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

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NY Regulators Call for Overhaul or End to Mass-Market Retail Choice

By William Opalka

Eighteen years after opening retail electric and gas choice, New York regulators concluded Friday that the initiative has failed, launching a proceeding that could bar energy service companies (ESCOs) from operating in the state.

"After considerable experience with the offering of retail service to mass-market customers by ESCOs, the [New York Public Service Commission] has determined that the retail markets serving mass-market customers are not providing sufficient competition or innovation to properly serve consumers," the commission wrote in its notice (98-M-1343). "Despite efforts to realign the retail market, customer abuses and overcharging persist, and there has been little innovation, particularly in the provision of energy efficiency and energy management services."

The commission has attempted to revamp consumer protections in the program, including a guarantee of savings for customers not enrolled with green energy suppliers, but it has been thwarted by the courts. (See *New York ESCO Order Vacated by Court*.) A companion proceeding to impose a moratorium on sign-ups for low-income customers has also been challenged. (See *Marketers Seek Rehearing on NY Low-Income Moratorium*.)

Two-Track Process

The notice sets out a two-track process, one an evidentiary process to determine "whether ESCOs should be completely prohibited from serving their current products to mass-market customers" or whether reforms could save it. Evidentiary hearings will follow written submissions from energy marketers, consumers and PSC staff on a list of 20 questions posed in the notice. Responses are due April 7, 2017.

The commission defines "mass-market" customers as residential and small commercial customers — those whose bills do not include a demand rate element.

Among the questions is whether the commission currently has authority to penalize ESCOs for abuses and whether it should revisit its decision to exempt them from Article 4 of the Public Service Law.

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MISO IMM Suggests Deliberate Over-Forecasting by Wind Operators

By Amanda Durish Cook

CARMEL, Ind. — Some wind generators appear to be deliberately over-forecasting their output to inflate their revenues, according to MISO Independent Market Monitor David Patton, who called for rule changes to discourage gaming.

Patton said wind units on average produced 146 MW less than their MISO dispatch instructions in 2015 and 2016 (excluding economic curtailments and manual redispatch), a higher deviation than any other resource class in the RTO.

Patton told the Market Subcommittee on Nov. 29 that much of the problem lies with MISO's day-ahead margin assurance payment (DAMAP), which guarantees day-ahead profit when real-time dispatch is less than the day-ahead schedule. MISO uses wind operators' forecasts to determine their dispatch level.

Two-thirds of MISO's $7.5 million in DAMAP payments to wind resources in 2015 and 2016 was because of over-forecasting and only $2.5 million was spent on curtailment, Patton said. "Most of our wind DAMAP payments are unjustified," he said.

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President-elect Trump is sending conflicting signals on his policy on global warming, as he considers climate change deniers for top energy posts while claiming an "open mind" and meeting with former Vice President Al Gore (above). (p.3)

Illinois Lawmakers Clear Nuke Subsidy

By Rory D. Sweeney and Rich Heidorn Jr.

Illinois legislators on Thursday approved a bill to keep Exelon's Clinton and Quad Cities nuclear plants operating for another decade.

The "Future Energy Jobs Bill" was approved by the state Senate by a 32-18 vote, an hour

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Also in this issue:

10837 Deborah Drive ▣ Potomac, MD 20854 ▣ (301) 983-0375 ▣ info@rtoinsider.com
▣ www.rtoinsider.com ▣

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CAISO ERCOT ISO-NE MISO NYISO PJM SPP

Editorial

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

Contributing Editors
Ted Caddell 434-882-5589
Julie Gromer 215-869-6969

Production Editor
Michael Brooks 301-922-7687

MISO Correspondent
Amanda Durish Cook 810-288-1847

SPP/ERCOT Correspondent
Tom Kleckner 501-590-4077

CAISO/West Correspondent
Robert Mullin 503-715-6901

ISO-NE/NYISO Correspondent
William Opalka 860-657-9889

PJM Correspondent
Rory D. Sweeney 717-679-1638

Subscriptions and Advertising

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

Account Executive
Marge Gold 240-750-9423

Marketing Assistant
Ben Gardner

RTO Insider LLC
10837 Deborah Drive
Potomac, MD 20854
(301) 983-0375

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Illinois Lawmakers Clear Nuke Subsidy

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after clearing the House 63-38 on the last day of the legislature's session for the year (SB 2814). The product of two years of negotiations, it was sent to be signed by Gov. Bruce Rauner, who issued a statement in support.

The bill "shows that when all parties are willing to negotiate in good faith, we can find agreement and move our state forward," Rauner said.

The bill provides Exelon with $235 million in ratepayer-funded zero-emission credits annually for 10 years of continued operation.

Exelon said Commonwealth Edison ratepayers are likely to see increases averaging about 25 cents/month during the life of the plan, but critics have said the increase could exceed $4. Ameren customers are likely to see increases of 12 cents/month on average, the Associated Press reported.

It caps price increases for all business classes at 1.3% over 2015 rates, Exelon said.

"This forward-looking energy policy levels the playing field and values all carbon-free energy equally, positions Illinois as a national leader in advancing clean energy and will provide a major boost to the Illinois economy," Exelon CEO Chris Crane said in a statement.

The bill also requires "hundreds of millions of dollars" in energy efficiency spending, which has garnered environmentalist support, the AP reported.

Critics have called the bill a corporate bailout under the guise of maintaining reliability in a state that produces much more energy than it needs.

Governor's Reservations

The bill has gone through several iterations in the Democrat-controlled legislature and almost failed until Rauner, a Republican, joined the negotiation to pare down the cost. He initially offered his support then removed it after seeing language he didn't like, according to Crain's Chicago Business.

Rauner's statement said the bill's cost was reduced by exempting new renewable energy projects from prevailing wage rules and "eliminating billions of dollars in special interest" funding.

Dynegy, which saw proposed subsidies for its coal plants in southern Illinois cut in the final version of the bill, told Crain's that it would sue to overturn the law.

Exelon said the bill, which will take effect June 1, will save 4,200 direct and indirect jobs, including 900 workers at Quad Cities and 700 at Clinton. The company threatened in May to shut down the money-losing plants if they did not receive state aid. (See *Bill to Save Coal, Nuclear Plants Introduced in Illinois*.)

Reaction

Among those hailing the bill's approval were the Nuclear Energy Institute, the Illinois Clean Jobs Coalition, which represents the wind, solar and energy efficiency industries, and the Environmental Defense Fund, which called it "the most significant clean energy economic development package in the state's history."

The EDF said the legislation "will fix Illinois' broken renewable portfolio standard and significantly expand the state's successful energy efficiency programs."

The Alliance for Solar Choice said it was pleased that the final bill reinstated net metering and removed proposed demand charges that would have discouraged rooftop solar.

The bill increases the RPS target to 35% by 2030, up from the current 25% by 2025.

"Prior to this agreement, Illinois was meeting the criteria of its less-audacious RPS goals by investing in clean energy projects being built by neighboring states," the Alliance said. "Illinois was not only sending money to help grow the economies of other states, but it was also missing out on countless clean energy jobs and economic growth in-state."

The group said it will press policymakers to ensure there's a full stakeholder process before state regulators when the bill's 5% net metering cap is reached "to guarantee a fair valuation of the benefits of rooftop solar."

AARP Illinois called on Rauner to veto what it called the largest rate increase in "our nation's history."

"The bill just passed by the legislature will send monthly consumer bills through the roof for the next 25 years, will impose massive cuts to low-income energy assistance programs and even though it will supposedly save the jobs at the nuclear plants, down the road it will cost Illinois an additional 44,000 jobs," said AARP Illinois Director Bob Gallo.

Trump Sends Conflicting Signals on Climate Change

By Rich Heidorn Jr.

President-elect Donald Trump is sending EPA watchers conflicting signals, interviewing potential agency heads who are vocal critics of climate science while also claiming an "open mind" on the issue.

In an interview with editors and reporters of *The New York Times* on Nov. 22, Trump said he has an "open mind" on humans' role in global warming, appearing to soften his campaign pledge to withdraw the U.S. from the Paris Agreement.

On Monday, Trump met with former vice president and climate activist Al Gore at the invitation of Trump's daughter Ivanka. Gore told reporters afterward the "lengthy and very productive session" was a "sincere search for areas of common ground."

Politico reported Dec. 1 that Ivanka intends to make climate change "one of her signature issues." Quoting a source close to her, *Politico* said Ivanka, who has endorsed liberal positions on pay equity and parental leave, "is in the early stages of exploring how to use her spotlight to speak out on the issue," seeing herself as a "bridge" to moderate and liberal women.

That would put her in conflict both with her father's prior statements on the issue and those of EPA transition leader Myron Ebell and the candidates rumored to be in the running to head the agency.

The Associated Press reported Nov. 29 that it had seen internal documents from the president-elect's transition team that indicate the new administration plans to stop defending the Clean Power Plan in court. (See *CPP, FERC's Bay, Honorable Among Losers in Trump Win*.)

'Bunch of Bunk'

Trump's Chief of Staff Reince Priebus told Fox News on Nov. 27 that the president-elect's "default position" on climate change is that "most of it is a bunch of bunk."

"The only thing he was saying after being asked a few questions about it [by the *Times*] is, look, he'll have an open mind about it, but he has his default position, which most of it is a bunch of bunk, but he'll have an open mind and listen to people," Priebus said.

On Nov. 28, Trump met in New York with two rumored EPA candidates, Oklahoma Attorney General Scott Pruitt, one of the state officials leading the legal challenge to the CPP, and Kathleen Hartnett White, former head of the Texas Commission on Environmental Quality, who has criticized "the imperial EPA."

President-elect Donald Trump released a video via YouTube outlining his policies and executive actions during his first 100 days in office.

Other EPA candidates, according to Reuters, include two former EPA executives during the George W. Bush administration, energy attorney Jeff Holmstead and Mike Catanzaro, a lobbyist for CGCN Group. Venture capitalist Robert Grady of Gryphon Investors, who served in President George H.W. Bush's administration, also is in the running, Reuters reported.

'Looking Very Closely'

Although Trump did not specifically mention the CPP during the *Times* interview, his moderate tone was a marked contrast to his previous bombast on global warming.

Trump was asked by *Times* columnist Thomas Friedman if he would "take America out of the world's lead of confronting climate change." Trump responded that he is "looking at it very closely."

"I absolutely have an open mind. I will tell you this: Clean air is vitally important. Clean water, crystal clean water is vitally important. Safety is vitally important," Trump said.

Editorial page editor James Bennet asked, "When you say an open mind, you mean you're just not sure whether human activity causes climate change? Do you think human activity is or isn't connected?"

Trump responded: "I think right now … well, I think there is some connectivity. There is some, something. It depends on how much. It also depends on how much it's going to cost our companies. You have to understand, our companies are noncompetitive right now."

White House correspondent Michael Shear followed up with a question about the potential of foreign leaders to impose tariffs on American goods to offset the carbon that the U.S. had pledged to reduce.

"I think that countries will not do that to us," Trump responded. "I don't think if they're run by a person that understands leadership and negotiation, they're in no position to do that to us, no matter what I do. They're in no position to do that to us, and that won't happen, but I'm going to take a look at it. A very serious look. I want to also see how much this is costing, you know, what's the cost to it, and I'll be talking to you folks in the not too distant future about it, having to do with what just took place."

'Hoax'

In a 2012 tweet, he called climate change a hoax created "by the Chinese in order to make U.S. manufacturing noncompetitive." During the campaign, he said he would "cancel" the U.S.'s involvement in the Paris Agreement, which aims to limit global warming to 1.5 degrees Celsius above preindustrial levels. (See *NARUC Panel: CPP Poised to Fall Under Trump, New Congress* and *CPP, FERC's Bay, Honorable Among Losers in Trump Win*.)

But in a video released Nov. 21, Trump also made clear that he will steer a different course than President Obama on energy policy, renewing his promise to "cancel job-killing restrictions on the production of American energy, including shale energy and clean coal."

Trump and the Republican Congress could use the Congressional Review Act to cancel some of the Obama administration's most recent regulations, including a Nov. 15 Interior Department rule requiring oil and gas producers to use "currently available technologies and processes" to cut methane flaring in half at oil and gas wells on federal and Native American lands. The act allows an incoming Congress to reject regulations finalized within 60 days of the end of either the House's or Senate's sessions.

The Congressional Research Service has concluded the act would apply to regulations finalized after May 30, if Congress holds no more sessions this year, *The Washington Post* reported Nov. 22.

In contrast, an EPA regulation intended to reduce methane gas leaks was finalized on May 12, making it likely exempt from being reversed under the act, the *Post* reported. EPA said the rule, designed to reduce methane emissions from new or modified oil and gas wells, will prevent 11 million metric tons of carbon dioxide equivalent emissions by 2025.

Third Quarter is a Charm for *RTO Insider* Top 30

The third quarter was a good one for the *RTO Insider* Top 30, as companies reported a 4% increase in revenues over a year earlier and a 22% increase in net income.

Six companies — Avangrid, Calpine, CenterPoint Energy, DTE Energy, Exelon and Great Plains Energy — reported at least a 10% increase in year-over-year revenue. Centerpoint and Entergy rebounded from losses a year earlier.

American Electric Power, which wrote down the value of its Ohio merchant generation by $2.3 billion, was the only company to report a loss for the quarter. (See related story, *AEP Ohio Rate Plan Excludes Merchant Generation*, p.37.)

Consolidated Edison, Pinnacle West Capital, NextEra Energy, FirstEnergy, Entergy, Public Service Enterprise Group and NRG Energy all reported drops in revenue.

NRG reported a six-fold increase in net income despite a nearly 11% drop in revenue, thanks largely to a $266 million gain on sale of assets in the third quarter. Excluding the sale, and $263 million of impairments in the third quarter of 2015, net income declined $203 million because of lower energy margins and increased debt costs, the company said. (See *NRG Continues to Pare Down Businesses, Affirms Guidance*.)

Sempra Energy and Avangrid each saw profits more than double over 2015.

Aliso Canyon Injections by Year-end?

Sempra reported third-quarter 2016 earnings of $622 million, up from $248 million a year earlier. Its California utilities saw earnings rise by $21 million, primarily because of higher margins.

San Diego Gas & Electric won state regulators' approval to own and operate 37.5 MW of energy storage expected to enter commercial operations in the first quarter of 2017.

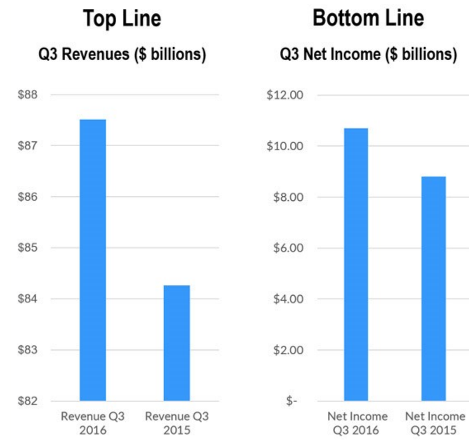
The company said its Southern California Gas unit "has made significant infrastructure technology and safety enhancements" to the Aliso Canyon gas storage facility and hopes to win regulators' approval to resume injections by the end of the year.

Avangrid Adding 2,350 MW of Wind Capacity

Avangrid, formerly Iberdrola USA, said it earned net income of $109 million versus $54 million a year ago ($76 million if the costs of the company's merger with UIL Holdings are excluded.)

CEO James P. Torgerson credited the improvement to "solid earnings" in its networks and renewables businesses, thanks to a rate settlement in New York, higher wind production and the "extension of the useful life of certain wind assets." The company's networks unit includes electric and gas utilities in New York, Maine, Connecticut and Massachusetts. Its renewable unit owns 53 wind farms with 5,643 MW of capacity in 18 states.

The company said it will purchase equipment for up to 2,000 MW of additional wind generation and more than 350 MW to repower existing wind turbines by the end of the year to obtain the full value of production tax credits.



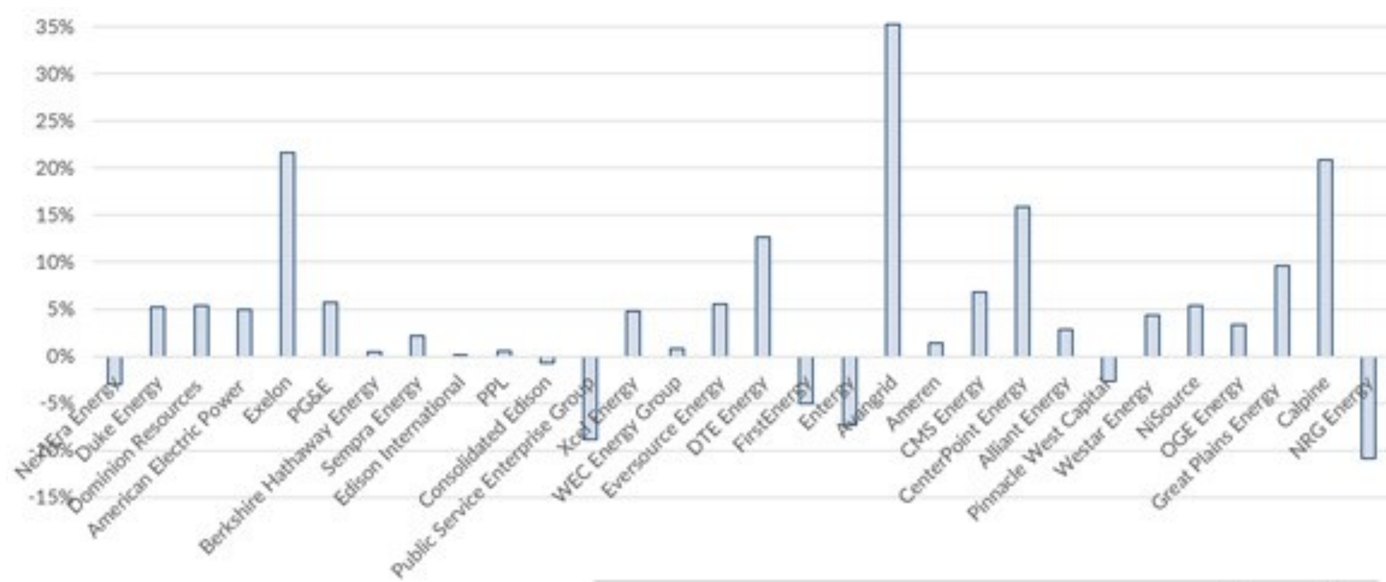
company filings

"Also, we are contracting additional power purchase agreements as we continue to manage our merchant exposure," Torgerson said.

Previous stories on third-quarter earnings:

- *Westar Boosts Earnings Amid Pending Acquisition*
- *PJM Third-Quarter Earnings Roundup*
- *CenterPoint Energy Fine-Tunes its Gas Businesses*
- *AEP Turns Away from Generation to Transmission, PPAs*
- *FirstEnergy Wants out of Competitive Generation*
- *Earnings Up, Xcel Touts 'Steel-for-Fuel' Strategy*
- *Entergy Earnings Surpass Expectations; Wall Street Unimpressed*

— Rich Heidorn Jr.



