solar Energy Valuation adding as much as 0.8%. The research group's wind index, the Bloomberg Global Wind Energy Valuation Peers, increased by about the same.

European wind energy companies traded down a little, with shares of the world's largest turbine manufacturer, Vestas Wind Systems, falling by as much as 3%.

More: Bloomberg Markets

Report: Fast Growth Expected for Commercial, Industrial Microgrids

Commercial and industrial microgrids, fueled by private-sector adoption, are poised to grow faster than all other forms of microgrids, with Navigant Research forecasting worldwide growth from 448.3 MW in 2017 to 5,389.1 MW annually by 2026.

In 2017, commercial and industrial microgrids, both grid-connected and remote, will capture about 20% of the total implementation spend, said Navigant Research's Peter Asmus, author of "C&I Microgrids." He said the market spending share is expected to swell beyond 35% by 2026.

For North America, Navigant Research said grid-connected C&I microgrids will begin at 215.5 MW in 2017, growing to 870.8 MW annually in 2026. Remote microgrids will start at 15.0 MW in 2017, increasing to 30.3 MW annually by 2026.

More: Microgrid Knowledge

Edward McGinnis Named to No. 2 Role in Office of Nuclear Energy

McGinnis

Edward McGinnis, who oversaw the Energy Department's international civilian nuclear energy policy, has been appointed principal deputy assistant secretary in the department's Office of Nuclear Energy, effective immediately.

Since 2007, McGinnis served as the department's deputy assistant secretary for international nuclear energy policy and cooperation. He previously worked in the Office of Global Material Security, formerly the Office of Global Radiological Threat Reduction.

More: Bloomberg BNA

Report: New Global Solar Capacity Could Top 80 GW in 2017

New global solar capacity will continue its growth spurt this year and could surpass 80 GW, Europe's solar industry forecast last week.

The report by SolarPower Europe, an industry association, said solar photovoltaic module prices have fallen 80% since 2009 as capacity has risen and technologies improved.

In 2016, a record 76.6 GW of new solar capacity was installed and connected to the grid, up 50% compared with 2015.

More: Reuters

US Considers Emergency Tariffs for Imported Solar Cells

The U.S. has notified the other 163 World Trade Organization members that it is considering putting emergency "safeguard" tariffs on imported solar cells, according to a filing published last week.

Under WTO rules, countries can use temporary tariffs to shield an industry from a sudden, unforeseen and damaging surge in imports. Other WTO members can challenge the tariffs.

U.S. consideration of the tariffs comes on the heels of a trade complaint by Suniva before the U.S. International Trade Commission.

More: Reuters

STATE BRIEFS

REGIONAL

Mayors Will Consider Renewable Resolution at June Conference

The co-chair of the U.S. Conference of Mayors plans to introduce a resolution at the conference's annual meeting this month that would formally establish support from the nation's mayors for a 100% renewable energy goal in cities nationwide.

"It's up to us as leaders to creatively implement clean energy solutions for our cities across the nation," Columbia, S.C., Mayor Steve Benjamin said in a statement. "It's not merely an option now; it's imperative."

Presently, 29 cities are committed to 100% clean energy.

More: *Curbed*

ARIZONA

Court Refuses to Order Release of APS Political Spending Records

A Superior Court judge is refusing to force Arizona Public Service, and its parent company Pinnacle West Capital, to turn over records of its political spending to a utility regulator — at least for now.

Little

Corporation Commissioner Bob Burns wants the documents so that he can ascertain whether the companies made more than $3 million in anonymous donations that led to the 2014 election of Republicans Tom Forese and Doug Little to the commission.

Maricopa County Superior Court Judge James Kiley said Burns must first ask the full commission to compel the utility and its parent to produce the documents before he will rule on the request.

More: *Arizona Capitol Times*

MICHIGAN

2003 Pipeline Report Says Sections Lacked Support

A previously undisclosed 2003 inspection found that 16 sections of underwater oil and gas pipelines in the Straits of Mackinac were without support for an unknown period, subjecting them to the stresses the supports are designed to help alleviate.

The information about the pipeline sections came to light in an October 2016 report by a contracted engineer for Enbridge, which owns the pipeline.

Enbridge's original 1953 easement with the state required that the supports be spaced no more than 75 feet apart. The largest unsupported span discovered during the inspection was 286 feet. An Enbridge spokesman said the discovered problems were corrected.

