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California Policy Goals to Require Significant Transmission Upgrades

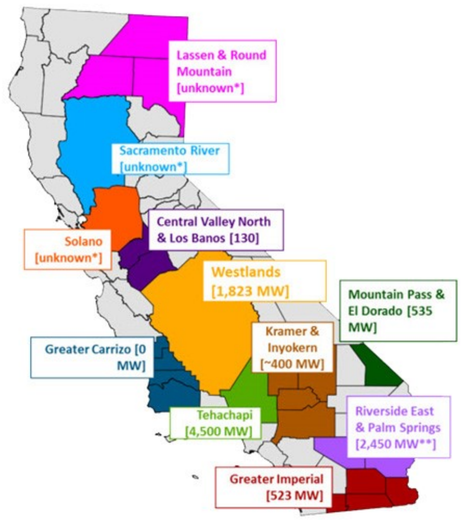
By Robert Mullin

California must significantly upgrade its transmission system in order to meet its 2030 target of generating 50% of its electricity from renewable resources, according to an interagency study.

"We have either the seventh or eighth largest economy in the world — we need a grid to match that," state Secretary for Natural Resources John Laird said during an Aug. 15 workshop to discuss the second iteration of the state's Renewable Energy Transmission Initiative (RETI 2.0). The first initiative focused on helping the state meet a 33% renewable portfolio standard.

But there is uncertainty about the amount of new renewables needed to fulfill the 50% RPS — as well as the most cost-effective transmission solutions required to reach whatever resources are selected.

"It's very difficult to predict what load will be" in the future, said California Energy Commission Chair Robert Weisenmiller, pointing out that demand for renewables — like other types of generation — will ultimately be driven by economic growth, the penetration of vehicle electrification and the



Planners evaluated 11 different "Transmission Assessment Focus Areas" to determine the level of upgrades needed to fulfill California's renewable and greenhouse gas reduction goals.
Source: California Energy Commission

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Mass. Supreme Court Vacates EDC Pipeline Contract Order

By Michael Brooks and William Opalka

Massachusetts' highest court Wednesday struck down regulators' plan to allow electric distribution companies to charge ratepayers for additional natural gas pipeline capacity, concluding that the legislature intended for electricity and gas utilities to be regulated separately (SJC-12051).

The Department of Public Utilities issued

John Adams Courthouse in Boston

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Co-ops, Munis Call for Reset of PJM Capacity Model

Dominion, Direct Energy Join Call for 'Holistic' Review

By Rory D. Sweeney and Rich Heidorn Jr.

The grand bargain that created PJM's capacity market in 2007 has suffered fissures in the years since because of repeated rule changes.

Now, a coalition of cooperatives and municipal utilities says it's time to start over.

PJM's Grid 20/20 Ponders Mixing Public Policy, Competitive Markets (p.22)

At this week's Markets and Reliability Committee meeting, American Municipal Power plans to propose a problem statement calling for a "holistic assessment" of the Reliability Pricing Model.

Joining with AMP are the Delaware Municipal Electric Corp., Old Dominion Electric Cooperative, the PJM Public Power Coalition and the Public Power Association of

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success of the state's "very aggressive" energy efficiency goals.

State officials conceived RETI 2.0 to determine what combination of renewable resources could meet their environmental goals most cost-effectively and what transmission will be needed to deliver their output. The initiative also seeks to identify the land use and environmental issues that could constrain development and access to resources.

The intended result: an "accelerated, agency-driven, high-level assessment to inform future planning and regulatory proceedings," according to project director Brian Turner, of the state's Natural Resources Agency.

Two Policy Developments

Two major policy developments last year drove the development of the initiative.

The first was Gov. Jerry Brown's executive order directing California agencies to reduce the state's greenhouse gas emissions to 40% below 1990 levels by 2030. That goal has so far failed to win legislative backing to become codified into law.

The second development was passage of SB 350, which not only increased the state's RPS to 50% by 2030, but also set higher standards for energy efficiency in buildings, ensured utility progress toward GHG reductions, expressed intent to expand CAISO into other areas of the West and encouraged electrification of the state's transportation fleet.

Those overlapping objectives are creating challenges for resource planners.

"How do you translate the high-level goals for SB 350 and the executive order into quantifiable objectives?" Turner asked. "How much [renewable resources] might we need to meet the 50% [RPS] by 2030?"

The initiative's findings indicate that an additional 25 to 108 TWh of renewables will be needed, depending on growth in vehicle electrification, adoption of behind-the-meter solar and the success of energy efficiency programs.

That translates into 7,000 to 31,000 MW of new capacity, assuming a 40% average capacity factor — or 9,000 to 41,000 MW assuming a 30% capacity factor.

Adding to the uncertainty is that a 40% economy-wide GHG reduction could require the equivalent of a 55 to 60% RPS for the state.

Planners working on the initiative found that "environmental and land use constraints tend to favor in-state solar and out-of-state wind" for meeting mandates, but "determining the environmental and transmission access feasibility for in-state wind may [also] be a priority," according to Turner.

He also said that while low-cost solar is "ubiquitous" in California, a focus on resource and technology diversity would be more cost-effective because of the "long-term integration challenges" posed by an overreliance on solar. Geothermal may offer "important benefits" by 2030, but more investigation is needed into the costs, benefits and transmission access to those resources.

'Broad Support'

The planners also found "broad support" among industry participants for further assessing procurement of out-of-state resources, with a focus on high-quality, low-cost options that would be complementary to in-state resources. That task is made difficult by a lack of information about the potential for developing the resources themselves and the transmission options for reaching them absent a broader study in cooperation with other Western states, an issue the initiative is seeking to address.

The subject of transmission access fell to the RETI 2.0 Transmission Technical Input Group (TTIG), led by Neil Millar, CAISO's executive director of infrastructure development.

Fully Deliverable

Millar said that California has sufficient

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transmission capacity to fulfill the state's 33% by 2020 RPS, but more will be needed to meet the 50% RPS with "full deliverability" for additional renewable resources. While the TTIG estimates that there is "significant transmission available to accommodate resources beyond 33% on an 'energy only' basis" — which would allow for quicker and less costly interconnection — those resources would be subject to curtailment.

