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

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White House Announces Nationwide EV Charging Network

By Ted Caddell

Tesla Superchargers | *Tesla Motors*

The federal government will create 48 "charging corridors" across nearly 25,000 miles of interstate highways in 35 states and D.C. — the beginning of what it hopes will become a nationwide web of stations that will eliminate "range anxiety" and spark broader acceptance of electric vehicles.

Under the plan announced last week by the White House, EV owners will be able to find charging stations every 50 miles on designated highways. Most of the charging stations are to be installed by the end of 2017. The Department of Energy is offering $4.5 billion in loan guarantees to aid financing for multi-outlet, commercial-scale charging stations.

The electrification of transportation could provide a jolt to power producers dismayed by flat load growth. But there are only about 520,000 EVs on the road today — 0.2% of the 250 million vehicles in the U.S. fleet —

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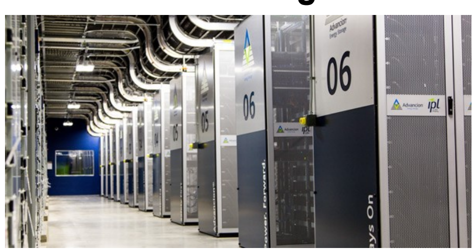
IPL Asks FERC to Force Update to MISO Storage Rules

By Amanda Durish Cook



Harding Street Station storage facility | *AES*

INDIANAPOLIS — After demonstrating the capabilities of its new 20-MW battery for five months, Indianapolis Power and Light says it's time for it to get paid.

The energy storage system at its Harding Street Station here has been providing MISO with primary frequency response since May. But the company told FERC in an Oct. 21 complaint that the battery is "supporting the grid with no means for compensation for the services rendered" (EL17-8).

The complaint asks FERC to compel MISO to update its energy storage definitions and compensation.

"Nothing [in the Tariff] exists to allow the battery to participate in the regulation market and be appropriately paid," Lin Franks, IPL's senior strategist for RTO, FERC and compliance initiatives, told *RTO Insider* in an interview. "We're hoping FERC will see the wisdom in compensating automatic frequency control, injecting when frequency is too low and withdrawing when frequency is too high."

IPL argues its battery should be paid instead of charged when "withdrawing [power] in response to a frequency deviation."

Franks said IPL is not trying to be critical of MISO in making the filing. She pointed out that in 2009, when MISO opened its

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FirstEnergy Wants out of Competitive Generation

Competitive Retail Unit May Face Bankruptcy

By Rory D. Sweeney

With unprofitable power plants dragging down its bottom line, FirstEnergy says it is calling it quits on competitive generation. And its days as a competitive retail supplier may be numbered as well.

CEO Charles Jones said during the company's third-quarter earnings call Friday that the company will seek to sell its 17,000 MW of competitive generation or persuade Ohio regulators to transfer them into rate-base units.

"After the election is over … we plan to begin legislative and regulatory efforts designed to preserve our remaining generation assets. We are looking to convert competitive generation to a regulated or regulated-light construct in Ohio," Jones said. "We're also open to exploring the sale of any or all of these assets, particularly the gas and hydro units at Allegheny Energy Supply. If we find that one or more of these options are not viable, we'll also consider deactivating additional competitive generating units, similar to the ones we announced this summer at Sammis Units 1

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FERC Rejects Complaint on Montana Solar Rates; 2nd Case Pending

By Ted Caddell and Rich Heidorn Jr.

FERC last week cast shade on an attempt by environmentalists and solar proponents to block NorthWestern Energy from cutting the prices for solar qualifying facilities in Montana.

But the commission's procedural ruling didn't address the merits of complaints that Montana regulators are attempting to discourage solar developers — a claim it will address in a separate docket.

The complaints were filed in response to the Montana Public Service Commission's 3-2 ruling in June to suspend NorthWestern's tariff for solar QFs larger than 100 kW under the Public Utility Regulatory Policies Act pending an updated rate review.

The commission acted after the utility sought emergency action, saying it feared a "flood" of QF filings because the rate — set in 2013 at $53.14/MWh (off-peak) and $92.37/MWh (on-peak) — was now 35% above its avoided costs (Docket No. D2016.5.39).

The change put about 130 MW of planned solar facilities in Montana in limbo. While the commission said solar projects could negotiate rates with NorthWestern while the review is pending, developers say they have no leverage and would be forced to accept the utility's avoided cost figure.

FERC dismissed a complaint by the Vote Solar Initiative and the Montana Environmental Information Center, saying the PSC is not subject to the general complaint jurisdiction under Section 306 of the Federal Power Act and that the plaintiffs had no standing to file a complaint seeking PURPA enforcement (EL16-117).

"The Montana commission is not an entity that, for purposes of enforcement, [FERC] may, by order, require to take or not take particular actions," FERC said. "Additionally, Vote Solar is neither a QF nor an electric utility, and as such is not authorized to file a petition for enforcement pursuant to Section 210(h) of PURPA."

Jenny Harbine, an attorney with Earthjustice, which represented the complainants, called the decision disappointing. "It limits the ability for advocacy groups — including consumer advocates as well as clean energy advocates — to raise issues before FERC that are critical to the future of clean energy development and consumer choice," she said.

Second Case Pending

But Harbine said the groups would participate as intervenors in a PURPA enforcement petition filed last month by FLS Energy, a North Carolina-based solar developer.

FLS said the Montana PSC's actions "precluded [it] from continuing with the development of 14 advanced-stage solar QFs" and faces the loss of more than $750,000 that it has invested (EL17-5). The

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FLS Solar's Fairmont facility in North Carolina | *FLS Solar*

CAISO News

Stakeholders Seek Clarity on CAISO Policy Initiative Process

By Robert Mullin

Stakeholders last week voiced concerns about CAISO's annual process for determining which "discretionary" policy initiatives the ISO should pursue in the coming year.

Critics expressed confusion about the criteria CAISO uses to rank the list of prospective initiatives, of which only a few will be ultimately incorporated into the 2017 stakeholder initiatives catalog and potentially become part of the ISO's longer-term policy "roadmap."

They also questioned how the ISO values their contributions to the effort, which factors in stakeholder input as a key variable to rank potential initiatives but does not subject proposals to an outright stakeholder vote.

During a Nov. 3 conference call to kick off the process, Neil Huber, an energy trader with XO Energy, noted that he's provided comments on the initiatives for the past three or four years.

"The answer seems to come back each year that there's not enough bandwidth to work on a substantial number of projects," Huber said.

Brad Cooper, market design and regulatory policy lead at CAISO, said the policy initiative process can be broken into two steps.

The first step consists of revising the catalog by adding new proposed initiatives and deleting those that have become obsolete. Initiatives listed for the catalog then become candidates for the roadmap, although there's no guarantee they will immediately become action items.

In the second step, ISO management and stakeholders rank discretionary initiatives in order to elevate the most popular for development and implementation based on their feasibility and potential benefits.

Benefits include reliability and market efficiency improvements, as well the ISO's perception of the stakeholders' desire for the change.

The feasibility category attempts to capture how much money and ISO and stakeholder resources it will take to implement the proposal.

		Criteria	HIGH	MEDIUM	LOW	NONE
			10	7	3	0
A	Benefit	Grid Reliability	Significant Improvement	Moderate Improvement	Minimal Improvement	No Improvement
B	Benefit	Improving Overall Market Efficiency	Significant Improvement	Moderate Improvement	Minimal Improvement	No Impact
C	Benefit	Desired by Stakeholders	Universally Desired by Stakeholders	Desired by a majority of stakeholders	Desired by a small subset of stakeholders	No apparent desire
D	Feasibility	Market Participant Implementation Impact ($ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant Impact
E	Feasibility	ISO Implementation Impact ($ and resources)	No Impact	Minimal Impact	Moderate Impact	Significant Impact

Some stakeholders questioned the soundness of CAISO's scoring system for potential policy initiatives. | *CAISO*

Most initiatives already in the roadmap are considered "nondiscretionary," meaning that they address "significant" reliability or market efficiency issues, represent previous commitments to stakeholders or the Board of Governors, or have been mandated by FERC.

'Bandwidth' Issue Addressed

Just a few discretionary initiatives can be slipped into the ISO's roadmap each year. Cooper estimates there will be room for two or three next year, depending on the scope of the initiatives selected.

Greg Cook, the ISO's director of market and infrastructure policy, responded to Huber's concern about the lack of bandwidth to handle more stakeholder requests for initiatives.

"There's a lot of resource constraints we take into account," Cook said, noting that some stakeholders have told the ISO that "they can only handle a certain number of initiatives at any given time." Smaller stakeholders are particularly constrained because of staff limitations, he said.

CAISO also considers the timeline for implementing a policy when deciding whether to prioritize it.

"We don't want to schedule a policy development on an initiative that we're not going to be able to implement for a number of years," Cook said. "Likewise, if there's an initiative that's going to have a long time for the policy development that we want to implement by a certain time — that's going to play in as well."

Huber countered that — even as a small market participant — he has "bandwidth to work plenty of stuff I'm interested in." He contended that a bigger issue for his company is that some of the smaller proposals that it requests never make it to the top half of the list of initiatives.

"So it seems like each year — specifically as a smaller entity — I just don't make much progress," Huber said.

Stakeholders had questions about the mechanics and philosophy behind the initiative ranking process.

Under the ranking system, the ISO assigns scores — 0, 3, 7 or 10 — to various benefits and feasibility categories of a potential initiative, the sum of which determines an initiative's place in the overall standings (see chart).

CAISO has already published "first-cut" rankings showing that the current top six initiatives concern real-time market enhancements, generator risk-of-retirement issues, congestion revenue rights auction efficiency, donation of transmission capacity for EIM transfers, multiyear resource adequacy contracts and the altering of export charges.

Stakeholders were not asked to provide their own scores but were given the opportunity to formally comment on the list of potential initiatives — input that the ISO used to inform its formulation of the scores. Some meeting participants were especially curious about one ranking criteria: "desired by stakeholders."

Continued on page 4

CAISO NEWS

CPUC Contests ISO Incentive for PG&E

By Robert Mullin

The California Public Utilities Commission is protesting FERC's decision to allow Pacific Gas and Electric to include a 50-basis-point ISO participation adder in its 2017 transmission rates proposal.

The CPUC said that the commission's ruling "ignores the need to demonstrate that an incentive must be 'justified' pursuant to [FERC] Order 679," which allows transmission owners to collect the adder as motivation to join an RTO.

The Sacramento Municipal Utility District (SMUD) joined the CPUC's request that the commission reconsider its Sept. 30 order granting the adder, which the CPUC contends will provide PG&E an annual $30 million "unjustified windfall" at the expense of its ratepayers (ER16-2320). As a transmission customer of CAISO, SMUD uses part of the PG&E system to serve its own load and is subject to any rate changes.

While the commission's Sept. 30 order accepted and then suspended PG&E's request for a 10.9% return on equity based on concerns that the proposed rate adjustment could produce "substantially excessive revenues," it denied a CPUC request to disallow the incentive adder. (See *FERC Sets PG&E Rate Increase Proposal for Talks*.)

The CPUC argued that California law requires PG&E — as well as the state's other investor-owned utilities — to maintain membership in CAISO, invalidating the need for a financial incentive. Furthermore, justification for the adder is the subject of an ongoing proceeding before the 9th U.S. Circuit Court of Appeals, the CPUC noted.

FERC countered in its September order that the court challenge "does not operate as a stay of the commission's consideration" of the issues.

In its Oct. 31 rehearing request, the CPUC pointed out that the commission has granted the adder to nearly every utility that has asked for it since it was implemented almost 10 years ago — including PG&E. The PUC has four times sought rehearing on the issue, but in each instance it withdrew the requests as a condition of a settlement.

"Faced with rapidly escalating transmission access charges, with no end in sight, the CPUC, and the California ratepayers who the CPUC represents, can no longer afford to let the FERC orders, which grant unjustified ROE incentives to California utilities for doing something they are already required to do, go unchallenged," the CPUC wrote.

The CPUC estimates that the adder has so far cost PG&E ratepayers $125 million.

SMUD previously disputed the appropriateness of the adder and questioned whether it furthers California or FERC objectives with respect to the cost-benefits of ISO membership for PG&E customers. Like the CPUC, SMUD asked the commission to defer action on the incentive until the 9th Circuit's decision.

FERC has scheduled a Feb. 7-8, 2017, settlement conference to address PG&E's 2017 rate proposal.

Stakeholders Seek Clarity on CAISO Policy Initiative Process

Continued from page 3

"Since you didn't have stakeholders submit rankings prior to you doing your preliminary rankings, what was the input for 'desired by stakeholders?'" asked Bonnie Blair, a consultant representing the Six Cities municipal utilities — Anaheim, Azusa, Banning, Colton, Pasadena and Riverside. "Was it just impressionistic?"

"We get input from stakeholders all the time," Cooper responded. "I think we've a pretty good sense what's desired by stakeholders," adding that the scoring for the category "is based on our impressions of what we hear."

'Not That Scientific'

Cook pointed out that the category generally reflects whether an initiative is desired by a majority of stakeholders or just a few.

"It's not that scientific," Cook said.

Blair maintained that scoring of the category seemed vulnerable to skewing, particularly for initiatives representing the interests of a vocal minority — such as export charges.

Carrie Bentley, a consultant representing the Western Power Trading Forum, questioned how the ISO would adjust its rankings based on stakeholder input.

"We were envisioning this year people just submitting where they differed from us on our scores, just submitting written comments on how they think the scores should be revised and then providing the rationale for why," Cooper said.

Bentley wondered whether the ISO would change the "desired by stakeholder" number just based on what people comment on.

"For example, if I don't really want something and think it's stupid, should I comment on it and say it's stupid and do a zero, or should I just not say anything at all?" Bentley asked.

"Comment on it, say it's stupid and do a zero, and we might have other people that agree with you and revise our score down," Cooper said.

David Oliver, a managing consultant at Navigant Consulting, wondered why the ISO hadn't chosen a simpler 1-4 scoring scale.

"I don't recall exactly where the scale came from, but it's just something we've been using," Cook said. "This was just trying to have a little more separation in the rankings."

Michael Rosenberg, principal trader for ETRACOM, asked whether the input of the ISO's Department of Market Monitoring would be given more deference than that of other stakeholders.

"We don't give more weight to one stakeholder over another," Cook said. "We weight it by how well the arguments are stated."

The ISO is seeking stakeholder comments on its initiative rankings by Nov. 17. An updated roadmap will be presented to the board Feb. 15, 2017.

CAISO News

Council OKs Seattle City Light Bid to Explore Joining EIM

By Robert Mullin

The Seattle City Council authorized Seattle City Light to perform "a detailed analysis of costs, benefits and potential risks" of joining the Western Energy Imbalance Market (EIM) to inform the council's decision on whether to approve the move.

The unanimous Oct. 31 vote came three weeks after council members Lorena González and Mike O'Brien voiced concern about the upfront costs of exploring membership, leading the council to defer a vote on entering an "exploratory phase" with the CAISO-run EIM. González had expressed concern that authorizing a study created an expectation that "we will invest and carry forward" with the market. (See EBA Speakers Ponder a Western RTO.) With its vote, the council is asking City Light to flesh out the findings of an EIM benefits study performed by consulting firm E3 that showed the utility could earn an additional $4 million to $23 million in yearly revenues from the market.

"City Light's own evaluation of the E3 study identified a number of deficiencies that call the study's revenue estimates into question," González told *RTO Insider* after the meeting. "Furthermore, the cost estimates were based on those experienced by other utilities entering the market. I think it prudent for City Light to do its own assessment of the costs it is likely to incur."

González said the council's ordinance provides the utility with "the time and spending authority necessary to conduct a thorough gap analysis."

"The council's vote gives us the opportunity to further investigate participation in the EIM," said Scott Thomsen, City Light's senior strategic advisor in communications and public affairs. "This will involve more due diligence to get more details on the areas outlined in the [E3] report."

Introduced in September, the original ordinance would have greenlit City Light's membership in the EIM, but it was scaled back ahead of the council's Oct. 10 meeting to require more analysis before a final decision.

As approved by the council, the ordinance includes a González-sponsored amendment requiring the city-owned utility to report its findings to the council's Energy & Environment Committee by April 10, 2017.

"This amendment will allow the council to receive and review the results of this analysis within a reasonable timeframe and grant City Light sufficient time to conduct the analysis that is required," González said.

She said that there are "significant risks that accompany [City Light's] varying revenue projections," which needed adequate time for the council to evaluate before the utility could enter "what would be a new line of business."

With a generating portfolio heavy in hydroelectric resources, City Light stands to benefit from the EIM as an exporter of the flexible ramping capability needed to smooth out intermittent renewables.

The utility's revenue estimates from the market are dependent in part on water supply conditions. Implementation is projected to ring in at about $8.8 million, while operations costs could run at around $2.8 million annually.

The Pacific Northwest's ability to export power from surplus hydro can vary significantly based on precipitation.

"While there is a range in the estimated benefits, it is commensurate with the uncertainty in our current hydroelectric generation portfolio because of variable weather and water conditions," City Light said in a summary and fiscal note to the council.