More: *Detroit Free Press*

NEW YORK

EV Charging Stations Planned For Entire 496-Mile Thruway

The State Thruway Authority plans to spend $4.2 million to install electric vehicle charging stations that will enable drivers to travel the highway's entire 496-mile length without having to leave for a recharge.

The authority will partner with the New York Power Authority to build upon a previous 18-month trial of high-speed charging stations at four of its 27 travel plazas to install high- and medium-speed charging stations at the remaining plazas. The plan also calls for 15 Thruway-owned commuter parking lots with medium-speed charging stations.

The stations are expected to be completed in two years.

More: *Times Herald-Record*

NORTH DAKOTA

Hearings Scheduled on Dakota Access Construction

State regulators will hold hearings this summer on whether Energy Transfer Partners removed too many trees and shrubs and improperly reported the discovery of Native American artifacts during construction of the Dakota Access oil pipeline.

A third-party inspector identified 83 sites along the pipeline's 380-mile route in the state where trees or shrubs might have been cleared in violation of the Public Service Commission's orders. Additionally, the commission says ETP diverted construction of the pipeline around artifacts last October without first consulting the commission, as required.

A man locks himself to construction equipment in protest of the Dakota Access pipeline in North Dakota.

ETP said it did nothing wrong with respect to clearing trees and shrubs and that it plans to plant two trees for each one it removed. The company said it acted in good faith with respect to the artifacts and that it got clearance from the State Historic Preservation Office.

More: *The Associated Press*

OHIO

Lawmaker Floats Customer Opt-out For Proposed Nuclear Subsidy

The Chairman of the House Public Utilities Committee is floating an idea to give FirstEnergy customers a one-time chance to opt out of paying a customer fee to keep the company's Davis-Besse and Perry nuclear power plants operating.

Seitz

FirstEnergy says it needs $300 million per year, which would raise energy bills by 5%.

Chair Bill Seitz (R) tabled a plan to add a fee to customers' electric bills, saying it didn't have support. However, he said he had support from some committee members for the opt-out proposal.

More: *WKSU*

Trump Announces US Withdrawal from Paris Agreement

Continued from page 1

years. "China can do whatever they want for 13 years," he said. "India can double its coal production. We're supposed to get rid of ours."

In rejecting the agreement, Trump said he was reasserting American sovereignty and undoing a "self-inflicted wound."

"This agreement is less about the climate and more about other countries gaining a financial advantage over the United States. The rest of the world applauded when we signed the Paris Agreement. They went wild, they were so happy. For the simple reason that it put our country … in a very, very bad economic disadvantage."

Speaking after the president, EPA Administrator Scott Pruitt praised what he called "an historic restoration of American economic independence."

"We owe no apologies to other nations for environmental stewardship. After all, before the Paris accord was ever signed America had reduced its CO_2 footprint to levels of the early 1990s," he said, citing an 18% reduction in carbon emissions between 2000 and 2014. "This was accomplished not through government mandate but accomplished through the innovation and technology of the American private sector. … Other nations talk a good game. We lead with action, not words."

Former President Barack Obama issued a statement rejecting Trump's criticism. "It was steady, principled American leadership on the world stage that made [the agreement] possible. It was bold American ambition that encouraged dozens of other nations to set their sights higher as well. And what made that leadership and ambition possible was America's private innovation and public investment in growing industries like wind and solar — industries that created some of the fastest new streams of good-paying jobs in recent years, and contributed to the longest streak of job creation in our history.

"The nations that remain in the Paris Agreement will be the nations that reap the benefits in jobs and industries created," Obama continued. "I believe the United States of America should be at the front of the pack."

Little Surprise

Although Trump said in November that he had an "open mind" on the subject, his announcement in the White House Rose Garden was not surprising given his campaign pledge and his executive order directing EPA to undo the Clean Power Plan.

The CPP would have required a 32% reduction in power plant CO_2 emissions from 2005 levels by 2030. (See *Trump Order Begins Perilous Attempt to Undo Clean Power Plan*.) The U.S. Energy Information Administration says emissions were 12% below the 2005 level as of 2015.

Bannon

Opposition to the Paris Agreement was led within the administration by Pruitt and political aide Stephen Bannon, who were in the audience for the announcement along with about 100 Trump supporters, including members of the conservative Heritage Foundation and Competitive Enterprise Institute.