Under California regulations, a generating resource is considered "fully deliverable" if its output can reach its intended load sink without hitting constraints — which typically requires a contracted path from a generator to a utility service area. The state's rules also allow a utility to count those resources toward its resource adequacy requirement. "Energy-only" resources have no such requirements for deliverability and cannot be counted as capacity.

"The sufficiency of [energy-only resources] from a policy perspective is yet to be determined," the group found.

To explore potential transmission solutions, the group evaluated seven internal and four transmission assessment focus areas to determine what transmission upgrades would be necessary to make new renewables fully deliverable into each area's load centers.

For example, the San Joaquin focus area can currently handle 1,823 MW of deliverable and 3,131 MW of energy-only capacity, but developing another 5,000 MW of deliverable capacity to accommodate new resources would require upgrades costing about $440 million. Some areas — like the Tehachapi — would require few upgrades, while other areas require much more to open up renewable development.

Sushant Barave, a lead transmission engineer with CAISO, pointed out that transmission capacity is dynamic.

"Resource additions in one area may impact availability in other areas," Barave said, adding that mitigating a constraint that limits flows through multiple focus areas would be the most cost-effective approach to planning.

Barave noted that energy-only resources might require less extensive upgrades, prompting CAISO CEO Steve Berberich to ask that a comparison between energy-only and fully deliverable requirements be made explicit in the group's final report, to be published later this year.

Source: Pacific Gas and Electric

The group also concluded that any out-of-state resources being delivered into California will be injected into one of the focus areas, subjecting new imports to the same transmission constraints as those faced by internal resources.

The potential for renewable imports from other areas of the West is still something of a blind spot for California grid planners. To remedy that, RETI 2.0 created the Western Outreach Project to "gather stakeholder input from across the Western Interconnection regarding the availability of renewable energy and transmission that could contribute to meeting California's renewable goals," according to Keegan Moyer, an Energy Strategies consultant working on the project — a collaboration with the Western Interstate Energy Board.

Key Questions

The project is looking to answer a number of key questions, including:

- How much additional renewable development is likely in the West?
- Where — and in which technologies — is development of renewables likely to occur over the next 15 years?
- How will the future mix of renewables affect daily and seasonal power flows in the Western Interconnection?
- What load centers could potentially import surpluses from California?

The project also seeks to determine the existing load capacity to deliver power from high-quality renewable areas into California — and what constraints limit additional deliveries.

"How would different expansion options affect deliverability to and from California?" Moyer said.

Another project task is to gain insight into generation fleet trends, including coal plant closures that could free up transmission capacity in the interior West and possible changes to hydroelectric utilization in the Northwest.

The project will also seek to answer the question of how increased use of dynamic scheduling, conditional firm and energy-only resources, and other renewable procurement arrangements will impact transmission availability and needs.

"It's pretty clear that we have a lot of options," Weisenmiller said. "We have to do it in a way that minimizes environmental and economic impacts."

"I think significant progress is being made," said Michael Picker, president of the California Public Utilities Commission. "The goal here, I think, is to reuse as much as we can, so we don't have to go new."

"In the old paradigm we were looking at renewables. Now we're looking at greenhouse gases," Weisenmiller said. "We're in a brave new world that will require a lot of new thinking about how the pieces fit together."

"We're in a brave new world that will require a lot of new thinking about how the pieces fit together."

Robert Weisenmiller, California Energy Commission

CAISO NEWS

Skeptics Question CAISO Plan to Lower Bid Floor

By Robert Mullin

Critics of a proposal to lower CAISO's energy market bid floor last week questioned the need for the measure and its efficacy in solving the ISO's increasing intervals of oversupply.

The ISO contends that reducing the bid floor from -$150/MWh to -$300/MWh will provide the market with more "downward flexibility" — or the ability to curtail renewable resources in the market rather than through out-of-market operations.

CAISO hopes that lowering the bid floor will persuade self-scheduled resources to submit bids that reflect the marginal cost of operations when oversupply turns prices negative.

"To ensure the ISO is able to provide accurate price signals to incent a more flexible fleet of resources during this transition, market changes must be implemented to encourage generators to economically participate in the markets rather than self-schedule," CAISO wrote in its proposal.

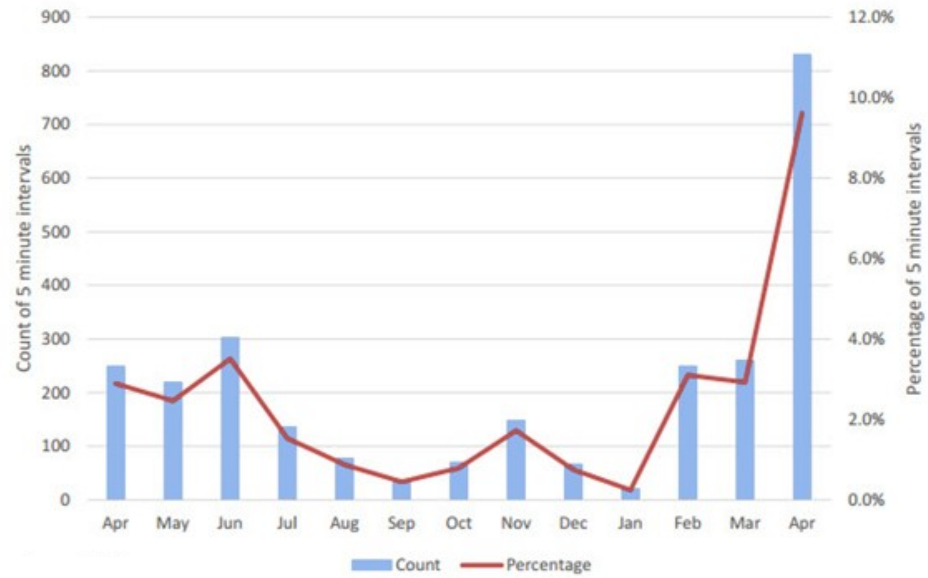
Self-schedules often represent renewable resources operating under power purchase agreements with load-serving entities that include take-or-pay clauses. The LSE's penalty for refusing the power adds to its opportunity cost of not generating a renewable energy certificate (REC).