Seattle's neighboring utility Puget Sound Energy began participating in the EIM last month, along with Arizona Public Service. (See *Arizona Public Service, Puget Sound Energy Begin Trading in EIM*.) Last month also saw Sacramento Municipal Utility District become the first publicly owned utility to announce its intent to join the market. (See *Sacramento Utility to Join EIM; Other BANC Members May Follow*.)

> **"I think it prudent for City Light to do its own assessment of the costs it is likely to incur."**
>
> **Lorena González, Seattle City Council**

ERCOT NEWS

ERCOT Expects Ample Energy for Winter, Spring

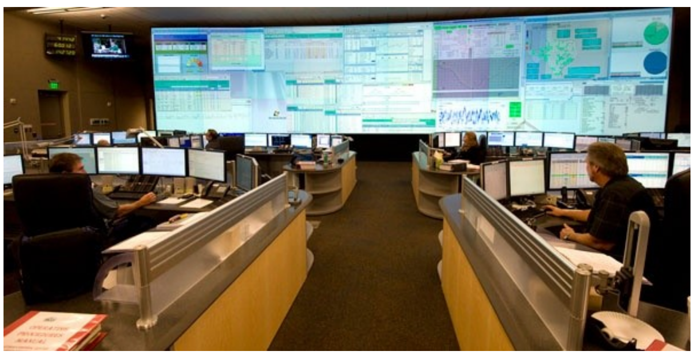
By Tom Kleckner

ERCOT's latest seasonal forecasts indicate the ISO will continue to have more than enough generation capacity to meet demand into next summer, continuing a recent pattern of rosy forecasts.

According to the winter Seasonal Assessment of Resource Adequacy (SARA), ERCOT expects to have almost 82,000 MW available December to February, more than enough to meet an anticipated winter peak of 58,000 MW. That would exceed the ISO's winter peak record of 57,265 MW, set in February 2011.

The preliminary spring SARA (March-May) also projects nearly 82,000 MW of available capacity and a seasonal peak of 58,000 MW in May. The assessment takes into account the expected spring generation outages for routine maintenance; the final spring SARA report will be released in March.

Asked about the recent positive forecasts, ERCOT Senior Director of System Planning Warren Lasher said, "I believe we're in a period right now where we have adequate resources. The emphasis here is proving that assessment back to consumers."



ERCOT control room | *ERCOT*

"We've added resources, but we've also modified our load forecast methodology," said Pete Warnken, ERCOT's manager of resource adequacy. "I believe it's a more accurate, more on-target forecast."

Lasher and Warnken both cautioned that continued congestion in the Lower Rio Grande Valley, which resulted in conservation calls in early October, remains a subject of concern. The 524-MW Frontera combined cycle plant's withdrawal from the ERCOT system Oct. 1 to dispatch into the Mexican market has complicated the task of meeting demand along the U.S.-Mexico border.

"Our current expectation is we won't have a similar call for conservation," Lasher said.

Weather is not expected to play a factor this winter. Senior Meteorologist Chris Coleman said Texas hasn't seen an extremely cold day since Feb. 2, 2011, and its coldest month in recent history came in December 1989. Lasher warned a few very cold days could drive up demand during early morning and evening hours.

ERCOT serves about 24 million customers and 90% of Texas' load. The ISO has added 600 MW of new capacity since the preliminary winter SARA was released Sept. 1, and an additional 800 MW are expected to be in operation by December. New natural gas, wind and solar resources are expected to provide another 1,700 MW of capacity for the spring.

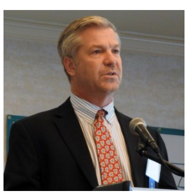
Northeast Energy and Commerce Association Power Markets Conference

Markets vs. Climate Goals the Subject at NECA Conference

WESTBOROUGH, Mass. — The challenge of preserving competitive markets while decarbonizing the New England economy was much on the minds of attendees at the Northeast Energy and Commerce Association's 15th Power Markets Conference last week.

Some stakeholders fear New England states' plans to procure up to 2,000 MW of renewable capacity could suppress prices in ISO-NE's Forward Capacity Auctions. Those fears have receded somewhat, as the states are currently in negotiations for no more than 460 MW. (See New England States Move Toward Renewables Contracts.)

"The short-term problem isn't as big as what was expected," **Jeff Bentz**, director of analysis at the New England States Committee on Electricity, said during a panel discussion on the New England Power Pool's Integrating Markets and Public Policy (IMAPP) process. "That level is pretty small and could enter in FCA 12 [2021/22] but probably won't enter until FCA 13 [2022/23]."



Another panelist, **Peter Fuller**, vice president of market and regulatory affairs at NRG Energy, described his company's proposed two-step auction to accommodate state policy resources while maintaining efficient pricing for merchant generators.

The first auction would reflect the market without the effect of subsidized resources, which would be paid to all generating resources clearing in the first step.

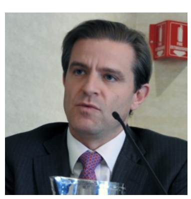
A second, lower price including the subsidized capacity would be paid to the generating resources that are subsidized by state policy.

All resources cleared in both steps would receive a capacity obligation, but these obligations would be pro-rated to ensure that the total quantity of generation purchased is no greater than the status quo 'merchant' outcome. NRG says this would ensure that the cost impact of the states' policy actions is shared among all market suppliers equitably.

"While NRG supports including state policy-subsidized generating resources in the markets, wholesale sellers and the private investors in the market should not have to shoulder the entire burden of all of the state policy objectives," Fuller said. "And effectively that's the world we're in right now. The [ISO-NE] renewable technology resource exemption, while limited, does create a price-suppression effect and potentially puts the full cost of adding those resources on the backs of all resources in the markets."

Bill Berg, vice president of wholesale market development at Exelon, said the IMAPP meetings instead need to determine what subsidized resources are able to bid into the FCA and which aren't. An estimated 8.7 GW of nameplate clean energy generation capacity will be needed to meet the states' 2030 goals.

"We're talking about 8.7 GW of subsidized capacity. Think about the angst that 200 MW has caused. Think about trying to design a market that puts both objectives, allowing the states to do what they want and protect reliability and the market, when you're dealing with an 8.7-GW spread, which is 25% of the [FCA] market," he said.

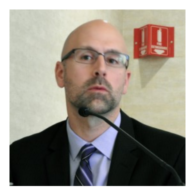


Pallas LeeVanSchaick, vice president of Potomac Economics, the ISO-NE External Market Monitor, said there are inherent risks in the adoption of out-of-market contracts intended to achieve public policy objectives.

"We're going to get to the point that contracts with individual resources may not pass on costs in the short term, except that they're able to fund those priorities through lower wholesale prices," he said. "Maybe in the short term we don't see higher rates to consumers, but in the long term, I bet we will see legacy costs that go on long after the impacts on the lower wholesale prices end. We're going to notice over time that these are not in the interests of consumers."

On a panel on the opportunities presented by energy storage, **Ian Springsteel**, director of U.S. regulatory strategy for National Grid, likened the industry to how consumers might have reacted to a smart phone a decade ago. It has seemingly unlimited potential, but the industry and public aren't quite sure what the device can do or how to integrate it into daily practices.

"We're in the same place with storage. We have an inkling of what it can do as one of many tools in the energy market or the distribution system. But to integrate it into all the rules and operational framework, to fully use this technology, we're at the beginning of that process," he said.



Christopher Parent, director of market development at ISO-NE, said the RTO is comfortable with storage, having had decades of experience with pumped hydro in New England. ISO-NE currently has about 90 MW of storage in its interconnection queue. The queue has a total of 10,000 MW of resources, many from flexible fast-start gas generators.

"When we look at our 2025 [projections], we're looking at 4,400 MW of wind and about 3,300 MW of solar on the system," Parent said. "That creates a lot of variability on the system that shows annual summer peaks of about 25,000 to 28,000 MW. That's going to create a need for a lot of flexible resources on the system, be it storage or whatever technologies materialize in the coming years. The key thing in the market is to send the right price signals so we get the response we need."

— William Opalka

"We're talking about 8.7 GW of subsidized capacity. Think about the angst that 200 MW has caused."

Bill Berg, Exelon

MISO NEWS

MISO Files Forward Capacity Auction Plan with FERC

By Amanda Durish Cook

MISO has filed with FERC its proposal to implement a separate three-year forward capacity market with a downward-sloping demand curve for its retail-choice areas.

The nearly 1,700-page filing, submitted Nov. 1, creates Tariff Module E-3 and makes corresponding changes to modules A, D and E-1 (ER17-284). Jeff Bladen, MISO executive director of market services, said the RTO took pains to incorporate stakeholder advice into the proposal over the 20-month period since the initial issues statement.

"The proposal is a reflection of the breadth of advice we got throughout the process," Bladen said during a conference call after the filing. "There are no surprises in what we filed this afternoon. … We look forward to the review process FERC will undertake."

The filing came despite calls from some stakeholders for more discussion. Bladen said that although all stakeholders didn't agree on MISO's forward auction solution, virtually all stakeholders agree that a problem exists that needs to be corrected. Bladen pointed to the OMS-MISO Survey that found a possibility of a generation shortfall below the RTO's minimum reserve margin requirement in 2018. (See *OMS-MISO Survey: Generation Shortfall Possible*.)

Jeff Bladen discusses the forward auction construct at the October Informational Forum. | *© RTO Insider*

MISO's plan is designed to "ensure conditions don't deteriorate further," Bladen said.

Bladen also noted that MISO's Independent Market Monitor was heavily involved throughout the process, although the RTO and Monitor continue to have "philosophical differences." (See *MISO Delays Forward Auction Filing; Issues Draft Tariff and Business Rules*.)

"It's no secret that there has been difference in opinion about the preferred approach," he said.

Bladen said the proposal is designed to provide equally valued capacity from both merchant generators and regulated utilities. An analysis from The Brattle Group has demonstrated that the proposal would ensure enough capacity to meet reserve margins.

MISO is requesting an effective date of March 1, 2017, the beginning of its implementation timeline for the 2018/19 planning year capacity auction. He would not speculate as to what the RTO might do if FERC doesn't approve the changes by then. "There are many plausible ways FERC might act, so there are too many hypotheticals," he said.

To respect state jurisdiction, the filing includes a prevailing state compensation mechanism modeled after one in PJM that will provide an alternative method for demonstrating long-term resource adequacy outside of the forward auction.

Under the mechanism, state regulators can facilitate settlements of compensation rates between their load-serving entities and suppliers outside of MISO's processes. Authorities must notify MISO of the amount of demand under such agreements two months prior to the auction.

The filing also includes the late addition of a pivotal supplier test that Monitor David Patton said is based on language used by NYISO. (See *Late Changes to MISO Auction Plan Renew Calls for Filing Delay*.)

Market Subcommittee Briefs

MISO Prepped for Better Combined Cycle Modeling

MISO said last week that it is ready to begin introducing improved modeling of its combined cycle generating fleet.

The RTO can now use a configuration-based combined cycle model that can mimic different combinations of combined cycle units and their dependencies, Yonghong Chen, MISO principal advisor of market development and analysis, said during a Nov. 1 Market Subcommittee conference call.

Currently, MISO's roughly 40 combined cycle unit "groups" are subject to an aggregate model in which they must either bid as a single generator or bid as separate combustion or steam turbines; dependencies between the units are not modeled. A generator with two combustion turbines and one steam turbine would constitute a "group."

MISO said the new modeling will increase bid accuracy and prevent infeasible scheduling. Chen said the RTO performed a rough analysis using eight sample cases and found the new model could have saved $47 million in annual production costs in 2014 and $16 million in 2015. The analysis studied MISO's 20 combined cycle groups with reliable configuration data and assumed other combined cycles would stick to the aggregated model.

Chen said the modeling can be used with the current 40 combined cycle generator groups in MISO's system, but doubling or tripling the number of groups under the model would create computational challenges.

She also said MISO should be ready this month to implement improvements to reduce its day-ahead market clearing time for combined cycle units from four hours to three. The plan involves getting more up-to-date data from owners and better modeling of constraints.

Chen said MISO will look for further improvements and continue to study the benefits of the new modeling throughout 2017 using more updated offer data from resource owners and optimization software from programming firm Gurobi Optimization.

Jeff Bladen, executive director of MISO market services, said the RTO "expects to spend meaningful resources on combined cycle generators" in 2017 given the potential benefits.

MISO May Tweak Emergency Pricing Floors

Following a summertime emergency pricing

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MISO NEWS

IPL Asks FERC to Force Update to MISO Storage Rules

Continued from page 1

ancillary services market in accordance with FERC Order 888, the requirement did not include details on how fast-start resources recover costs.

"That was fine for back then, but now that we have a lithium ion battery in the MISO footprint, it's no longer just and reasonable. What was just and reasonable in 2009 isn't necessarily just and reasonable now," she said.

Franks said creating proper definitions and a compensation mechanism is an "industry-wide kind of challenge."

"Nobody is mad at anybody. It's just time to make a change ... and we don't want this to get on the back burner," Franks said.

The battery — consisting of eight 2.5-MW blocks — is using the interconnection facilities of two gas turbine generator units, which connect to the Harding Street South substation. (See FERC Approves 1st Storage GIA in MISO.)

Franks said settlement and dispatch for IPL's lithium ion batteries are "vastly different" than for MISO's current Type II storage energy and demand response resources. IPL claims MISO's dispatch protocols are currently tailored to flywheel storage only.

MISO spokesperson Jay Hermacinski said the RTO is assessing its next steps before responding to the complaint.

"It is relevant to point out that at MISO and across the industry, there are numerous discussions at both the policy and technical levels to determine the most efficient and effective ways to integrate new technology, including storage, to the grid," Hermacinski said.

He added that MISO has begun work on broader storage issues, starting with a stakeholder workshop in January and through its market roadmap process. He also said MISO staff will attend FERC's technical conference on storage Wednesday (AD16-25). (See "FERC Calls Tech Conference on Storage," Federal Briefs.)

MISO is currently considering including medium-term energy storage resources in its definition of DR resources. (See MISO Stakeholders Provide Ideas on Incorporating Storage.) IPL called the current stakeholder process "indeterminate" and asked for "tight time limits on any required MISO compliance filings."

Franks insists that MISO should gather

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Market Subcommittee Briefs

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event that resulted in depressed prices, MISO is considering changing its emergency offer floor calculations to expand the pricing logic to more emergency power.

MISO had been monitoring performance of its two emergency pricing floors since July 21, the first maximum generation event since the 2014 polar vortex. Based on a forecast that average temperatures in the footprint would hit a record of 91, load on July 21 was predicted to hit 130 GW. But the load didn't materialize because of thunderstorms that lowered temperatures. (See "New Emergency Pricing Floors Undergoing Monitoring," MISO Market Subcommittee Briefs.)

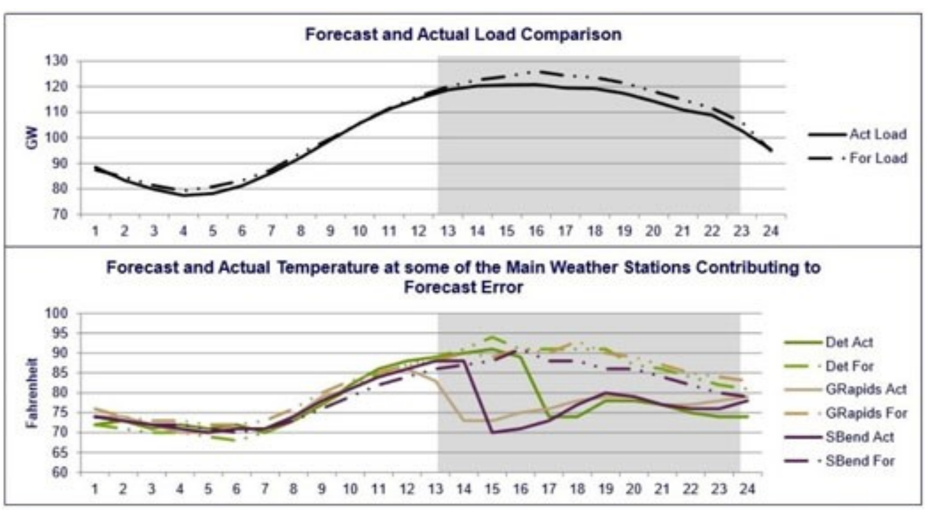
Michael Robinson, principal adviser of market design, said MISO is mulling five possible approaches, all of which require Tariff changes:

- Implementing an offer cap to the emergency offer floors, which unlike the other solutions would not require a software change;
- Allocating the commitment costs of offline fast-start units into the minimum run time when calculating the offer floor;
- Expanding the emergency pricing logic to allow emergency-committed units dispatched at their economic minimum prices to set emergency prices, similar to how fast-start resources can set prices under extended locational marginal pricing;
- Applying emergency pricing to non-firm export curtailments; and
- Evaluating the need to further compensate deployed emergency resources when LMPs, make-whole uplift and capacity credits are not sufficient.

Robinson said MISO could consider further changes as well. MISO is asking for stakeholder input through Nov. 18.

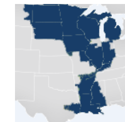
"We want to make sure we're sending the right prices to as many generators called up as we can," Bladen told stakeholders.