Q3 2016 revenue % change vs. 2015 | *company filings*

The *RTO Insider* Top 30

Rank	Company	Market Cap ($ billions)	Revenue Q3 2016 ($ billions)	% change vs. 2015	Net income Q3 2016 ($ millions)	% change vs. 2015
1	NextEra Energy	54.15	4.81	-3.01	789.00	-10.54
2	Duke Energy	51.05	6.82	5.21	1181.00	26.31
3	Dominion Resources	46.57	3.13	5.42	690.00	16.36
4	American Electric Power	31.57	4.65	4.98	(765.80)	-247.67
5	Exelon	30.74	9.00	21.63	526.00	-16.38
6	PG&E	29.59	4.81	5.71	391.00	26.13
7	Berkshire Hathaway Energy	N/A	5.09	0.45	1047.00	18.44
8	Sempra Energy	26.80	2.54	2.18	622.00	150.81
9	Edison International	23.54	3.77	0.11	449.00	0.22
10	PPL	23.48	1.89	0.59	473.00	20.36
11	Consolidated Edison	22.95	3.42	-0.76	497.00	16.12
12	Public Service Enterprise Group	21.18	2.45	-8.85	327.00	-25.51
13	Xcel Energy	20.90	3.04	4.79	457.80	7.35
14	WEC Energy Group	18.90	1.71	0.81	217.30	19.07
15	Eversource Energy	17.19	2.04	5.51	267.20	12.36
16	DTE Energy	16.81	2.93	12.70	325.00	23.11
17	FirstEnergy	14.08	3.92	-5.00	380.00	-3.80
18	Entergy	13.74	3.12	-7.32	388.17	-153.69
19	Avangrid	12.91	1.42	35.31	109.00	101.85
20	Ameren	11.93	1.86	1.42	369.00	7.58
21	CMS Energy	11.72	1.59	6.80	186.00	25.68
22	CenterPoint Energy	10.00	1.89	15.89	179.00	-145.78
23	Alliant Energy	8.72	0.92	2.86	131.00	-28.22
24	Pinnacle West Capital	8.46	1.17	-2.69	263.03	2.30
25	Westar Energy	8.04	0.76	4.34	158.55	12.80
26	NiSource	7.78	0.86	5.40	27.20	-655.10
27	OGE Energy	6.31	0.74	3.35	183.60	65.11
28	Great Plains Energy	5.88	0.86	9.65	133.60	5.36
29	Calpine	4.54	2.36	20.89	301.00	7.89
30	NRG Energy	3.54	3.95	-10.87	402.00	509.09
	TOTAL		**$87.51**	**3.9%**	**$10,704.64**	**21.6%**

NOTE: Net Income figures include minority interests; exclude income not available to common shareholders.

CAISO NEWS

Monitor: Flawed CRR Auction Design Costs Ratepayers

By Robert Mullin

A new report from CAISO's internal Market Monitor contends that the ISO's program for auctioning off congestion revenue rights (CRRs) suffers from inherent design flaws that have allowed speculators to reap enormous gains at the expense of outmatched ratepayers.

Adding to previous calls to reform or eliminate the auction process, the Department of Market Monitoring report spells out flaws in the current system and suggests a possible alternative. (See *CAISO Monitor Seeks Congestion Revenue Rights Auction Reforms*.)

Skeptics say the Monitor's conclusions are ill-considered and that more analysis is necessary before the ISO takes any steps to alter the CRR auction process.

The Monitor, headed by Eric Hildebrandt, said that California ratepayers lost $520 million in 2012-2015 through a market that pays $1 to CRR holders for every 45 cents in revenues received from auctions.

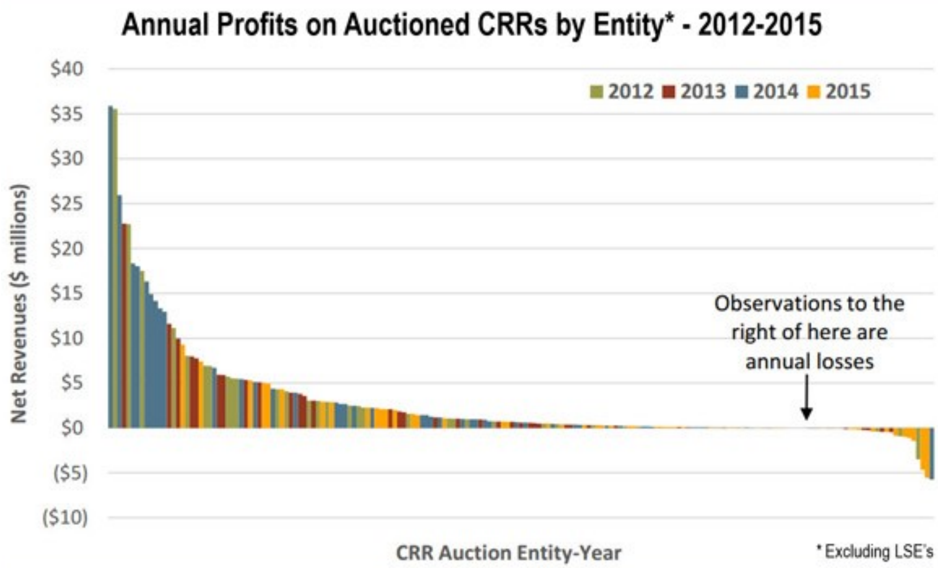
"This consistent underpricing of CRRs calls into question a fundamental assumption of the CRR auction design that competition will drive auction prices to equal the CRR's expected value," the Monitor said. "It is unlikely that rules similar to the CRR auction design would emerge in many competitive markets that are not designed by a regulatory process."

'No Clear Rationale'

The Monitor contends that there is "no clear rationale" for the ISO to provide a market for price swaps, echoing criticism voiced by PJM Independent Market Monitor Joe Bowring and others. (See *Role, Value of Financial Trading Debated by OPSI Panel*.)

CAISO's Monitor says the main beneficiaries of the current system are "purely financial entities" sophisticated enough to identify which CRRs are likely underpriced at auction but stand to pay off handsomely because of a disconnect between how the CRRs are packaged at auction and how they're compensated at settlement.

To illustrate that disconnection, the Monitor first explicates its view on what exactly a CRR does and doesn't represent.



Congestion revenue rights (CRR) auction revenues have significantly lagged payments to CRR holders since the system was put in place nearly five years ago. | *CAISO*

"A CRR is not a day-ahead market transmission right," the Monitor said. "All day-ahead market bidders have access to the transmission system regardless of whether or not they hold a CRR."

CRRs are not needed to ship power between nodes because the ISO's centrally cleared LMP market is linked to its transmission operation, meaning that market participants are not responsible for moving power from one location to another.

Rather, a CRR purchased at auction should be understood as a forward contract that allows an auction participant to hedge financial exposure to — or speculate on — day-ahead price differences between two locations, the Monitor explained. The demand for such hedging stems not from the ISO's own market but from forward power contracting occurring outside the market.

"A supplier may sell a forward power contract at a location different than its generator's location," the Monitor said. "When this occurs, the day-ahead price on which the forward contract settles will be different than the day-ahead price the generator receives for selling power into the day-ahead market."

The differing settlement locations expose the supplier to possible price discrepancies not accounted for in the forward power contract. So it's the CRR auction that provides for acquiring forward contracts for differences to hedge price differentials between two points.

The problem with this setup?

"Unlike most other forward contract markets, the CRR auction allows participants to take positions without a counterparty offering to take the opposite position," the Monitor said.

Instead, transmission ratepayers become unwilling counterparties to the CRR contracts because they're on the hook to provide payment when auction revenues come up short of CRR payouts.

Ratepayers Outgunned

To avoid that outcome, those ratepayers would have to enter the auctions to buy the contracts themselves. This is problematic for a couple reasons, the Monitor points out.

First, the load-serving entities that effectively act on behalf of ratepayers in ISO markets may obtain CRRs to hedge risk, but they are explicitly barred from financial speculation in any transactions. In any case, LSEs would lack the incentive to manage ratepayers' CRR forward contracts in the auction because they can pass on CRR costs

Continued on page 7

CAISO NEWS

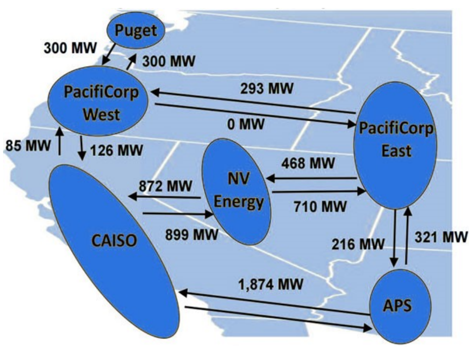
Monitor Proposes Fixes for EIM Market Power Concerns

By Robert Mullin

CAISO's internal Market Monitor is proposing new enforcement measures to address market power concerns in the Energy Imbalance Market — an effort that could help participants win market-based rate authority in the West's only real-time energy market.

The Monitor's efforts come in response to FERC rulings limiting nearly all of the EIM's current participants to transacting at cost-based rates — the result of the commission's ongoing concerns about manipulation in the nascent market.

"We've been working with the [EIM] participants and the ISO to address the various concerns that FERC articulated so [participants] could refile and get market-based rates," Eric Hildebrandt, director of CAISO's Department of Market Monitoring, told a Nov. 30 meeting of the EIM's governing body.



Map illustrates average transfer capacity throughout the Energy Imbalance Market since Arizona Public Service and Puget Sound Energy joined the effort in October. | *CAISO*

Hildebrandt pointed out that FERC now requires all prospective EIM members to file for market-based rate authority before joining the EIM — even if those entities already exercise that authority in the rest of the West.

"At the Market Monitor, we actually think it's a very good thing — as long as the conditions are competitive — to have the full flexibility of bidding that is afforded entities which have market-based rates," Hildebrandt said.

That flexibility has so far been elusive for three out of the four current EIM members.

Denials

FERC denied NV Energy and PacifiCorp — both subsidiaries of Warren Buffet's Berkshire Hathaway Energy — EIM market-based rate authority in a November 2015 ruling that cited the companies' failure to employ sufficient tests demonstrating their inability to wield economic power in their portions of the imbalance market (ER15-2281). The commission rejected Arizona Public Service in an August 2016 ruling (ER10-2437).

In both instances, the commission said it could not rely on CAISO's market monitoring and mitigation to sufficiently address market power concerns in the EIM. All three utilities were invited to reapply for market-based rate authority once they could provide an additional 12 months of operational data demonstrating whether or not they possess market power.

FERC is concerned about the potential for EIM participants to engage in physical or economic withholding of generating resources in areas of the EIM subject to transmission constraints — wide areas dominated by generation owned by EIM members themselves.

Physical withholding can involve a supplier not bidding lower-cost resources into the market in order to allow higher-cost units to set clearing prices. This risk arises from the fact that the EIM has no must-offer requirement.

Economic withholding occurs when a unit bids into the market above its marginal costs in order to elevate the market price.

Monitor's Proposals

CAISO has attempted to address this risk

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Monitor: Flawed CRR Auction Design Costs Ratepayers

Continued from page 6

to those ratepayers.

Second, participation in CRR auctions as a speculator requires knowledge of power flow analysis, finance and transmission/generation outages and operations, as well as meeting collateral requirements to engage in the market. In short, ratepayers would be outmatched by the companies that employ electrical engineers and other experts to transact in the highly complex market.

The most fundamental problem with the ISO's CRR market, the Monitor contends, is its financial structure and lack of a consistent definition for a particular set of CRRs. Although CRRs are auctioned as "a bundle of forward contracts on specific transmission constraints," they are not settled as the same bundle at day-ahead market prices. That's because the day-ahead market network model that forms the basis for settlement cannot be known when the auction is run. New transmission constraints can be introduced after the auction," effectively making the CRR a different product when bought than when it is settled.

"A CRR will only be consistently defined if the bundle in the auction is the same as the implied bundle from the day-ahead market price differences," the Monitor said. "When the transmission models are different in the auction and day-ahead market, the bundles will not be the same."

Proposal

As an alternative to the CRR auction, the Monitor proposes a bilateral or exchange market for forward contracts-for-difference for pairs of ISO nodes — otherwise known as locational basis price swaps. The swap buyer would pay the seller a price in the forward market and in return be paid the spot price difference between the two locations.

A key difference from the current CRR

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CAISO NEWS

EIM Leaders OK Governance 'Guidance' Proposal

By Robert Mullin

The Western Energy Imbalance Market's governing body voted to implement procedures to ensure market participants have input into CAISO policy initiatives that affect the market.

The CAISO staff's proposed "guidance document" sketches out how ISO staff will interact with the EIM, providing a schedule for notifying the governing body about ISO initiatives and laying out the processes by which body members and EIM participants will provide feedback on proposed policy changes.

ISO staff initiated development of the document in October in response to a recommendation by the EIM's Transitional Committee — the West-wide stakeholder group charged with developing the market's governance plan. That committee decided to leave it to market participants to parse out that plan into specific procedures. (See *CAISO Seeks Process to Keep EIM, Governing Body in the Policy Loop*.)

EIM governing body members left to right: Valerie Fong, John Prescott, Douglas Howe, Carl Linvill and Kristine Schmidt. | *CAISO*

"The Transitional Committee envisioned a more user-friendly document, something that's different from corporate bylaws or the charter for EIM governance," CAISO General Counsel Dan Shonkwiler told the EIM governing body during its Nov. 30 meeting. "It may be a more accessible document for stakeholders trying to understand what you do and how to interact with you."

Not a Rubber Stamp

Governing body member Valerie Fong said her support for the guidance document came only "after a number of questions and comments that were addressed and are answered very specifically through" the final proposal.

"This isn't just a rubber-stamp 'OK,'" Fong said ahead of the vote to approve the document. "It took a lot of work on Dan's part to consider the comments and suggestions — and the questions" submitted by EIM stakeholders.

The proposal still requires approval by the ISO board, which is expected to issue a decision on the matter during its December meeting.

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Monitor Proposes Fixes for EIM Market Power Concerns

Continued from page 7

through automated bid mitigation procedures that kick in when transmission congestion limits supply into an EIM area. But FERC expressed concern that the ISO might not enforce the market constraints required to trigger mitigation.

To address the commission's concerns about physical withholding, the Monitor suggests that the ISO improve the EIM's outage reporting rules by logging when plant outages are submitted by market members for non-physical reasons. In short, the ISO must have more visibility into EIM outages, Hildebrandt said.

To counter economic withholding concerns, the Monitor recommends that the ISO step up enforcement of local market constraints in specific EIM areas and provide FERC an explanation when it decides not to enforce them.

Hildebrandt said the Monitor will heed a commission request that it comment on market-based rate authority proceedings, something the department hasn't done in nearly a decade, he noted.

Puget's Success

Lessons can be learned from Puget Sound Energy's successful effort to obtain market-based rate authority in the EIM, Hildebrandt said (ER10-2374).

The commission determined that Puget provided sufficient evidence that its limited link to other EIM areas would not become constrained frequently enough to create a submarket requiring specific measures to mitigate market power.

A significant factor in gaining approval: Puget's commitment to providing 300 MW of firm transmission to the market at all times. Other EIM members committed a "less certain" volume of transmission to the market, Hildebrandt said.

"I think the key there is the amount of potential transmission," Hildebrandt said. "If they can satisfy to FERC that it's going to be offered or available all hours, that would seem to play a big role."

Hildebrandt said Puget's approach could provide a template for how the ISO can work with other members to help them win FERC approval.

The EIM's continued expansion should go a long way in assuaging FERC's concerns about the interplay between transmission constraints and local market power, according to Hildebrandt. The Monitor's own analysis indicates that the addition of NV Energy a year ago created enough additional transfer capacity to ensure competitiveness in all EIM balancing authority areas during nearly all hours.

That additional capacity is translating into increased flows between EIM areas, making the market more competitive, Hildebrandt said.

"Now with multiple connections between the ISO and the EIM, you really have to have congestion on multiple constraints at the same time to isolate any one area," he said. If congestion occurs at one constraint, energy can be scheduled around it to supply the affected area.

"You're really operating as one single market on a system basis throughout most — if not all — of the EIM," Hildebrandt said.

CAISO NEWS

FERC OKs One-Year Extension for CAISO's Aliso Canyon Gas Rules

'Bidding Enhancement Measures' Made Permanent

By Robert Mullin

FERC approved CAISO's plan to extend the temporary Tariff provisions the ISO implemented last June in response to natural gas pipeline restrictions stemming from last year's closure of the Aliso Canyon natural gas storage facility.

The measures — which are intended to reduce the potential for blackouts through improved gas-electric coordination — now remain effective until Nov. 30, 2017, a year after the original sunset date.

"We find that continuation of the interim measures for an additional year should improve scheduling coordinators' ability to manage their gas procurement and enhance their ability to recover gas procurement costs, while also providing CAISO with flexible tools to maintain reliability and avoid adverse market outcomes related to the limited operability of Aliso Canyon," the commission wrote in its Nov. 28 decision (ER17-110).

In a separate ruling Nov. 21, the commission also approved the ISO's request to make permanent three other related "bidding enhancement measures" approved by FERC on June 1 that also would have expired Nov. 30. (See below.)

No Timetable for Return

The ISO sought expedited approval to extend the Alison Canyon measures to head off concerns about potential natural gas shortages during the coming winter, a second peak season for Southern California gas consumption because of increased residential heating. (See CAISO Seeks to Extend Aliso Canyon Gas Rules Through Winter.)

While Aliso Canyon owner Southern California Gas has been testing the storage facility for leaks, the California Public Utilities Commission has not yet set a timetable for reopening the facility. State regulators have instead signaled that they expect utilities to implement winter-specific measures for electricity consumers that would mirror the state's successful summer response to constrained gas supplies. (See Sandoval: Nuke Shutdown, Auto-DR Aided Aliso Canyon Response.)

For its part, CAISO is preparing for the facility to remain out of service for most of 2017.

The commission's decision enables the ISO to extend provisions that provide scheduling coordinators with two-day ahead advisory schedules and allow gas-fired generating units to incorporate more timely fuel prices into their market offers. It also continues use of an after-the-fact cost recovery mechanism for generators that includes pipeline penalties and is based on same-day gas prices rather than day-ahead gas indices.

The ISO will also retain its authority to override its "dynamic competitive path" assessment when it determines that the transmission path is no longer competitive in the face of a gas constraint, as well as to suspend virtual bidding to prevent market manipulation.

The commission also approved CAISO's request to refine a provision that allows the ISO to enforce a market constraint that limits the minimum and maximum amount

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EIM Leaders OK Governance 'Guidance' Proposal

Continued from page 8

Significantly, the guidance document provides solutions to the overlapping authority between the ISO board and the EIM governing body resulting from the EIM's delegation of a portion of its authority over Federal Power Act Section 205 filings to the ISO.

The document describes how ISO staff and board members will interact with the EIM governing body to determine whether a proposed Tariff amendment affecting the EIM falls under the body's "primary authority" — giving EIM leaders the right to effectively approve or reject an amendment.

In those instances, the ISO board — which technically retains final authority over all Tariff changes — is expected to give "great deference" to the governing body's decisions and place those matters into a consent agenda.

The document also spells out an "advisory" — and non-voting — role for the governing body regarding policy initiatives covering general market rules that also affect the EIM.

'Hybrid' Initiatives

"Hybrid" initiatives — proposals that would amend multiple Tariff provisions affecting both the EIM and the ISO at-large — will get more complicated treatment. In cases when the EIM is the key driver of an initiative, primary authority will fall to the governing body. In other cases, the body could retain primary authority over just EIM-specific portions of a broader ISO initiative — a sort of line-item veto power.

The governing body will also have a voice in how any policy initiatives are designated with respect to primary authority, providing the body the right to challenge any "initial" designation made by ISO management.

In the event that the governing body objects to an initiative's final designation, the body chair — currently Christine Schmidt — can trigger a dispute resolution process ultimately involving a joint session of the body and the ISO board.

In response to requests by current and future EIM members, the final document also clarifies that CAISO's Department of Market Monitoring and Market Surveillance Committee should interact directly with the EIM governing body in the same manner in which both groups currently consult with the ISO board.

On Oct. 1, Arizona Public Service and Puget Sound Energy joined the EIM, which launched in November 2014 with PacifiCorp and NV Energy. Portland General Electric and Idaho Power are expected to join in 2017 and 2018 respectively. Others that have indicated an interest in joining are Mexico's Baja California Norte, the Sacramento Municipal Utility District and Seattle City Light. (See Council OKs Seattle City Light Bid to Explore Joining EIM.)

CAISO NEWS

FERC OKs One-Year Extension for CAISO's Aliso Canyon Gas Rules

'Bidding Enhancement Measures' Made Permanent

Continued from page 9

of gas that can be burned by generators in the affected area during periods of restricted supply. The refinement will set a limit on the maximum burn only, given that generators this summer demonstrated they could regulate their minimum burns simply by lowering the price of their bids into the real-time electricity market.

'Objective Standard' Rejected

FERC rejected a request by the Western Power Trading Forum (WPTF) to require CAISO to establish standards for deeming when a constrained transmission path has become uncompetitive or suspending convergence bidding. Reprising a statement from its decision authorizing the original Aliso Canyon measures, the commission said "the impact of the natural gas constraint on the assessment of competitive paths can only be assessed based on actual system conditions once the constraint is in place."