The ISO has authority to curtail self-scheduled deliveries to protect reliability during periods of oversupply. The ISO said it was compelled to take that step during 2.5% of five-minute intervals between April 2015 and April 2016.

The practice is only growing with the increased penetration of renewables in response to the state's 50% by 2030 renewable portfolio standard.

"In April [2016] alone we had 11% of intervals where self-schedules were being cut," Kallie Wells, senior market monitoring analyst in CAISO's market infrastructure and development department, said during an Aug. 18 stakeholder call. "The shoulder months will likely see increased amounts of that."

In addition to incentivizing LSEs to bid contracted renewable resources into the CAISO market rather than self-schedule, ISO staff say they also hope the change will encourage LSEs to negotiate renewable PPAs that give them the option to curtail renewables to accommodate the ISO's operational needs.



CAISO is seeing an increase in curtailed self-schedules as more renewables come online in California. *Source: CAISO*

Market Monitor not Convinced

CAISO's internal Market Monitor says the ISO hasn't made a compelling case.

The Department of Market Monitoring "is right now opposed to lowering the bid floor," said Ryan Kurlinski, manager of the department's analysis and mitigation group. "We're not seeing the evidence that this policy will create additional decremental bids."

Kurlinski contended that lowering the bid floor will create a greater likelihood for the exercise of market power in decremental bids and expand the opportunity for increasing bid-cost recovery — or uplift — payments, which are shared by load across the ISO.

While a number of stakeholders have commented in favor of the measure, others are skeptical.

"Can you tell me what type of resource would be bidding in at less than -$150/MWh?" asked Eric Little, manager of wholesale market and greenhouse gas market design at Southern California Edison.

"We did look into actual costs, and -$150/MWh did cover a portion of intermittent resources' costs but didn't cover another portion," said Brad Cooper, CAISO's manager of market design and regulatory policy.

"Whenever we talk about this it comes down to RECs, but there are no RECs worth more than" $150/MWh, Little said.

Greg Cook, CAISO director of market and infrastructure policy, said that "it comes down to the power purchase agreements."

"We do know that there are those that have contracts that are take or pay, but those contracts are changing," Little said. "Are you trying to get companies to renegotiate contracts?"

Seeking Evidence

Little also asked the ISO to provide more evidence supporting the change.

"I would like to see something that would show what elements will require a floor below -$150," he said. "That would help us

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Skeptics Question CAISO Plan to Lower Bid Floor

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out."

Nivad Navid, a principal with Pacific Gas and Electric, also sought more supporting data, asking CAISO to provide statistics showing how often the market clears at -$150/MWh. He also expressed concern about the ISO deterring LSEs from submitting self-schedules.

"We're not saying you can't self-schedule," Wells said. "By lowering the bid floor, economic bids will more likely set the price" rather than out-of-market mechanisms. Wells also said a deeper pool of economic bids would prevent the ISO from cutting self-schedules.

"So when you change the bid floor, are you expecting that you will not need any more curtailment?" Navid asked.

"It sounds like the assumption you're making is that there are resources that can't bid into the market because of the bid floor of -$150," said Josh Arnold, a settlement analyst at PG&E.

> **"I'm very confused by the way you're going about this. It seems like you're anticipating an upcoming problem and trying to smash it with a hammer."**
>
> **Josh Arnold, Pacific Gas and Electric**

"That seems to be a sticky assumption to be making without providing supporting data," he continued, adding that the ISO's Board of Governors had previously said the -$150/MWh floor was appropriate.

Arnold questioned whether the renewables-heavy fleet serving California would change its market behavior as a result of the change, pointing out the difficulty in renegotiating contracts within the timeline of the proposal's implementation. The ISO plans to seek approval from the board this fall, meaning the change could be implemented early next year, pending FERC approval.

"I'm very confused by the way you're going about this," Arnold said. "It seems like you're anticipating an upcoming problem and trying to smash it with a hammer."

CAISO is pairing the bid floor proposal with a plan to no longer exempt load corresponding with self-scheduled supply from being allocated costs associated with uplift payments. The ISO says the latter proposal will further incentivize economic bids over self-schedules and align allocation with cost-causation principles, as self-scheduled generation is also contributing to the oversupply issue.

The ISO is seeking comments on both proposals by Aug. 25 and plans to present a final plan to the board in October.

CAISO NEWS

Berkshire Affiliates Refund $95K After Market-Based Rate Ruling

By Robert Mullin

NV Energy and PacifiCorp returned nearly $95,000 to generation customers after FERC revoked market-based rate authority for Berkshire Hathaway Energy affiliates in four neighboring Western balancing authority areas and imposed cost-based rates.

The refunds were disclosed in confidential documents released under a Freedom of Information Act request by *Clearing Up*, an energy newsletter covering the Pacific Northwest.

The documents show that NV Energy refunded $77,073 — with interest — to its customers, which included about $50,000 to Idaho Power, $20,000 to TransAlta Energy Marketing and $5,000 to Shell Energy. PacifiCorp refunded a total of $17,646.10, including nearly $6,900 to Morgan Stanley Capital, $6,100 to Tucson Electric Power and $3,900 to NorthWestern Energy.

The commission restricted Berkshire's market-based rate authority in June after ruling that the company's affiliates failed to disprove that they collectively exercise horizontal market power in the PacifiCorp East, PacifiCorp West, Idaho Power and NorthWestern balancing areas (ER10-2475, *et al.*).

The affiliates failed the indicative "pivotal supplier" and "wholesale market power" screens for initially assessing horizontal market power in the four regions, as well as a more thorough "delivered price test" analysis designed to enable companies to rebut a presumption of market power. (See *Berkshire Market-Based Sales Restricted in 4 Western BAAs*.)