— Amanda Durish Cook



MISO predicted load would hit 130 GW on July 21 based on a forecast that temperatures would hit a record of 91. The load didn't materialize because of thunderstorms that lowered temperatures. | *MISO*

MISO News



MISO to Use Same Sub-Regional Limit Rules for 2017/18 PRA

By Amanda Durish Cook

CARMEL, Ind. — MISO will continue its current treatment of the sub-regional transfer limit in the Planning Resource Auction, both in deciding the initial limit and subtracting firm transmission reservations, RTO officials told the Nov. 2 Resource Adequacy Subcommittee meeting.

Under that same approach, the preliminary limits for the 2017/18 PRA are 984 MW for South to North and 3,000 MW for North to South, MISO Director of Forward Operations Planning Kevin Sherd said.

The RTO said it believes its approach — which deducts firm reservations from 2,500 MW for flows South to North and 3,000 MW for North to South — curbs the curtailment risk that use of non-firm contract paths could introduce.

Some stakeholders had argued for changing the value used in the initial limit and possibly reassessing the deduction of firm flows from the limit, saying the current approach was overly conservative as not all firm reservations are used.

MISO is also at the center of a FERC complaint filed by its transmission customers, which argue the limit is too strict and traps capacity in MISO South, driving up clearing prices. (See *MISO Recommends No Change to Transfer Limits*.)

The RTO is expected to publish the final sub-regional import and export limits before March 1. Sherd said MISO plans to continue to evaluate the sub-regional limit methodology for future auctions.

WPPI Energy engineer Steve Leovy said MISO should still consider alternatives to the calculation of the limit.

RASC liaison Renuka Chatterjee said subtracting firm reservations in the sub-regional limit is consistent with the treatment of other capacity import and export limits. Leovy said the treatment was not equitable since MISO considers pseudo-ties in capacity import and export limits and does not model pseudo-ties in the sub regional limit.

No Change to External Resource Treatment, Either

MISO also is electing not to change the PRA's treatment of external resources any earlier than other auction changes set for the 2018/19 planning year.

MISO Manager of Resource Adequacy John Harmon said after careful consideration, the RTO will not introduce a locational construct in the 2017/18 PRA. Instead, MISO is seeking a permanent solution as part of a larger bundle of auction changes, including a seasonal construct and separate forward auction, in time for the 2018/19 planning year. The RTO had suggested that it could roll out six new external zones in the capacity auction next year. (See "MISO to Move Ahead with Brattle Demand Curve for Forward Auction," *MISO Resource Adequacy Subcommittee Briefs*.)

"We feel strongly that changes regarding a locational construct should be part of a larger reform and not a one-off change," Harmon said. He added that MISO is looking to do its due diligence on a more comprehensive solution and avoid the "whiplash" of adopting one interim solution then distancing itself from the temporary solution by the time it formulates permanent rules.

Dynegy's Mark Volpe said that while he appreciated MISO's desire to develop a permanent solution, external resources should not be on equal footing with resources in zones inside the RTO's footprint.

MISO will continue discussion of external zone creation in 2017.

IPL Asks FERC to Force Update to MISO Storage Rules

Continued from page 9

stakeholders to work on new storage definitions. "You really have to start all over. It's a very time-consuming process," she said.

IPL has committed to sharing "as much data as it practically can," Franks said, to help explain the battery's benefits.

In its filing, IPL suggested using PJM's Regulation D payment factor as a provisional model until MISO can develop its own method for compensation.

PJM developed the regulation market payment after being approached by IPL parent company AES in 2009. AES' Laurel Mountain facility in West Virginia — 98 MW of wind generation and 64 MW of integrated battery-based storage — has been providing PJM regulation service since October 2011.

The PJM payment mechanism is "certainly not going to be perfect for the MISO footprint," Franks said. "But for the interim period, we're suggesting that it is equitable and fair until MISO does its own body of work."

Franks said working through the stakeholder process to incorporate a new storage definition and compensation into the Tariff would take about two to five years. She added that while IPL has a few ideas on what storage definitions might look like, it would rather reveal them in MISO's stakeholder process.

"We prefer to share our data and testing and experience and work together to find a way that actually works to present to the stakeholders. No man is an island," Franks said.

The Energy Storage Association lauded IPL's move and urged FERC to take action to stop IPL from having to "operate the system in a suboptimal manner" and degrade the useful life of the battery.

"Without proper market structures that recognize the value delivered by energy storage systems, there is no way that the system can be dispatched cost-effectively. And without market signals that reflect the storage system's operating parameters, the storage system could be unintentionally compromised or damaged," the group said.

IPL's complaint has attracted motions to intervene from American Municipal Power, Calpine, the Electric Power Supply Association, the Indiana Utility Regulatory Commission, Alliant Energy and the Coalition of MISO Transmission Customers and battery maker Alevo.

NYISO NEWS

Generators Appeal Lower NY Capacity Cap

By William Opalka

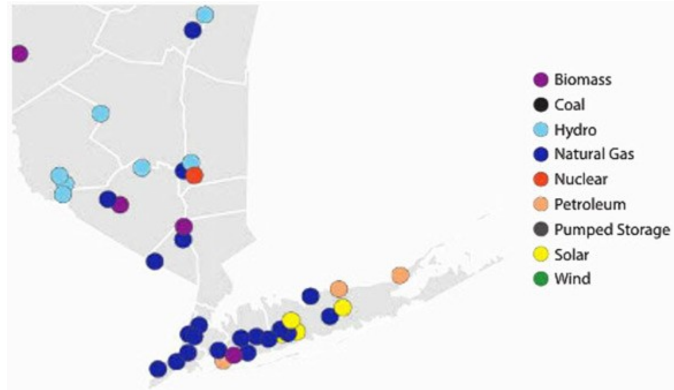
New York's generators have appealed to the NYISO Board of Directors to reject a rule change that would effectively cap capacity payments received by generators in a constrained zone.

The Independent Power Producers of New York filed its appeal Nov. 1 seeking to overturn the Management Committee's Oct. 25 vote capping capacity payments in the Lower Hudson Valley and New York City zones to protect consumers from higher prices. (See *NYISO OKs Capacity Export Fix Over Generators' Opposition*.)

Responses to IPPNY's appeal are due today; the board is expected to take up the appeal at its next meeting on Nov. 14-15.

Supporters of the rule change concede that the cap is not justified by any analysis done by NYISO staff.

"Because [the cap] is unsupported, will distort market signals, will harm reliability and will set a dangerous precedent that will embolden load interests to use the stakeholder process rather than the competitive markets based on sound and efficient market design to set prices, it cannot be found to be just and reasonable," the petition says.



IPPNY members | *IPPNY*

The appeal will be a "paper proceeding" unless a party requests oral arguments, NYISO spokesman David Flanagan told *RTO Insider* on Friday. "No such request has been received at this time," Flanagan said.

The proposed rule change is in response to FERC's Oct. 17 order accepting ISO-NE's changes to its annual capacity reconfiguration auctions. The motion was carried with a 63% vote in favor, above the required supermajority of 58%.

FERC's ruling allows Castleton Commodities International's 1,242-MW Roseton 1 generator, located 43 miles north of New York City in NYISO's capacity import-constrained G-J locality, to supply 511 MW of its capacity to ISO-NE beginning next June for the 2017/18 delivery year.

Appeals of committee motions are rare and reversals are even rarer. According to the NYISO website, there have been 28 appeals since 2000, with 20 being denied, three motions reversed and five sent back to either the committee or staff for further action.

Alliance for Clean Energy New York 10th Annual Conference

Enviros, Green Developers Push NY Tx Expansion

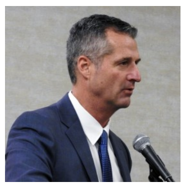
By William Opalka

ALBANY, N.Y. — A coalition of environmental groups and clean energy developers on Thursday called for upgrades in New York's transmission system at the Alliance for Clean Energy New York's 10th Annual Conference.

"Today's unique circumstances dictate that the rapid construction of new high-voltage transmission infrastructure should be an important component of the state's strategy to meet its clean energy goals," said ACENY, the Sierra Club, Pace Energy and Climate Center, Environmental Advocates of New York and the Natural Resources Defense Council in a statement released at the conference.

"When we're looking at transmission projects for the future, we need to see them through the 50% renewables lens," ACENY Executive Director **Anne Reynolds** said, referring to Gov. Andrew Cuomo's State Energy Plan, which requires the state to procure 50% of its electricity from renewables by 2030.

The joint statement was also filed with the New York Public Service Commission, which is overseeing two transmission initiatives under the public policy provisions of FERC Order 1000. (See *NYPSC Directs NYISO to Seek Tx Bids*, *NYISO Identifies 10 Public Policy Tx Projects*.)



The groups had a willing ally in NYISO CEO **Brad Jones**, who addressed the attendees at the morning session. He decried the 10- to 12-year process to get transmission built, advocating an expedited process of no more than six years.

"We need to develop our transmission system with an eye toward where renewables will be built," Jones said. He said transmission developers need to build what he called a collector system, where renewables can be easily connected.

He said the ISO wants to lessen risks for energy developers who currently may seek less-than-optimal sites to access existing transmission; Jones had experience in Texas helping to develop collector systems in which networks of lower-capacity transmission lines would link several wind farms to a central point where they would connect to the main transmission corridors.

"My staff calls this our moon shot," said Jones, who paraphrased President John F. Kennedy's 1962 Rice University speech about landing a man on the moon: "We do it not because it is easy, but because it is hard."

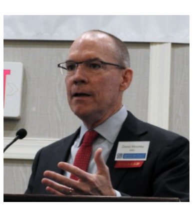
Reynolds said new lines should be built only if they help deploy wind and solar projects.

"With nearly 4,000 MW of new renewable energy projects proposed, real progress toward New York's 50-by-30 goal is in sight," Reynolds said in a statement. "New transmission capability is needed, but with upstate New York turning to a renewable energy future, the state should only be investing in those lines that are needed to deliver wind- and solar-generated power."

Overheard

ALBANY, N.Y. — Here's some of highlights of what *RTO Insider* heard at the Alliance for Clean Energy New York's 10th Annual Conference.

The Long Island Power Authority is inching toward New York's first offshore wind farm, which would supply 90 MW of electricity on a site off the eastern tip, said **Mike Voltz**, director of energy efficiency and renewables for PSEG-Long Island, which operates the power grid for LIPA. "We expect that power purchase agreement to go to the LIPA board of trustees in December for approval."



David Mooney, director of the Strategic Energy Analysis Center at the National Renewable Energy Laboratory, discussed how New York could meet its 50% clean energy mandate. Because the current hydropower penetration of 20% is not expected to increase substantially, wind and solar would make up the remainder.

"There's enough flexibility that exists in the system to be able to manage 30% penetration of wind and solar, and that's without adding storage to manage variability," he said.

Charles Fox, senior director of regulatory affairs and business development for fuel cell manufacturer Bloom Energy, praised New York's level of sophistication in discussing clean energy policy. But he said the state needs to proceed with caution.

"The process of implementation is absolutely critical. We all want to get to the promise of Reforming the Energy Vision, but it's important to do that to recognize that not only customers but financial institutions have entrenched business models that are going to need to change to finance projects. With companies that may have power purchase agreements in seven to 10 states, and when you suddenly change the rules in one of those places, it has a reverberating effect through just the law of unintended consequences."

Richard Kauffman, Gov. Andrew Cuomo's chairman of energy and finance for New York, took on critics of the zero-emission credit program, which would subsidize upstate nuclear plants to keep their carbon-free generation available for another 14 years.

"It would be great, as some critics would have us do, to say 'let's replace the nuclear plants with renewable energy. Let's do that right now.' It's just not practical," he said. "We cannot snap our fingers and have it done. We need to recognize the role nuclear will play in a transition to a renewable energy future, as no one has put forth a credible plan for cost- and time-effective replacement."

Jim Muscato, a partner at the Young/Sommer law firm, which has represented wind developers for 15 years, said permitting has become more difficult as state agencies like the departments of Health and Transportation become involved.

"The totality of the siting process is that it will take about three years. One of the specific challenges is that the government does not speak with one voice. When getting through the preapplication process, we've had more government agencies get involved in the process than have ever been involved before. We've had 15 years successfully siting projects, but now we are working with agencies that had never been involved before."

— William Opalka

Operating Committee Briefs

Easing Winter Reserve Targets Would Increase IRM

VALLEY FORGE, Pa. — Members endorsed PJM's 2016/17 winter weekly reserve targets, but not without first questioning if they could be reduced.

Part of PJM's reserve requirement study, the winter targets are used by the Operations Department to coordinate generator maintenance outages in the cold months. (See "IRM Study Approved but Criticized for Lack of Winter Analysis," *PJM Markets and Reliability and Members Committees Briefs*.)

Stakeholders asked why the winter loss-of-load expectation needs to be near zero given that few zones within PJM are winter peaking. PJM's Patricio Rocha-Garrido explained to the Operating Committee that the annual LOLE target of 0.1 — one day every 10 years — is cumulative throughout the year, so maintaining a near-zero level in the winter provides more leeway in the summer when load is higher.

"If we were to allow for a large risk in the winter, we would need a lower risk in the summer, which would require a larger reserve margin," Rocha-Garrido said.

The targets will leave PJM with between 24 and 30% of its available reserves between December and February.

PJM Considering Changes to System Operations Report

After walking through the operations report for October, staff outlined ideas for redesigning the report to address additional topics. Among the subjects being considered for inclusion are topology changes, weather trends and seasonal comparisons.

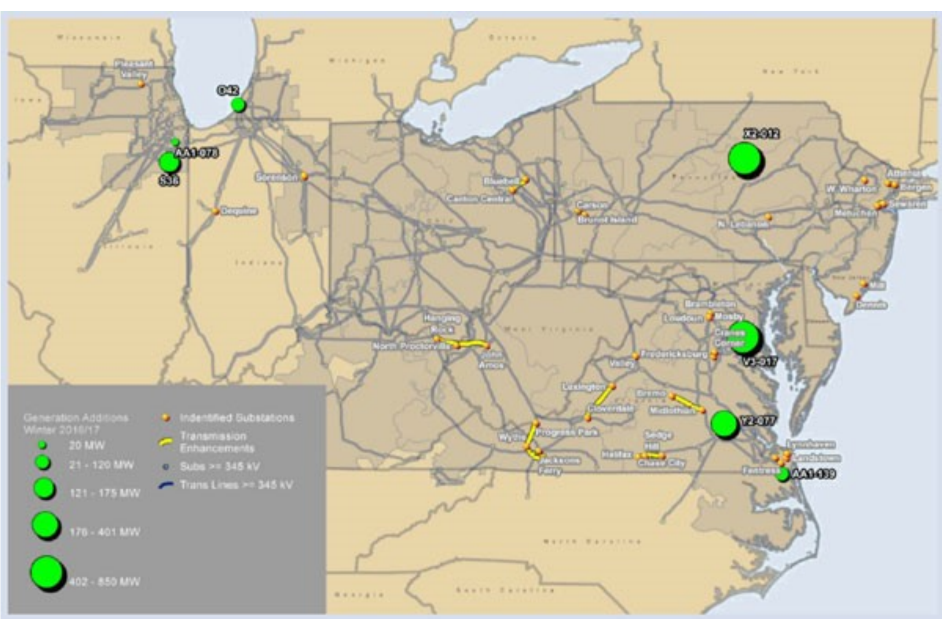
Stakeholders requested PJM increase its focus on reducing load-forecasting errors by providing more granularity about what factors are driving errors, such as how many and how often generating units are brought online in response to specific reliability contingencies. Staff said their ability to release information on specific units is limited because of the need to protect market-sensitive data.

"We're talking about that internally," PJM's Joe Ciabattoni said.

Committee Endorsements and Recommendations

The OC made the following endorsements without objections or abstentions:

- The 2017 day-ahead scheduling reserve requirement, which will be incorporated into Manual 13.
- Updates to the TO/TOP matrix, an index between the PJM manuals and NERC reliability standards that specifies assigned and shared tasks for PJM and transmission owners. The changes, which the OC recommended be approved by the Transmission Owners Agreement-Administrative Committee, add new standards and delete inactive ones.



Topology changes considered in the Operations Assessment Task Force's winter 2016/17 preparedness study. | *PJM*

'Cover to Cover' Manual 13 Changes Better Reflect Reserve Requirements

PJM's Chris Pilong presented a first read of extensive changes to Manual 13: Emergency Operations, on which the RTO will seek endorsement at the December committee meeting. Many of the changes are to clean up and streamline language regarding capacity and transmission emergency procedures.

"There are a lot of changes in here," he said, but he acknowledged that many aren't substantive. The biggest changes were the inclusion of more accurate Mid-Atlantic Dominion (MAD) reserve requirements. "The obligation can be met with non-MAD resources … if they're deliverable," he said.

Manual 14D Changes to Facilitate Periodic Surveys

PJM will be seeking endorsement at the December committee meeting on changes to Manual 14D: Generator Operational Requirements. The changes include the renaming of the section on fuel limitation reporting — now fuel and emissions reporting — a new section on periodic reporting and updates to the provisions on seasonal reporting. PJM's Augustine Caven said the intention is to begin doing generating-unit surveys more often. "We definitely utilize [the survey] pretty heavily for operations purposes as we head into the winter," he said.