Requiring CAISO "to develop objective standards for when and how these measures may be implemented is not feasible," the commission concluded.

However, the commission did agree to a WPTF request that the ISO be required to publish a market notice for any revisions made to generator gas adders — rather than just during instances when the adder is increased.

The commission also said it agreed with market participants who filed comments contending that the interim measures should not become substitutes for permanent market reforms that could become necessary in the future.

"We find that the Tariff revisions proposed here are appropriate for mitigating the risks resulting from the limited operability of Aliso Canyon but expect CAISO to honor its commitment to consider other types of longer-term market enhancements," the commission said. It encouraged the ISO to begin a stakeholder process to address the potential need for additional measures dealing with exceptional — or out-of-market — dispatches related to the facility's closure.

Nov. 21 Ruling

In a separate ruling Nov. 21, the commission approved the ISO's request to make permanent three "bidding enhancement measures" approved by FERC on June 1 to address summer gas supply concerns (ER16-2445). (See *FERC Approves CAISO's Aliso Canyon Response Plan Ahead of Summer*.)

The Tariff revisions allow scheduling coordinators to rebid commitment costs in the real-time market if they were not committed in the day-ahead market or residual unit commitment process; ensure that the ISO's short-term unit commitment process does not commit resources that did not submit bids into the real-time market unless they were scheduled or committed in the day-ahead market or had a real-time must-offer obligation; and allow scheduling coordinators to seek after-the-fact recovery of unrecovered commitment costs that exceed the commitment cost bid cap as a result of actual fuel procurement costs.

CAISO told FERC that the Tariff provisions were developed independently of the concern over Aliso Canyon as part of a stakeholder effort approved by the ISO's Board of Governors in March 2016.

Although the changes were not intended to be temporary, the ISO said it included them in the package of interim revisions accepted in the June 1 order because it believed they would help it manage the transmission system and market operations during the summer.

The commission said the Tariff revisions "should provide more accurate prices in the real-time market and help avoid the inefficient dispatch of resources in the real-time market based upon bids that may not reflect current fuel prices."

Monitor Seeks Sunset

The ISO's internal Department of Market Monitoring told FERC the language permitting the real-time rebidding of commitment costs should only be extended until the end of summer 2017 pending a review of how limitations on rebidding commitment costs could be directly enforced through the ISO's market software. The Monitor said it opposed continued reliance on non-automated, after-the-fact monitoring and enforcement to protect against the potential for excessive bid cost recovery payments.

The commission rejected the Monitor's request to sunset the real-time rebidding rules but ordered CAISO to submit an informational report by Oct. 1, 2017, "detailing its assessment of the effectiveness of the rebidding process and its efforts to automate the monitoring and enforcement process."

With no timetable set for the reopening of the Aliso Canyon natural gas storage facility, CAISO sought to extend for another year interim market measures designed to deal with gas supply restrictions this past summer. | *California Governor's Office of Emergency Services*

ERCOT News

ERCOT Adds 2,800-MW Reserve to Address Capacity Shortages

By Tom Kleckner

AUSTIN, Texas — ERCOT's Technical Advisory Committee last week approved a revision to the ISO's planning guide that some stakeholders called the most important policy change this year.

The planning guide revision request (PGRR042) allows ERCOT to address a shortage of generation capacity in Regional Transmission Plan base cases by establishing a required reserve amount. It would require total generation capacity in the base case before contingency outages to be at least 2,800 MW more than peak load plus losses.

It also documents methodology requirements and conforms the maximum dispatch level for wind and solar resources to the ISO's Capacity, Demand and Reserves report.

'Critically Important'

"It's critically important to have balance in our planning process, because we've observed transmission costs and the transmission projects this planning criteria applies to are some of the most expensive items this stakeholder body reviews and approves," Reliant Energy's Bill Barnes said. "It has an impact on the cost to consumers, it has an impact on the market … there has to be some balance in the planning process. [The change] makes a lot of sense and is a huge step forward in how we think about planning the transmission system and being responsive to the needs of the competitive market."

"This is perhaps the most meaningful transmission reform since I've been involved with ERCOT," said Shell Energy's Greg Thurnher. "I don't know that ERCOT has had discretion in the past to push back on some of the inputs to the planning process."

The TAC approved the PGGR by a 24-4 vote with one abstention. ERCOT's Board of Directors will take up the measure during its Dec. 13 meeting.

Cost Concern

The revision drew some pushback from stakeholders concerned about a revised impact analysis filed in October that indicated the need for two additional full-time positions at an estimated cost of $260,000 to $280,000. Committee members asked ERCOT staff to "beef up" its business case for the two positions before the board meeting.

Jeff Billo, the ISO's senior manager for transmission planning, said the new staff members are necessary to address increased responsibilities and workload being placed on his department and ERCOT's forecasting unit, each of which would receive one new employee. The latter group's work task is complicated by creating forecasts for ERCOT's non-opt-in entities (Austin Energy, San Antonio's CPS Energy and the Lower Colorado River Authority) and differences between the ISO's use of coincident forecasts and transmission providers' reliance on adding up individual substation forecasts.

"Part of the work in my group is not only [performing additional sensitivity] studies but working with the load forecasting group to ensure we're providing the proper load forecast," Billo said. "The additional [full-time equivalent] is making sure we get the numbers right with our load forecasts."

"The bottom line is this will affect the [administrative] fee," LCRA's John Dumas said.

Barnes said he was sensitive to Dumas' concerns, but he said the cost "pales in comparison to the benefits this rule change will give us."

'Pretty Compelling'

Noting ERCOT's Tier 2 transmission projects cost at least $50 million, Barnes said, "If we find through this rule change that this saves one unnecessary Tier 2 project of $50 million anytime in the next 100 years, it will have met the criteria for the cost-benefit case, and that's pretty compelling."

Responding to a comment that recalled ERCOT saying it wouldn't raise its administrative fee for the next several years, ERCOT COO Cheryl Mele said, "Hopefully, two FTEs is not enough to damage that expectation going forward."

Some TAC members also raised questions about the proposed use of the "bounded higher of" load forecast methodology — in which ERCOT will compare its load forecast with the summed bus-level forecast for each weather zone. A motion to table PGRR042 for a month was easily defeated by a 21-7 margin, with one abstention.

"We're interested in working through and talking about whether the higher-up bounding methodology makes sense," said Luminant Generation's Amanda Frazier. "There are a lot of open questions around … whether there should be different values between weather zones … we are concerned about codifying the process before that discussion happens."

The TAC's endorsement will allow staff to use the new planning methodology as it begins developing the 2017 Regional Transmission Plan in January. Following next year's "test drive," the methodology will become effective in 2018.

"Going to the board now allows us to get started with 2017 planning under the new assumptions and studies," Billo said.

ERCOT NEWS

Texas PUC Sets Questions in NextEra-Oncor Merger

By Tom Kleckner

From left to right: Commissioners Ken Anderson, Donna Nelson and Brandy Marty Marquez | *© RTO Insider*

The Public Utility Commission of Texas on Thursday approved a preliminary order outlining numerous issues NextEra Energy and Oncor must address to win approval of NextEra's acquisition of Texas' largest distribution utility.

Two of the PUC's three commissioners, Chair Donna Nelson and Ken Anderson, also filed memos with additional questions for the docket (No. 46238).

"I want to be sure we cast a wide net," said Nelson, who included a set of questions from the Texas Industrial Energy Consumers, during the commission's open meeting.

She focused her questions on whether NextEra should be able to expense federal taxes for ratemaking purposes and if so, whether those savings should be shared with ratepayers. Similar directives from the PUC scuttled Hunt Consolidated's attempted takeover of Oncor earlier this year. (See *Texas PUC Denies Rehearing on Oncor Sale, Ends Hunt Bid*.)

Nelson also asked whether NextEra's commitment to preserve Oncor's staffing levels for two years after the transaction's close was enough time, and what would constitute a "material involuntary workforce reduction," quoting from the company's promise of no layoffs.

Anderson directed the companies to answer whether the recent appellate court decision regarding Energy Future Intermediate Holdings' make-whole claims to lien holders would affect the transaction and require an amended application. (See *Appeals Court Ruling for Bondholders Clouds EFH Reorganization*.)

He noted the commission faces a hard deadline of April 29 to issue a decision on the transaction. Because the PUC is hearing the case rather than an administrative law judge, the commissioners will have some flexibility when they conduct a hearing on the merits Feb. 21-24, Anderson said.

"Everyone needs to be mindful that in the absence of a unanimous settlement, once the record closes, that's it," Anderson said. "There's no sweeteners … there's no ability to change the deal" without an amended application.

NextEra announced in late July it had reached an agreement to acquire Energy Future Holdings' 80.03% indirect interest in Oncor for $18.6 billion. On Oct. 31, it announced an affiliate would acquire an additional 19.75% from a pair of private venture funds, for an additional $2.4 billion. NextEra also plans to acquire the remaining 0.22% interest owned by Oncor Management Investment, giving the Florida-based company complete control of the company.

Intervenors in the case include the Steering Committee of Cities Served by Oncor, the Office of Public Utility Counsel, the Texas Industrial Energy Consumers, IBEW Local 16 and NRG Energy.

The U.S. Bankruptcy Court in Delaware was to begin confirmation hearings for the exit of EFH (rebranded as Vistra Energy) from Chapter 11 bankruptcy Thursday, but those proceedings have been postponed until February. EFH filed a modified reorganization plan Thursday to compensate for the appeals court's ruling that gives first- and second-lien noteholders an additional $800 million payout.

AEP Units' Merger OK'd

Also Thursday, the PUC approved a State Office of Administrative Hearings' proposal for decision in American Electric Power's merger of its AEP Texas Central, AEP Texas North and AEP Utilities subsidiaries (No. 46050) into AEP Texas. An ALJ found the merger "consistent with the public interest if certain conditions are imposed."

Those conditions include AEP maintaining separate divisions until the commission can approve consolidated rates and tariffs, AEP Texas providing rate credits to its customers and combining current reliability benchmarks into a single metric.

Anderson suggested modifying the proposed decision to direct AEP to prepare a study on consolidating the companies' rates and share it with stakeholders.

"That will inform stakeholders, including [PUC] staff, whether to call AEP in for a rate case," he said.

The commissioners and AEP representatives debated whether to set a June 2017 or June 2018 deadline for the study's completion. They eventually settled on finishing the study "four months in advance of a rate case."

"Our position is the rates are different in the two different areas," said the industrial consumers' Katie Coleman. "There will be winners and losers. We're not sure if we want the rates combined."

Actions Delayed

The commissioners delayed until its Dec. 16 open meeting a final rulemaking on distributed generation interconnection agreements (No. 45078) and final reports to the Texas Legislature on alternative ratemaking mechanisms (No. 46046) and competitive electric markets (No. 45635).

ERCOT NEWS

Technical Advisory Committee Briefs

Subcommittees to Study Make-Whole Discrepancies

AUSTIN, Texas — ERCOT's Technical Advisory Committee assigned two subcommittees to consider responses to discrepancies in day-ahead market make-whole payments.

ERCOT staff said it noticed a material increase in make-whole payments in November, which it said resulted from the implementation in June of NPRR617, which eliminated the caps on the first two parts of three-part day-ahead offers. It said a review determined the increase resulted from a mismatch between start-up and minimum energy costs used by the day-ahead market's clearing engine and those used for payments.

None of the operating days met the 2% threshold to prompt resettlements. A software code fix corrected the problem effective Nov. 16.

The ISO is evaluating additional means of monitoring settlement outcomes "to more rapidly identify implementation issues or other anomalies in the future."

TAC Chair Adrianne Brandt assigned the issue to the Commercial Operations and Wholesale Market subcommittees for further discussion and potential policy recommendations.

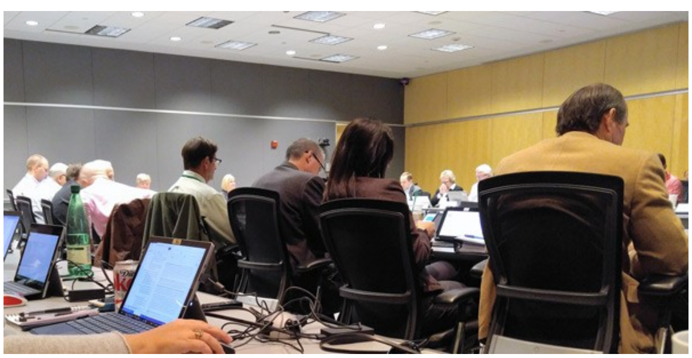
Committee Vice Chairs Approved

The TAC unanimously confirmed Oncor's Martha Henson as vice chair of the Protocol Revision Subcommittee. The committee also unanimously confirmed the re-election of TXU Energy's John Schatz as vice chair of the Commercial Operations Subcommittee.

Revision Requests Approved, Tabled

The TAC approved three nodal protocol revision requests (NPRRs), one nodal operating guide revision (NOGRRs) and two revisions to the Settlement Metering Operating Guide (SMOGRRs).

The committee tabled a Commercial Operations Market Guide revision request (COPMGRR044), pending the COPS' resolution of the related NPRR794. The changes relocate reporting requirements for unregistered distributed generation from the Commercial Operations Market Guide to the protocols.



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- NPRR773: Broadens the scope of acceptable letter of credit issuers, allowing electric cooperatives to post letters from the National Rural Utilities Cooperative Finance Corp. with ERCOT.
- NPRR792: Aligns the nodal protocols with NERC's definition for special protection system (SPS) and uses "remedial action scheme" and "automatic mitigation plan" in place of SPS for consistency purposes, when applicable. Also approved was the related PGRR051.
- NPRR803: Removes un-codified language from NPRR439, which was approved four years ago and updated a counter-party's available credit limit for the day-ahead market's current day.
- NOGRR162: Establishes a process for resolving real-time data discrepancies that affect ERCOT's network security analysis. NERC Standard IRO-010-2 (Reliability Coordinator Data Specification and Collection) requires ERCOT and applicable entities to have a mutually agreeable process for resolving real-time data conflicts.
- SMOGRR018: A change sponsored by the Texas Industrial Energy Consumers will allow efficient private use network configurations without jeopardizing ERCOT-polled settlement metering requirements.
- SMOGRR019: Makes several changes to the Settlement Metering Operating Guide, including a requirement that nameplate photos be submitted as part of site certification package for new or replacement instrument transformers.

Stakeholders also left NOGRR164 on the table until its accompanying protocol change (NPRR792) can be taken up by the board next week. The TAC will then conduct an email vote on the NOGRR.

— Tom Kleckner

ERCOT Tops 15,000 MW in Wind Generation

Less than two weeks after setting a wind generation record for grid operators, ERCOT became the first to exceed 15,000 MW when its system generated 15,033 MW of wind energy on Nov. 27.

ERCOT set its latest record at 12:35 p.m., when wind energy represented about 45% of the system's total demand. The Texas grid operator said more than 8,800 MW came from facilities in West and North Texas, nearly 3,800 MW came from South Texas and about 2,300 MW came from the Panhandle.

Wind generation accounted for 11.7% of ERCOT's energy production in 2015 but has provided 14.7% in 2016.

ERCOT said it recorded high wind outputs throughout the day, with just more than 10,000 MW at night into the noon hour. Its previous record of 14,122 MW came on Nov. 17.

The ISO has more than 17,000 MW of installed wind capacity, which is expected to top 19,000 MW by the end of 2016.

— Tom Kleckner

ISO-NE NEWS

ISO-NE Study Sees Little Savings from Keene Road Tx Upgrade

By William Opalka

WESTBOROUGH, Mass. — A transmission project intended to release bottled wind resources in Maine may not be cost-effective, according to a draft report issued at the ISO-NE Planning Advisory Committee meeting last week.

The needs assessment for the Keene Road market efficiency transmission upgrades showed relatively small annual savings in energy production costs of $1.35 million to $1.38 million (2015 $) if the export limits were raised from the current 165 MW to 195 MW.

An additional increase to 225 MW would save another $100,000 to $180,000. No additional savings are realized if the limit is further raised to 255 MW. The assessment measured the four export limits for the years 2020, 2025 and 2030.

A preliminary economic study from last year estimates the project could save ISO-NE ratepayers $1.4 million to $5.7 million by allowing additional wind development in the area and displacing more expensive hydropower.

The PAC set the parameters for determining if Keene Road could qualify as a market efficiency project in September. (See *ISO-NE Outlines Keene Road Tx Upgrade Study*.)

"This has the look of providing a *de minimis* benefit, so you have to ask if it's worth doing," said Bob Stein of Signal Hill Consulting Group, who represents Hydro-Quebec and other power generators.

Michael Henderson, ISO-NE's director of regional planning and coordination, said those were "questions more properly dealt with at a later date."

The RTO has not released any estimates on the cost of the upgrades, which would be eligible for competitive bidding under FERC Order 1000.

Under the RTO's Tariff, the cost of a market efficiency project must be less than the resulting production cost savings. "If the ISO does issue a request for proposals and no developer provides a proposal that meets this cost threshold, then no regionally funded transmission project would move forward," ISO-NE spokeswoman Marcia Blomberg told *RTO Insider* on Thursday.

A final discussion of the results will be held at the December PAC. In January, the committee will discuss whether to move toward a competitive solicitation for bids from potential developers.

Connecticut Advances Small-Scale Renewables Contracts

By William Opalka

Connecticut has selected 25 small clean energy and energy efficiency projects totaling 402 MW to negotiate power purchase agreements with the state's two electric distribution companies.

The Class I projects, all less than 20 MW each, responded to a request for proposals earlier this year. They will negotiate PPAs with Eversource Energy and United Illuminating as part of Connecticut's legislative mandate to decarbonize its electric generation resources.

"The response to the RFP for small-scale clean energy projects was robust and competitive — giving us the welcome challenge of carefully considering more than 100 projects and evaluating them against our established criteria," Department of Energy and Environmental Protection Commissioner Robert Klee said in a statement Nov. 28.

Included among the 25 projects are 11 totaling 170 MW within the state: nine solar, one wind and 34 MW of energy efficiency offered by Eversource, making it both a resource supplier and the EDC negotiating procurement.

"DEEP and the state Attorney General's office will play a role in development of the efficiency contract," DEEP spokesman Dennis Schain told *RTO Insider*. "Also, all contracts have to be reviewed and approved by our utility regulatory body, so there are protections for ratepayers in this project from Eversource having been selected."

CTEWD

Besides the 11 Connecticut projects, seven have been selected in Vermont, two each in Maine, Massachusetts and New York, and one in New Hampshire. The projects range in size from 3.5 MW of wind in Connecticut to two solar projects of 19.99 MW in New York.

Final contracts will be submitted to the Public Utilities Regulatory Authority for approval, which is expected in early 2017.

Connecticut also is part of a separate procurement with Massachusetts and Rhode Island for large-scale projects of 20 MW or greater. The states selected seven projects totaling 460 MW for contract negotiations. However, those negotiations have been stayed by the Second Circuit Court of Appeals following a challenge by Allco Renewable Finance, a developer of small-scale renewable projects. Oral arguments in that case are scheduled for Dec. 9 (Allco Finance Limited v. Klee, 16-2946). (See *Court Halts New England Clean Energy Contracts*.)

FERC Declines PURPA Case

In a related matter, FERC ruled Nov. 22 against initiating an enforcement action against Connecticut regulators over Allco Finance's claims that the state was not abiding by the mandatory purchase requirements of the Public Utility Regulatory Policies Act (EL16-115, QF16-362, *et al.*).

The commission's action means Allco and its unit Windham Solar may file their own enforcement action against the PURA "in the appropriate court," FERC said.

Allco contends the state regulators improperly concluded that Windham is not entitled to a legally enforceable obligation at a forecasted avoided cost rate and that Eversource has no need for capacity.

It is at least the third time this year that FERC has rebuffed Allco's PURPA claims. (See *FERC Rejects Enforcement Action in Connecticut PURPA Dispute*.)

ISO-NE NEWS

LaFleur Backs NEPOOL Market-Climate Collaborative

By William Opalka

BOSTON — The New England Power Pool's collaborative process to address climate change while preserving wholesale electricity markets won an endorsement from FERC Commissioner Cheryl LaFleur at the ISO-NE Consumer Liaison Group meeting Thursday.