FERC ordered the Berkshire companies to revise their tariffs for the the four areas and issue refunds for the period between Jan. 9, 2015, and April 9, 2016.

The modest sums involved reflect persistent weakness in regional wholesale electricity prices. A source close to the matter told *RTO Insider* that many of the sales during the period were transacted below Schedule Q — or cost-based — rates because of market conditions.

The expected future impact of FERC's ruling got only brief mention in Berkshire's second-quarter filing with the Securities and Exchange Commission. "The specified [Berkshire] subsidiaries affected in the order do not believe the order will have a material impact on their respective consolidated financial statements," the company wrote.

Nevertheless, Berkshire last month requested a rehearing on the decision, contending that the commission "did not provide sound reasoning, nor did it show a path to how it arrived at its decision." (See *Berkshire Contests Market-Based Sales Restriction in the West*.)

FERC OKs CAISO Energy Storage Rules

By Robert Mullin

FERC last week approved rule changes to improve the ability of energy storage resources to participate in CAISO's markets (ER16-1735).

The changes will allow "non-generator resources" to submit their state-of-charge as a bid parameter in the day-ahead market and manage their own state-of-charge and energy limits for the purposes of bidding into the market.

Non-generator resources are those that can be dispatched to generate, consume or curtail consumption of energy to any operational level within their specified capacity range.

The non-generator resource model is the primary means by which energy storage devices currently participate in CAISO's market, enabling batteries to continuously operate across a range that includes both charging and discharging. For bidding purposes, the ISO assumes that the available energy from a storage resource is a function of the resource's state-of-charge — information the ISO obtains through telemetry.

While that approach is sufficient for real-time operations, CAISO contends that it does not provide a storage resource's scheduling coordinator a "usable" bid parameter for the day-ahead market.

Under current day-ahead bidding practices, CAISO assumes that a resource's initial state-of-charge is the ending value from the previous day's day-ahead award. If there was no such award, the ISO assumes the charge to be 50% of the resource's megawatt-hour limit.

The Tariff change will allow a scheduling coordinator to replace the ISO's assumed state-of-charge values with its own bids "to better reflect actual conditions" for a storage resource, CAISO said in its proposal.

"CAISO contends that non-generator resources choosing to self-manage their energy limits and state-of-charge will be able to maintain their states-of-charge at an optimal level through their bidding strategies, enabling resources to better account for dynamic needs in real time and avoid uninstructed imbalance energy settlements," the commission's order explained.

The commission's ruling will also enable CAISO to implement a mechanism to allow energy storage devices to more effectively participate in the ISO's demand response programs. Those programs measure demand reductions by comparing actual consumption relative to a baseline of expected consumption.

But when demand is offset by a behind-the-meter generation device — such as a storage resource — and "there is no sub-meter to separate consumption and energy produced on site, this approach fails to distinguish the cause of the demand response," the ISO wrote. "The CAISO cannot tell whether the [DR provider] is curtailing consumption or serving its load from a behind-the-meter resource."

To remedy the problem, the ISO consulted with stakeholders to develop special metering methodologies.

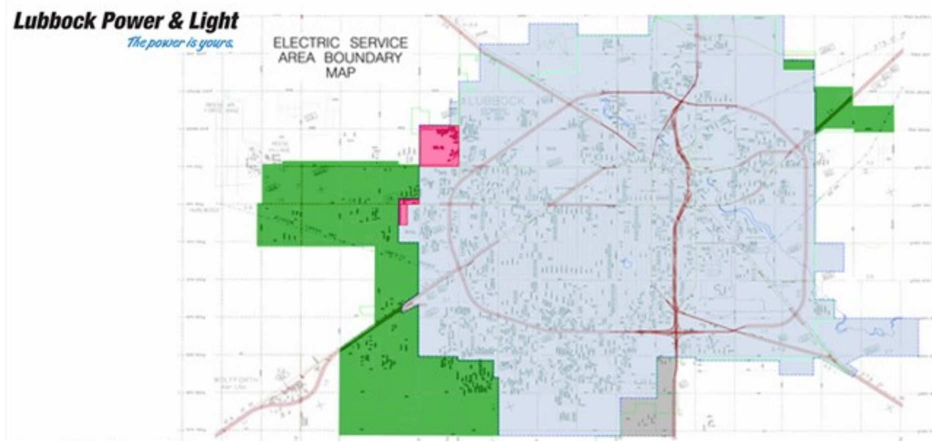
"These performance methodologies will accommodate sub-metering and allow the CAISO to ascertain demand response performance based upon the gross load [of a DR provider] independent of behind-the-meter generation, the behind-the-meter generator output itself or both," the ISO said.

The amendments become effective Oct. 1.

ERCOT NEWS

Texas PUC Grants ERCOT, SPP More Time to Study LP&L Move

By Tom Kleckner



The Public Utility Commission of Texas last week granted ERCOT and SPP staff's request for a five-week extension before reporting back on how they will together study Lubbock Power & Light's planned move to ERCOT.

Commission Chair Donna Nelson acknowledged the complexity of analyzing LP&L's integration into ERCOT and its impact on SPP's neighboring grid. "We have to assume [ERCOT and SPP] are moving as quickly as they can," Nelson said during the PUC's Aug. 18 meeting. "We'll give you this extension, but don't ask for another."

The commission last month detailed specific issues the RTOs should analyze and asked them to produce a study scope before its August open meeting. The PUC has regulatory oversight of ERCOT and would have to approve LP&L's migration to the Texas grid (Docket No. 45633). (See *PUCT Asks ERCOT, SPP to Coordinate on Lubbock P&L Move*.)

ERCOT's director of system planning, Warren Lasher, and SPP's vice president of engineering, Lanny Nickell, responded with a joint letter Aug. 11 saying they were "not yet able" to provide a firm schedule for completing the analyses. They promised a "more definitive response" for the commission's Sept. 22 open meeting.

"At that time, ERCOT and SPP expect to be able to provide more information regarding the coordinated studies, including technical details and a more informed estimate of the study schedule," they said.