Audit Goes Well

NERC and ReliabilityFirst Corp.'s planning and operations audit, which reviewed PJM's compliance with 21 reliability standards and 48 requirements, concluded with no violations, two areas of concern and nine recommendations. There also were two open enforcement actions, PJM's Srinivas Kappagantula said.

PJM is awaiting a draft audit report and will

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PJM News

PC/TEAC Briefs

Con Ed-PSEG 'Wheel' to Reach 0 MW Baseflow by 2021

VALLEY FORGE, Pa. — PJM has determined that it must keep a loop flow in place with NYISO when the Con Ed-PSEG "wheel" ends next year, but that by 2021 that "operational baseflow" will be reduced to zero.

Presenting at the Market Implementation, Operating and Planning committees last week, PJM staff explained that anything less than a 400-MW loop flow on the current system would "impact" system reliability and minimize transfer capability across the seam.

The baseflow is "allowing us the flexibility to operate the system until we get some experience operating without the wheel in place," PJM's Ken Seiler said.

Staff also said they don't expect "widespread congestion impacts" outside of the northern New Jersey and southern New York area.

Dave Pratzon of GT Power Group asked that PJM provide an annual review to see if maintaining the 400-MW operational baseflow assumption was necessary for reliable, economic system operation.

At the Planning Committee meeting, Citigroup Energy's Barry Trayers said NYISO has been explaining that the 400-MW loop is necessary to keep PSEG North's territory from "voltage collapse" and asked if that was accurate.

"We're going to have to circle back with New York," PJM's Paul McGlynn said. "We haven't seen anything like that in our analyses."

He said they would also check with PJM's Operations Department to determine if they're seeing "anything close to that."

Manual Updates Endorsed

The Planning Committee endorsed updates to three manuals.

In Manual 21: Rules and Procedures for Determination of Generating Capability, an acceptance test is now required for newly constructed units for which a summer/winter verification test after the unit is in service previously was sufficient. "Not many people are doing this so what we have to do is go back and look at your verification tests," PJM's Jerry Bell said. "You have to do this before you can cap-mod your unit up," he added, using the shorthand for a notice of a capacity modification.

In addition to an administrative cleanup, the changes add detail to the testing requirements, including an expanded section on capacity interconnection rights. It also adds rules for non-hydro storage and removes class average information for wind and solar resources that will instead be posted to the planning resource page on PJM's website.

Manual 14B: PJM Region Transmission Planning Process is being amended to remove from the capacity import limit (CIL) procedure references to the Reliability Pricing Model, PJM's capacity market design. Starting with the 2020/21 delivery year, the CIL will not be applied as part of the capacity process. Instead, the limits will be considered during interconnection studies for new transmission service requests, part of new study procedures approved in early 2016.

PJM's Michael Herman explained how the CIL will be calculated and used to determine that the import capacity is sufficient to support PJM's capacity benefit margin (CBM), the portion of the RTO's emergency import capability that is deducted from total transfer capability to determine available transfer capability. CBM is reserved to import capacity assistance from external areas under emergency conditions.

Section G.11 states that the CIL "is used to confirm that import capability into the PJM system is sufficient to support the PJM [CBM] as well as confirmed long-term firm transmission service."

American Municipal Power's Ed Tatum questioned how "sufficient" is determined. McGlynn explained there is an annual study in accordance with NERC reliability standards. Stakeholders endorsed the intent of the manual changes but asked that that explanation be written into the revisions. Herman confirmed that they will be.

In Manual 14A: Generation and Transmission Interconnection Process, the word "interconnection" is being replaced with "new service" to ensure cost allocation will occur for all projects. The change addressed needs identified at special PC sessions regarding new service request cost allocation and study methods.

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Operating Committee Briefs

Continued from page 13

let stakeholders know about any changes it decides to make.

Kappagantula commended the transmission owners for their assistance in the process. "I wanted to think the TOs because we've reached out to you … for some of the data-sampling evidence that we requested," he said. "That kind of reduced the onsite burden for us and the audit team … because they didn't have to go through a bunch of documents onsite."

OATF Study Finds No Major Concerns

While several major generation additions are coming online this winter, the Operations Assessment Task Force's preparedness study found no significant concerns from its base case and N-1 analyses.

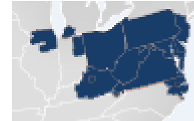
It found that off-cost generation redispatch and switching will be required to control local thermal or voltage violations in some areas. Networked transmission voltage violations were controlled by capacitors and all other voltage violations were caused by radial load, PJM officials said.

Stakeholders were concerned, however, that the study used hypothetical values in its calculations rather than real-world results.

Calpine's David "Scarp" Scarpignato noted that units with dual-fuel capabilities weren't differentiated from those without for pipeline failure contingencies. "This thing has a point to it, and I think you [should] set up the base case as accurate as possible," he said.

— Rory D. Sweeney

PJM NEWS



PC/TEAC Briefs

Continued from page 14

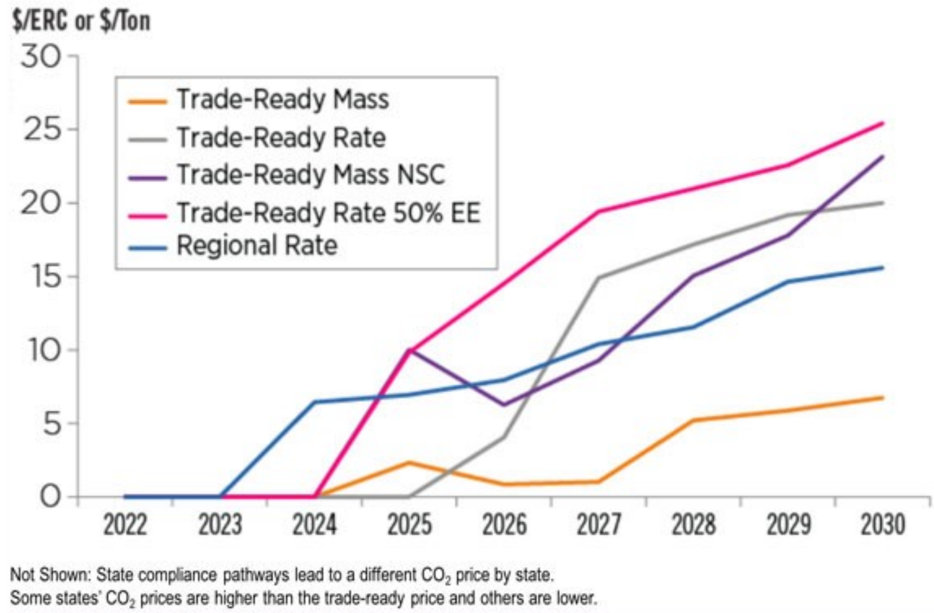
Too Soon to Include CO_2 Pricing in Market Efficiency Analyses

PJM staff have decided not to incorporate CO_2 prices into their analysis of market efficiency transmission projects, saying that accurately projecting the likely price depends heavily on how — or whether — states comply with EPA's Clean Power Plan.

"States have seven different compliance pathways and their choices will have very different impacts on resource entry and exit," PJM said in a presentation.

Staff also noted that the EPA rule could be thrown out due to pending legal challenges. (See *Analysis: No Knock Out Blow for Clean Power Plan Foes in Court Arguments*.)

"Right now, there's not a clear driver that could be built into the market efficiency scenario," PJM's Muhsin Abdur-Rahman told the PC.



Projected CO_2 and emission rate credit (ERC) prices under Clean Power Plan | *PJM*

Load Voices Concern over Transmission Repair Costs

During a review of immediate-need projects, members of the Transmission Expansion Advisory Committee questioned the proposed solutions for the loss of the South Butler-Collingwood 345-kV line in American Electric Power's transmission zone, which would result in a loss of more than 300 MW of load.

The region, an industrial zone in which continued growth is expected, is partially served by local 69-kV lines built in the 1950s with wood poles and distribution-class cross arms. A wholesale distribution cooperative served by such 69-kV lines has experienced multiple forced and momentary outages recently, planners said.

One option, which was estimated to cost \$76.5 million, would add a new 345-kV switching station near Steel Dynamics Inc. (SDI) in Butler, Ind., a tap of the Rob Park–Allen 345-kV line and the addition of about 17 miles of a double-circuit 345-kV line.

PJM recommended a second option, estimated to cost \$108 million. It would add new 138-kV and 345/138-kV stations and reconstruct sections of the Butler-North Hicksville and Auburn-Butler 69-kV lines as 138-kV double-circuit lines. In addition, the 138-kV circuit between Dunton Lake and the SDI Wilmington substation would be reconductored.

When AMP's Tatum asked why the project was needed immediately and could not be included in a competitive window, McGlynn explained that a data error had recently been found in the modeling, revealing that there is an overload on the line currently.

Tatum said AMP "has a problem moving forward with this."

Carl Johnson of the PJM Public Power Coalition pointed out that this project is "exactly the kind of issue" that caused the formation of the Transmission Replacement Processes Senior Task Force. "You're probably making the right choice, but … you couldn't have handed us a better example," he said.

Reimbursement through this process would distribute the costs throughout the RTO, despite the fact that part of project would replace aging infrastructure, which should stay with AEP, Johnson said.

"We're seeing more and more examples of this," he said.

Looking over all of the projects, Tatum commented that, "It looks like we have \$520 million of projects that are immediate need. … I don't know what we can do in the planning process to get out in front of that."

"If we were all doing our jobs perfectly and properly, we wouldn't have any immediate need projects," McGlynn conceded.

Tatum then pointed out seven projects whose cost estimates had ballooned from \$205 million originally to \$372 million, about an 82% increase.

"We might need to do better than an 82% increase, and I'd like to see if PJM could help us with that," he said. "I hope that as we move forward and continue enhancing our planning process and ability that our cost estimates might be a little bit more robust at the initiation of a project."

— Rory D. Sweeney

PJM News

MIC Briefs

Fuel-Cost Policy Revisions Approved

VALLEY FORGE, Pa. — After months of debate, PJM's Manual 15 revisions on fuel-cost policies and hourly offers won the approval of the Market Implementation Committee on Wednesday.

The changes are based on FERC's approval of related Tariff changes that were filed in August (ER16-372).

Catherine Tyler Mooney of Monitoring Analytics, PJM's Independent Market Monitor, questioned why some language on the review process that the Monitor and PJM had previously agreed upon had been struck from the revisions.

PJM's Jeff Schmidt explained that elsewhere in the manual, the policy review was detailed as a "collaborative process" between the Monitor and PJM, so it needed to read that way everywhere in the manual. "The way we had it broken up before, it was staged," he said. "It didn't make sense for one [section] to be staged or stepped, and one to be at the same time."

The section in question put generators on a five-day clock for responding to inquiries from the Monitor. "If the [Monitor] lets us know you want us to keep track of the clock, we'll start the clock," Schmidt explained. "If you have some specific question during the process about the fuel-cost policy, you have to let us know [to start the clock]. Then we'll keep track of it."

Mooney indicated that the explanation wasn't satisfactory, but she declined to continue the debate. The exchange was the latest skirmish in an ongoing dispute between PJM and the Monitor. (See *PJM Attempting to Usurp Market Mitigation Role, Monitor Says*.)

Several stakeholders, including Mike Borgatti of Gabel Associates, had concerns with how that plan would be implemented to ensure a generator is aware whether it's on the clock or not. Schmidt assured him that PJM would make them aware.

Schmidt's efforts were good enough for Calpine's David "Scarp" Scarpignato. "I'd like to do something I usually don't do: I'd like to commend you," he told Schmidt. "It's pretty specific what this engineering judgment is referring to, and I think this is a well-written sentence."

The revisions were endorsed with seven objections and two abstentions.

'Fully Metered' EDC Definition OK'd

Members endorsed by acclimation Manual 28 changes describing a "fully metered" electric distribution company.

The changes were developed in response to a stakeholder request for a definition of the phrase, which was added in a recent update to Manual 01: Control Center and Data Exchange Requirements.

The new language in Manual 28: Operating Agreement Accounting defines a fully metered EDC as one that "reports hourly net energy flows from all metered tie lines to PJM via Power Meter and revenue meter data for the hourly net energy delivered by all generators within that EDC's territory via Power Meter, for the purposes of energy market accounting."

Monitor Concerns Delay Operating Parameter Revisions

PJM's Tom Hauske had come to the MIC meeting hoping for endorsement of changes to the Tariff and Manuals 11, 12 and 28 relating to operating parameters. But the Monitor's concerns about definitions and modeling shelved that idea and the item was changed from an endorsement to a first read. (See "Stakeholders Approve Last-Minute PJM-IMM Operating Parameters Collaboration," *PJM Market Implementation Committee Briefs*.)

Monitoring Analytics' Joel Romero Luna raised concerns with how the definitions were applied, specifically pointing to what he saw as an over-complication of how to handle facilities with multiple breakers. He suggested standardizing the language to "the last breaker" throughout the revisions.

"When there's one breaker, that's always the last one," he said.

Based on Luna's concerns, Dave Pratzon of GT Power Group suggested delaying the vote until the Monitor had revised the language. "Personally, I can't see voting on something where the [Monitor] is going to come back and make changes," he said.

More Adjustments for Five-Minute Settlement

PJM will transition from an hourly calculation to a five-minute calculation for balancing spot market energy charges in order to eliminate an imbalance created when values such as demand, generation, imports and exports are calculated on different time scales, PJM's Ray Fernandez explained.

Additionally, PJM proposed including the value of the generation and load imbalance in the transmission loss charges calculation and the transmission loss credits allocation. (See "Order 825 Progress," *PJM Market Implementation Committee Briefs*.)

"The key piece to remember in here is the five-minute [generation-to-load] imbalance component," Fernandez said. "That component is part of the balancing spot-market charge."

Next, PJM's Rebecca Stadelmeyer explained the RTO's proposed adjustments to shortage pricing to integrate with five-minute settlement requirements. PJM's plan would change the scarcity signal for the maximum

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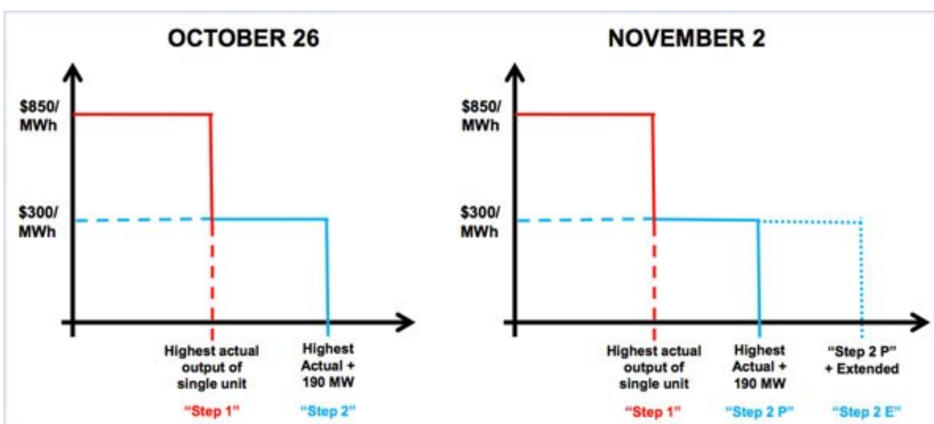
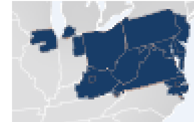


PJM's shortage pricing proposals | *PJM*

PJM NEWS



MIC Briefs

Continued from page 16

$850 penalty factor from the economic maximum of the single largest contingency to the highest actual output of a single unit. Next, it would add two lower "steps" that would trip a $300 pricing level. One step would be calculated as the highest actual output plus 190 MW — a static number derived from the synchronous reserve mean of the Mid-Atlantic Dominion zone plus one standard deviation. The second step would be calculated as the previous step plus an extension.

Stakeholders had several concerns with the proposal. Direct Energy's Jeff Whitehead questioned the value of additional penalty thresholds that would just trigger lower levels of scarcity pricing more often. "I'm still a little perplexed as to why the reserve requirement is even being discussed here," he said.

PJM argued it would reduce volatility.

IMM Clarifies Fuel-Cost Policies

Bowring outlined fuel-cost issues he's observed and how they should be handled. First, he addressed penalty gas — gas used by generators that exceeds the amount the generator committed to using that day.

"The basic issue with penalty gas is it's intended to be an incentive to not use the gas," he said. "It's not appropriate to include that in the cost of your gas."

Stakeholders took exception to that, saying not being able to recover those costs would make them less likely to respond if called by PJM.

Bowring also discussed how generators should account for the costs of "ratable take" gas — gas that is not guaranteed to be available. "If a generator chooses to take a less-firm service, that's fine, but they should take the risk," he said.

Again, stakeholders were less than enthusiastic with Bowring's perspective. "We need to be able to recover the costs of responding to PJM's request. If we can't do that, we're going to have issues," Dynegy's Jason Cox said. (See *Heeding Stakeholders, PJM Reduces Proposed Fuel-Cost Penalties*.)

Generators Displeased with FTR Adjustments

To comply with FERC's order on assigning balancing congestion costs, PJM is proposing several changes to its financial transmission rights market. First, it plans to assign all real-time balancing congestion to load. Along with that, PJM proposed returning to auction revenue rights holders any FTR auction and day-ahead congestion surplus after ARRs and FTRs are fully funded.