During his trip to Europe last month, Trump was lobbied by European officials and Pope Francis to honor the deal. Others who made their case to Trump for remaining included former Vice President Al Gore and leaders of dozens of Fortune 500 companies.

Thirty top CEOs, including Pacific Gas and Electric's Geisha Williams, signed an open letter urging Trump to remain in the agreement, which they said would strengthen U.S. competitiveness, benefit American manufacturing and support investment "by setting clear goals which enable long-term planning."

"It expands global and domestic markets for clean, energy-efficient technologies, which will generate jobs and economic growth. It encourages market-based solutions and innovation to achieve emissions reductions at low cost," they said.

Also weighing in with support were Trump's daughter Ivanka and Secretary of State Rex Tillerson, neither of whom attended the announcement.

Trump's speech started 30 minutes late, leaving the hundreds of reporters, photographers and guests sweltering in the sun as a military band played jazz.

Some analysts contend Trump's decision to abandon the Paris Agreement and the CPP will have limited effect because of decarbonization efforts already adopted by power generators and others. (See *Trump Policies Likely Little Help to Coal; May Aid China* and *EBA Panel: CPP's Demise not Certain — and it Doesn't Matter*.) Economic consultancy company Rhodium Group estimates the U.S. would reduce carbon emissions by 21% below 2005 levels in 2025 under the CPP but that the reduction would flatten at 14% under Trump's rollback.

Protesters in front of the White House. | © *RTO Insider*

Shortly after Trump's announcement, Democratic Govs. Jay Inslee (Wash.), Jerry Brown (Calif.) and Andrew Cuomo (N.Y.) announced they had formed the U.S. Climate Alliance, a pact dedicated to upholding the country's commitments under the agreement. On Monday, the group expanded to include Connecticut, Delaware, Hawaii, Massachusetts, Minnesota, Oregon, Puerto Rico, Rhode Island, Vermont and Virginia.

More than 180 U.S. mayors — including Pittsburgh Mayor Bill Peduto and the chief executives of Los Angeles, Boston, New York, Chicago, Houston, Seattle, Philadelphia and Atlanta — issued a statement saying they would "adopt, honor and uphold the commitments" under the agreement.

The Paris Agreement is intended to prevent the planet's temperature from increasing by more than 3.6 degrees Fahrenheit, which many experts say would lead to an irreversible future of rising oceans and extreme weather, causing drought, flooding, and food and water shortages.

It will take the country until November 2020 to complete its exit from the agreement.

Reaction

The Business Council for Sustainable Energy, which has been an observer at the United Nations Framework Convention on

Continued on page 22

Trump Announces US Withdrawal from Paris Agreement

Continued from page 21


The Competitive Enterprise Institute's Myron Ebell, who headed Trump's transition team at EPA, was in a celebratory mood for the president's Rose Garden announcement that the U.S. was withdrawing from the Paris Agreement. | © *RTO Insider*

Climate Change for the past 25 years, was dismayed by the news. "Withdrawing from the Paris Agreement weakens the U.S. government's ability to protect U.S. commercial interests in these discussions as well as in other important international negotiations," President Lisa Jacobson said. "This international agreement is an opportunity to bolster American economic development, not a barrier to it."

Mike Tidwell, director of the Chesapeake Climate Action Network, said Trump's decision "sealed his reputation as an economic and environmental wrecking ball with few rivals in U.S. history. Locally, his decision to withdraw from the Paris Climate Agreement threatens to reduce jobs and shrink our regional economy. It would do so by embracing fracking and a dying coal industry over the jobs-creating markets for wind and solar power."

Myron Ebell, director of the Competitive Enterprise Institute's Center for Energy and Environment, who attended the announcement, issued a statement saying the decision will lower prices. "The agreement involves enormous costs for zero benefits, and requires member countries to submit new, steeper commitments to reduce emissions every five years," he said. "Its global energy-rationing regime consigns poor people in developing countries to perpetual energy poverty."

Heritage Foundation President Ed Feulner said the withdrawal was "a commonsense approach that helps the American people and businesses. … From lost jobs, higher electric bills or more overzealous government regulations, the Paris Agreement was by all accounts a rotten deal."

Senate Majority Leader Mitch McConnell (R-Ky.) thanked Trump for "dealing yet another significant blow to the Obama administration's assault on domestic energy production and jobs."