"I look forward to hearing from them. Go forth and do good," Nelson said.

According to the letter, staff have met four times since the July 20 PUC meeting, comparing their transmission-planning study processes and discussing study approaches and project schedules. Lasher and Nickell noted the two RTOs have not worked together on transmission-planning studies in the past and said differences in their study processes meant they would not be able to supply the requested details before last week's PUC meeting.

The two officials said the study could be completed as early as the second quarter of 2017.

Last September, LP&L announced its intention to disconnect 430 MW of its load from SPP and join ERCOT in June 2019. An ERCOT study completed in June indicated it will cost $364 million and take 141 miles of new 345-kV right of way to incorporate LP&L.

El Paso Electric, SWEPCO Settlements

In other actions, the PUC approved a settlement with El Paso Electric allowing the utility to build a voluntary community solar pilot program (Docket No. 44800) and a settlement in which Southwestern Electric Power Co. will pay $23,000 for violating reliability and service standards when it fell behind in tree trimming (Docket No. 46117).

The SWEPCO order gave Commissioner Ken Anderson a chance to speak out on one of his pet peeves. "Tree trimming needs to be done on an annual basis," he told SWEPCO representatives. "You're in East Texas, where things actually grow."

PUC staff are working on a study evaluating Texas utility tree-trimming practices.

Cost Allocation for Seams Projects

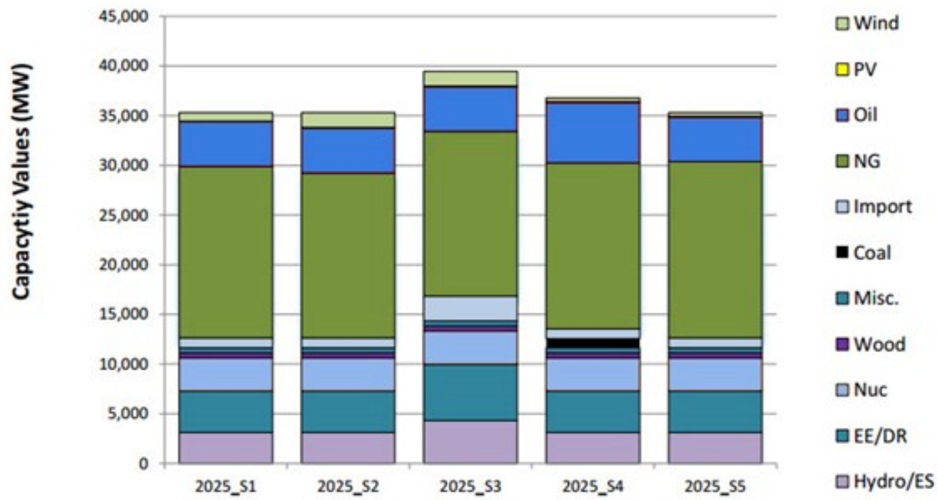
Nelson and Anderson also briefly discussed holding a special meeting involving MISO and SPP staff to gather their input on allocating costs for seams projects. Anderson, a member of the Organization of MISO States, said Missouri representatives have questioned whether the interregional planning changes FERC ordered for MISO and PJM should also apply to MISO's seams with SPP and ERCOT.

Acting on a complaint by Northern Indiana Public Service Co., the commission in April ordered MISO to reduce its minimum voltage threshold for interregional economic transmission projects from 345 kV to 100 kV and to eliminate the $5 million cost threshold for such projects. It also ordered the removal of the requirement for a third, separate benefit-cost analysis for the combined regions (EL13-88). (See *FERC Orders Changes to MISO-PJM Interregional Planning*.)

ISO-NE NEWS

5 Resource Scenarios Presented to ISO-NE Planning Advisory Committee

By William Opalka



Resource mix assumptions, 2025 capacity values (megawatts) *Source: ISO-NE*

WESTBOROUGH, Mass. — ISO-NE last week presented the five scenarios it will evaluate in its 2016 Economic Study, which envisions continued reliance on natural gas, renewables, energy efficiency and demand response.

The RTO is in the early stages of Phase I of the two-phase study, which will look at projected needs for 2025 and 2030.

The draft study will analyze the following futures:

1. The generation fleet meets existing renewable portfolio standards, with natural gas combined cycle units replacing any retiring units and filling any installed capacity requirement shortfalls.
2. The same as Scenario 1 except that all additional capacity needs, including retirements, are met with new renewable/clean energy resources, including nuclear power.
3. The "RPS-plus scenario" assumes additional renewable/clean energy resources above existing RPS requirements.
4. The "no retirement scenario" is the same as Scenario 1, except that RPS requirements are met by renewable/clean energy resources that are interconnected to the system, under construction or approved as of April 1, 2016, with alternative compliance payments — which would support renewable energy projects — used to meet any remaining RPS requirements. Combined cycle plants meet any installed capacity shortfalls.
5. The same as Scenario 4, except that retired units are replaced with combined cycle plants to meet installed capacity requirements.

Most of the scenarios reflect the region's commitment to renewable generation and its shift away from coal and oil. "We see little to no generation from oil-fired units," Michael Henderson, ISO-NE director of regional planning and coordination, told the Planning Advisory Committee on Wednesday.

In Scenarios 1, 4 and 5, fossil-steam resources burn oil, coal and natural gas at existing locations. Scenarios 2 and 3 have very large amounts of zero-dispatch-cost resources such as wind, energy efficiency and solar photovoltaic. And while Scenario 3 adds new import capability, energy imports are about the same as the other scenarios for 2030 because of the large-scale addition of zero-cost resources.

That is especially pertinent following Massachusetts' approval of legislation requiring the procurement of large amounts of Canadian hydropower and offshore wind. (See *Massachusetts Bill Boosts Offshore Wind, Canadian Hydro*.)

Phase I will consist of traditional economic study analyses, with an emphasis on production costs.

Phase II will supplement Phase I by discussing several market and operational issues, including Forward Capacity Auction clearing prices, intra-hour ramping, regulation and reserve requirements and access to natural gas.