"PJM believes the allocation of FTR surplus should change to align closer with allocation of balancing congestion," PJM's Asanga Perera said in his presentation.

While stakeholders took issue with the proposal and said it went beyond the scope of the compliance order, Bowring said, "we think it's entirely within the scope." (See *Monitor Says FERC Erred in PJM FTR Ruling, Seeks Rehearing*.)

PJM also proposed annual replacement of retired Stage 1 paths. "We would only consider any future replacements as units retire. in other words, we wouldn't be doing this process over and over every year," Perera said. PJM has proposed a hybrid plan that would replace merchant paths RTO-wide and zonal-wide rate-based paths only in that zone.

Calpine's Scarp was concerned with this approach. "I think you need to go back to the original presumption, which is, 'Those who pay for the transmission get the rights,'" he said. "To say I have [capacity injection rights] and don't get some of the incremental ARRs doesn't make sense."

"Why would a generator need a congestion hedge?" asked PJM's Tim Horger. "They have no load."

"I think the generator deliverability analysis lines up directly with the load deliverability analysis," Scarp said. "There's a parallel here. You can ignore it if you want, but I'm telling you it exists."

— Rory D. Sweeney

SPP NEWS

SPP Ponders Congestion Rights as Z2 Solution

By Tom Kleckner

SPP stakeholders are considering the use of incremental long-term congestion rights (ILTCRs) to help solve some of the complexity with the RTO's Z2 crediting process, a contentious issue that dates back to 2008.

Meeting in Kansas City last week, the Z2 Task Force spent considerable time discussing ILTCRs — a form of financial transmission rights used by most other RTOs and already included in SPP's Tariff — as part of the transmission-congestion rights market.

In lieu of cash compensation, upgrade sponsors would be eligible to receive ILTCRs as credit for their financial contributions to grid improvements, as the upgrades increase the available transfer capability on the system.

SPP's outside legal counsel, D.C.-based Wright & Talisman, provided the results of its research on how other RTOs' Tariffs compensate entities that sponsor network transmission upgrades. CAISO, ISO-NE, MISO, NYISO and PJM all apply some form of compensation through congestion rights or incremental auction revenue rights, according to the report.

"While the terminology, form, amount and duration varies from RTO to RTO," the report said, "most RTOs provide these incremental ARRs on a long-term basis based on the incremental transfer capability provided by the upgrade."

SPP's TCR "market is still a little bit different than MISO or PJM's, because SPP models on point of delivery, whereas in other markets it's financial," said Denise Buffington, Kansas City Power & Light's director of energy policy and corporate counsel, and the task force chair.

The task force will continue its discussion with an educational session in Dallas on Nov. 29, during which it will bring in several subject matter experts to help the group examine SPP's TCR market and its generation interconnection and aggregate study processes, among other items.

"I want more information. I don't want to go into the weeds, but I want to know the pressure points and how one impacts the other … and begin connecting the dots," Buffington said. "The problem we still face is an education problem. Every time we talk about [Z2], we learn something new — or about something else that touches it."

In addition to ILCTRs, the group discussed five other options staff offered to improve the Z2 process:

- Base plan funding: All upgrades, regardless of their origin, would be included in the current cost allocation methodology. This would recognize that the regional planning and operational processes will optimize all the available transmission.
- Reverse engineering: SPP staff has reverse engineered the Z2 process and its associated data inputs, identifying potential modifications to simplify the process, including annual Z2 billing; revising the Tariff's transmission payment schedules; removing short-term transmission service requests (TSRs) from the process; using annual transmission revenue requirements for point-to-point credit-payment obligations; posting impact ratios for each TSR; using an alternate source for transmission distribution factors; removing short-term TSRs from stacking; and a hybrid solution combining most of the modifications.
- Upgrade sponsor-facilities rider (USFR): Consistent with the current Z2 revenue crediting process, sponsors would retain responsibility for reimbursing the owner that builds the creditable-upgrade facilities and the funds used to compensate the sponsors collected from users of the facilities. The process would be simplified by substituting a USFR in part of the crediting process by recovering the facilities' engineering and construction costs over a specified number of months. The USFR rate would be an add-on charge applicable only to customers using the creditable-upgrade facilities, and funds would be distributed to the sponsor.
- Construction credits: Allows the upgrade's sponsor to receive credits against its transmission service invoice up to, but not above, the amount of engineering and construction costs paid to the entity that built the upgrade.
- Toll-road option: Similar to the approach used to fund toll roads, the funding entity is repaid over time by those who use the upgrade. Staff would calculate transmission impacts on a new facility once it is constructed, and all subsequent customers would be charged a fee for use of the line. The sponsor would receive funding from that use until it recoups to the cost of the facility.

All of the options are still in play. Buffington told her fellow stakeholders she hopes they bring their own proposals or a ranking of those on the table to a January task force meeting before the Markets and Operations Policy Committee meeting. The task force expects to finish its work by April.

In the interim, staff will review the Z2 process to identify FERC-mandated requirements and SPP's own additions and provide the task force with background on why certain requirements were placed in the Tariff. Staff was also asked to develop an annual cost estimate for ongoing support of the Z2 system and to document how it will model fixes and improvements.

SPP's Board of Directors formed the task force in July to address Z2 waiver requests from members for directly assigned upgrade costs and to improve the process going forward. SPP has billed members for almost $110 million in regionwide, aggregate net payable historic amounts for Z2 credits and obligations, some of which date back to 2008.

Creditable Upgrade Name	Directly Assigned Costs ($MM)
NORTHWEST - WOODWARD 345KV CKT 1	44.8
Sub - Tap Nebraska City - Mullin Creek 345kV (Holt County) POI for GEN-2014-021 (SANU)	23.0
Madison County 230kV Substation	3.9
Interconnection Substation for GEN-2013-007	3.0
HUGO - VALLIANT 345KV CKT 1	3.0
Tap Elk City - Wheeler 230kV (Sweetwater) POI for GEN-2006-002 (NU)	2.7
Beaver County 345kV Substation	2.6
Carter County 138kV Substation	2.4
MCNAB REC - Turk 115KV CKT 1 #2 (AEP)	2.2
FLATRDG3 - HARPER 138KV CKT 1	1.9

The top 10 creditable upgrades represent $89.4 million, more than three-quarters of the total Z-2 assessments. | *SPP*

SPP NEWS

SPP's M2M Payments to MISO Continued in September

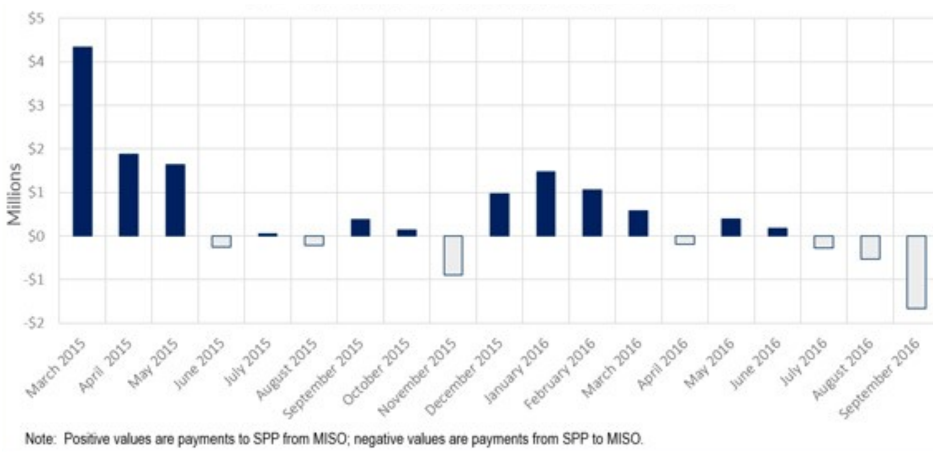
SPP's recent trend of sending market-to-market payments to MISO continued in September, but that trend figures to reverse itself in the months that follow.

SPP's Gerardo Ugalde told the Seams Steering Committee on Wednesday that the RTO sent $1.66 million to MISO as a result of temporary and permanent flowgates with MISO. It was the third straight month the M2M process has resulted in a payment from SPP to MISO.

"We don't foresee this showing up in November," Ugalde said. "This seems to be a seasonal change, where the flows flip."

Temporary flowgates resulted in 591 hours of binding M2M and $1.14 million in charges from SPP to MISO; permanent flowgates added another $517,000 in M2M charges to SPP as a result of 441 hours binding.

SPP Interregional Coordinator Adam Bell reminded stakeholders of a Nov. 30 deadline to submit projects they would like to see included in a potential joint study with MISO as part of the 2016 Coordinated System Plan. (See "SPP, MISO Shared Joint Study Needs List," SPP Briefs.)



SPP market-to-market settlements with MISO | *SPP*

Bell said initial discussions have been held with MISO to use the targeted study as the "foundation" for a "much broader study" next year. He said progress has been slow in developing coordinated system plans with both MISO and Missouri-based Associated Electric Cooperative Inc.

— Tom Kleckner

FERC Rejects Complaint on Montana Solar Rates; 2nd Case Pending

Continued from page 2

company said the order eliminated NorthWestern's only PURPA tariff allowing for fixed, long-term payments for solar, which it called an "essential element of a financeable" power purchase agreement.

The developer said the commission's order — which followed a hearing in which only the utility gave testimony and was not subjected to cross examination — is intended to discourage the development of small solar QFs.

"The Montana PSC performed a back-of-the-envelope calculation and suspended the rates based on an initial conclusion (untested by discovery or opposing testimony)," FLS said.

It said the commissioners' "hostility towards the goals of PURPA is evident from statements made by a majority of the commissioners" at hearings in the NorthWestern case and in an editorial by Commissioner Brad Johnson, who accused solar developers of using PURPA to finance projects, "cherry picking the states with the highest government-assured rate to do business in."

> ***"Simply put, it was well past time to put the rate on pause and update it again."***
>
> **Brad Johnson, Montana PSC**

"Simply put, it was well past time to put the rate on pause and update it again," Johnson said, noting that the Montana Consumer Counsel supported NorthWestern's request for the suspension.

Dissent

In his dissent, Commissioner Travis Kavulla accused his colleagues of flouting the commission's procedures and precedents.

"The intervention deadline to the proceeding occurred only after a hearing on NorthWestern's motion was held. Certain parties — or rather, quasi-parties, since the intervention deadline had not arrived — participated in that hearing, but the developers of the projects that would be compensated under the rate schedule did not," wrote Kavulla, the current president of the National Association of Regulatory Utility Commissioners. "The hearing commenced with the purpose of taking 'argument' on NorthWestern's motion. Then, as a surprise to those in attendance, counsel for NorthWestern alerted the commission that it also wished to offer evidence. No other quasi-party presented evidence at this hearing."

On Wednesday, FERC granted Montana regulators' request for more time to respond to the petition, extending the deadline until Nov. 17.

Other States

Utilities in other states also are trying to limit PURPA payouts. Idaho, for instance, has limited such solar QF contracts to two years only in a 2015 ruling. Duke Energy is contemplating a similar move against solar QF rates in North Carolina, according to Vote Solar.

COMPANY NEWS

NextEra Energy Talks Up its Oncor Acquisition

TXU Energy, Luminant Rebrand as Vistra Energy

By Tom Kleckner

DALLAS — Having finally chased down Oncor, a quarry it has been after for two years, NextEra Energy has embarked on a charm offensive to ensure it successfully completes its acquisition.

The Florida-based company sent Senior Vice President Mark Hickson barnstorming across Texas last week to spread the message that Oncor is a perfect fit for NextEra's focus on regulated investments and long-term power contracts. (See *NextEra, EFH Seek to Reassure Texas PUC on Merger Deal*.)

Speaking at the first of three Gulf Coast Power Association luncheons 48 stories up the Dallas skyline Wednesday, Hickson said Oncor has a lot in common with NextEra's Florida Power & Light subsidiary.

"FP&L is part of the reason we're one of the most admired companies for nine of the last 10 years," Hickson said, pointing to the utility's repeated listing among *Fortune*'s "Most Admired Companies."

"We have the highest reliability [measures] and our bills are lower. Oncor shares those same commitments. The two of us coming together and sharing best practices is going to further our ability to provide that kind of service."

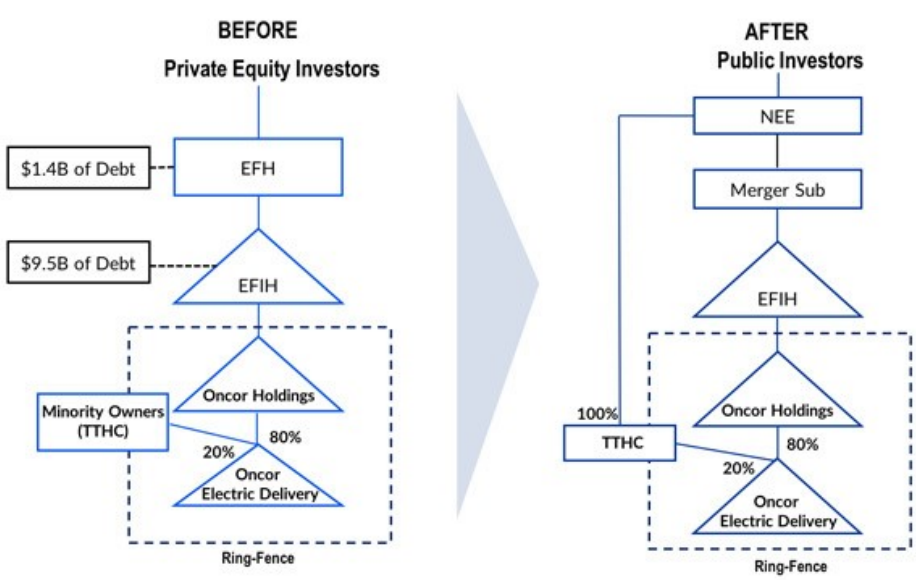

Hickson

Hickson also spoke before GCPA gatherings in Houston and Austin last week. Hickson's tour followed the company's Oct. 31 earnings announcement, in which it reported a 14% drop in third-quarter earnings.

Reducing Debt

Hickson said NextEra's financial strength and access to Oncor's cash flows will allow it to "reduce to zero" the utility's nearly $11 billion debt and improve its credit ratings, thereby decreasing the cost of borrowing money, said Hickson, who heads the company's corporate development and strategy functions.

FP&L already enjoys credit ratings of A or above from the three major ratings agencies. Oncor, which has been enmeshed in parent Energy Future Holdings' bankruptcy since 2014, saw Moody's bump its senior secured credit rating from Baa1 to A3 on the news of NextEra's proposed acquisition. (See *NextEra Reaches Deal for Oncor*.)



Oncor's current ownership structure (left) and the organization chart under NextEra Energy's proposed acquisition (right). | *NextEra*

Moody's, Standard & Poor's and Fitch Ratings have all since issued positive outlooks for Oncor.

"As our operations get less risky, the rating agencies aren't so fussy about how much debt we have," Hickson said.

NextEra announced in late July it had reached an agreement to acquire EFH's 80.03% interest in Oncor for $18.4 billion. On Oct. 31, it announced an affiliate — created through a web of holding companies — would acquire the other 19.75% from Texas Transmission Holdings Corp. (TTHC), composed of a pair of private-venture funds, for an additional $2.4 billion. It has also acquired the remaining 0.22% interest owned by Oncor Management Investment.

That same day, NextEra and Oncor filed an application with the Public Utility Commission of Texas seeking its approval of the merger (Docket No. 46238). The companies expect the deal to close in the second quarter of 2017.

The application quickly drew intervention filings from an organization of Oncor cities and the Office of Public Utility Counsel. The PUC has placed the application on its Nov. 10 open meeting agenda.

Texas Investments

Hickson emphasized NextEra's substantial investment — $8 billion over 15 years — in Texas through NextEra Energy Resources (NEER), its competitive energy subsidiary. The company's Texas holdings include 26 wind farms (3,000 MW), 569 miles of natural gas pipelines in South Texas and 330 miles of transmission in western North Texas through subsidiary Lone Star Transmission.

Among the commitments NextEra has made, Hickson said, is to consolidate Lone Star with Oncor's assets once the transaction is completed. Oncor, which already owns 119,000 miles of transmission and distribution lines and has more than 3 million meters, will keep its name and brand.

"Oncor is a very sizeable company, but it will end up being 20% of" NextEra, Hickson said. The Texas utility's addition will increase

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COMPANY NEWS

NextEra Energy Talks Up its Oncor Acquisition

Continued from page 20

NextEra's customer connections to 8.6 million and its regulated assets from $82 billion to $102 billion, he said.

"The trick in bankruptcy is to try and get as many creditors as you possibly can onboard with the transaction," he said. "The easiest way to do that is to come as close as you possibly can to providing $11 billion of value."

Under the merger agreement's terms with TTHC, NextEra will pay 100% of the consideration in cash, leaving no debt at TTHC upon the merger's close.

NextEra has been interested in acquiring Oncor since 2014, when EFH announced its bankruptcy. EFH and its creditors first supported Texas-based Hunt Consolidated's bid for the utility in 2015, but that deal fell apart earlier this year when the PUC required conditions that changed the economics for investors.