LaFleur, a New England native, was referring to the Integrating Markets and Public Policy collaborative, which seeks to reconcile markets with state mandates to decarbonize the grid. (See *Markets vs. Climate Goals the Subject at NECA Conference*.)

Stakeholders are meeting into next year with the goal of having ISO-NE present Tariff revisions to FERC.

"I think there's a lot in it for customers because we will still harness the power of the competitive market while also having the states address climate change [to see if] those are two things that can be reconciled," she said.

One contentious point is that states have mandated clean energy procurements leading to subsidized out-of-market contracts that skew prices.

"What I'm worried about as we go forward is if we go without a plan and try to have it both ways: try to have a market that's working ... but then we get to a place where it's not working and it begins to be cannibalized by the subsidized resources," LaFleur said.

LaFleur

Noting the unlikelihood that the Trump administration would endorse a federal carbon tax, LaFleur said that the commission would probably look favorably on a state-based consensus that meets the regional goals along with market-based solutions.

"In my mind, Plan A is the region creates some kind of comprehensive plan that recognizes the state environmental goals and the [role of] pricing in the wholesale market and files it at FERC," she said.

She said the two alternatives would have unappealing outcomes: The current state of affairs, with FERC acting as arbiter in the disputes between state governments, RTOs and market participants; or a *de facto* reregulation, as states more actively promote resource adequacy with preferences for cleaner energy sources, with out-of-favor generators then looking for their own state support.

"Pretty soon you realize the market's pretty small and you've reregulated in a messy, expensive way. I don't think that's a good idea, particularly for a region that invented competitive markets, ISO-NE," she added.

Adjustments Ahead

Besides an expected lessening of government activism in climate policy, LaFleur will have to adjust to being a minority member of FERC when three Republicans are expected to be nominated to FERC next year.

"[FERC commissioner] is my first government job and it's only been for President Obama, so I'll see what it's like," she said. LaFleur said the Democrats on the commission had a good working relationship with the former Republican members. "The only thing we've had that had a partisan feel was anything that relates to environmental rules."

That could continue.

"One of the things everyone will be watching is where the new administration takes us in the intersection of energy and the environment," she said.

Regardless of what the Trump administration does, LaFleur said, she's on FERC for the duration.

"I plan to serve out my term until 2019. I don't know what anybody else is going to do, but I know what I'm going to do," she said.

ISO-NE NEWS

Overheard at the ISO-NE Consumer Liaison Group Meeting

Anne George, ISO-NE vice president of external affairs and communications, speaks on the RTO's winter reliability program. | © *RTO Insider*

BOSTON — New England appears poised to withstand another winter of tight natural gas supplies, an ISO-NE official told the RTO's Consumer Liaison Group meeting on Thursday. Other speakers debated whether states' renewable portfolio standards are demanding enough to meet climate goals.

Anne George, ISO-NE vice president of external affairs and communications, said the 342,000-dekatherm Algonquin Incremental Market project just went online, and while it's primarily meant to serve local distribution companies' natural gas customers, it should ease system constraints for power generators.

"But as we see [the 1,517-MW] Brayton Point station retire [next June], we see the additional gas capacity going away as a large non-gas resource will likely be replaced by more gas generation," she said.

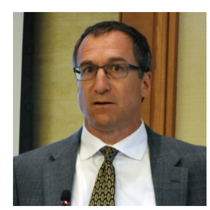
Overall consumer costs for electricity have remained relatively flat for New Englanders over the past six years, even as more charges have been added to the distribution side of the bill. Electric distribution companies and their customers are responsible for funding public policy as renewable standards, including the cost of solar carve-outs, energy efficiency and other programs grow, said **Jim Bride**, president of Boston-based Energy Tariff Experts.

"Transmission charges have gone up a lot. So, there's this increasing cost wedge, whether it's renewables or other mandated charges, over transmission that's taken up a greater portion of the bill. What has allowed that to happen without consumers really noticing is the decrease in natural gas prices. Wholesale market power costs are down significantly," he said.

Massachusetts lawmakers abandoned an effort to increase the state's RPS this year to further reduce greenhouse gas emissions.

Ron Gerwatowski, an advisor on energy policy and utility regulation and former assistant Massachusetts energy secretary, said the renewable energy credit market that has driven clean energy projects needs further study and more recent data, noting that complete regionwide figures are about three years old. Another area worth more study is the impact of high alternative compliance payments in Massachusetts. The $67 cap draws RECs away from neighboring New Hampshire, Connecticut and New York, potentially leaving them short of meeting their own goals.

"Will an increase in annual obligations really achieve emissions reductions? Or, will it just cause a reshuffling of where the RECs are sold over time? I'm not suggesting we eliminate the RPS ... but we really do need a comprehensive study before states consider raising them," he said.



Greg Cunningham, vice president and director of clean energy climate change for the Conservation Law Foundation, said the two largest New England states, Massachusetts and Connecticut, are mandated to reduce greenhouse gas emissions by 80% below 1990 levels by 2050. From that, the Integrating Markets and Public Policy initiative was born to help markets assist all of the states to reach their climate goals.

"We, CLF, have watched as slowly clean energy has been built out, but at a trajectory that doesn't come close to meeting this essential obligation — that is not only law, but [what] the science dictates we must do — to avoid the worst implications of climate change," he said.

— William Opalka

"Transmission charges have gone up a lot. So, there's this increasing cost wedge, whether it's renewables or other mandated charges, over transmission that's taken up a greater portion of the bill. What has allowed that to happen without consumers really noticing is the decrease in natural gas prices."

Jim Bride, Energy Tariff Experts

MISO News

MISO Granted Winter Waiver on Offer Cap

FERC has granted MISO a waiver of its $1,000/MWh offer cap for winter, providing the RTO relief before the commission's pre-Thanksgiving order that doubled the hard offer cap for all grid operators takes effect.

FERC's Nov. 17 ruling setting the offer cap for day-ahead and real-time markets to $2,000/MWh in all RTOs and ISOs won't take effect until 75 days after publication in the *Federal Register* (RM16-5). (See *New FERC Rule Will Double RTO Offer Caps*.)

Thus the commission on Nov. 29 granted MISO's request that resources with incremental energy costs above the current $1,000/MWh offer cap be allowed to recover costs effective Dec. 1 (ER16-2685). FERC approved similar MISO requests for the winters of 2014/15 and 2015/16.

The waiver and FERC's new rule require that energy costs that exceed $1,000/MWh must be verified before the offer is used to set LMPs. FERC acknowledged the rule in the order granting the waiver, calling it "a long-term solution."

"MISO's experience during the polar vortex of the 2013/14 winter demonstrates that fuel costs can increase to a level such that the current $1,000/MWh offer cap prevents resources from submitting incremental energy offers that reflect their marginal production costs. If similar weather and natural gas supply conditions materialize in the 2016/17 winter, some resources could face the untenable position of being forced to offer electricity at levels below their actual cost," the commission said.

As with MISO's two previous waivers, the order instructs MISO's Market Monitor to file a report within 30 days after the waiver period ends April 30 with statistics on offers above $1,000/MWh.

— Amanda Durish Cook

Market Subcommittee Briefs

New Data in Monthly Operations Reports

CARMEL, Ind. — MISO will likely add new details to its monthly operations reports as a result of an annual review, engineer Oluwaseyi Akinbode told the Nov. 29 Market Subcommittee meeting.

Akinbode said MISO will add a market efficiency metric based on the alignment of the financial transmissions rights, day-ahead and real-time markets. (FTR shortfalls plus real-time excess congestion funds divided by FTR target credits.)

Market efficiency is expected to maintain a 12-month rolling average of at least 94%. If the rolling average falls to 92% or lower, or the monthly average falls below 87%, the issue will be flagged for review by MISO staff.

Jeff Bladen, executive director of market services, said the metric will help the Board of Directors understand the reasoning behind future proposals for market improvements. "It's intended to be a broad indicator and not a surgical tool to identify improvements with," he said.

WPPI Energy economist Valy Goepfrich said the new metric is difficult to understand and asked how MISO calculates FTR shortfalls.

Akinbode also said MISO will add charts depicting transfer trends between the RTO's North and Central regions and MISO South. He asked for comments through mid-December and said MISO would respond to stakeholder suggestions in January.

Run Reason Requirement Shelved

MISO has canceled plans for a mechanism to track the reasons behind commitment decisions because of a lack of stakeholder interest.

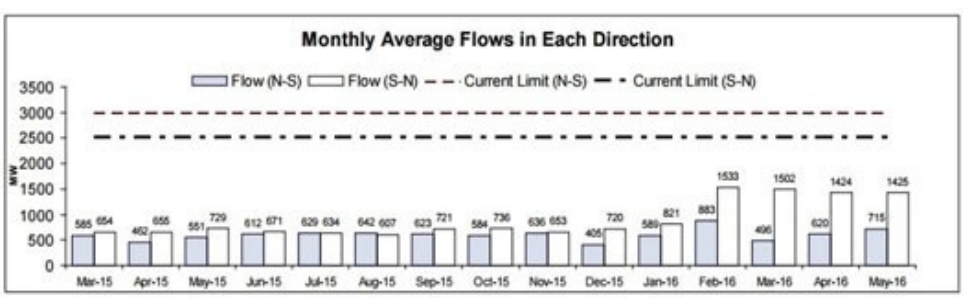
The mechanism would have tracked information including start and stop times, run reasons and sources of commitments. A similar project was shelved in 2012. At that time, MISO's market communication system provided the information, but it is no longer "the system of record," the RTO said.

Constellation Energy requested the tracking mechanism in May 2016. But Bladen said MISO's request for feedback on the possible data collection yielded only four stakeholder responses, half of them expressing low interest and the other half asking the project not be taken up.

"So, on the basis of that, we are not pursuing this item," Bladen said. He added that stakeholders may raise the topic again using the Steering Committee's issues introduction process.

The initiative is expected to be closed at the December Steering Committee meeting.

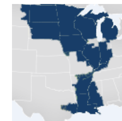
— Amanda Durish Cook



	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16
Percent of the time flow in North to South direction	48%	34%	49%	72%	80%	71%	58%	53%	57%	17%	25%	13%	8%	18%	14%
Percent of the time flow in South to North direction	52%	66%	51%	28%	20%	29%	42%	47%	43%	83%	75%	87%	92%	82%	86%

Energy transfer trends between MISO South and Central/North regions | *MISO*

MISO NEWS



No OMS Consensus on MISO Cost Allocation Changes

By Amanda Durish Cook

The Organization of MISO States was unable to achieve consensus on a response to a five-question survey asking how MISO should revise its cost allocation procedures, Wisconsin Public Service Commission staffer Randel Pilo said Tuesday.

During the Nov. 22 OMS Board of Directors conference call, Pilo said that although state regulators were not able to reach unanimity on possible revisions to MISO's cost allocation methodology, the discussion was a "helpful exercise."

In multiple recent stakeholder meetings, MISO expressed a desire to work on cost allocation revisions through 2017 and implement the change by 2018, when Entergy's integration transition period — which limits cost sharing in MISO South — expires. (See *MISO Stakeholders Propose Changes to Market Efficiency Cost Allocation Process*.)

The RTO circulated a five-question survey on market efficiency project cost allocation in October, which asks:

- Should MISO allocate all costs to benefiting local resource zones for economically beneficial projects lower than 345 kV?
- Should MISO investigate additional quantifiable benefit metrics in addition to adjusted production costs for market efficiency projects?
- Should MISO allocate all costs to benefiting local resource zones for economically beneficial projects lower than 345 kV?
- Should MISO allocate all costs to benefiting transmission pricing zones for economically beneficial projects lower than 345 kV?
- Should MISO allocate all costs to a blend of benefiting local resource zones and transmission pricing zones for economically beneficial projects lower than 345 kV?

Pilo said states are "nervous" about a blend of allocation to local resource zones and transmission pricing zones.

MISO will share and go over individual state responses at the Dec. 13 Regional Expansion Criteria and Benefits Working Group meeting and use input to make a conceptual proposal.

Pilo also noted that the questions were close-ended, and some states used an all-no answer strategy in the hopes of getting MISO to pay attention to their written responses.

"Moving forward, MISO has built in a year's worth of time … and is planning on filing a process with FERC in December 2017," said David Carr of the Mississippi Public Service Commission.

OMS Executive Director Tanya Paslawski also said work continues on the organization's 2017 strategic initiative document, which identifies long-term goals similar to the 2016 document. Paslawski said the new document is set to be approved before the new year.

Paslawski also said OMS will adopt a banking resolution Dec. 1 to allow incoming OMS president and Indiana Utility Regulatory Commissioner Angela Weber to sign off on banking transactions. OMS voted to approve Weber as president at its annual meeting in October. She will replace current president and Michigan Public Service Commission Chair Sally Talberg in January.

Davis Quits Arkansas Commission for MISO South Post

By Amanda Durish Cook

Arkansas Public Service Commissioner Lamar Davis has resigned to take a newly created position as executive director of government and regulatory affairs for MISO's South Region.

Beginning Dec. 1, Davis will serve as MISO's main liaison with state regulators, lawmakers and governors within MISO South, the RTO said Nov. 28. Davis resigned from the PSC effective Nov. 25.

Davis is the third former state regulator to join MISO's staff since last year, following Vice President of Government and Regulatory Affairs David Boyd, who joined the RTO in 2015 after eight years on the Minnesota Public Utilities Commission, and former Public Utilities Commission of Ohio Chairman Andre Porter, who resigned to become vice president and general counsel in May. (See *Former PUCO Chairman Andre Porter Joins MISO*.)

"MISO is truly honored and excited to have Lamar join our team," said Todd Hillman, vice president of MISO's South Region. "We look forward to Lamar representing MISO South and the work we are doing to facilitate collaboration among state regulators, policymakers and stakeholders."

Lamar Davis at NARUC | *© RTO Insider*

Prior to his appointment to the PSC in January 2015, Davis served eight years as deputy chief of staff under former Arkansas Gov. Mike Beebe. Davis was also an assistant attorney general in Arkansas' Consumer Protection Division, taught consumer law at the William H. Bowen School of Law in Little Rock, Ark., and served as a law clerk for the Arkansas Court of Appeals.

"These roles have afforded me the opportunity to work with countless public servants to serve the people of Arkansas, which has been very rewarding," Davis said in a PSC statement. "I now have been offered a position in the private sector that will afford me the opportunity to champion policies to help advance the goals of our beloved state and region."

Davis received his law degree from Bowen and a bachelor's in political science from Dillard University in New Orleans.

MISO NEWS

MISO to Study Aging Software; Market Improvements Planned for 2017

By Amanda Durish Cook

CARMEL, Ind. — MISO will spend $1.8 million on consultants to evaluate how its aging market system can be improved to respond to stress and future threats.

Jeff Bladen, executive director of market services, said it was hard to put a date on when MISO's market system will hit its limits, but if it isn't overhauled, it could fail in five to seven years.

Bladen told the Market Subcommittee on Nov. 29 that some of the code in the RTO's late 1990s software platform dates back to the late 1980s. "It's a very dated software architecture for what it's used for today," Bladen said. "You can install airbags into a 1950s Chevy; it doesn't mean the car is safe. … Frankly, we're not the only RTO having these challenges."

Bladen said MISO and consultants will be studying the effects of changes such as increased intermittent and behind-the-meter generation and increased combined cycle units.

"I do want to stress that we see no risk to reliability in the near term," he said.

The $1.8 million in funding will be used to cover a series of independent and third-party studies from November to April, with the first 30-day study examining if MISO's planned efforts are enough. MISO plans to spend $1.1 billion on information technology between 2015 and 2019.

Bladen said the aim of the studies is to provide the Technology Committee of the Board of Directors with "a complete and comprehensive view of the limitations and viability of current market systems." He said MISO will make reports on its findings to the committee during the first three board meetings in 2017. Bladen said he did not expect an immediate "huge" investment to be revealed at the meetings.

Market Improvements Continue in 2017

MISO's Mia Adams reported that three Market Roadmap projects were completed in 2016 and six projects are planned for 2017.

In 2016, MISO expanded its day-ahead market coordination with PJM with a firm flow entitlement exchange process and introduced pricing floors to its emergency pricing structure.

It also rolled out a product allowing generators to voluntarily set aside ramping capability for fleet flexibility during peak hours compensated by MISO at no more than $5/MWh. Chuck Hansen, of MISO's market evaluation design group, said the ramp product has been delivering "tangible benefits" since its May launch, with projected annual savings of $4.2 million in resource production costs and reserve shortage price spikes.

For 2017, MISO plans to:

- Make improvements to its day-ahead reliability assessment commitment software.
- Control power swings caused by market-to-market dispatch.
- Improve MISO-PJM interchange modeling and pricing.
- Tighten thresholds for uninstructed deviation. Jason Howard, MISO market quality manager, said strengthened thresholds for uninstructed deviation are still under review for their impacts. Proposed changes, draft Tariff language and analysis results will be readied in early 2017. (See *Monitor Again Criticizes MISO's Uninstructed Deviation Rules*.)
- Introduce the second phase of its extended locational marginal pricing, which will expand price-setting eligibility to online resources with a one-hour start-up time. MISO's Congcong Wang said the expansion had stakeholder support because it was a change the RTO could adopt without new software and captured about 60% of peaking resources. A FERC filing is planned in the first quarter with testing to begin in the second quarter. (See "MISO to Expand ELMP Price Setting, but not to IMM's Specs," *MISO Market Subcommittee Briefs*.)
- Launch MISO-PJM coordinated transaction scheduling. MISO's Beibei Li said the product should come online in October 2017, after vendor General Electric delivers the software sometime in December and the RTOs spend time testing it. (See "MISO-PJM Coordinated Transaction Scheduling Delayed," *MISO Market Subcommittee Briefs*.)

Jeff Bladen | *© RTO Insider*

Additionally, MISO research and development adviser Yaming Ma said the RTO will publish a study by July on automatic generation control to better use fast-ramping resources. The project was identified as high priority in 2015's Market Roadmap classification, and a two-stage study began in September. Ma said design details would likely emerge in late 2017, but first MISO will use a prototype to develop strategies for storage resources that may have limited amounts of power on hand.

DTE Energy market developer Nick Griffin asked how fast resources must be to be included in automatic generation control. Bladen said while MISO would use battery storage as "proxy speed, MISO will test a small gamut of different response speeds."

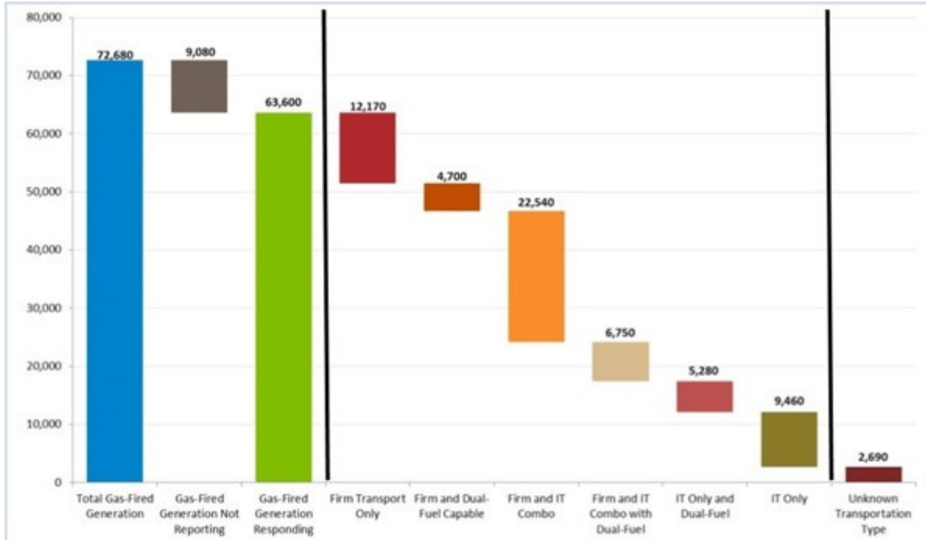
"You can install airbags into a 1950s Chevy; it doesn't mean the car is safe."