A draft report is expected to be completed in the fourth quarter.

Massachusetts Supreme Court Vacates EDC Pipeline Contract Order

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the order last year in response to the Department of Energy Resources' request for an investigation into how the state could add more pipeline capacity, an issue that has lingered since the polar vortex of 2014. The order was challenged by ENGIE Gas & LNG and the Conservation Law Foundation.

The Supreme Judicial Court determined that state law, dating back to 1926, precluded the DPU from allowing EDCs to enter into contracts for gas capacity.

The DPU argued that language in the 1926 act unambiguously allowed it to approve such contracts. But the court said that the law neither expressly prohibits nor permits the department's order. Instead, it relied on legislative intent for its ruling.

"We conclude that the legislature did not intend to authorize the department to approve the contracts contemplated in its order, but rather intended, with limited exceptions, to regulate the gas and electric utilities differently," the court said.

The court found that the law was enacted at a time when EDCs were being consolidated into large holding companies, provoking concerns about the impact on ratepayers.

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ISO-NE NEWS

Massachusetts Supreme Court Vacates EDC Pipeline Contract Order

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The 1926 law was amended in 1930 to include gas companies because lawmakers "predicted that the same concerns about electric companies would arise with respect to gas companies as well," the court said. It also noted that the state's utilities distribute both electricity and gas.

The court's logic mirrors comments state Attorney General Maura Healey made in June before the order was finalized. "Legislative history also clearly demonstrates that the legislature meant to relate purchases of electricity to electric companies and purchases of gas to gas companies," she wrote.

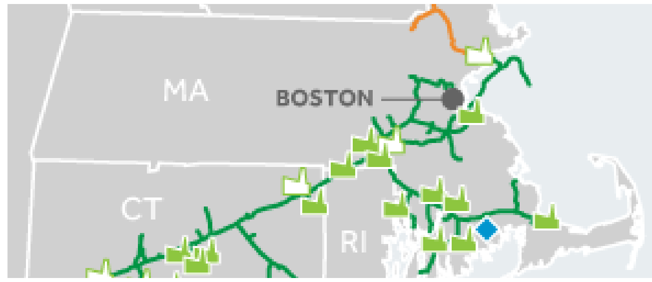
"The court's decision makes clear that if pipeline developers want to build new projects in this state, they will need to find a source of financing other than electric ratepayers' wallets," she said in a statement Wednesday.

Healey also released a study in November disputing the presumption that New England needed additional pipelines to maintain reliability and lower prices. (See *Mass. Attorney General's Study: Pipelines Unneeded*.)

Environmentalists praised the court's decision.

The ruling "will help Massachusetts move more quickly to a clean, renewable energy future," the Sierra Club said. "The $3 billion that would have gone to out-of-state corporations for fracked gas pipelines can now be spent here in Massachusetts on projects such as energy efficiency, energy conservation and clean power sources like solar and wind."

The New England Coalition for Affordable Energy, which advocates for expanded energy infrastructure in the region, called the ruling disappointing, but not surprising.



Access Northeast route *Source: Spectra Energy*

"However, it does not resolve underlying concerns about the region's ability to cost-effectively meet future needs, which we believe requires an integrated approach using both renewable resources and natural gas generation," the group said.

While pipeline proponents were disappointed by the court's ruling, they said they would press on with their attempts to get infrastructure funded and built.

"This leaves Massachusetts and New England in a precarious position without sufficient gas capacity for electric generation during cold winters. The lack of gas infrastructure cost electric consumers $2.5 billion during the polar vortex winter of 2013 and 2014," said Creighton Welch, a spokesman for Spectra Energy, which is developing the Access Northeast project with partners Eversource Energy and National Grid.

"This is a disappointing setback for the project, which is designed to help secure New England's clean energy future, ensure the reliability of the electricity system and, most importantly, save customers more than $1 billion annually on their electricity bills," National Grid said in a statement.

"While the court's decision is certainly a setback, we will re-evaluate our path forward and remain committed to working with the New England states to provide the infrastructure so urgently needed to ensure reliable and lower-cost electricity for customers," Eversource said.

Part of that path is changing its Tariff to allow for targeted capacity releases from natural gas pipelines to be sold to natural gas-fired generators. That proposal, which has been opposed by some power generators, is pending before FERC. (See *Utilities Seek OK for Gas Releases to Generators at Technical Conference*.)

"Massachusetts has some of the highest electricity rates in the nation, and without additional gas capacities and a diverse energy portfolio, the trends will continue to rise over time," said Peter Lorenz, a spokesman for the Massachusetts Executive Office of Energy and Environmental Affairs.

The Massachusetts ruling may have also killed a similar pipeline funding order in Maine. State regulators there last month approved ratepayer financing, provided other New England states followed suit. (See *Maine PUC Endorses Gas Pipeline Contracts*.)

For its part, ISO-NE reiterated it remains neutral on individual projects or how they are financed. But the RTO repeated its position that the region needs gas infrastructure to replace retiring generation and to help balance the increased penetration of intermittent renewable resources.

"The ISO has consistently stated, based on studies conducted for the ISO as well as our operational experiences as the regional power system operator, that we continue to see a need for natural gas infrastructure to ensure continued system reliability," spokeswoman Marcia Blomberg said. "The need will continue to grow as the region transitions rapidly to a power system with decreasing amounts of coal, oil and nuclear power and increasing levels of renewable and distributed energy resources."

"We conclude that the legislature did not intend to authorize the department to approve the contracts contemplated in its order, but rather intended, with limited exceptions, to regulate the gas and electric utilities differently."

Massachusetts Supreme Judicial Court

MISO NEWS

Panelists Envision Low-Carbon Future at MISO Symposium

By Amanda Durish Cook

INDIANAPOLIS — MISO used its first-ever Market Symposium last week to ask industry leaders how a low-carbon environment will influence the electricity market.

Although the discussions produced few specific suggestions on what new rules should be proposed, there was wide agreement that the markets need to become more flexible to accommodate the increase in renewables and distributed resources. The Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) partnered with the RTO in the sold-out event Aug. 18-19.