NextEra says it will continue to maintain a ring fence around Oncor, not allowing it to incur additional debt and setting up a separate board that includes seven independent directors. Oncor CEO Bob Shapard will become the board's chair, and E. Allen Nye Jr., the utility's general counsel, will become CEO. Nye is the son of Erle Nye, the long-time CEO of TXU Corp. before EFH's leveraged buyout.

NextEra also says there will be no "involuntary reductions" at Oncor, labor agreements will be honored and the utility's operations will not conflict with NextEra's other businesses.

Hawaii Setback

NextEra is hoping to burnish its image after failing to win Hawaii regulators' approval in July for the acquisition of the state's largest utility. The company also has come under criticism from clean energy advocates in its home state over a ballot initiative they say would block solar competition.

Hickson noted former Oncor sister companies Luminant and TXU Energy maintain larger shares of the ERCOT market than do NextEra's other subsidiaries. He said Luminant accounts for 18% of ERCOT's generation compared to NextEra Energy Resources' less than 1%, and retailer TXU Energy has a 12% share of customers compared to NextEra's 3%.

> **"The trick in bankruptcy is to try and get as many creditors as you possibly can onboard with the transaction."**
>
> **Mark Hickson, NextEra Energy**

"Not only do we have a low market share of generation, we don't have any generation currently interconnected to Oncor," he said, going on to note the utility will seek the commission's approval before connecting to any NextEra generation.

Hickson said Oncor and FP&L will operate independently of each other and there are no plans to grow Oncor outside of Texas.

"The thing we surprisingly found — the customer growth, the economic growth — was equal to, if not better than, that of Florida," Hickson said. "We think there are a lot of opportunities for Oncor to grow within ERCOT."

TCEH Rebrands Itself as Vistra Energy

On Friday, meanwhile, TCEH Corp., the parent of TXU Energy and Luminant, announced that it has rebranded itself as Vistra Energy. The company emerged from Chapter 11 bankruptcy as a tax-free spinoff from Energy Future Holdings. (See *Luminant, TXU Energy Emerge from Bankruptcy*.)

Vistra combines the vision of "an energy company preparing for the future" and the tradition of "an energy company whose lineage dates more than a century," the company said.

"The Vistra Energy brand is intended to capture the full opportunity set before us, backed by a proud history, the industry's best team of professionals, stellar operating assets and a strong balance sheet," said Vistra's recently installed CEO, Curt Morgan, a former operating partner at private equity firm Energy Capital Partners.

Long known as Texas Utilities and then TXU, the company was acquired in 2007 by EFH and its consortium of private-equity investors through a leveraged buyout. The deal went sour when energy prices collapsed, and EFH filed for bankruptcy in April 2014.

Vistra retains Luminant, the largest generator in the ERCOT market with 17,000 MW, and TXU Energy, the No. 1 retailer with about 1.7 million residential and business customers.

NextEra Shares Drop Following Q3 Earnings Release

NextEra announced Oct. 31 that profits fell 14% in the third quarter compared to last year amid higher overall expenses and declines at NEER.

The company reported net income of $753 million ($1.62/share) down from $879 million ($1.93/share) the year prior. Revenue decreased 3% for the quarter, down to $4.81 billion.

FP&L reported its earnings rose 5.3% to $515 million. However, earnings fell 19% to $307 million for NEER.

CEO Jim Robo said he was not concerned with NEER's third-quarter decrease.

"There is no one in this industry that has the greenfield capabilities that we do," he said. "Being in the wind business, 70% or 80% of the value creation is in the … greenfield development of those projects. No one in the industry has the pipeline that we do, that has the team that we do and the year in and year out track record. I worry about a lot of things, but [NextEra's clean-energy development] is very low in my list of things that I worry about."

NextEra shares, which have risen 22% in the past 12 months, closed Friday at $123.18, down $3.42/share after the earnings announcement.

COMPANY NEWS

Westar Boosts Earnings Amid Pending Acquisition

By Amanda Durish Cook

In what may be one of its last earnings reports as an independent company, Westar Energy said it improved its third-quarter earnings over 2015 while falling two pennies short of Zacks Investment Research's consensus forecasts at $1.09/share.

The Topeka, Kan.-based company reported net income of $155 million in the quarter, besting last year's showing of $138 million ($0.97/share).

Westar said the rise was due to rate increases granted by the Kansas Corporation Commission this spring and an increase in corporate-owned life insurance income. (According to its 10-K filing for 2015, Westar reports as income increases in the cash surrender value and death benefits of its policies.)

Year-to-date earnings are $40 million above the $253 million earned through the same period third quarter of 2015. But the company said the higher revenue was "partially offset by a Southwest Power Pool assessment and higher expenses due to improving long-term grid reliability."

Westar did not host a quarterly conference call because of its pending sale to Great Plains Energy. The company said it would not hold any future earnings conferences before the deal closes. (See *Great Plains Energy, Westar Shareholders OK $12.2B Deal*.)

The earnings announcement comes two weeks after Kansas regulators warned that they might block the merger because of staff's conclusion that the companies' filing lacked information on costs savings and what operations would continue in Westar's Topeka headquarters (Docket No. 16-KCPE-593-ACQ).

A spokesperson for the two utilities said they did not expect the commission's concerns to alter the merger's spring completion target. The companies filed for joint application reconsideration Nov. 2, adding testimony from two Great Plains employees attesting to future customer savings and the reasonableness of the purchase price. However, Great Plains staff said the allocation of savings as a result of the merger is unknown and no final determinations have been made on what departments will remain in the Topeka office.

Great Plains recently struck a compromise with the Missouri Public Service Commission that requires the company to keep its capital structure and credit ratings isolated from Westar's. The agreement also bans Great Plains from seeking increases in retail rates or capital spending because of the purchase. Great Plains initially maintained that the Missouri PSC had no jurisdiction over the sale.

CenterPoint Energy Fine-Tunes its Gas Businesses

By Tom Kleckner

CenterPoint Energy continues to focus on its gas business even as its regulated electric business contributed to a strong third-quarter earnings report.

The Houston-based company, which owns electric transmission and distribution and natural gas distribution, sales and services subsidiaries, on Friday reported a third-quarter profit of $179 million ($0.41/share), beating a Zacks Investment Research consensus of $0.37/share.

It was a marked reversal from the same period last year, when CenterPoint reported a $391 million loss after a taking an $862 million impairment charge due to its investment in struggling Enable Midstream Partners.

CenterPoint's revenues for the quarter rose 16% to $1.9 billion, including $908 million from its electric transmission and distribution segment, an almost 10% increase over a year earlier. The company attributed the rise to customer growth and higher rates.

Earlier last week, CenterPoint announced its CenterPoint Energy Services had reached an agreement to acquire Atmos Energy Marketing for $40 million. Atmos, which manages assets for utilities, power plants and local distribution companies, will add six states to the 26 in which CenterPoint Energy Services already markets its energy packages.

"This deal will allow us to grow our customer base and revenues while maintaining a low operating model and a cost-effective organization," Joe McGoldrick, president of CenterPoint's gas division, said during a conference call with analysts Friday. "This deal will increase our scale, geographic reach and expand our capabilities."

CenterPoint is also continuing to evaluate "strategic alternatives" for its Midstream partnership with Oklahoma-based OGE Energy, including a sale or spinoff, to "reduce exposure to commodity price influences," CEO Scott Prochazka said.

CFO Bill Rogers told analysts the company is continuing its discussions with interested parties. If no deal is reached by mid-January, CenterPoint will be required to submit a right-of-first-offer to OGE — allowing OGE to buy out CenterPoint's interest — before continuing discussions with other prospects, Rogers said. (See *CenterPoint Abandons REIT Plan; Offers Stake in Gas Partnership to OGE*.)

COMPANY NEWS

FirstEnergy Wants out of Competitive Generation

Continued from page 1

through 4 and Bay Shore."

He also raised the prospect of a bankruptcy filing for FirstEnergy Solutions, the company's competitive retail arm.

The news came as FirstEnergy reported earnings of $380 million ($0.89/share), down slightly from earnings of $395 million ($0.94/share) for the same period last year. The company expects a loss of $1.30 to $0.90/share for the year.

Jones said the company would be seeking a "solution" for its nuclear units in Ohio and Pennsylvania "that recognizes the environmental benefits of these established baseload-generating resources." New York regulators' approval of a zero-emissions credits system to preserve the state's upstate nuclear plants has been challenged in court. (See Federal Suit Challenges NY Nuclear Subsidies.)

$1.1B Loss

Jones' announcement on the fate of FirstEnergy's merchant generation was his most definitive yet. After posting a $1.1 billion second-quarter loss tied to the closure of five coal-fired plants, Jones said the company would not make any large investments to prop up the credit rating of its generation business. (See FirstEnergy Posts $1.1B Loss, Eyes Exit from Merchant Generation.)

Last month, the company was disappointed when Ohio regulators rebuffed its request for a $4.46 billion subsidy spread over eight years, approving instead $612 million over three years. (See PUCO Rejects FirstEnergy's $558M Rider, OKs $132.5M.)

Jones last week blamed "weak" current prices and "anemic" demand forecasts for the poor financial performance of the generation fleet, which he said "is weighing down the rest of our company."

"And while we have fought hard, we cannot continue to wait for an upturn," he said. "We believe an accelerated timeframe is necessary so that we can remove lingering uncertainty, especially for our employees, and ensure that our company is singularly focused on the transition to becoming a fully regulated company."

Jones estimated it would take 12 to 18 months for the company to execute its plans for its generation.

He also warned of deteriorating conditions at FirstEnergy Solutions, which sells retail energy to residential, commercial and industrial customers in the Northeast, Midwest and Mid-Atlantic regions.

"Further downgrades … by the rating agencies could require posting additional collateral of $355 million," he said. "The continued viability of FirstEnergy Solutions is also pressured by some additional risks over the near term. These risks, which include an inability to implement our strategic alternatives in a timely manner, an adverse outcome related to a coal transportation contract dispute at FirstEnergy Solutions, or the inability for FirstEnergy Solutions to extend or refinance debt maturities of $515 million in 2018 could cause FirstEnergy Solutions to take additional actions, including restructuring its debt and other financial obligations or seeking bankruptcy protection."

In West Virginia, meanwhile, FirstEnergy's Mon Power subsidiary plans to issue a solicitation by the end of this year to address its generation shortfall.

Company News

California GHG Rules Keep Edison Focused on 'Wire Side'

By Robert Mullin

Edison International will continue upgrading its transmission and distribution networks to take advantage of recently enacted legislation requiring California to reduce greenhouse gas emissions to 40% below 1990 levels by 2030, company officials said during their third-quarter earnings call with analysts last week.

Through its primary utility subsidiary Southern California Edison, the company is seeking to become a "key enabler" of California's goals by facilitating the adoption of rooftop solar, energy storage and electric vehicle charging, CEO Pedro Pizarro said.

"Grid modernization, which, by the [California Public Utilities Commission's] estimate, will be an ongoing effort into the middle part of the next decade, is a very significant part of the needed solution" for reducing emissions, Pizarro said. Edison's quarterly profit increased by 11.1% to $419 million partly on higher revenues stemming from a revenue escalation mechanism included in a rate case approved late last year.

Pizarro noted that state officials are turning their GHG reduction efforts from the power industry — accounting for about 20% of current emissions — to the transportation sector, which is responsible for more than a third.

"We believe the significant new efforts across all sectors of the economy will be needed and many of these efforts will require significant electrification of sectors that today rely on fossil fuels," Pizarro said.

Edison anticipates about $4 billion in yearly capital spending and $2 billion in annual rate base growth next year and into "the foreseeable future," with nearly all of the investment on the "wire side" of the business, according to CFO Maria Rigatti.

"We believe it has lower investment opportunity risk as compared to utilities with a high percentage of growth tied to generation investment," Rigatti said.

Edison is seeking regulatory approval to roll $200 million of "early-stage" grid modernization into its 2016-2017 rates, but the company might have to delay that investment until 2018 if it does not receive a timely decision from the CPUC. The spending would focus on replacing aging infrastructure, adding new customer connections, upgrading information technology, maintaining SoCalEd's generators and modernizing the utility's distribution system to accommodate the growth of distributed energy resources.

The company's $1.1 billion West of Devers transmission project — which will upgrade existing 220-kV lines to double-circuit lines — was approved by the CPUC in August but has been challenged on environmental grounds.

Edison has also proposed alternative designs — which require "significant re-engineering" — in the CPUC's review of the company's $600 million Mesa substation project, which would upgrade the existing facility in the western Los Angeles Basin from 220 kV to 500 kV.

"These permitting and approval challenges are increasingly typical of transmission planning and part of the process, although the need for these projects is not affected by the regulatory delays that impact initial timing," Rigatti said.

Edison continues to engage with Mitsubishi Heavy Industries in arbitration over steam generator design flaws that forced the permanent closure of San Onofre nuclear generating station in 2013. Edison shares ownership of the plant with San Diego Gas and Electric.

In the event of a favorable outcome for the plant's owners, SoCalEd will refund to its ratepayers 50% of any proceeds that exceed legal expenses, Pizarro said. The rest of the money would be used to pay down or reduce the short-term debt associated with the utility's capital spending program.

Edison anticipates receiving a decision on the matter later this year or early next year.

Q3 Company Earnings Roundup

PPL Improves on Higher Rates and Good Weather

PPL improved its third-quarter performance by 20%, reporting $473 million($0.69/share) in earnings, compared to $393 million ($0.58/share) for the same period last year. The company attributed the increase to higher rates for its Pennsylvania and U.K. operations and warm weather, which boosted demand.

PPL raised the bottom end of its 2016 earnings guidance by 5 cents to $2.30-$2.45/share based on slightly stronger-than-expected performance at its Pennsylvania and Kentucky utilities. The company, whose Pennsylvania utility benefited from a rate increase in January, intends to file rate hike requests in November for Kentucky Utilities and Louisville Gas and Electric.

With the exchange rate for the British pound falling in the wake of the U.K.'s decision to leave the European Union, PPL mitigated the financial impact on its U.K. operations by restriking its currency hedges.

"We remain confident in our ability to deliver on our long-term growth projections," PPL CEO Bill Spence said during a conference call. "We expect to achieve 5% to 6% compound annual earnings growth from 2017 to 2020 and are targeting annual dividend growth of about 4% over the same period."

Lagging Coal Units Drag down PSEG

Public Service Enterprise Group's third-quarter earnings of $327 million ($0.64/share) were down 26% compared to the same period last year, when it reported $439 million ($0.87/share) in 2015. However, the company's adjusted operating earnings of $444 million ($0.88/share) were up 10% year-over-year from $403 million ($0.80/share) in 2015.

The retirement of two coal-fired plants in New Jersey, a reduction in the value of its lease of two coal-fired plants in Illinois and

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COMPANY NEWS

AEP Turns Away from Generation to Transmission, PPAs

By Tom Kleckner

American Electric Power CEO Nick Akins hardly sounded like someone whose company had just taken a $2.3 billion impairment Tuesday, telling investors and analysts he is "very happy with the strategic process" and that "conditions are in place that are conducive to us achieving our objectives."

Akins' comments came as he led a panel of AEP executives briefing investors and analysts in New York following the company's third-quarter earnings release. With the one-time charge, AEP posted a loss of $765.8 million (-$1.56/share) for the quarter, compared with a profit of $518.3 million ($1.06/share) for 2015's third quarter. Sales were up from $4.4 billion to $4.7 billion, partly because of a warm summer.

"The new story of AEP is one of higher growth, higher dividends, more regulation and more certainty," Akins said. "When you stop chasing the wrong things, you give the right things the chance to catch you."

The impairment reflects AEP's ownership share of 2,684 MW of competitive generation in Ohio, including its Cardinal, Conesville, Stuart and Zimmer plants. It also includes the competitive portion of the coal-fired Oklaunion Plant in West Texas, the Desert Sky and Trent Mesa wind farms, also in West Texas, and some coal-related properties.

Akins said the company will spend $17.3 billion in capital investments through 2019 — $9 billion on transmission — an increase of $4.3 billion from plans laid out last year through 2018. The company owns the largest transmission system in the U.S., with 40,000 miles of lines and more 765-kV extra-high voltage than all other transmission systems combined.

"We're focusing the proceeds on the [transmission business] we find attractive," said Akins, who noted AEP already accounts for 14% of the country's transmission investment. "We're able to invest in transmission in an order of magnitude not many others have. If you're looking for a transmission company, AEP is certainly that. We're well-positioned as a regulatory business."

The company also plans to increase its renewables through long-term power purchase agreements. AEP expects to add 5,400 MW of wind energy and 3,400 MW of solar power through 2033.

Investors didn't respond positively to the news. AEP shares closed Wednesday at $62.61/share, down 77 cents (-1.21%) on the day.

AEP's embrace of regulation also allows it to escape the problems it faces in Ohio's competitive-generation market. Many of the company's coal plants date back to the 1970s and earlier, making them underperformers against other power units. Coal resources accounted for 71% of AEP's generation in 2005, but that figure is projected to drop to 47% next year.

"Fortunately, AEP's balance sheet can withstand this impairment," CFO Brian Tierney said. "Combined with other sales of generating assets, it puts the Ohio generation debacle behind us. We also have wires companies in the states with very attractive returns."