Senate Minority Leader Chuck Schumer (D-N.Y.) called the withdrawal "a devastating failure of historic proportions. Future generations will look back on President Trump's decision as one of the worst policy moves made in the 21st century because of the huge damage to our economy, our environment and our geopolitical standing."

Corporate, International Responses

Several corporate leaders blasted the move, with Tesla CEO Elon Musk and Walt Disney Co. CEO Bob Iger pledging to quit a White House advisory council. "Leaving Paris is not good for America or the world," Musk said.

General Electric CEO Jeff Immelt tweeted his disappointment. "Climate change is real. Industry must now lead and not depend on government," he said.

IBM issued a statement rejecting Trump's view that the agreement would hurt the economy. "IBM believes that it is easier to lead outcomes by being at the table, as a participant in the agreement, rather than from outside it."

But Peabody Energy, the largest coal mining company in the U.S., praised the decision. It said it "continues to advocate for greater use of technology to meet the world's need for energy security, economic growth and energy solutions through high-efficiency, low-emissions, coal-fueled power plants, and research and development funding for carbon capture."

The decision was not well received in Europe.

"The Paris Agreement provides the right global framework for protecting the prosperity and security of future generations, while keeping energy affordable and secure for our citizens and businesses," U.K. Prime Minister Theresa May said.

French President Emmanuel Macron rejected Trump's call for renegotiation. "I tell you firmly tonight: We will not renegotiate a less ambitious accord," he said. "There is no way. Don't be mistaken on climate; there is no plan B because there is no planet B."

California Senate Passes 100% RPS Bill

By Robert Mullin

California has moved a step closer to adopting a 100% clean energy standard.

The State Senate on Wednesday passed a bill that would require California load-serving entities to obtain all of their electricity deliveries from renewable resources by 2045 (SB 100).

Sponsored by Senate President pro Tempore Kevin de León, a Los Angeles Democrat, the bill passed 25-13 along party lines. It now moves to the State Assembly.

"When it comes to our clean air and climate change, we are not backing down," de León said in a statement. "Today, we passed the most ambitious target in the world to expand clean energy and put Californians to work."

De León said it is now critical for California to "double down on climate leadership" given President Trump's announcement last week that the U.S. would withdraw from the Paris Agreement on climate change. (See related story, *Trump Announces US Withdrawal from Paris Agreement*, p.1.)

"We are sending a clear message to the rest of the world that no president, no matter how desperately they try to ignore reality, can halt our progress," he said.

The new bill would accelerate the timeline for California's current 50% RPS from 2030 to 2026, with an interim 45% goal put in place for 2023. The 2030 requirement would increase to 60%, and the bill gives the California Energy Commission discretion to establish "appropriate" three-year compliance periods subsequent to 2030.


De León

The bill also directs state agencies to incorporate the planning goal into any energy and climate programs subject to their jurisdiction, which would include the utility integrated resource plans administered by the PUC.

Passage of the bill got expected support from environmental groups and advocates for renewable energy.

"Getting 100% renewable is 100% possible and 200% necessary," said Kathryn Phillips, director of Sierra Club California. "SB 100 responds to what survey after survey shows that Californians want: clean energy, clean air and a future for the next generation."

Strela Cervas, co-director of the California Environmental Justice Alliance, said the proposed law would move California away from fossil fuels that that have a disproportionate impact on disadvantaged communities and communities of color.

"No president, no matter how desperately they try to ignore reality, can halt our progress."

Kevin de León, California Senate

"The bill charts a pathway for the public health and economic benefits of local renewable energy to reach communities that need it the most," Cervas said.

"Transitioning to a 100% carbon-free future in an economy the size of California's requires persistence, commitment and vision," said Bernadette Del Chiaro, executive director of the California Solar Energy Industries Association.

In urging his colleagues to vote against the bill, Republican Sen. Jeff Stone warned that the state might be getting ahead of its ability to actually implement a 100% RPS.

"If we don't have the science to back up the methodology to get to 2030 with 60% coming from renewables, then it's going to increase costs for our constituents," Stone said. "We need to let the technology drive the innovations in alternative energy and not put mandates out there that may be unachievable."

If it becomes law, the bill would make California the second state after Hawaii to require LSEs to rely on 100% renewables by 2045.

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For more information, contact Marge Gold at marge.gold@rtoinsider.com