"We're basically heading off to a situation where there's no trail, and we're going to have to cut through the wilderness for a while," said Michael J. Curran, chairman of the Markets Committee of the Board of Directors. "This [symposium] is a coming together of the community where we're going to have to share ideas. … I look forward to cutting the trail together."

"We have people saying the system cannot do this; the system was not designed for this," said CEO John Bear, commenting on incorporating distributed resources. "That reminds me of what people used to say about wind. … We can solve these problems. We can look at what we're doing in the control room."

MISO's wind generation has grown exponentially since 2005, when it totaled only 500 MW. A decade-plus later, the RTO has 15 GW of wind.

MISO CEO John Bear © *RTO Insider*

Gas the 'New Coal'

Tom Doughty, vice president of customer and state affairs at CAISO, spoke about the challenge of meeting California's mandate of 50% renewables by 2030.

Doughty said wind and solar will be a "massive element" by then.

"We're in a race now to meet the mandates and accomplish our state's objectives," he said. "But that race must be run carefully to avoid placing additional costs on consumers."

Eric Schubert, regulatory affairs advisor at BP Energy, said the growing role of natural gas will require investments in firm transport, storage and long-term contracts.

With gas-fired generation having to manage peak loads in the morning before the sun rises high and in the evening before the wind picks up, measures are needed to optimize the use of intermittent resources throughout the day, said Scott Harvey of FTI Consulting.

But time-of-use pricing is not the answer, said Cathy Woollums, senior vice president and chief environmental counsel at Berkshire Hathaway Energy. "How are you going to tell someone not to do their laundry at 10 in the morning or they're going to pay more?" she said. "We can't switch overnight to looking at something brand new."

Paul Mitchell, CEO of Energy Systems Network, said the transition could be eased by Internet-connected devices, which can receive signals to temper energy use when demand is high.

Roles for Energy Storage

Mitchell also touted the "endless" applications of energy storage, which can be integrated into the grid "at all different layers and levels."

"The markets are going to have to realize that energy storage is not a renewable-based asset like wind and solar," Mitchell said.

Richard Tabors, co-director of the Massachusetts Institute of Technology's Utility of the Future Project, said markets will have to be value-driven instead of cost-driven, so that 200 MW in storage will be compensated based on the energy price when it's consumed. "We're not quite there yet," he said.

"I think the trick for storage and renewables is to have really good forecasting in place so you know when to fill the storage and empty the storage," said Michael Milligan, principal researcher at the National Renewable Energy Laboratory.

Milligan said for wind and solar to be integrated, systems have to be geographically large with very responsive markets — a recognition that has resulted in CAISO expanding beyond state borders with its Energy Imbalance Market.

"It's my sumo wrestler theory of wind and solar integration," Milligan said. "You have to be big and you have to be fast."

Left to right: Tom Doughty, Scott Harvey, Paul Mitchell and Cathy Woollums © *RTO Insider*

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MISO NEWS

Panelists Envision Low-Carbon Future at MISO Symposium

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Terry Oliver, Tim Heidel, Joe Schatz and moderator Jeff Bladen of MISO. *© RTO Insider*

'Unguided Missile'

Doughty said consumer participation in the grid will continue to rise, and CAISO has responded by rolling out two products allowing consumers to enter their solar generation into the market through aggregators.

"On our … 70,000-MW grid, we have 5,000 MW of solar that's invisible to us and undispatchable," he said. "We are very, very much bullish about involving the consumer. Because if we don't involve them, they can become an unguided missile.

"My electric bill last month was $800," Doughty continued. "And I don't have a large home. In California, the [highest electric rates are more than] $0.40/kWh. There's a huge opening for solar. We have a tremendous responsibility to inform customers about their ability to participate in markets."

BP's Schubert said as more wind and solar are added, reserves need to be priced efficiently, or else MISO could find itself in a "binary position" where the marginal cost of wind will be $0/MWh then jump to an offer cap once the breeze stops.

"The beauty of pricing is if you price it right, it will all fall into place because everyone has an incentive," Schubert said.

Research and Development

Several speakers talked about the need to increase research and development.

"The RTO creates value," said David Sun, chief scientist at The Glarus Group. "It's an economic platform that allows us to do things we previously could not. But that platform needs to change. It will do well in the future," but "today we're not doing enough innovative research. We're doing embarrassingly little."

Tim Heidel, program director at ARPA-E, called for a "no-regrets" approach to research and development, in which even failures are celebrated.

"One of the tough technical questions is how do we do that aggregation while respecting the constraints of the market. I think we'll solve that and I think it'll work, but there's a possibility that we uncover another showstopper," Heidel said. He predicted optimization algorithms will be a large part of distributed resource research.

Terry Oliver, chief technology innovation officer at Bonneville Power Administration, said he does not recommend MISO conduct basic research, but it could use its members to collaborate on narrower research topics. He also said the RTO should "free the data" to researchers and pointed out other sources of harvestable data, such as Nest thermostats.

Mitchell said the regulatory structure needs to expand to reflect the electrification of transportation and the role of microgrids and distributed resources. "Industry needs to be defined far more broadly than just RTOs and utilities," he said.

Heidel said the scale of change in the electric system is going to be "huge," pointing out how quickly the industry grew after Thomas Edison built the first central power plant on New York City's Pearl Street in 1882.

"We're going through that magnitude of change again," he said. "Climate change is going to accelerate the rate of this change, and we're going to be playing catch up for years. We're going to get our feet wet in R&D again."

MISO's Melissa Seymour moderates talk with Michael Milligan, Eric Schubert and Richard Tabors. *© RTO Insider*

MISO NEWS

Upper Peninsula Ratepayers to Seek FERC Probe of Billing Fraud

FERC Agrees to Overhaul of MISO SSR Process

By Amanda Durish Cook

Presque Isle *Source: We Energies*

A group of Upper Peninsula electric users plans to ask FERC to investigate Wisconsin Electric Power Co. for allegedly falsifying records to increase its revenues under the Presque Isle power plant system support resource agreement.