Jeff Bladen, MISO

MISO NEWS

MISO to Continue Gas-Electric Coordination Efforts in 2017

By Amanda Durish Cook



MISO winter fuel surveys | *MISO*

CARMEL, Ind. — MISO will continue its efforts to improve gas-electric coordination in 2017, revealing a plan for the year that includes more data sharing, modeling and outreach.

The top 2017 goals include disclosing generators' hourly gas usage profiles to gas system operators and improving modeling to identify future electric transmission and pipeline expansion needs. The RTO also plans on continuing to issue market updates to stakeholders and communicate with gas industry officials and regulators.

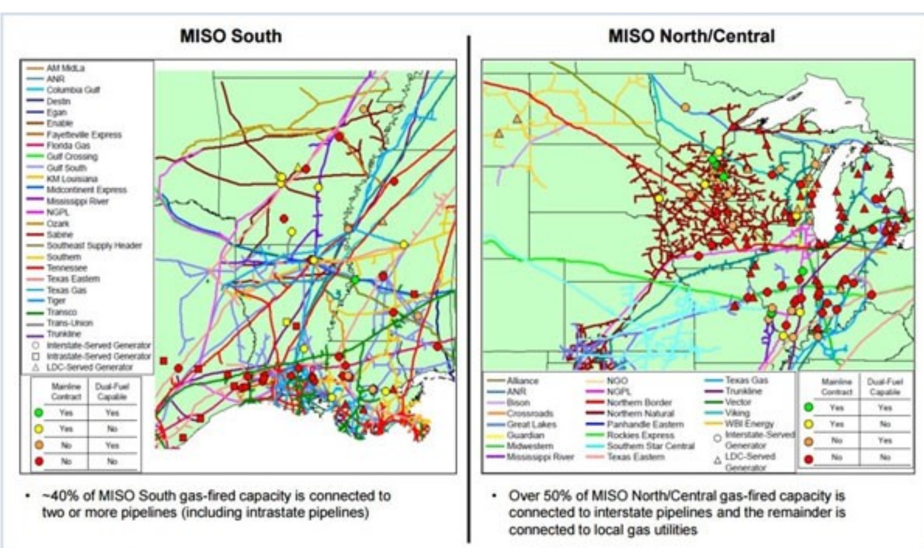
Other tasks include creating a gas generator database and NERC studies on gas contingencies, MISO strategy adviser Scott Wright told the Resource Adequacy Subcommittee on Nov. 30.

MISO will launch a pilot project to share two or three generators' day-ahead gas usage profiles with gas system operators. The RTO will use its day-ahead clearings to forecast hourly gas usage. Wright noted that FERC Order 787 enables sharing of nonpublic operational information with gas pipelines for "reliability and operational planning."

Indianapolis Power and Light's Lin Franks said MISO has done "a fine job" so far in getting pipeline and gas resource owners to communicate, such as providing real-time pipeline restrictions and notifications.

But she cautioned MISO against involving itself in fuel contracts between gas suppliers and generators and said MISO's gas role should be limited to providing operational data transparency and not influencing new products or rules.

"None of these contracts are exactly alike," Franks said. "Managing our fuel supply is our obligation, not MISO's. We've got to be very careful here that MISO doesn't insert itself in our ability to manage our fuel supply. It is our job to ensure adequate supply to our generation. This one seems to be ripe for a fight on jurisdiction."



MISO

Wright said the main thrust behind the coordination is fuel assurance. "By no means [are we] thinking that we're going to get in between a generator and its pipeline. It's, 'Are there ways to unlock efficiencies in the gas coordination market?'"

Wright said he didn't understand stakeholder concerns that gas was being treated differently than coal in terms of fuel assurance. "Why gas and not coal? I find it befuddling the references to the coal pile," Wright said. "Gas is different. All of these pipelines are FERC-regulated. Coal is off by itself."

MISO houses about 200 gas-fired generators and more than 30 pipelines. Gas resources, which currently comprise 42% of MISO's generation fleet, will rise to 50% in the coming years, according to the RTO.

In October, gas was 12.8% of the dispatched generation fuel mix in MISO's Central Region, versus 5.4% of the mix in MISO North and 63.4% of that in MISO South.

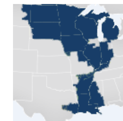
"The outlook of gas is it will grow, and in some ways MISO is catching up. There's going to be a lot of gas demand growth in MISO North and Central," predicted Wright.

Gas Generators Ready for Winter

Gas system operators reported a "high level" of winter preparedness in MISO's

Continued on page 21

MISO NEWS



Resource Adequacy Subcommittee Briefs

Two More Options to Check Affiliate Physical Withholding

CARMEL, Ind. — MISO has come up with two possible responses to its Independent Market Monitor's suggestion to apply its 50-MW physical withholding threshold to affiliated market participants collectively, rather than individually.

MISO told the Resource Adequacy Subcommittee on Nov. 30 that the withholding threshold should either use allocations based on load ratio share, or the fixed 50-MW limit should be scrapped in favor of a new threshold based on percentage of generation assets.

MISO's Cliff Risley said the downside to the load ratio share option is that market-sensitive information could be released inadvertently through how many megawatts each affiliate is awarded. Risley also said the percentage option could result in more allowed withholding overall and weaken capacity market efficiency.

MISO and the Monitor are proposing to set withholding limits on a company basis rather than the current market participant basis, which allows affiliates to hold back 50 MW apiece without overstepping the Planning Resource Auction withholding threshold. (See "MISO Takes 1st Steps in Monitor Recommendations," *MISO Resource Adequacy Subcommittee Briefs*.)

Monitor David Patton said the two alternatives remove the "common incentive" for affiliates to withhold to boost prices for a sister company, but putting the 50 MW on a *pro rata* basis is "more draconian" than the current market rules.

"There are cases where withholding less than 50 MW is mitigated. You've now made the affiliation more stringent," Patton said. He also said he didn't know how the percentage method could be distributed fairly.

Some stakeholders argued that FERC Order 697 already prohibits coordination among affiliates that are franchised public utilities and the withholding proposal should only apply to affiliates not covered by the rule.

Risley asked for more stakeholder feedback before Dec. 14.

Projects Without GIA Counted in OMS-MISO Survey?

MISO's Darrin Landstrom asked stakeholders if the RTO should include resources that have yet to secure a generator interconnection agreement in the annual OMS-MISO Survey.

Currently, MISO only includes Tier 1 resources — those that have a signed generator interconnection agreement — into the survey's regional and zonal weighted averages. The RTO is asking if it should include Tier 2 resources — projects still in the interconnection queue — into the survey totals, or create a separate survey category for them. RASC Chair Gary Mathis asked if MISO could use historical data to calculate the likelihood of projects being completed after they enter the final stage of the queue. Landstrom said the option could be explored.

Laura Rauch, MISO's manager of resource adequacy coordination, reminded stakeholders that MISO's ongoing effort to revise its queue rules could complicate the suggestions, as the queue's stages and restudy periods could be changed.

Tier 1	Resource Additions with Generator Interconnection Agreement (GIA) (included in survey totals)
Tier 2	Planned resource additions active in MISO queue without GIA, in definitive planning phase (not included in survey totals).
Tier 2	Planned resource additions active in MISO queue without GIA, on hold or in system planning and analysis phase (not included in survey totals).
Tier 3	Planned resource additions currently not in MISO queue (not included in survey totals).

2017 MISO-OMS survey: considerations for new resources | *MISO*

Landstrom asked for input on the issue by Dec. 15.

IMM Clears Up Market Mitigation Application

The Monitor is proposing a Tariff change to make clear which resources are subject to PRA market mitigation measures.

IMM staffer Michael Chiasson said market mitigation will apply to "generation resources, including behind-the-meter generation, that are internal to or are pseudo-tied into MISO."

Chiasson said MISO's Tariff is currently unclear as to what resources are answerable to the Monitor; the edits would be made to Module D.

Demand resources, energy efficiency resources and external resources will be exempted from market mitigation measures, Chiasson said. He asked for stakeholder feedback by Dec. 14.

— Amanda Durish Cook

MISO to Continue Gas-Electric Coordination Efforts in 2017

Continued from page 20

third winter generator fuel survey. MISO Electric Gas Operations Coordinator Mark Thomas said 174 gas-fired facilities (representing 63,600 MW, 87% of the RTO's gas-fired capacity), participated in the survey.

The survey reported connections to more than 30 gas systems in the footprint, with approximately 46,550 MW, or 65% of MISO gas capacity, connected directly to intrastate and interstate pipelines. About 70% of MISO North/Central gas capacity is connected to just five pipelines through direct connect or local distribution companies. MISO found 40% of gas-fired capacity (28,900 MW) had firm transportation and/or dual-fuel capability. "Though an increase from the previous survey, questions remain as MISO expects gas reliance to grow," the RTO said.

MISO also found that 42% of responding capacity (30,850 MW) subscribes to no-notice services and 37% of capacity (27,340 MW) has access to firm or interruptible storage.

However, Thomas said 11% of responding generators said they did not have a detailed weatherization plan, including insulation, wind breaks and equipment shelters. He said it was "surprising" that so many did not have a plan in place and wondered whether the question was worded clearly enough.

MISO NEWS

MISO IMM Suggests Deliberate Over-Forecasting by Wind Operators

Continued from page 1

Patton: Eliminate DAMAP for Wind

Patton said the DAMAP should be eliminated for wind resources once MISO adopts five-minute settlements. He reasons that because wind is a fast-ramping resource, operators will want to be paid in real-time prices rather than collecting DAMAP.

Patton also called for a change in rules that encourage wind generators to err on the high side in their forecasts to ensure they receive a dispatch signal that does not limit their output. Wind resources producing above their dispatch signal can be subject to excess energy penalties, but MISO settlement rules are less punitive for wind resources that fall below their forecast output.

Patton recommended wind suppliers be incentivized to submit accurate forecasts by giving them more "headroom" and relaxing excessive energy charges when the system is unconstrained. He also suggested MISO automate its validation of market participant forecasts.

"If we balance these objectives well, the wind suppliers will be happy, the grid operators will be happy and those that have to contribute to the DAMAP payments will be happy," Patton said.

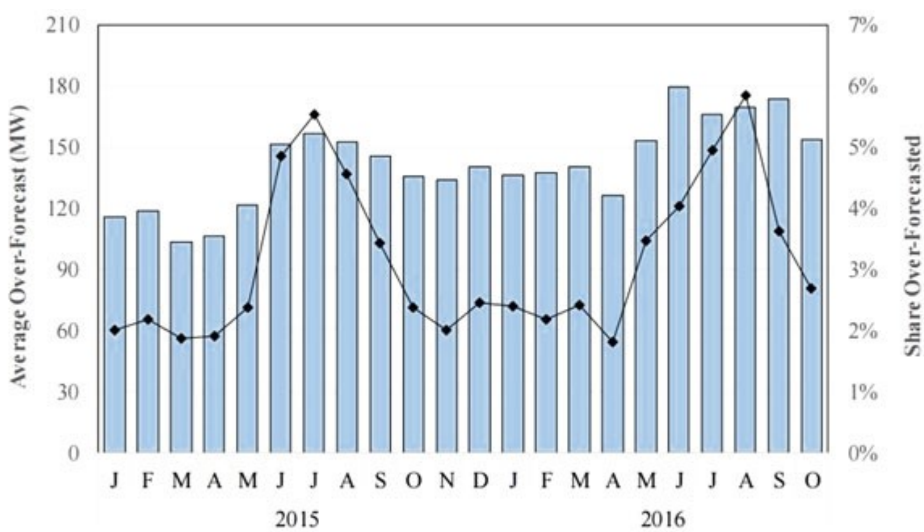
Over-forecasting leads to supply-demand imbalances, he said, with MISO deploying regulating reserves and under-utilization of the grid as the RTO dispatches the system to make room for the over-forecasted energy.

'Sustained Biases'

Patton said that although larger wind producers generally have lower forecasting errors than smaller ones, "a number of large and small wind suppliers exhibit large sustained forecast biases." Patton said over-forecasting is more prevalent in summer, when energy prices are higher.

He said wind operators might be violating their obligation to provide accurate information to MISO. He noted that FERC is similarly concerned about evidence of over-forecasting.

Patton also said more research is needed to put a price on how much the over-forecasting costs MISO and that he may offer more definitive solutions in his 2016 State of the Market Report.



Monthly wind deviations: 2015-2016 | *Potomac Economics*

MISO Responds

Jeff Bladen, executive director of market services, said MISO staff will work with the Monitor on potential fixes. "We aren't seeing broad-based market manipulation for sure, but we may have a market inefficiency that we want to close up as soon as practical. Certainly there's work in front of us to assess and get advice," Bladen said.

DTE Energy's Nick Griffin said he would like to see MISO and the Monitor provide similar deviation averages for other asset classes. But he said he could support removing forecasting capability from wind units if gaming is discovered.

"Wind resources are in a difficult position because they face different challenges than other resources," Patton said. "They have to manage something that's fundamentally different than other resources. When we suggest that wind resources should be treated differently, it's because they have a challenge that other asset owners do not have to face."

NYISO News

Loss on Water Permit a Setback for Indian Point Extension

By William Opalka

New York's highest court ruled Monday that the Indian Point nuclear plant is subject to state coastal waters rules — a potential hurdle in Entergy's bid to extend the plant's operating licenses.

The unanimous Court of Appeals ruling said that Entergy must obtain a Department of State permit under the state's Coastal Zone Management program. Indian Point Units 2 and 3 are on the banks of the Hudson River, 30 miles north of New York City.

"In sum, the Department of State's interpretation of the exemptions in the Coastal Management Program, and its conclusion that Entergy's application to relicense the nuclear reactors at Indian Point is subject to consistency review, are rational and must be sustained," the court said.

New York's CMP, adopted in 1982, includes protections for fish and wildlife while also "meeting public energy needs in an environmentally safe manner," according to the opinion.

License Extensions

The plants were licensed by the U.S. Nuclear Regulatory Commission in the early 1970s and are operating under extensions while the commission reviews their applications for 20-year license renewals.

Entergy applied for the license renewals in 2007 and initially conceded that its application was subject to the state review under the CMP. In 2012, however, Entergy changed its position, arguing that the plants were grandfathered.

The court disagreed, saying that relicensing applications require new permits. Nuclear power plants' use of state waterways is

listed as a regulated use.

"Entergy is reviewing the court's decision to determine its next steps, which could include refiling its Coastal Zone Management application that Entergy previously withdrew pending issuance of the NRC's final supplemental environmental impact statement," the company said in a statement. "Notwithstanding this court decision, we continue to believe we will ultimately be successful in obtaining a CZM permit and relicensing Indian Point. The facility continues to safely operate in a manner that is fully protective of the Hudson River and in compliance with state and federal law."

The 16-page decision overturned a previous ruling from an Appellate Division court, which sided with Entergy.

The state's objections to Indian Point will now be considered as part of the record for federal relicensing. However, if the state eventually denies a coastal certification, the plant owner could appeal to the U.S. Department of Commerce, which could override the state's action, according to the decision.

Entergy also has a concurrent challenge pending in the U.S. District Court for the Northern District of New York. It sued New York in January, claiming the state's attempts to require a CMP review intrudes on federal jurisdiction (1:16-cv-00051-LEK-DJS).

According to Entergy's 2016 Form 10-K, New York is citing "nuclear safety concerns."

That is a persistent complaint after a series of mishaps occurred in recent years at the plant.

"Indian Point is antiquated and does not belong on the Hudson River in close proximity to New York City, where it poses a threat not only to the coastal resources and uses of the river, but to millions of New Yorkers living and working in the surrounding community," Gov. Andrew Cuomo said in a statement.

Cuomo, along with several of the state's environmental organizations, has long advocated the plant's closure. (See *Environmental Groups Press for Indian Point Shutdown*.)

Cooling Towers

Entergy also has been challenging New York's contention that closed-cycle cooling would be the "best technology available" for addressing concerns over the impact of the nuclear plants' cooling water intakes on aquatic life.

The company has estimated that retrofitting Indian Point with cooling towers would cost more than $1.2 billion. The company proposed as an alternative the use of cylindrical wedgewire screens at an estimated cost of $250 million to $300 million.

A decision on the cooling tower dispute is pending by administrative law judges at the New York Department of Environmental Conservation, Entergy said.

Because of the uncertainty over whether it will succeed in relicensing, Entergy said it may enter into fewer unit-contingent forward sales contracts for output from the plants.

NY Regulators Call for Overhaul or End to Mass-Market Retail Choice

Continued from page 1

Another asks whether ESCOs should be required to offer value-added energy efficiency and energy management services as a condition of selling gas and electricity.

The second track would include "collaborative" meetings of interested parties to develop proposals on what new practices or products "would provide sufficient real value to mass-market customers … [and] ensure just and reasonable rates."

"For too long, [the PSC] has seen substantial overcharges and deceptive practices by the ESCO industry harming New York consumers," the commission said in a press release. "As part of

Continued on page 24

NYISO NEWS

Environmental Group Files Second Challenge to NY Nuke Subsidy

By William Opalka

The New York environmental group Hudson River Sloop Clearwater sued New York regulators on Wednesday over their subsidies for upstate nuclear power plants.

Clearwater wants the court to vacate the "Tier 3" requirement included in the state's Clean Energy Standard, which would pay zero-emission credits to three generators that that could have closed as early as next year. Critics say the program could cost ratepayers $7.6 billion over 12 years.

The suit, filed in state Supreme Court in Albany, alleges the program was illegally enacted and fails the New York Public Service Commission's mandate to provide just and reasonable rates.

This is the second legal challenge to the ZEC program. In October, fossil fuel generators and a trade association filed suit in federal court attacking the program on the grounds that the state was interfering in FERC-regulated wholesale markets. (See *Federal Suit Challenges NY Nuclear Subsidies*.)

ZECs "would bring about one of the largest transfers of wealth from the ratepaying public to a single corporate entity in New York state history," Clearwater's suit says.

The PSC last month approved Exelon's purchase of the James A. FitzPatrick nuclear plant from Entergy, making it the sole owner of the three nuclear power plants on Lake Ontario, all of which are eligible for ZEC payments. Exelon also is the beneficiary of a bill approved by Illinois legislators Thursday to provide similar credits to keep its Clinton and Quad Cities nuclear plants operating for another decade. (See related story, *Illinois Lawmakers Clear Nuke Subsidy*, p.1.)

Clearwater says the PSC rushed the subsidy through the regulatory process in 14 days after a staff report first publicly broached the subsidy. The ZEC price will be determined by the federal "social cost of carbon."

"Tier 3 contains many deficiencies, including implementing a program beyond the legal authority of the PSC, numerous assumptions and statements not supported by any technical basis, errors of fact and legal procedural defects preventing public comment and review in violation of multiple sections of the State Administrative Procedures Act," the suit alleges.

A PSC spokesman defended the program. "Clearwater's opposition to nuclear energy is based on ideology, not reality, and ignores the many benefits these upstate nuclear plants provide. Our zero-emission credit plan is a cheaper, sensible way to have the existing carbon-free nuke fleet serve as a bridge to renewables as opposed to importing fracked gas and using dirty oil," spokesman Jon Sorensen said in a statement.

Manna Jo Greene | *Hudson River Sloop Clearwater*

"Opposing this subsidy will demonstrate to the country that nuclear power is not where our dollars need to be spent. Many of these nuclear plants are aging, leaky and dangerous," Manna Jo Greene, Clearwater's environmental action director, said in a statement. "Clearwater strongly supports N.Y. state's goal of 50% renewable energy generation by 2030 but opposes the nuclear subsidy. Moving toward a fully renewable energy economy as rapidly as possible is the direction that New York should model for the nation."

NY Regulators Call for Overhaul or End to Mass-Market Retail Choice

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these hearings and by obtaining testimony under oath, we will give ESCOs the opportunity to explain their pricing practices and to hear from consumers who have been harmed by these practices. We will then push ahead with reforms to ensure that ESCOs provide useful, value-added, economical services to New York consumers, particularly as part of our efforts under Reforming the Energy Vision."

ESCOs Cry Foul

ESCOs have said the state's approach to reform has been heavy-handed and has not given them a proper chance to respond to the allegations. They have also challenged the state's data.