Akins said AEP would continue working with legislators to restructure the Ohio market.

Both AEP and FirstEnergy attempted to get relief from the Public Utilities Commission of Ohio with what amounted to a subsidy request for their competitive generation. While what opponents called a "bailout" was approved by PUCO, FERC effectively scotched the deals, saying they needed to undergo a more stringent review.

AEP decided to work to get favorable reregulation legislation approved.

But FirstEnergy — which reported a $1.1 billion loss in the second quarter, much of it related to the closure of five coal-fired units — filed a modified request with PUCO seeking a $558 million-a-year rate stability rider for eight years.

In October, PUCO voted instead to give the company $204 million a year for only three years. FirstEnergy has until Nov. 11 to file for a rehearing on the order, which it called "disappointing." (See *PUCO Rejects FirstEnergy's $558M Rider, OKs $132.5M*.)

Q3 Company Earnings Roundup

Continued from page 24

lower hedges accounted for the difference, the company said.

"Net income was impacted by our decision to retire the Hudson and Mercer coal-fired generating stations in 2017," said PSEG CEO Ralph Izzo.

Warm summer weather staved off an even greater drop in the company's performance, but it wasn't enough to offset poor performance year-to-date thanks to unfavorably warm conditions during the winter. Izzo announced the company was shaving the top end of its 2016 guidance by 5 cents to $2.80-$2.95/share.

Its Public Service Electric and Gas subsidiary has reached a settlement with key parties for an extension of its existing landfill/brownfield solar program. The settlement provides for an investment of approximately $80 million to construct 33 MW of grid-connected solar generation over three years.

The PSEG Power generation subsidiary incurred $67 million ($0.13/share) in one-time charges related to the early retirement of the Hudson and Mercer generators.

Reduced energy hedges caused by lower fuel prices were partially offset by lower load-serving costs, but they still reduced net income by $0.02/share, the company reported.

The PSEG Enterprise/Other business group reported a net loss of $67 million ($0.13/share) after recalculating the residual values of its leases of two coal-fired plants in Illinois. The company recorded an after-tax impairment of $86 million on the leases "as a result of current and expected future market conditions."

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Company News

Q3 Company Earnings Roundup

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Unit Retirements, Tax Ruling Dampen Exelon's Performance

Exelon's third-quarter earnings fell 22% to $490 million ($0.53/share), down from $629 million ($0.69/share) in 2015. Adjusted earnings were up 11% year-over-year to $841 million ($0.91/share) from $757 million ($0.83/share).

While the company benefited from substantially better hedging and reduced nuclear decommissioning trust fund payments, those positives were outweighed by an unfavorable tax ruling, costs from the Pepco Holdings Inc. merger and plant retirements.

In September, the U.S. Tax Court ruled against the company in a $1.45 billion tax-shielding dispute with the Internal Revenue Service that stemmed from Exelon's $4.8 billion sale in 1999 of six coal-fired plants in Illinois. The buyer, Edison Mission Energy, eventually sold four of the plants out of bankruptcy to NRG Energy, which leases two of them to PSEG.

While Exelon hasn't decided whether to appeal the ruling, it is required to post a bond for the payment anyway. The company accounted for $199 million of the bill in the third quarter.

The quarter saw a shuffling of Exelon's nuclear fleet as well, with the company announcing the early retirement of the Clinton and Quad Cities facilities and the purchase — pending regulatory approval — of Entergy's James A. FitzPatrick station in New York.

Overall, earnings were bolstered by regulatory rate increases and favorable weather but partially offset by decreased capacity revenue, increased income taxes from a decrease in the domestic production activities deduction and increased nuclear decommissioning amortization, the company said.

Even with the write-downs, CEO Christopher Crane was bullish, announcing that the company was raising its 2016 guidance from $2.55/share to $2.75/share. The revision was based on improved performance of its Commonwealth Edison and recently acquired PHI utility subsidiaries.

Dominion Improves Finances

Dominion Resources had a good Monday last week, announcing both strong third-quarter results and the redistribution of its Questar acquisition that allowed the parent company to retire debt.

The company earned $690 million ($1.10/share) for the third quarter, compared with $593 million ($1/share) for the same period in 2015. It amounted to a 16% increase that the company partially attributed to favorable weather, lower capacity expenses, revenues from regulated growth projects and a lower tax rate. The performance was offset by share dilution and the absence of a farmout transaction, the assignment of part or all of a natural gas interest to a third party, which contributed $27 million to earnings a year earlier, the company said.

Dominion reported an operating earnings increase of 17% to $716 million ($1.14/share), compared to $611 million ($1.03/share) last year. The principal difference in the adjusted earnings was related to transaction costs associated with its acquisition in February of the pipeline company Questar.

The deal expanded Dominion's service territory to Utah, where the natural gas deliverer has about 1 million customers. The sale closed in September, and by the end of October, Dominion had "dropped down" Questar to Dominion Midstream Partners, its master limited partnership, in a $1.7 billion deal that will allow the company to retire debt.

— Rory D. Sweeney

Company Briefs

Duke Energy Announces 5 Executive Appointments

Duke Energy last week announced five executive appointments — effective at varying dates between now and year-end — with the goal of strengthening its regulatory and economic development initiatives.

Clark Gillespy, currently South Carolina state president, will become senior vice president of economic development. Alex Glenn, currently Florida state president, will become senior vice president of state and federal regulatory legal support.

Kodwo Ghartey-Tagoe, currently a senior vice president of state and federal regulatory legal support, will take over Gillespy's role. Harry Sideris, currently a senior vice president of environmental health and safety, will take over Glenn's role. Paul Draovitch, currently a senior vice president for fossil-hydro operations, will take over Sideris' role.

More: *The Charlotte Observer*

PG&E Hit with Federal Lawsuit over Pension Benefits

Three Pacific Gas and Electric workers filed a lawsuit Nov. 1 in the U.S. District Court for the Northern District of California accusing the utility of wrongly classifying them as independent contractors to deny them pension benefits.

The lawsuit alleges that PG&E adopted different and conflicting interpretations of its pension plan and stopped asking its counsel for advice "when it did not like the results."

Emails and memoranda that allegedly support the workers' allegations are attached to the court filing. The internal documents came to light during another worker's pension lawsuit settled by PG&E in 2013.

More: *Pension & Benefits Daily*

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COMPANY BRIEFS

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Swiss Companies to Supply Battery Storage System for PJM

Swiss Green Electricity Management Group, which invests in energy storage projects, has announced a partnership with fellow Switzerland-based company Leclanché to supply a 20MW/10MWh battery storage system for PJM's frequency regulation market.

Leclanché will act as SGEM's engineering, procurement and construction partner and supply the battery storage system, which will be constructed in Marengo, Ill.

In August, the two signed an agreement that gives SGEM right of first offer for Leclanché projects, which are expected to grow to more than 85 MWh in 2017.

More: *Energy Storage News*

American Electric Power Seeks Coal Delivery Bids

American Electric Power is seeking bids by Nov. 9 for delivery of up to 500,000 tons of coal for one or more of its generating stations.

Delivery would begin in January 2017 and end in March 2017.

More: *American Electric Power*

Duke Energy, Siemens Team Up for Wind Farm Services

Duke Energy Renewables and Siemens' wind power and renewables division are teaming up to provide operations and maintenance services for wind farms whose turbines have multiple manufacturers.

Under their agreement, the companies can bid separately on services at wind projects. If either company wins a contract, it will bring the other in for appropriate work.

The partnership establishes "one-stop shopping" for wind farm owners who would otherwise need to make separate contracts with each original equipment supplier, Duke Renewables spokeswoman Tammie McGee said.

More: *Charlotte Business Journal*

GE to Supply Converter Stations For Plains & Eastern Clean Line

GE Energy Connections will supply three HVDC converter stations to Clean Line Energy Partners for its $2.5 billion Plains & Eastern project, which will deliver 4,000 MW of wind power generated in the Oklahoma panhandle over a 720-mile system to a terminal near Memphis, Tenn.

Clean Line selected GE as the exclusive provider of the stations, which will convert electricity from DC to AC. The stations will be located in Pope County, Ark.; Texas County, Okla.; and Shelby County, Tenn. Construction could begin in the second half of 2017.

GE described HVDC transmission as "the most efficient means of connecting wind generation to distant end-use customers."

More: *Arkansas Business*

Marcellus Shale Partnership Ends For Noble Energy, Consol Energy

Noble Energy and Consol Energy announced last week that they have ended their shale exploration partnership in the Marcellus drilling region.

In 2011 the companies agreed to jointly explore and develop 669,000 acres across Pennsylvania and West Virginia, producing 1.07 Bcfd of natural gas equivalent.

Noble will keep 363,000 acres, producing about 450 Mcfd of natural gas equivalent and pay Consol $205 million. Consol will keep 306,000 acres producing 620 Mcfd.

More: *Fuel Fix*

Amazon Plans Ohio Wind Farm to Power Cloud Computing Business

Amazon announced last week that it is planning a wind farm in Hardin County, Ohio, to help power its cloud computing business.

The wind farm, scheduled to open in December 2017, will be the fifth renewable energy project undertaken by the company's cloud computing division and its second wind farm in Ohio.

The new wind farm will generate 530,000 MWh of wind energy per year and feed into the grid connected to the division's Ohio and Virginia data centers.

More: *The Seattle Times*

Utilities Partner to Share Equipment During Disasters

A group of utilities in the Southeast have created a program to identify spare transformers and other transmission equipment that they can obtain from each other if disasters should strike.

Southern Co., Louisville Gas and Electric and Kentucky Utilities, PPL Electric Utilities and Tennessee Valley Authority last week announced the Regional Equipment Sharing for Transmission Outage Restoration (RESTORE) program, which would make needed transmission equipment available for purchase by the participating utilities.

The companies are interested in expanding the voluntary program to include others in the region.

More: *Southern Co.*

Blair Named New President, CEO of ITC Holdings

Linda H. Blair was named the new president and CEO of ITC Holdings effective Nov. 1, succeeding Joseph L. Welch.

She will be responsible for the strategic vision and overall business operation of ITC and its subsidiaries.

Most recently, Blair was ITC's chief business unit officer. She has served in several leadership roles with ITC since the company's inception in 2003.

More: *Crain's Detroit Business*

FirstEnergy Must Save $200M To Preserve Credit Rating

FirstEnergy must find cost savings of about $200 million to preserve its credit rating — and possibly stay independent after receiving about half of a special rate rider it requested from Ohio's Public Utilities Commission.

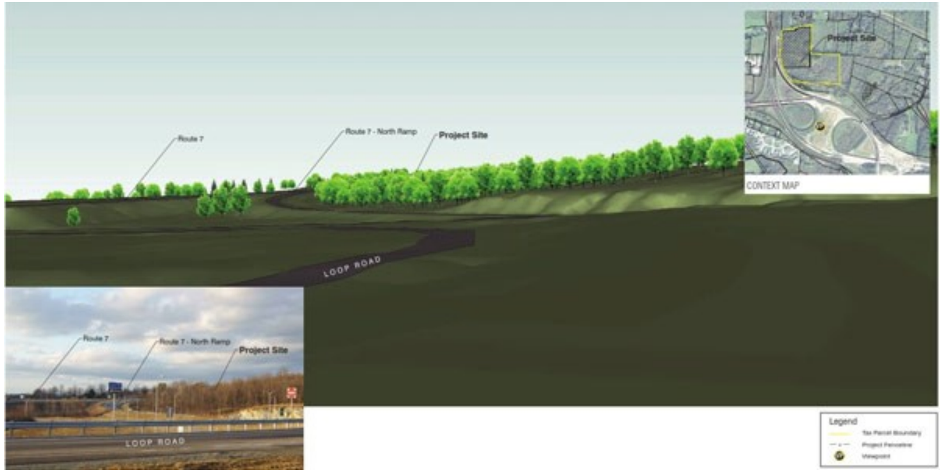
"We're evaluating everything we do as a company to try and find a way to close that gap. Because [what's been done so far] is not enough to get us into the position with the credit rating agencies that we need to be in," CEO Chuck Jones said.

FirstEnergy's stock is trading at 12 times the company's earnings, with many of its competitors' shares trading at 20 times their earnings, Jones said.

More: *Crain's Cleveland Business*

Court Halts New England Clean Energy Contracts

By William Opalka



Solar energy project schematic | *Allco*

A federal appeals court has halted the award of clean energy contracts sought by three New England states while it considers an appeal filed by a New York-based clean energy developer (16-2946).

The 2nd U.S. Circuit Court of Appeals issued a temporary injunction on Nov. 2 in response to Allco Renewable Finance's emergency petition.

Connecticut, Massachusetts and Rhode Island last month announced they would commence negotiations with developers of solar and wind projects totaling 460 MW. (See New England States Move Toward Renewables Contracts.)

"Defendants-appellees are enjoined from awarding, entering into, executing or approving any wholesale electricity contracts in connection with the current energy solicitation during the pendency of this appeal," the court said.

The three-judge panel expedited the appeal, set up a briefing schedule and ordered oral arguments in New York City as soon as the week of Dec. 5.

In its motion for the injunction, Allco tried to establish parallels with the U.S. Supreme Court ruling earlier this year in *Hughes v. Talen*, in which the court invalidated a contract between Maryland and a natural gas generator. Allco said the Maryland contract was "just like what Connecticut plans to do here." (See Supreme Court Rejects MD Subsidy for CPV Plant.)

In the schedule set up by the states, negotiations are supposed to be completed by mid-January. The solicitation imposed a 20-MW minimum on the contracts that could be considered.

Allco said the 20-MW minimum is arbitrary and violates the Public Utility Regulatory Policies Act and the Federal Power Act. The company develops small solar qualifying facilities under PURPA.

The company filed a lawsuit against Connecticut officials after the multistate solicitation was announced last year. (See Allco Challenges New England's Renewable Procurement Plan.) A U.S. District Court dismissed Allco's challenge over the summer, saying the company lacked standing. The company appealed to the 2nd Circuit and then filed its emergency motion last month as the states' solicitation process was ending.

Federal Briefs

Colonial Pipeline Restarts Gasoline Shipments

Six days after an explosion in Alabama shut it down, Line 1 of the Colonial Pipeline began shipping gasoline from Houston to New Jersey again on Sunday morning.

Colonial said it would take three days for the gas to arrive at the Linden, N.J., terminal. The explosion and ensuing fire, near Helena, Ala., was the result of a backhoe punching a hole in the pipeline, sending 200 feet of fire into the air, killing one worker and injuring five others.

The pipeline's shutdown disrupted the wholesale gasoline market and raised retail prices in the Southeast.

More: *Reuters*

Obama: US Considering Ways To Reroute Dakota Access

The U.S. Army Corps of Engineers is considering ways to reroute the controversial Dakota Access pipeline so that it doesn't intrude upon Native American cultural sites, President Obama said last week.

"I think as a general rule, my view is that there is a way for us to accommodate sacred lands of Native Americans, and I think right now the Army Corps is examining ways to reroute this pipeline," Obama said in an interview with news organization Now This.

But that was news to pipeline constructor Energy Transfer Partners, spokeswoman Vicki Granado said. "We are not aware that any consideration is being given to a reroute, and we remain confident we will receive our easement in a timely fashion," she said.

More: *Dallas Business Journal*

NRC Approves Plant Expansion While FP&L Cleans Up Leak

As Florida Power & Light works to clean up leaking cooling canals at its Turkey Point Nuclear Power Plant, federal regulators have partly cleared the way for the plant to build two new reactors.

Following a seven-year environmental study, the Nuclear Regulatory Commission found the use of cooling towers to operate the new reactors — located on the shores of Biscayne Bay between two national parks — would not damage the already fragile ecosystem.

Over the years, the plant's aging cooling canals sent an underground plume of saltwater miles inland, threatening drinking water supplies, and leaked tainted water into the bay. FP&L is conducting a massive cleanup.

More: *Miami Herald*

State Briefs

CALIFORNIA

Don Pedro Reservoir Scheduled For Major Refurbishment in 2017

The Don Pedro Reservoir hydrofacility is scheduled for three major refurbishment projects in its Power Tunnel in 2017, costing an estimated $7 million.

The work will be completed in two phases, each taking about 45 days. The first phase, which will begin before the irrigation season in February, includes the bulkhead gate installation and turbine shutoff valve replacements. The second phase, which is anticipated after the irrigation season in October, includes the fixed wheel gate installation.

The Turlock Irrigation District is hoping to operate the dam for another 50 years after the refurbishments, Assistant General Manager of Power Supply Administration Brian LaFollette said.

More: *Turlock Journal*

SoCalGas Wants to Pump Natural Gas Again After Aliso Canyon Leak

With investigations still pending and wells still shut down, Southern California Gas asked state regulators last week for permission to pump pressurized natural gas again — about one year after the largest methane leak in U.S. history at the Aliso Canyon storage field.

Citing "extensive physical upgrades" and "advanced technologies," the gas company is seeking permission to resume operations northeast of Los Angeles, at a depleted oil field now used for storage.

State environmental regulators anticipate it will take weeks to decide upon the utility's request, as state inspections at the field are still pending and utility regulators also must agree with reopening the field.