"The Retail Energy Supply Association believes that a fair and impartial review of New York's competitive energy markets will show clear and unambiguous benefits for consumers and the state's economy," spokesman Bryan Lee said Monday. "RESA seeks to keep the competitive markets for electricity and natural gas open to all consumers. RESA intends to actively participate in this Public Service Commission proceeding to achieve that goal. Consumers enjoy and demand choices in every aspect of their daily purchasing decisions, from car insurance and cell phone providers to doctors and vacation destinations. Any policy changes ultimately identified by the commission must preserve opportunities for choice by consumers in their energy supply decisions."

Retail choice was phased in by utilities on different schedules, beginning with Consolidated Edison in 1998.

More than 20% of New York's residential and small commercial customers currently receive energy from one of the approximately 200 ESCOs operating in the state. Regulators have previously cited several examples of unacceptable conduct, including companies that charged more than double or triple the rates of incumbent utilities. The commission has also cited examples of companies falsely representing themselves as local utilities.

PJM NEWS

MISO-PJM TMEP Projects Drop to 5

By Amanda Durish Cook

MISO and PJM's targeted market efficiency project portfolio has dipped from seven projects to five.

The latest project to drop off is the Marysville-Tangy 345-kV upgrade in central Ohio, which was supposed to deliver $122 million in benefits at a "minimal" cost. PJM and MISO staff have since learned that the line's emergency rating will be increased by the end of this year, eliminating the need for a congestion-relieving fix.

The Klondike-Purdue 138-kV project in north-central Indiana was also scrapped this fall after RTO staff discovered the congestion the project was aimed at relieving was merely outage-driven. (See *MISO, PJM Move Forward on TMEPs; 6 Projects Planned*.)

The five remaining projects are expected to cost $14.45 million and deliver $100 million in benefits, a 6.9:1 benefit-cost ratio. The original seven-project TMEP package was expected to cost $19 million and deliver $117 million in benefits, a 6.2:1 ratio.

During the Dec. 2 MISO-PJM Interregional Planning Stakeholder Advisory Committee conference call, PJM engineer Alex Worcester said the RTOs will continue to monitor the Marysville-Tangy project site to see if it could use future improvements.

"We're still looking at a $100 million benefit for [less than] $15 million in this portfolio of projects," Worcester added.

There are no recommended changes to the other five projects, MISO and PJM staff said.

WPPI Energy's Steve Leovy said he wanted more information on how the TMEP costs and benefits were calculated. "Based on [the dropped projects], the benefit metric could have changed significantly," Leovy said.

Leovy also said he would like the TMEP cost-benefit calculation to resemble the benefit analysis used in MISO's Market Congestion Planning Study. Leovy said when the TMEP project creation is filed with FERC, he will recommend WPPI make a filing asking the commission to consider making MISO use the Market Congestion Planning Study's benefit analysis for TMEPs.

MISO engineer Adam Solomon disagreed, replying, "We think having separate benefits metrics is OK."

FERC Rejects $400,000 Fuel Bill from Dominion

By Rich Heidorn Jr.

FERC rejected Dominion Resources' request to recover almost $400,000 in uncompensated costs incurred when it ran four dual-fuel units on fuel oil rather than cheaper natural gas in June.

The commission's Nov. 30 order said Dominion's Virginia Electric and Power Co. is not entitled to recover the additional costs because it only submitted to PJM cost-based offers for natural gas operations at its five combustion turbines in Ladysmith, Va. (EL16-109).

The units, totaling 783 MW, primarily operate with natural gas but can also run on fuel oil. They did not clear in the day-ahead market for June 25, and after the rebidding period, VEPCO learned of a pipeline constraint that left the Ladysmith units unable to operate on natural gas.

At 11 a.m. on June 25, PJM ordered the utility to operate four of the units beginning at noon for reliability reasons. The company said it notified PJM of its need to operate on more expensive fuel oil and PJM reiterated its dispatch order. VEPCO said it operated three units for 10 hours and one for 11 hours, spending $387,588 more on fuel than it was paid for.

The company said the commission's June 2015 ruling that PJM's Tariff and Operating Agreement were unjust and unreasonable because they did not permit day-ahead offers that vary by hour or allow market sellers to update their offers in real time supported its request for relief. (See *Duke, ODEC Denied 'Stranded' Gas Compensation*.)

The commission disagreed, saying the company's "inability to recover its fuel oil costs for the Ladysmith units resulted from its own business decisions regarding which cost-based offers to submit and is not the result of the offer limitations that the commission addressed in the offer flexibility proceeding."

FERC also rejected the company's request to make it whole through a waiver of PJM's rules, saying it would cause harm to load, which "would be assessed unanticipated additional charges inconsistent with the current PJM Tariff and Operating Agreement on file and without adequate prior notice."

"Granting waiver here would send the wrong signal to market sellers, namely, that a resource can submit an offer that PJM uses to dispatch the resource, and then seek to increase that offer after-the-fact to receive additional compensation," FERC said.

PJM's proposed Tariff revisions to increase offer flexibility, filed in August, is pending before the commission (ER16-372-002).

Ladysmith Power Station | *Dominion*

PJM NEWS

FERC Approves PJM RTEP Allocations, Denies DP&L Objection

By Rory D. Sweeney

FERC last week approved PJM's cost-responsibility assignments for its updated Regional Transmission Expansion Plan, dismissing complaints from Dayton Power and Light that one of the projects should have been allocated completely to Dominion Resources (ER16-2539).

DP&L protested PJM's request that the costs to rebuild the Carson-Rogers Road 500-kV transmission line in Virginia (project b2744) be distributed as part of regional reliability maintenance and should instead go completely to Dominion. DP&L said PJM's choice wasn't the most cost-effective, as the grid operator had presented a $24 million option at its Transmission Expansion Advisory Committee meeting in May but selected a $48.5 million project proposed by Virginia Electric and Power Co. because it also resolved a local-planning criterion for Dominion.

Additionally, DP&L argued the reliability violation came from an outdated load growth forecast and that "updated forecasts suggest that there may be no regional reliability violation."

"Dayton Power contends that there appears to be a disconnect in PJM's planning process such that a generation interconnection study, using one set of assumptions, may permit the interconnection of a generator without charging the generator for network service upgrades, while an RTEP study, using a different set of assumptions may find that there are network service upgrades that are needed with that generator interconnecting," FERC summarized in its ruling.

PJM responded that DP&L was missing the point of the filing and should have raised any concerns it had at the May TEAC meeting. The RTO said the filing is for FERC to determine if PJM's decisions conform with FERC's approved methods, not whether individual allocations are accurate.

It's also not a question of cheapest option, PJM said, but most cost-efficient and effective according to its engineering analysis. Although it reviewed other proposals, it explained, none of them also addressed the local criterion concerns.

Dominion said that just because the project also solves its local issue doesn't mean it's not suitable for inclusion in the RTEP.

The commission said "Dayton Power has not supported its assertion that this issue was not adequately vetted within the stakeholder process. We find that while Dayton Power disputes PJM's selection of project b2744, Dayton Power makes no assertion that the process that PJM undertook in selecting project b2744 in the PJM regional transmission plan for the purposes of cost allocation is inconsistent with Schedule 6 of the PJM Operating Agreement."

FERC OKs Duke, Constellation Settlements

FERC approved a settlement over Constellation Power Source Generation's reactive service payments that was initially opposed by PJM's Independent Market Monitor (ER16-746, EL16-57).

The Nov. 21 order requires Constellation to file a revised reactive service revenue requirement no later than Jan. 16, 2017, and to make refunds if the resulting requirement for Constellation's units in the Baltimore Gas and Electric zone is less than $1.24 million per year.

The Monitor initially asked FERC to add a list of conditions to the settlement, including updated power factor tests and eliminating the recovery of heating losses. The Monitor said the commission should end the practice of allowing cost of service rates for reactive capability and said if the practice is not discontinued the costs eligible for recovery should include only fixed costs incurred solely for providing reactive service.

On Oct. 4, the Monitor withdrew its opposition to the settlement, "because the settlement 'establishes no principles and no precedent with respect to any issue in this proceeding'" and because Constellation must make a new filing.

Constellation's Gould Street generator is one of the resources providing reactive power in PJM's BGE zone.

The settlement resulted from a review ordered by FERC in May, when the commission reduced Constellation's reactive payments by almost $225,000 to reflect the retirements of three generators. (See "Constellation's Reactive Payments Cut Due to Retirements," *FERC Rulings in Brief*.)

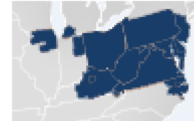
Duke Energy ROE Reduced

FERC on Nov. 21 approved an uncontested settlement reducing Duke Energy's return on equity for transmission to 10%, down from 10.2% (Duke Energy Carolinas) and 10.8% (Duke Energy Progress) (EL16-29, EL16-30).

The settlement also terminates the amortization of Duke Energy Carolinas' expenses on the aborted GridSouth RTO effective Dec. 31, 2015, caps common equity ratios and a sets a moratorium on changes in the ROE and equity cap through Dec. 31, 2019.

— Rich Heidorn Jr.

PJM NEWS



PJM Stakeholders Consider Best Way to Measure DER

By Rory D. Sweeney

PJM stakeholders are discussing the best way to measure distributed energy resources in integrating them into the grid. The debate over metering in front of or behind the customer's load was the focus of the Market Implementation Committee's most recent special session on the topic Nov. 22.

PJM's Andrew Levitt outlined the differences between measuring DER performance directly at the energy resource before it offsets the customer's load and measuring it through the main meter at the point of interconnection. The main difference, Levitt said, is whether the DER performance shows up as a reduction of the load baseline like demand response or is measured separately as an injection to the system.

The discussion came days after FERC's Nov. 17 Notice of Proposed Rulemaking, which would require RTOs to allow aggregated DERs and storage resources of 100 kW and above to participate in capacity, energy and ancillary services markets. (See *FERC Rule Would Boost Energy Storage, DER*.)

PJM has been working on the issue since the summer. (See "Venue for DER Discussions to Change," *PJM Markets and Reliability and Members Committees Briefs*.)

Of special concern is whether the baseline-reduction approach would work if the load is completely reduced and becomes a net injection. Levitt also posed the questions on how energy and capacity obligations would be impacted by either approach and how to ensure injections aren't double counted.

> ***"Not a lot of people think about a generator wired behind a load meter coming through PJM's queue and selling wholesale, but in fact that does happen."***
>
> **Andrew Levitt, PJM**

"I think we agree that proper accounting is an important first principle here, and that really means no double counting and … tracking down every step in the accounting chain and figuring out that that comes together correctly," Levitt said.

More Questions than Answers

FirstEnergy's Ed Stein asked if PJM has considered how adjustments to an individual customer's load from DER will be included in zonal load profiles. "I just know all the math we deal with today and trying to manage all of this. I just don't want these slides to start to look like it's very simple. It's very difficult right now," he said.

Dave Pratzon of GT Power Group questioned whether an energy resource behind a load meter could be considered a "front-of-meter" framework, but Levitt confirmed that many setups are wired that way.

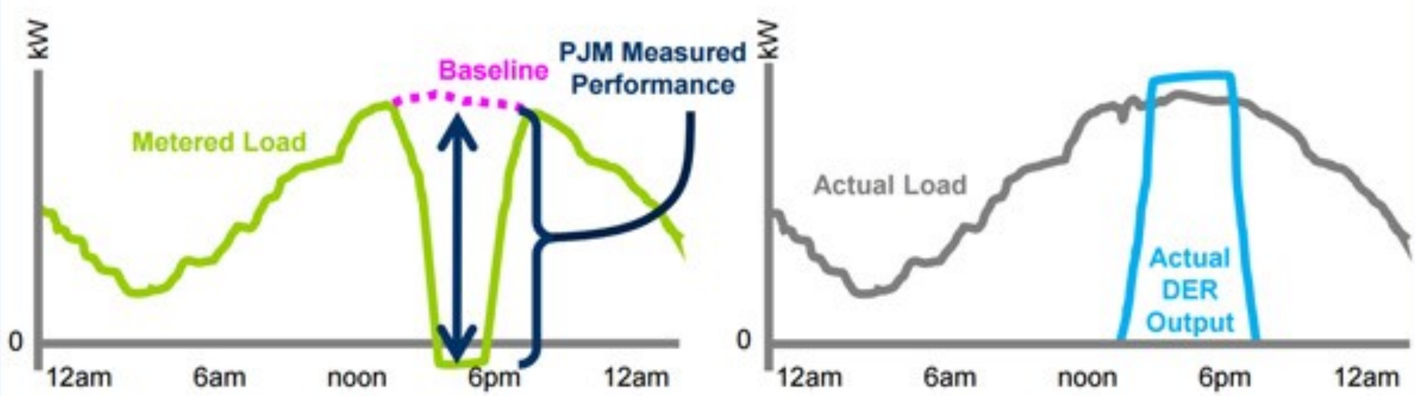
"I acknowledge that the terminology begins to get pushed to its limits when you talk about a front-of-meter resource wired behind a load meter," Levitt said. "Do they cancel out? Apparently they don't. You just measure whatever comes out at the point of interconnection and you do all of the performance measurement at the point of interconnection. Submetering in a front-of-meter framework, where you put a meter directly on the resource if it's wired behind a load meter, is not super easy. Not a lot of people think about a generator wired behind a load meter coming through PJM's queue and selling wholesale, but in fact that does happen. An example that I've been mining a lot is landfill gas generators."

Pratzon followed up, asking whether customers using that setup are claiming the entire load reduction as Reliability Pricing Model capacity or just the generation that becomes an injection beyond offsetting its load. Levitt said he would research the answer.

By the time the meeting finished, multiple stakeholders had pushed for increased visibility in how DER setups are designed. PJM officials said their plan for the group's next meeting on Dec. 16 is to identify interests and compile design components that could be included in measurement rules.

PJM's Dave Anders noted that the group has preliminarily agreed to focus first on DER participation in ancillary services and use the lessons gathered there to inform wider DER participation. PJM staff also suggested beginning with DR-style measurement, but stakeholders warned against limiting the group's options.

Anders also noted other ongoing efforts to address DER needs, including interconnection-queue changes that are being investigated through the Planning Committee.



Measuring DER baselines with injections | *PJM*

SPP News

Z2 Task Forces Look at Incremental Congestion Rights as Potential Solution

By Tom Kleckner

DALLAS — Stakeholders working to improve SPP's cumbersome Z2 crediting process for network upgrades met here last week to learn about how potential solutions might affect the RTO's other functions — leaving one stakeholder pining for the good old days when he worked in an operations center.

Another stakeholder, the Kansas Power Pool's Larry Holloway, expressed mild frustration as the Nov. 29 conversation turned to long-term and incremental long-term congestion rights (LTCRs and ILTCRs, respectively) and their potential addition to the Z2 process.

"There seems to be a bit of mission creep. I thought we were looking at a better way to do business with Z2," said Holloway, KPP's assistant general manager of operations. "I thought we were looking at a less complex way of handling [Z2] going forward and handling the burden of these historic costs. Now it sounds like we're keeping Z2 and having another process moving forward."

"Our goal is to come up with a better process," Bruce Rew, SPP's vice president of operations, reminded the task force. "We're working through the process of how we would transition to a different process."

SPP staff suggested LTCRs and ILTCRs could serve as potential alternatives to Z2 credits. LTCRs cover the entire June-May year and can be renewed annually or converted into TCRs. ILTCRs, already used by most RTOs, would provide the option of long-term rights for participant-funded transmission upgrades.

SPP's Charles Locke and Bruce Rew | © *RTO Insider*

> ***"I'd like to ditch this Z2 nightmare, but the problem is, [when] you give away the TCR to a project sponsor whose project resolves the issue and there's no congestion, he's getting nothing" of value.***
>
> **Richard Ross, AEP**

"The TCR process tries to forecast what the [congestion] pool will be," said Charles Cates, SPP's manager of transmission services, explaining that solving congestion at one point on the system can create congestion elsewhere. "A TCR is your share of the congestion pool. The value of the TCR may increase as more transmission requests come onto the system. Some bidders may try and predict where that congestion will be and seek TCRs."

'Nightmare'

"I'd like to ditch this Z2 nightmare, but the problem is, [when] you give away the TCR to a project sponsor whose project resolves the issue and there's no congestion, he's getting nothing" of value, American Electric Power's Richard Ross said. "I'm afraid this will give incentives for some sort of twisted sponsorship where sponsors will want to solve some, but not all, of the congestion. If there's still congestion and you've given that TCR away to that sponsor, it's not available for that transmission customer that wants, needs and expects it."

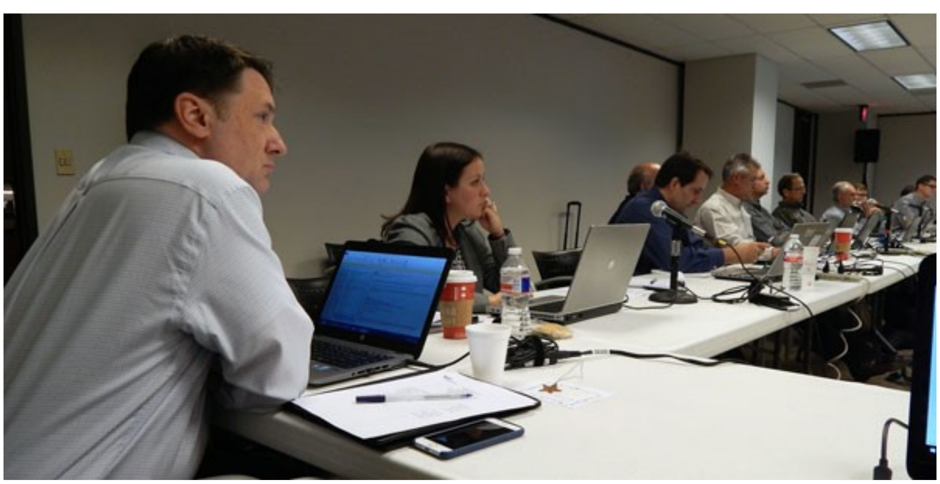
"I keep hearing the word 'incentives,' but we're really looking at reimbursement mechanisms," said Oklahoma Gas & Electric's Greg McAuley, agreeing with Ross. "We're looking to pay [upgrade sponsors] back and make them whole for what they've added to the system, but we're not trying to provide incentives for new transmission construction."

Cates noted SPP's TCR market is still going through growing pains since it was implemented as part of the RTO's Integrated Marketplace in 2014. In recent months, the TCR market's funding has just reached a 90% funding level.

"To be fair, we don't have much of an LTCR market because no one takes them," SPP's Lanny Nickell said.

The TCR market's inability to provide a one-for-one offset with hedges against congestion has become a growing concern for load-serving entities. They point to wind farms being granted non-firm service while being allowed to put physical energy on the system.

"How do they get away with not paying for non-capacity upgrades, and why are we being forced to pay for sponsored upgrades?" Ross asked rhetorically. "That doesn't make a bit of sense. Why are we paying $10 for something that's not worth a nickel?"



Left to right: SPP's Steve Purdy and Tessie Kentner, and AEP's Richard Ross during the Z2 Task Force meeting. | © *RTO Insider*

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SPP NEWS

Z2 Task Forces Look at Incremental Congestion Rights as Potential Solution

Continued from page 28

Kansas City Power and Light's Denise Buffington, the task force's chair, asked staff to provide more information on how the capacity versus non-capacity issue is handled in other markets. The task force will meet again before January's Markets and Operations Policy Committee meeting in Dallas, where it will take an even deeper dive into SPP's ILTCR proposal.

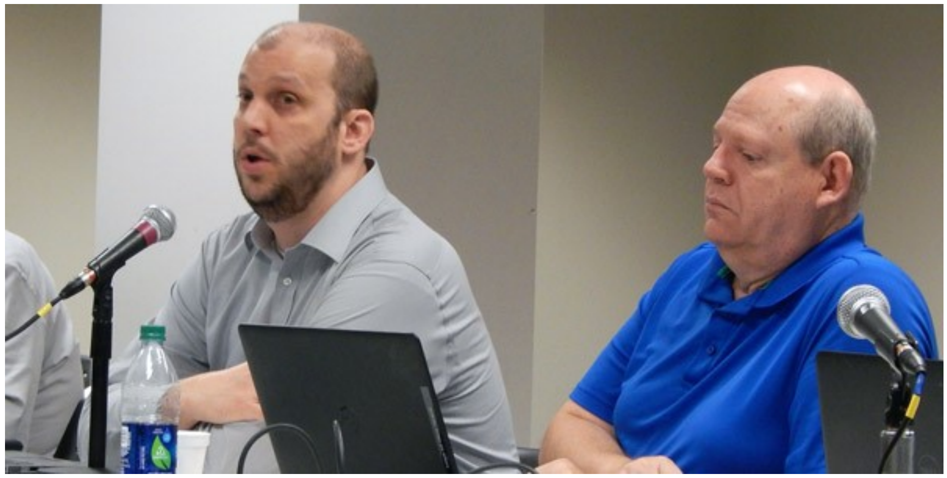
'And' vs. 'Or'

The group also discussed SPP's aggregate and planning studies, generation interconnection process and the auction revenue rights and TCR processes. Staff also explained the Z2 process was used as a mitigation for FERC's concern about "And" pricing for service, embedded costs and any other upgrade costs.

In a 2001 order, the commission said the pricing of transmission service could reflect either the greater of the network's average cost (with expansion costs rolled-in) or the incremental cost of the expansion, known as "Or" pricing. It prohibited pricing based on a combination of average and incremental costs, known as "And" pricing.

SPP's Tessie Kentner said any changes to the Z2 crediting process must not violate those principles. She said the commission accepted the RTO's compliance filing and its use of Z2 credits for sponsored upgrades for Order 681, which requires organized electricity markets to make available long-term firm transmission rights.

Richard Ross Gold Star for "taking the Z2 bullet for the team." | © *RTO Insider*



SPP's Charles Cates and AECC's Bruce Walkup during the Z2 Task Force meeting. | © *RTO Insider*

"I think we have a deeper understanding of the complexity of Z2 and may have highlighted that Z2, as implemented today, still has many unknown impacts to participants," Buffington said.

Ross did provide a moment of levity when he presented "Richard Ross Gold Stars," in the form of Christmas ornaments, to SPP's Steve Purdy and Charles Locke. Ross said it was a sign of appreciation to the two for representing the RTO's position on Z2 credits.

"Somebody has to take the shots for the organization," Ross said.

KEPCo Files FERC Complaint

The Kansas Electric Power Cooperative became the first SPP member to pursue legal action over the Z2 revenue-crediting process when it filed a complaint with FERC under Sections 206 and 306 of the Federal Power Act and Rule 206 of the commission's Rules of Practice and Procedure (EL17-21).

KEPCo said in its Nov. 22 filing that SPP's direct cost assignment of approximately $6.2 million to KEPCo violated the RTO's Tariff and the filed rate doctrine, and is "otherwise unjust, unreasonable and proscribed" by the FPA. The complaint seeks relief from directly assigned Z2 obligations and a refund for payments already made.

KEPCo COO Les Evans had hinted at the filing when his request for a waiver from directly assigned Z2 network upgrades was rejected by the SPP board in October. (See *SPP Board Lets Action on Z2 Stand; Litigation Likely*.)

Seven parties have already intervened in the case, including SPP members KCPL, Sunflower Electric Power, Western Farmers Electric Cooperative and the Arkansas Electric Cooperative Corp.

Competitive Transmission, Strategic Planning, Other Groups Meet

The Z2 task force's meeting was just one of several held in Dallas last week in and around AEP's offices.

The Competitive Transmission Process Task Force met Wednesday to revise draft revision requests that reflect input from the October Board of Directors meeting and to incorporate changes in SPP's annual transmission revenue requirement template. The group will conduct a conference call next week to prepare for the January board meeting.

The Strategic Planning Committee met Thursday to review and discuss the operational challenges facing SPP as a result of the 22,000 MW of wind power in the interconnection queue.

Stakeholders shared their concerns that the expected expiration of renewable tax credits is leading to a surge of additional generation being added to the system, citing congestion concerns. Wind and solar resources account for 98% of SPP's current generation interconnection queue.

Stakeholder Soapbox

Opinion: The Ripple Effects of Subsidizing Utility Monopolies

By Dick Munson

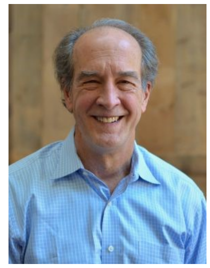
Ohio regulators recently provided $600 million to FirstEnergy, the state's largest utility. Although the decision was labeled as a "distribution modernization rider," the money seemingly came with no strings attached, meaning the utility giant need not do anything to update or improve its system of wires and transformers.

Even the chairman of the Public Utilities Commission of Ohio, Asim Haque, described the decision as "undoubtedly unconventional." His rationale for the subsidy was that FirstEnergy could not modernize its grid until it reduced its debt, which would allow it to obtain a better credit rating, which, in turn, would lead to lower financing costs for future grid investments — if they occur.

That line of thinking led to the $600 million decision, raising six questions.

First, rather than advance grid modernization in the state, has the decision actually set it back? FirstEnergy will not spend any of the money on near-term upgrades. Plus, other electricity companies will avoid investing in Ohio, as regulators are showing a preference for the incumbent utility monopolies. Innovative entrepreneurs will not risk their capital when regulators have stacked the market against them.

Second, should we reward a utility's poor management? FirstEnergy needed to reduce its debt because its executives made bad business decisions, particularly buying up old coal-fired power plants at the very time the price of natural gas was falling, making those plants uneconomic. Rather than reduce executive bonuses or trim generous dividends to shareholders, regulators sent the tab to customers, every one of whom must pay $36 more per year to cover FirstEnergy's mistakes. Regulators are signaling more interest in a utility's pleas than its performance.



Munson

Third, how much will Ohioans really have to pay? Since every other utility in the state is now lining up to get the same deal regulators gave to FirstEnergy, the cost will certainly be much more than $600 million.

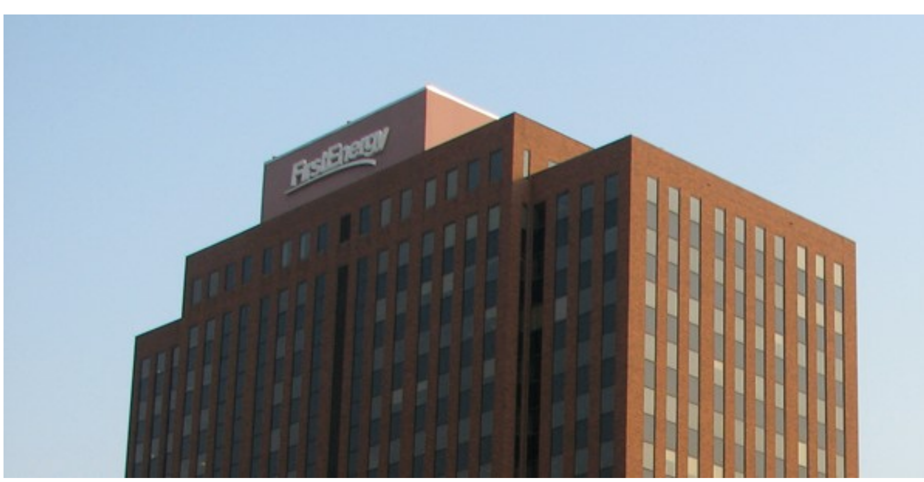
Fourth, doesn't the subsidy distort regional power markets? FirstEnergy originally asked for money to cover power purchase agreements that would support the continued operation of its uneconomic (and dirty) power plants. Federal regulators objected, saying such a subsidy would distort competitive markets. To skirt those objections, the utility then asked for the subsidy to go to a different subsidiary instead. The effect, however, is the same — state regulators have provided a competitive advantage to FirstEnergy's generators. As a result, FERC will need to decide if such a "virtual PPA" also illegally disrupts regional markets.

Fifth, is there true corporate separation between FirstEnergy's generation and distribution subsidiaries, as required by Ohio's deregulation law? As mentioned, FirstEnergy diverted the subsidy, directing the money away from its generation units to its distribution companies. Those subsidiaries, ironically, are doing very well financially, largely because they are monopolies that enjoy guaranteed profits. Although state law requires arms-length dealings among the utility's subsidiaries, the subsidy came in through a different door but ended up in the same house. In effect, it is still propping up FirstEnergy's economically challenged generation units that are not able to compete in regional power markets.

Sixth, should utilities get something for nothing? Ohio regulators did "not place restrictions on the use" of the subsidy and said FirstEnergy could use the funds to cover "outstanding pension obligations, reducing debt or taking other steps to reduce the long-term costs of accessing capital." Almost as an afterthought, PUCO also said FirstEnergy could use the subsidy "to indirectly support grid modernization investments." The operative word, of course, is "indirectly," noting the utility need not show any connection to grid modernization efforts. Put another way, Ohioans are paying millions of dollars for something they have no guarantee of receiving.

Such questions suggest a simple subsidy prompts ripple effects that set back grid upgrades, hurt customers and distort competitive markets. The PUCO chairman has said he wants to move beyond the subsidy debate so regulators can focus on modernizing the grid. Perhaps the question he should be considering is, what are the investments and innovation needed to build a cleaner, more affordable energy system?

Dick Munson is director of Midwest Clean Energy for the Environmental Defense Fund.



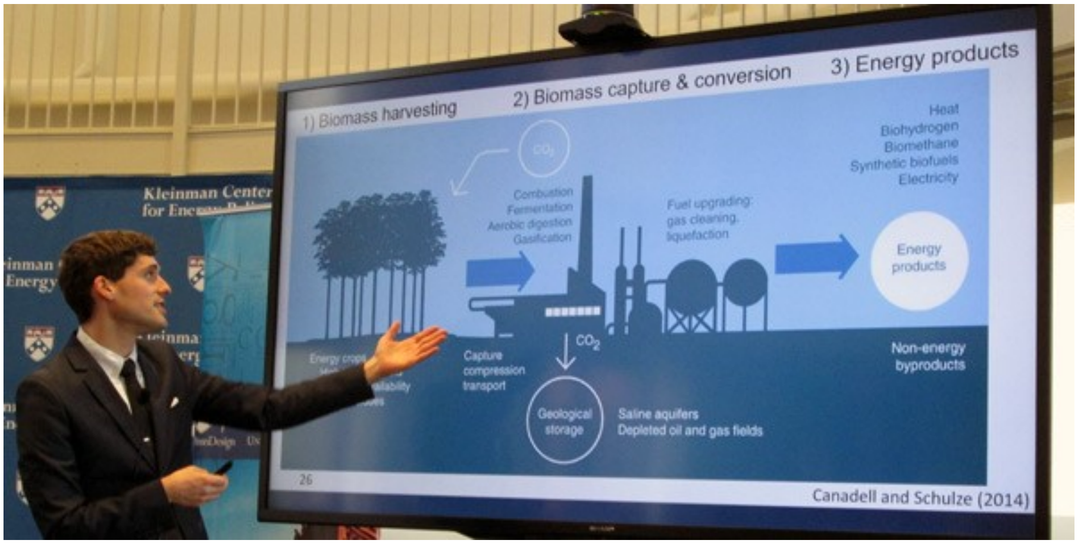
FirstEnergy headquarters

Stakeholder Soapbox

If you'd like to contribute an op-ed article, email the editor at rich.heidorn@rtoinsider.com.

Clean Energy Innovation Will Require Collaboration, Researcher Says

By Rory D. Sweeney



Researcher Dan Sanchez discussing his conclusions for developing effective clean energy policy. | © *RTO Insider*

PHILADELPHIA — The next wave of clean-energy innovation will require collaboration as well as competition, says a researcher for the Near Zero energy policy advocacy group.

Speaking at a lecture series sponsored by the University of Pennsylvania's Kleinman Center for Energy Policy last week, Dan Sanchez, a postdoctoral scholar at the Carnegie Institution for Science, said sharing intellectual property and allowing open access to research data are catalysts necessary for growth in the clean energy industry.

"There's actually some really strong empirical work that shows that connectivity between the private sector and the public sector really does improve innovation outcomes and really does improve the chances that publicly funded research results in commercially successful products," he said.

Sanchez focused his argument on two initiatives, one an institutional effort and the other creating a roadmap for successful implementation of technology. The technological initiative focused on developments in bio-energy with carbon capture and storage (BECCS).

The institutional effort focused on Mission Innovation, a 23-country commitment established in 2015 to double their annual combined public funding of clean-energy research and development from $15 billion per year to $30 billion per year by 2021.

Consistency is Key

He identified three "waves" of clean-energy investment in the past 70 years that failed to take hold permanently: nuclear energy following World War II; nuclear, renewables and energy efficiency in response to the oil crisis of the 1970s; and renewables, carbon sequestration, efficiency and grid upgrades in the 2000s.

Following each spurt of investment, there was a "dramatic retrenchment" in private funding as projects failed to deliver on their promises, he said.

"I think the lesson of the past two waves of energy innovation is that capricious funding — funding that ramps up and then ramps down very quickly — can really stall the pace of innovation," he said. "Following World War II, the U.S. and the European Union in particular really focused on research and development of nuclear energy technologies. … We really kind of settled on standardized technology pretty quickly, and then dramatically reduced our R&D funds."

Sanchez sees Mission Innovation having the potential to spur a fourth investment wave and says a clear, consistent path will be necessary to sustain it. That will include a centralized, independent headquarters, along with public visibility of R&D expenditures and better coordination among countries. For example, the U.S. and China have been collaborating for the past eight years on clean energy research centers, but in the past five years, no joint patents have been filed nor have any projects truly been jointly funded, Sanchez said.

"Essentially, the U.S. funded their technologies; China funded their technologies. They shared a little bit of information, but it really wasn't joint, collaborative R&D in the way we'd really like to see," Sanchez said.

BECCS

Sanchez focused on BECCS as a likely candidate for the next investment wave. He pointed out that just one facility in the world — an Archer Daniels Midland corn-to-ethanol plant in Decatur, Ill. — is employing the technology to sequester about 1 million tons of carbon dioxide a year, accounting for about 1/10,000th of the worldwide reductions that are estimated to be necessary.

"It's fair to say there's a very large gap between where we want to be and where we are right now," he said.

Critics have said experimenting with sequestration could delay deployment of emissions technologies and even provide tacit acceptance of additional emissions. But Sanchez said that perspective misses the "market opportunity" that could be created by planning the development and deployment of the technology — essentially creating a roadmap for its successful implementation.

Next Steps

Sanchez said whether researching technologies or getting them deployed deserves more focus is the wrong question. "I think a lot of people frame this as an either/or question, but I think it's silly … because it's pretty obvious we really need both," he said. "There's not really enough time in the day to really fight those fights."

He pointed to gasification of coal and biomass as technologies with high commercial potential because of their ability to balance carbon-reduction product costs and scale facilities. However, the necessary research will require collaboration among public and private organizations. He offered as a successful model the National Nanotechnology Initiative, which coordinates the work of 13 federal agencies and industry groups in addition to performing regulatory and public outreach.

Combining lessons learned from the BECCS and Mission Innovation initiatives, Sanchez said, could "fill the gap between our ambitions and where our technologies lie right now."

COMPANY BRIEFS

Dominion Midstream Partners Acquires Questar Pipeline

Dominion Midstream Partners on Dec. 1 acquired Questar Pipeline from its parent company Dominion Resources for $1.725 billion.

Dominion Midstream, Dominion's natural gas subsidiary, paid $823 million in cash, issued $167 million of common units and $300 million of convertible preferred units to Dominion, and has assumed Questar's $435 million of outstanding indebtedness.

More: Dominion

Entergy's Grand Gulf Nuclear Gets 20-Year License Renewal

Entergy's modernized Grand Gulf Nuclear Station received a 20-year license extension to 2044 — concluding a five-year renewal process by the company's owners, System Energy Resources and Cooperative Energy.

The Grand Gulf Station completed a modernization and refurbishing program in 2012 that increased the capacity of its boiling water reactor from 1,266 MWe to 1,433 MWe.

The plant is the most powerful single unit nuclear facility in the U.S. and one of the top five single unit sites in the world.

More: Forbes

GE, Vestas and Siemens Generate 76% of US Wind Capacity

General Electric, Vestas and Siemens account for 55 GW, or 76%, of installed wind generating capacity in the U.S., according to data collected by the Energy Information Administration.

The three companies generated more than 92% of the 8.2 GW of total wind capacity installed in 2015.

Gamesa and Mitsubishi each represented 5% of U.S. wind turbine capacity operating at the end of 2015. Neither company installed a significant amount of new capacity in 2015.

More: Energy Information Administration

Vectren Plans to Retire Coal-Burning Generating Units

Indiana utility Vectren is looking to retire all but one of its coal-burning generating units by 2024, build a 50-MW solar farm and significantly increase its natural gas use.

Vectren's plans, which it will file with state regulators by Dec. 16, include shuttering its A.B. Brown plant and half of its F.B. Culley plant in 2024. In 2020, it will end its joint operations of a unit at another generator, which it co-owns with Alcoa.

Between 2015 and 2036, the utility intends to reduce its coal baseload from 68% to 16% and increase its dependence on natural gas from 17% to 63%. Renewables would increase from 6% to 8%, while energy efficiency would grow from 8% to 11%.

More: Indianapolis Business Journal

AES Proposing World's Largest Battery Facility for Calif. Site

AES is seeking to build the largest battery facility in the world — a 300-MW facility that would be erected on the site of its Alamitos Generating Station in Long Beach, Calif.

If approved by state regulators, construction could begin in 2019, and the facility could go online in 2020.

AES also is seeking approval to build a 1,040-MW natural gas-fueled power plant at the site and to demolish its existing plant.

More: Press-Telegram

Talen Merger Deal Clears Final Regulatory Hurdle

The Nuclear Regulatory Commission on Nov. 30 issued the final approval necessary for affiliates of private investment firm Riverstone Holdings to acquire Talen Energy pursuant to a merger agreement announced on June 3, 2016.

The commission approved a request from Talen's subsidiary, Susquehanna Nuclear, for an indirect transfer of control of the operating licenses for both units at the Susquehanna nuclear power plant.

The merger transaction is expected to close within 10 days.

More: Times Leader

DiDona Heading Power Practice Unit at Energy Ventures Analysis

Robert DiDona has joined Energy Ventures Analysis as a partner, heading the Power Practice business unit.

He will help the firm improve its existing business in power market modeling and forecasting and expand its offerings into new consulting areas.

DiDona previously served as head of U.S. power trading at BNP Paribas, where he managed proprietary trading books, client flow and structured transactions.

More: Energy Ventures Analysis

Neal Cohen Joins NEI as Senior Vice President, External Affairs

Neal Cohen will join the Nuclear Energy Institute as senior vice president for external affairs, effective Jan. 1.

He will be responsible for developing and executing NEI's strategic government affairs, communications and advocacy programs to achieve critical policy objectives for the nuclear energy industry.

Cohen, who was with APCO Worldwide for 30 years, most recently served as vice chairman and president of its global strategy group.

More: Nuclear Energy Institute

PG&E Identifies Best Locations for Future EV Chargers in California

Pacific Gas and Electric has identified 300 areas in Northern and Central California with the highest expected need for electric vehicle fast chargers by 2025 based on EV adoption forecasts.

The locations are available on an interactive map and are based on traffic patterns, unmet charging demand and PG&E's electric system.

"By offering new tools to help installers, governments and communities get more chargers in the right places on the roads — especially fast chargers — we hope to spur EV adoption with our customers and help the state meet its ambitious greenhouse gas reduction goals," said PG&E Vice President of Customer Energy Solutions Aaron Johnson.

More: PG&E

FEDERAL BRIEFS

| Delaware Riverkeeper Network

About 65 environmentalists and landowners "testified" about what they called FERC's cozy relationship with gas pipeline companies and indifference to local residents at an unofficial "People's Hearing" in D.C. on Friday. The daylong session at the National Press Club was organized by the Delaware Riverkeeper Network and other groups after they said their request for Congressional hearings was ignored.