More: *Los Angeles Times*

Option of Up to 100% Renewables Coming to Bay Area Residents

First Solar will sell energy to Bay Area residential customers who are seeking up to 100% renewable energy under a deal with community choice aggregator Marin Clean Energy.

The energy will come from First Solar's Little Bear project in Fresno County, scheduled for construction in 2019, with commissioning expected in 2020. In the beginning, the project will generate up to 40 MW, with plans to eventually expand to 160 MW.

Customers who opt out can receive Pacific Gas and Electric's standard service, which is currently 30% renewable.

More: *The Business Journal*

CONNECTICUT

PURA Commissioners Elect Katie Dykes as Chair


Dykes

Katie Dykes was elected last week as chair of the Public Utilities Regulatory Authority by its commissioners. She fills the position left vacant by Arthur H. House, who was appointed by Gov. Dannel Malloy in October to become the state's new chief cyber security risk officer.

Malloy appointed Dykes as a PURA commissioner on Oct. 27. She previously served as deputy commissioner of the Department of Energy and Environmental Protection.

Dykes currently serves as chair of the Regional Greenhouse Gas Initiative's board of directors and represents Malloy on the board of managers of the New England States Committee on Electricity.

More: *Connecticut Department of Energy & Environmental Protection*

IDAHO

Group Uses Defunct Guideline To Protest Tx Line Route

A group called the Gateway West Task Force filed a protest last week against the U.S. Bureau of Land Management's preferred route for the Gateway West transmission line in Cassia and Power counties based upon a federal guideline on sage grouse that is no longer in effect.

The interim guideline prohibited construction near sage grouse habitat on federal land, said attorney Doug Balfour, who represents the group. The now-irrelevant guideline pushed transmission routes onto private land, which affected 40 private landowners in Cassia County, Balfour said.

Since 2015, the state has had its own sage grouse conservation plan that permits the group's proposed construction route. Although the BLM rejected the group's preferred route through Cassia and Power counties three years ago, it now has a responsibility to re-evaluate its decision based upon the new information, Balfour said.

More: *Times-News*

KENTUCKY

LG&E/KU Propose Rate Hike For Funding Advanced Meters

A proposal last week by Louisville Gas and Electric and Kentucky Utilities that would give customers new advanced electric meters comes with a rate hike that would boost LG&E's electricity service revenue by 8.5% and KU's revenue by 6.4%.

LG&E's typical residential electric customers would see a rate hike of $9.65/month, while KU's would see a $7.16/month increase.

The advanced meters would allow customers to get near real-time information on their energy use, while allowing the utilities to better detect power disruptions and make faster repairs, LG&E/KU spokeswoman Natasha Collins said.

More: *Courier Journal*

MAINE

Mohegan Island Group Wants Wind Project to Move Elsewhere

A group of Mohegan Island residents is asking developers to move construction of two 600-foot wind turbines — planned for 3 miles offshore — elsewhere.

The Legislature and the Public Utilities Commission already approved the project, and developer Maine Aqua Ventus anticipates construction will begin in 2019 and the generation system will be in service for the next 20 years.

Travis Dow, a spokesman for the newly formed group, Protect Mohegan, said many of the island's 50 year-round residents were

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STATE BRIEFS

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unaware of the project's potential scope and timeline when it was approved.

More: Maine Public Radio

MASSACHUSETTS

Solar Project Underway At Hancock Shaker Village

Three separate solar arrays presently being installed on the grounds of Hancock Shaker Village could supply electricity into the Eversource Energy power grid beginning in 2017, while keeping with the living museum's ideal of environmentally sound use of land.

The project, a partnership between Syncarpha Solar and Renewable Energy Massachusetts, consists of a 1-MW array on the Pittsfield side of the historic village and two 2-MW facilities in Hancock. It will serve customers throughout Western Massachusetts.

The project will provide lease income to Hancock for up to 30 years, while enabling residents of the Berkshires who are Eversource customers to buy net metering credits at a discount.

More: The Berkshire Eagle

MARYLAND

Tree Trimming Cuts BGE Power Outages by 35%

Baltimore Gas and Electric is crediting a new tree-trimming protocol for its 10,500 miles of overhead power lines with reducing power outages by 35% during the past four years.

The Public Service Commission's adoption of new electric reliability standards in 2012 prompted BGE to remove more branches that overhang power lines and make other changes aimed at reducing outages.

More: The Baltimore Sun

MINNESOTA

Minnesota Power Asks for Immediate, Future Rate Increases

Minnesota Power is asking state regulators to approve an immediate 8% rate increase for homeowners effective Jan. 1 and a future increase of 10% after a 12- to 18-month contested case hearing process.

The utility said it needs the money to recover hundreds of millions of dollars it invested in its infrastructure in recent years, which includes monies for storm recovery and to "harden" its portion of the grid against extreme weather, and converting from a 95% coal-generated system to a 30% renewable system, Amy Rutledge, Minnesota Power spokeswoman, said.

Residential customers are paying 35% less than what it costs to get electricity into their homes, Minnesota Power officials concluded after a recent study.

More: Forum News Service

NEBRASKA

South Sioux City, Big Ox Reach Agreements on Sewage Odors

Officials from South Sioux City and Big Ox Energy reached several agreements last week addressing strong sewage odors that forced residents of 15 homes in a five-block area to take refuge in hotels.

Big Ox converts organic waste into methane gas and shares sewer lines with the affected homes.

Among the agreed-to items, Big Ox will shut down its wastewater reception, hire an engineering firm to develop and present a plan to the city to ensure that the problem is not repeated, and provide financial support for impacted residents.

More: Sioux City Journal

NEW JERSEY

ACE Customers See Rate Drop Courtesy of Most-Favored Clause

Atlantic City Electric's half-million customers can thank utility regulators in D.C. for a drop in their electric rates.

In 2015, the state approved Exelon's acquisition of Pepco Holdings Inc., ACE's parent. The deal, which provided $62 million in credits for ACE customers, also included a most-favored-jurisdiction provision that ensured state ratepayers would receive equal benefits to those negotiated in other states or the district.

The D.C. Public Service Commission negotiated a more lucrative agreement for district residents, forcing Exelon and PHI to add more than $53 million in benefits in New Jersey. The state Board of Public Utilities approved the revised agreement last week.

More: NJ Spotlight

PSE&G Reaches Agreement For Solar Arrays on Brownfields

Public Service Electric and Gas has reached a tentative agreement with state regulators to build 33 MW of solar arrays costing about $80 million on brownfields and old garbage dumps — a smaller-scale version of its original proposal to spend $275 million to build 100 MW of solar facilities.

The state Board of Public Utilities still needs to approve the tentative agreement, which was reached with its staff, the Division of Rate Counsel and other parties after months of negotiations.

Gov. Chris Christie's administration supports using former garbage dumps and brownfields as sites for solar farms, rather than undeveloped farmland and open spaces. But consumer advocates, including the Rate Counsel, have voiced concerns about allowing a regulated utility to pass the development costs to utility customers.

More: NJ Spotlight

NORTH CAROLINA

Duke Implodes Dan River Steam Station

Duke Energy imploded the long-shuttered Dan River Steam Station in the final days of October — putting an end to the 276-MW plant where a 2014 coal ash spill led to new state laws and Duke's guilty plea to federal Clean Water Act violations.

The company used explosives to implode the powerhouse, three boilers and an electrostatic precipitator.

The plant was shut down in 2012, but in February 2014, a storm water pipe running under its main coal ash pond collapsed, sending 39,000 pounds of coal ash into the Dan River. The state adopted the Coal Ash Management Act that summer, and in May 2015, Duke pled guilty to nine misdemeanor

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STATE BRIEFS

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violations of federal environmental laws and was fined $102 million.

More: Charlotte Business Journal

NORTH DAKOTA

PSC May Fine Dakota Access for Delayed Notification of Cultural Find

The developer of the Dakota Access Pipeline is facing a possible fine for failing to notify state regulators for 10 days about the discovery of Native American artifacts in the pipeline route.

Dakota Access, a subsidiary of Energy Transfer Partners, was required under its permit to notify the Public Service Commission and to receive its clearance to proceed with construction. It did, however, notify the state Historic Preservation Office and rerouted the pipeline in coordination with the state archaeologist.

The commission can issue a fine of $10,000 per day per violation, or a maximum of $200,000.

More: The Bismarck Tribune

OHIO

FirstEnergy, NOPEC Contract Battle May Impact 500,000 Customers

FirstEnergy Solutions and the Northeast Ohio Public Energy Council (NOPEC) are embroiled in a court battle over changing their long-standing contract. The 500,000 customers that NOPEC represents may lose discounts, but not electricity, as a Jan. 1 switch to a new supplier looms.

Last week, FirstEnergy argued in documents before the Summit County Common Pleas Court that it could not afford the regular fees that it agreed years ago to pay NOPEC. It additionally is seeking to prevent NOPEC from cashing a multimillion-dollar letter of credit that it issued at the start of the companies' relationship.

If the contract is dissolved, customers would shift to buying power from Ohio Edison or the Illuminating Co. NOPEC will probably have a new supplier within 60 days, said Chuck Keiper, NOPEC's executive director.

More: The Plain Dealer

UTAH

Rocky Mountain Power's Subscriber Solar Program 95% Sold Out

Rocky Mountain Power's Subscriber Solar program is 95% sold out, with residential and business customers purchasing nearly 20 MW of solar power scheduled to come online in 2017.

The utility anticipates that the last few blocks of power will be sold within two weeks. The plant, near Holden, allows customers to use solar energy without installing solar panels.

More: Deseret News

VERMONT

Wind Farm Vote Money Legal, But Residents Still See It as Bribe

The state Attorney General's Office has found that a developer's promise of direct payments to Grafton and Windham residents if they approve an industrial wind farm on Nov. 8 does not violate election laws. But some residents see it as an outright bribe.

For the past four years, Iberdrola Renewables has wanted to construct 16 turbines in Windham and eight in Grafton.

The idea of payments — an estimated $1,162/year to full-time adult residents of Windham and $428 for Grafton residents — came from residents, the company's representatives said.

More: Burlington Free Press

VIRGINIA

Regulators Propose Fining Dominion $260K for 2 Oil Spills

State regulators proposed last week fining Dominion Virginia Power about $260,000 for a 13,500-gallon oil spill in Crystal City and a 9,000-gallon oil spill in Staunton — both of which polluted public waters in January.

A consent order is out for public comment for 30 days, and the State Water Control Board is expected to hear the matter at its December meeting, Department of Environmental Quality spokesman Bill Hayden said. Because of the spills, Dominion was required to monitor its wells for the last two weeks of October and must do so again during the last two weeks of January 2017.

According to Dominion, about 11,120 gallons of oil were recovered from the first spill, and all but 100 gallons were recovered from the second.

More: The Washington Post

White House Announces Nationwide EV Charging Network

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little more than half of the 1 million plug-in EVs target President Obama set eight years ago for 2015.

Sales of EVs have been hampered by low gasoline prices, high battery prices and limited range and charging infrastructure. U.S. EV sales declined 5% in 2015 over 2014 but increased 19% in the first half of 2016 over the year before, according to FleetCarma.

According to the Energy Department, there are about 14,600 public charging stations for plug-in vehicles, with 37,000 charging outlets, now in the U.S.

Charging Speed

Charging speed also is a challenge. While the new network would make it possible to drive coast to coast, there could be a lot of waiting along the way. Depending on the vehicle and charger type, it can take between three and six hours to fully recharge a plug-in EV.

The Energy Department is working with the National Laboratories and others on a study expected by the end of the year on developing direct-current chargers capable of 350 kW, which could provide

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White House Announces Nationwide EV Charging Network

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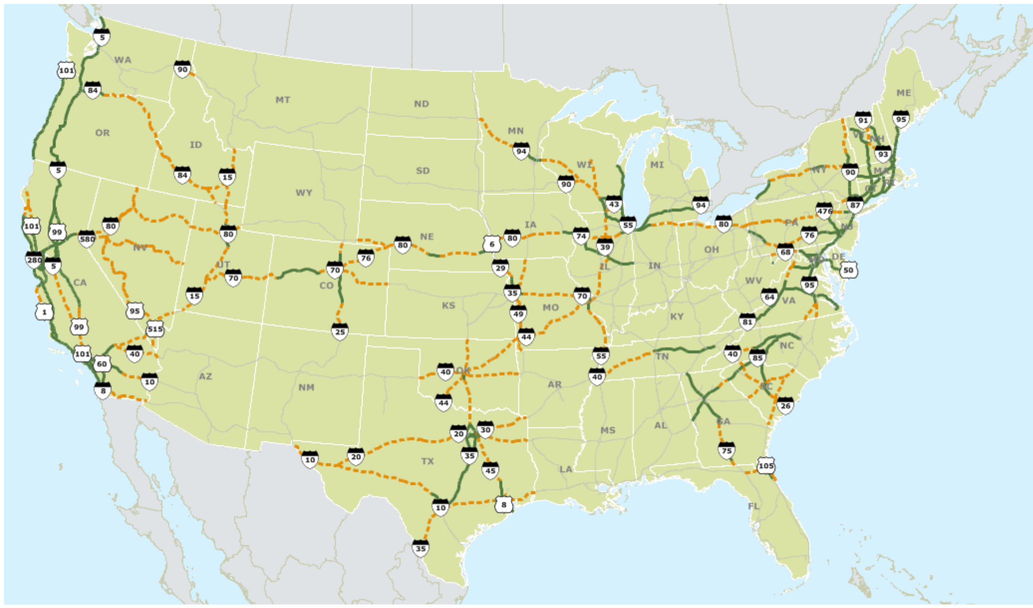
a 200-mile charge in less than 10 minutes.

Nissan says its LEAF can restore up to 80% of its charge in 30 minutes with a "fast charger," but there are only 1,840 of them nationwide. Tesla Motors' Model S and Model X can charge to a 170-mile range in 30 minutes using a 120-kW "supercharger" available at 734 stations.



Alternate Fuel Corridors | *Federal Highway Administration*

Increasing the Range

Vehicle manufacturers also are responding to the desire for more range. The Chevrolet Bolt EV, expected to be released later this year at less than $30,000 (net of federal tax credits), will run for more than 200 miles on a full charge. Tesla's Model 3, due in late 2017, also will have a range of at least 200 miles.

The Obama administration also is attempting to help make technological advances to reduce battery costs, which exceeded $500/kWh in 2012.

Bloomberg New Energy Finance says lithium-ion battery costs have dropped 65% since 2010, falling to $350/kWh last year. It issued a study in February predicting costs will drop below $120/kWh by 2030.

It projects that worldwide EV sales will hit 41 million by 2040, representing 35% of new light duty vehicle sales. EVs would comprise a quarter of the cars on the road, consuming 2,700 TWh of electricity — equal to 11% of global electricity demand in 2015.

Partners

A public-private partnership of 28 states, utility companies, vehicle manufacturers — including BMW, Nissan and General Motors — and other organizations have agreed to accelerate the installation of chargers and other infrastructure needed. Among the utilities signing on to the project are Pacific Gas and Electric, Ameren Missouri, Portland General Electric, Public Service Company of New Mexico, Eversource Energy and Southern California Edison.

Car manufacturers and utilities will accelerate installation and hookup of charging stations throughout the U.S. Vehicle manufacturers are redoubling production commitments and working to coordinate installation and help fund some of the charging stations. Some of the companies have vowed to increase access to EV stations for their employees.

State and local governments are also making additional commitments to plug-in vehicles. Thursday's announcement included the details of 24 state and local government plans to purchase 2,500 new EVs in 2017. Los Angeles, for instance, is spending $22.5 million on EV charging stations by June 2018, with 500 additional public EV vehicle charging stations scheduled to be completed by the end of 2017, for a total of 1,500.

Alternative Fuels

The Department of Transportation also is seeking nominations from state and local officials in the creation of alternative fuel corridors for vehicles powered by hydrogen, propane and natural gas. A Federal Highway Administration website offers maps of current EV and alternative fuel infrastructure.

"Alternative fuels and electric vehicles will play an integral part in the future of America's transportation system," Transportation Secretary Anthony Foxx said. "We have a duty to help drivers identify routes that will help them refuel and recharge those vehicles and designating these corridors on our highways is a first step."

"Working together with the private sector, these actions can help to combat climate change, increase access to clean energy technologies and reduce our dependence on oil. Expanding the infrastructure that supports plug-in and fuel cell vehicles is key to achieving these national energy and national security imperatives," said Genevieve Cullen, president of the Electric Drive Transportation Association.

'Tipping Point'

Jim Sholler, 52, who drives about 40 miles from his home in Hillsborough, N.C., to his financial services job in Raleigh, has just reserved a Tesla. "First of all, it's a much cleaner solution [to greenhouse gas emissions]. You can't tell me that a large power plant is less clean than a six-cylinder car," Sholler said in an interview Sunday after learning the details of the government plan.

He said his "tipping point" came when he realized that the EV charging stations at his work were always in use. "And I realized I saw more and more charging stations."

Sholler noted that the worry that either the vehicle's range or the dearth of charging stations available on long trips is what holds many prospective owners back.

But improving battery technology — the latest Tesla model boasts a range of 300 miles on a charge, versus the typical range of the first generation of production plug-in electric cars of about 100 miles — and an expanding system of EV charging stations helped him to finally decide to order an electric car.

"Range anxiety is gone," he said.