The letter said Congress should hold hearings on complaints about FERC's implementation of the Natural Gas Act and to consider reforms to the law to protect communities. "The language of the Natural Gas Act is being misused by FERC to strip people of their legal and constitutional rights, to strip the legal authority of states, to undermine the authority of other federal agencies, to prevent fair public participation in the pipeline review process [and] to ignore the mandates of the Clean Water Act and the National Environmental Policy Act," the letter said.

A FERC spokeswoman said the commission had no comment.

Army Corps Halts Dakota Access Pipeline; Trump May Reverse

The Army said Sunday that it is rejecting an easement needed by the controversial Dakota Access oil pipeline to cross under Lake Oahe in North Dakota, a victory for the Native American tribes who have been protesting the project for months.

Officials had delayed the decision in November, saying more discussion was needed about the proposed crossing because of concerns about its proximity to the reservation of the Standing Rock Sioux Tribe, which says it fears a spill could endanger its water supplies. "It's clear that there's more work to do," Jo-Ellen Darcy, the Army's assistant secretary for civil works, said in a statement Sunday. "The best way to complete that work responsibly and expeditiously is to explore alternate routes for the pipeline crossing."

The decision averted a potential confrontation after the Army Corps of Engineers said it would cut off access to the protesters' camp near the proposed crossing. The tribe's victory could be short-lived, however, because of President-elect Donald Trump's vocal support for energy pipelines.

More: *The Washington Post*

9th Circuit Agrees to Hear San Onofre Ratepayer Case

The 9th U.S. Circuit Court of Appeals will hear arguments Feb. 9 by plaintiffs seeking to overturn a ratepayer increase stemming from the failed San Onofre nuclear power plant.

Citizens Oversight, a nonprofit advocacy group, filed the lawsuit in 2014 after California regulators decided to charge customers more than 70% of the $4.7 billion cost associated with the plant's failure.

Last year, U.S. District Court Judge Ann Bencivengo rejected the case, ruling plaintiffs had not exercised all available state-level judicial remedies. If the circuit court returns the case to the district court, plaintiffs would gain access to internal records of California regulators and the utility and would be able to take depositions.

More: *The San Diego Union-Tribune*

Study Predicts Larger Turbines Will Reduce Wind Energy Costs

Growth in the size of wind turbines will continue to lower the cost of wind energy on land and offshore through 2030, according to a study by Lawrence Berkeley National Laboratory.

For land-based applications, experts anticipate the average turbine generator size will grow from 2 MW in 2015 to 3.25 MW in 2030. Offshore turbines will grow from 4.1 MW in 2015 to 11 MW in 2030, the study said.

By 2030, the cost of land-based wind is expected to fall by 24%, and the cost of offshore-based wind is expected to fall by 30%.

More: *Lawrence Berkeley National Laboratory*

EPA Plans to Withdraw Regional Haze Rule

EPA plans to voluntarily withdraw a rule, proposed two years ago, that aims to clean up the air in national parks.

The regional haze rule, part of the Clean Air Act, targets sulfur dioxide pollution in national parks and requires coal-fired power plants to use scrubbers to reduce emissions.

Environmentalists predict the agency will come back with a reworked rule.

More: *Fuel Fix*

STATE BRIEFS

CALIFORNIA

All-Electric Buses Will Hit the Road in Marin County

Marin County's transit system is buying two all-electric buses as part of a $1.6 million project to convert to cleaner-burning vehicles.

The buses, which are expected to arrive in September 2017, give Marin Transit a head start on the state Air Resources Board's proposed Advanced Clean Transit rule. The board is expected to require transit districts to use emission-free vehicles by 2040.

Chinese manufacturer BYD will build the buses, which will have a slow-charge technology and a 12-year battery warranty.

More: *Marin Independent Journal*

Enerparc Proposes Solar Farm Near Unity

Enerparc hopes to build in 2018 or 2019 a 2.75-MW solar farm on 23 acres of private land just north of Unity.

The proposed farm would consist of 6,000 solar panels and cost an estimated $3.5 million to $4 million.

More: *Baker City Herald*

Officials Urge Incoming AG To Ramp up PUC Investigation

Elected officials have signed a letter urging U.S. Rep. Xavier Becerra to ramp up a criminal investigation into the Public Utilities Commission. Becerra has been named by Gov. Jerry Brown to replace Attorney General Kamala Harris, who was elected to the U.S. Senate.

State Sen. Jerry Hill (D-San Mateo), Assemblyman Kevin Mullin (D-San Mateo) and San Bruno Mayor Jim Ruane urged Becerra to "bring charges as soon as possible" in a corruption investigation that began in 2014.

Emails released by Pacific Gas and Electric allegedly show its executive negotiated with commissioners to name a preferred judge in a $1.3 billion rate-setting case and that the PUC's former president solicited contributions from PG&E for a political cause in 2010.

More: *San Francisco Chronicle*

Clean Energy Powers 92% of Napa County Homes, Businesses

An estimated 92% of Napa County residential and commercial customers are now using a majority of clean energy after the county selected Marin Clean Energy as its default supplier in 2014 for consumers outside its five cities.

Only 8% of Pacific Gas and Electric's customers opted to stay with the utility.

Marin offers electricity generated from solar, wind, hydroelectric, biogas and other sustainable sources.

More: *Napa Valley Register*

CONNECTICUT

Regulators Seek to End Renewable Energy Options Program

State regulators issued a preliminary ruling last week that would terminate the state's Clean Energy Options Program at the end of 2016 — leaving some 25,000 residential customers of the program's three energy providers until June to find renewable energy options from other suppliers.

The Public Utilities Regulatory Authority stated in its ruling that the program, which was enacted in 2003 by the legislature, is no longer necessary because today's renewable energy market has an "abundance of green options available to Connecticut ratepayers through various alternative programs and numerous green offerings by competitive suppliers."

Officials with the state's Office of Consumer Counsel said eliminating the program fails to provide residential ratepayers with protections to ensure they get what they pay for and fails to protect them against questionable tactics used in the retail marketplace.

More: *New Haven Register*

ILLINOIS

Keeping Nukes Open Saves $3B, Study Says

State businesses and consumers will reap $3 billion in savings if the Quad Cities and Clinton nuclear plants remain open, according to a study conducted by global consulting firm The Brattle Group.

Exelon, which owns the plants, plans to close the Clinton plant on June 1, 2017, and the Quad Cities plant on June 1, 2018.

The company has been pushing for legislation that would provide a subsidy for nuclear reactors. The reactors at the two plants have lost a combined $800 million over the past seven years, Exelon said.

More: *Reuters*

High Court to Decide Fate of Clean Line Project

The state Supreme Court will decide the fate of the proposed Rock Island Clean Line, a $600 million privately funded electric transmission line that would run from Iowa into Rock Island and Henry counties.

In August, the 3rd District Appellate Court reversed a 2014 ruling by the Commerce Commission granting a certificate of public convenience and necessity to Clean Line Energy Partners. Opponents of the project argue that private companies do not have the same rights of eminent domain as electric utilities.

More: *The Quad-City Times*

INDIANA

Troy Joins IMPA As 60th Member

The town of Troy joined the Indiana Municipal Power Agency as its 60th member community, replacing its current electrical contract set to expire in early 2017.

The IMPA, a nonprofit wholesale power provider, serves more than 330,000 homes in Indiana.Troy Utilities Superintendent Bernard "Pudder" Linne will serve as the town's representative on the IMPA Board of Commissioners.

More: *Inside Indiana Business*

KENTUCKY

PSC: Staff Cuts Won't Affect Utility Bills, Service

The Public Service Commission issued a statement last week saying the public won't suffer from larger utility bills or worse service following the elimination of 10 of its 85 staff positions.

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State Briefs

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Gov. Matt Bevin signed an executive order on Nov. 18 transferring six engineers to the state's Energy and Environment Cabinet and eliminating four jobs vacated by retirements, including the director of the Division of Consumer Services, which is being folded into another division.

State budget cuts left the PSC with $9.4 million to spend this fiscal year, down from last year's $10.1 million.

More: *Lexington Herald-Leader*

MARYLAND

Fracking Foes Seek Ban, May Settle for Extended Moratorium

Fracking opponents are pushing for a state law to prohibit the practice, but legislators are more likely to extend the existing moratorium during the upcoming legislative session, *The Washington Post* reported.

Sen. Joan Carter Conway, a Baltimore Democrat who chairs a committee that oversees environmental affairs, has stopped previous attempts to prohibit the practice, and Republican Gov. Larry Hogan supports fracking with strict safeguards.

Sen. Robert A. Zirkin (D-Baltimore County), who supports a bill prohibiting fracking, said he would accept a moratorium as a last resort to stop the drilling practice.

More: *The Washington Post*

BGE, Baltimore Settle Conduit Rate-Hike Lawsuit

BGE® An Exelon Company

After a yearlong legal battle, Baltimore Gas and Electric has agreed to pay Baltimore about $24 million per year to use its century-old conduit system — an expense the utility will attempt to pass on to its customers.

Under the agreement announced Nov. 30, BGE and other users will pay $2/foot for the next three years, then $2.20 after that. Previously, BGE paid 98 cents/foot to use the 741-mile conduit system.

The city's Board of Estimates voted last year to more than triple BGE's rate to $3.33 per square foot.

More: *The Baltimore Sun*

MICHIGAN

PSC Calls for Utilities to Report Annually on Cybersecurity

The Public Service Commission plans to combat growing cybersecurity threats in the electric and gas industries through new annual reporting rules for utilities.

"With natural gas and electric utilities facing cybersecurity threats and attempted intrusions into computer systems on an almost daily basis, it is a question of when — not whether — an attack will occur," PSC Chair Sally Talberg said.

PSC is calling for annual reports on electric and gas providers' cybersecurity programs, lists of companies' cybersecurity departments, records of cybersecurity training by each utility, and discussions of specific tools and methods for conducting risk and vulnerability assessments.

More: *The Peninsula*

NEW JERSEY

BPU Approves $80M Investment in PSE&G's Solar 4 All Program

Public Service Electric and Gas received approval from the state Board of Public Utilities on Nov. 30 to invest up to $80 million over the next three years to build an additional 33 MW of solar farms on landfills and brownfields as part of its Solar 4 All program.

PSE&G has invested $500 million in the program, which is now at 158 MW with this most recent approval. Presently, there are 115 MW in service, with an additional 10 MW expected to be in service by year-end.

Opponents expressed concerns over whether ratepayers should aid with building solar farms and whether PSE&G was receiving an unfair advantage in the marketplace, as the program guarantees the utility a 9.75% return on equity.

More: *NJ Spotlight*

NEW YORK

Siting Board Set to Review Cassadaga Wind Project

A 126-MW wind farm proposed by Cassadaga Wind for Chautauqua County is the first wind project to have its application accepted for review by the state's siting board under a 2011 law that gives the board — and not local governments — the authority to determine if a power plant gets built.

The law applies to projects with a generating capacity of at least 25 MW. The board's review is expected to take 12 months.

More: *The Buffalo News*

TEXAS

Co-op Mulling Board Member's Fate After Offensive Comments


Oakley

Pedernales Electric Cooperative officials will decide by Dec. 9 what to do about a board member who posted on Facebook that it was "time for a tree and a rope" in reference to a black suspect accused in the killing of a San Antonio police detective in November.

James Oakley, who has since removed the post from his Facebook page and apologized, has served on the electric co-op's board since 2013 and is the board's vice president.

"A committee of board members has been formed to consider all allowable action, per the cooperative's bylaws," PEC said in a prepared statement. "PEC does not condone any type of offensive language. Consistent with our cooperative values, we proudly welcome and serve all members."

More: *Austin-American Statesman*

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State Briefs

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WEST VIRGINIA

FirstEnergy Energizes $98M Tx Line to Support Marcellus Industry

FirstEnergy has completed a new $98 million, 138-kV transmission line to support the electric demands of the growing Marcellus Shale gas industry.

The new line, supported by 80 steel structures along an 18-mile corridor, links transmission substations in the Clarksburg and Sherwood areas and serves some 13,000 Mon Power customers in the Clarksburg and Salem areas.

"As West Virginia's prominent shale gas industry continues its upward trajectory, FirstEnergy works diligently to keep pace with infrastructure enhancements such as this new transmission line," said Holly Kauffman, FirstEnergy's president of West Virginia operations. "We are committed to supporting this important growth industry that consumes significant amounts of electricity to run compressor stations and midstream gas processing plants."

More: *FirstEnergy*

DEP, Alpha Reach $15M Reclamation Agreement

The Department of Environmental Protection has reached a $15 million deal in a lawsuit targeting high-level former Alpha Natural Resources executives for potential liability if the reorganized company doesn't survive financially after a court-approved bankruptcy reorganization. Without the deal, the department feared Alpha would leave hundreds of mine sites around the state unreclaimed.

Under the deal, Alpha is posting its $6.3 million headquarters building as collateral. Contura — the new company formed as part of Alpha's reorganization — agreed to post a $4 million letter of credit and guarantee another $4.5 million for Alpha's obligations, both good through the end of 2018.

"The settlement provides the state with significant additional bonding and other security to ensure that reclamation will be done," said DEP Secretary Randy Huffman.

More: *Charleston Gazette-Mail*

Monitor: Flawed CRR Auction Design Costs Ratepayers

Continued from page 7

market: Price swaps would be traded between willing counterparties. And unlike the inconsistently defined CRR contract, the swap would be consistently defined in both the forward and day-ahead market.

'Robust' Analysis Needed

Gary Ackerman, executive director of the Western Power Trading Forum (WPTF), said his organization "strongly" disagrees with the Monitor's call for ending CRR auctions.

"The CRR platform is a market," Ackerman said. "Buyers and sellers value risk and opportunity differently. Scrapping it is a FERC question and seems like a radical step when indeed the CAISO makes the rules."

Ackerman pointed out that FERC requires organized wholesale power markets to provide instruments that allow participants to hedge risk.

"This isn't about who is getting what money or under-collecting the transmission revenue requirement," Ackerman said. "It's about [providing] market value for relieving congestion."

Carrie Bentley with Resero Consulting, which frequently works on behalf of the WPTF, elaborated on the group's position.

"If the CAISO had more transparency surrounding the transmission system — and in particular how the CAISO represents the transmission system in both the CRR model and the day-ahead market model — participants would have information at the time of the auction about the expected day-ahead market and any differences between the day-ahead market and the CRR market," Bentley said.

Increased transparency could incentivize bidders to offer a higher value for CRRs in the auctions, Bentley said, noting that recent improvements in the ISO's transmission outage reporting might account for the reason that CRR auction revenues exceeded payouts during the third quarter of this year.

Both Ackerman and Bentley dismissed the Monitor's proposal for a new bilateral market for price swaps.

"There cannot be an effective market without buyers and sellers fluidly engaging in commerce, and there does not appear to be buyer interest in long-term power and power basis hedging," Ackerman said.

Bentley said the CRR auction process is "invaluable" because it allows market participants to adjust their CRR positions "to get just the right hedge" based on portfolios and risks.

"Because the grid is so complex, achieving this fine tuning of one's CRR holdings would be nearly impossible if participants had to trade bilaterally," Bentley said.

Bentley also contends that market participants have not been provided with "robust analyses" on the precise cause for the revenue shortfalls in the auctions.

"It seems to make more sense that [the Monitor] could perform further analysis — or make such analysis public if they have already performed it — and then parties could consider how the CAISO could converge the day-ahead and CRR markets and models as a first step — before jumping to the conclusion the auction simply isn't useful," Bentley said.

> **"This isn't about who is getting what money or under-collecting the transmission revenue requirement. It's about [providing] market value for relieving congestion."**
>
> **Gary Ackerman, WPTF**

AEP Ohio Rate Plan Excludes Merchant Generation

Will Seek Legislative Change in 2017

By Rory D. Sweeney and Rich Heidorn Jr.

AEP Ohio proposed a new retail rate plan that would more than triple residential customers' fixed charges and shift more costs to customers that do not purchase their power through a competitive supplier.

But the company's request for a six-year extension of its "Electric Security Plan" (ESP) lacks the controversial proposals in its last rate case to subsidize the company's merchant generation — a plan that crumbled after FERC said it would be subject to its review. Instead, the company is hoping Ohio legislators will agree to revamp the state's deregulation law to allow it to bring its merchant generation back into the rate base.

The utility said it expects the Public Utilities Commission of Ohio to decide on its Nov. 23 request in April (16-1852-EL-SSO).

Rate Impact

The new plan, which would run through May 2024, would increase bills by $1.58/month — a 1.2% increase — for residential customers who use 1,000 kWh and haven't changed their electricity generator from AEP Ohio's standard service offer (SSO).

Heavier energy users would see rate cuts, the company said. Residential customers using 2,000 kWh/month would save 1.8%, small businesses with 1,000 kW peak demand and 350,000 kWh usage would save 1.3%, and industrial customers with demands of 20,000 kW or more and using at least 8 million kWh would save more than 4%, according to accompanying testimony by Andrea E. Moore, AEP Ohio's director of regulatory services.

"The terms of the proposed ESP offer AEP Ohio customers reasonable and stable electricity rates while offering investors some measure of financial stability," the company said in its filing.

If the extension is not approved, AEP says it will terminate the current plan before its May 2018 expiration, freeing it from its promise to build 900 MW of renewable generation.

AEP Ohio, a subsidiary of American Electric Power, had requested a 2024 expiration date when it applied in 2013 for its third and current ESP, but PUCO in 2015 approved a three-year plan.

Merchant PPAs

In that case, PUCO allowed AEP Ohio to sign power purchase agreements for all of its Ohio merchant generation.

But after FERC ruled in April that the PPAs would be reviewed under the *Edgar* affiliate abuse test, AEP scaled back its request, asking PUCO for agreements covering only its 440-MW share of the Ohio Valley Electric Corp. (See AEP, FirstEnergy Revise PPA Requests to Avoid FERC Review.)

AEP posted a loss of $765.8 million in the third quarter after taking a $2.3 billion impairment on its share of 2,684 MW of competitive generation in Ohio. (See AEP Turns Away from Generation to Transmission, PPAs.)

The company is currently collecting costs for its share of OVEC through a surcharge on all distribution customers. Under the new proposal, the OVEC generation would supplant power bought through the ESP's competitive auctions. AEP would recover costs from default customers, with its price blended with that of generators clearing in the auctions.

Riders

The proposal also includes adding or modifying several other riders to customer bills, such as an "alternative energy rider" to recover expenses for renewable energy credits. It also would more than triple the residential customer charge from $5/month to $18.40 by January 2018 while reducing the share of fixed charges included in distribution energy charges.

AEP committed in the last rate case to developing 500 MW of wind generation and 400 MW of solar generation in its stakeholder agreement. The extension proposal includes commitments to install between eight and 10 microgrids, 250 electric-vehicle charging stations and self-dimming street lighting in Franklin and 10 surrounding counties.

It would also commit AEP to installing a faster crew-dispatch system for outages and infrastructure hardening, as well as extend existing commitments to "aggressive tree trimming and vegetation-management programs" and replacing aging infrastructure.

AEP's proposal also includes a "competition incentive rider" (CIR) that would charge default customers extra for not shopping for an alternate supplier. The company said the rider would "incent shopping and recognize that there may be costs associated with providing retail electric service that are not reflected in SSO bypassable rates."

AEP's Cardinal Plant | *Baker Concrete*

AEP said PUCO and other parties were not able to agree on how large the rider should be but that the commission staff "has provided an initial CIR level for inclusion in this filing of $0.62/MWh."

Although the new proposal lacks the PPAs that drew opposition, Ohio Consumers' Counsel Bruce Weston said he has found things to dislike about it.

"AEP's holiday wish list is too long," he said in a statement. "AEP's continual requests for state government to approve even more charges on Ohioans' electric bills show why Ohio's 2008 energy law [which allowed multiyear rate applications] should be repealed."

Legislative Change Sought

Ohio deregulated the generation portion of its electricity rates in 1999, allowing customers to shop for their electricity suppliers.

AEP spokeswoman Melissa McHenry said the company is working with lawmakers to restructure the law so that it can reincorporate merchant generation into its rate base. McHenry said the company hopes to have a bill introduced into the legislature by the first quarter of 2017.

The company also is expected to file with PUCO by Dec. 31 a carbon-reduction plan, along with commitments on fuel diversification, grid modernization and battery utilization.