"The numbers presented by MISO and WEPCo going back to 2014 were inflated, and part of that was falsifying documents," Todd Chapman, spokesman for Cloverland Electric Cooperative, said Monday.

Chapman said that the organization expects to file a brief later this week or next week detailing the allegations, which were included in Administrative Law Judge Michael Haubner's initial decision last month saying WEPCo had overcharged ratepayers by $17 million over the SSR (ER14-1242-006, *et al.*).

Last week, meanwhile, FERC approved nine out of ten SSR process revisions proposed by MISO.

Consulting Contract Allegedly Backdated

Haubner said WEPCo changed the dates on a $1.4 million consulting services invoice relating to upgrades for EPA's Mercury and Air Toxics Standards at the 61-year-old coal plant. (See *ATC Plan Could Eliminate White Pine SSR; Refunds Coming on Presque Isle?*)

"Evidence shows that the invoice for services was originally executed and sent to WEPCo on Oct. 9, 2014. Then, a WEPCo employee requested the consultant resubmit the invoice with a later date, Oct. 16, 2014," Haubner said.

According to Haubner, the invoice dates were changed after WEPCo learned that a new version of its SSR agreement with MISO would cover costs incurred from MATS upgrades under a revised fixed-cost component. MATS upgrades were ineligible for recovery under the previous SSR agreement.

"This evidence demonstrates that WEPCo changed the date on the consulting services invoice to one day after the replacement SSR agreement became effective. It appears this manipulation was done by WEPCo to include these costs under the later agreement," Haubner concluded.

WEPCo issued a statement insisting the company was not seeking to recover MATS compliance costs through the SSR payments. "Beyond that, the company will not comment on cases currently being litigated. The issues that are in contention in the initial ALJ decision, including this issue, will be addressed by our future filings in this case," it said.

Chapman said the $1.4 million worth of back-dated invoices was "carved out" in the judge's estimated refunds and contributed to Cloverland lowering its expected amount owed to MISO for the Presque Isle SSR to "the neighborhood of $9.8 million," instead of the original $11.7 million, for 2014.

Chapman said Cloverland is waiting on a larger decision from FERC in order to verify the $9.8 million figure.

Cloverland will be joined in its request for an investigation by mining company Cliffs Natural Resources, Upper Peninsula Power Co., paper producer Verso Corp., the City of Mackinac Island and the Sault Ste. Marie Tribe of Chippewa Indians, Chapman said.

If FERC decides to investigate, a probe from its Office of Enforcement could take years, Chapman said.

"None of that is going to wipe it all out and completely dismiss the amount we owe," Chapman said, adding that the outcome of a possible investigation "probably" wouldn't further reduce the amount owed. "If FERC agrees that it was fraudulent, then we're back to the same lower number," he said.

MISO Confused by Refund

Meanwhile, MISO complained in an Aug. 16 brief that Haubner's ruling was inconsistent and confusing.

MISO said Haubner used two "inconsistent" methods to determine variable compensation under the two separate Presque Isle SSR agreements. The RTO also said the judge at times mixed up fixed compensation and clawback values. Finally, MISO said Haubner did not outline a procedure for calculating the total amount owed to ratepayers.

"MISO is unable to determine the amount of refund that should be made by the Wisconsin Electric Power Co.," the RTO wrote to FERC. It also said it "hoped for an initial decision that would contain internally consistent findings that MISO could implement in its role as Tariff administrator."

FERC Accepts Changes to SSR Process

In a related order on Aug. 19 (ER16-1758), FERC accepted nine out of ten SSR process revisions proposed by MISO, which affect the execution, filing and compensation of SSR units.

MISO proposed that while it would still file SSR agreement terms and conditions, SSR owners in "all cases" would make separate filings for compensation. MISO previously only had SSR members resort to a FERC filing when it couldn't agree on compensation.

FERC agreed. "Given that many recent SSR filings have set compensation issues for settlement and hearing procedures, the advantage of requiring that MISO and the market participant undergo preliminary compensation negotiations prior to executing an SSR agreement is limited and outweighed by the administrative burden of conducting such negotiations," the commis-

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Upper Peninsula Ratepayers to Seek FERC Probe of Billing Fraud

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sion said.

The Michigan Public Service Commission supported MISO's proposal, saying it would allow customers and regulators to offer input before MISO and SSR owners reach an agreement.

Chapman said it was better that MISO not take generators' cost numbers at face value. "I think MISO will learn their lesson, but not before this happens again," he said, referring to future coal plant retirements.

Inappropriate Limit

The order also allows MISO to enforce a 30-day notice period before retirement on forced outage units and units that are pseudo-tied out of the RTO. Pseudo-tied units now also have a 36-month maximum suspension period in a five-year time frame before their interconnection service is pulled. Black start-designated units must now fill out an Attachment Y notice, which triggers a reliability study, before retiring. Finally, all retirements can be made public by MISO once their retirement date passes.

However, FERC rejected MISO's proposal that a return to service on a retired former SSR would be defined at the point that the unit re-enters the interconnection queue, saying it would "inappropriately limit" situations where a generator would have to refund certain costs. FERC called MISO's existing Tariff language on refunds "appropriately broad."

Cliffs-WEC Deal

Chapman blames a Michigan exemption that allows mining companies to choose electricity suppliers for the creation of the disputed SSR. Mining company Cliffs Natural Resources took advantage of the exemption, leaving Presque Isle for an estimated $20 million to $30 million annual savings.

"Nobody thought anything of the exemption at first. At the time, it protected the mines, and Cliffs is the largest employer in Marquette," he said.

Cloverland now has a new concern, spawned by Cliffs' announcement last week that it has entered a 20-year power purchase agreement with WEC Energy Group to power its Tilden mine. The contract would result in the construction of two natural gas-fired plants on the Upper Peninsula totaling 170 MW.

He said Upper Peninsula ratepayers would be on the hook if Cliffs should go out of business, as the Upper Peninsula's transmission network isn't able to reliably export power to Wisconsin and the Lower Peninsula.

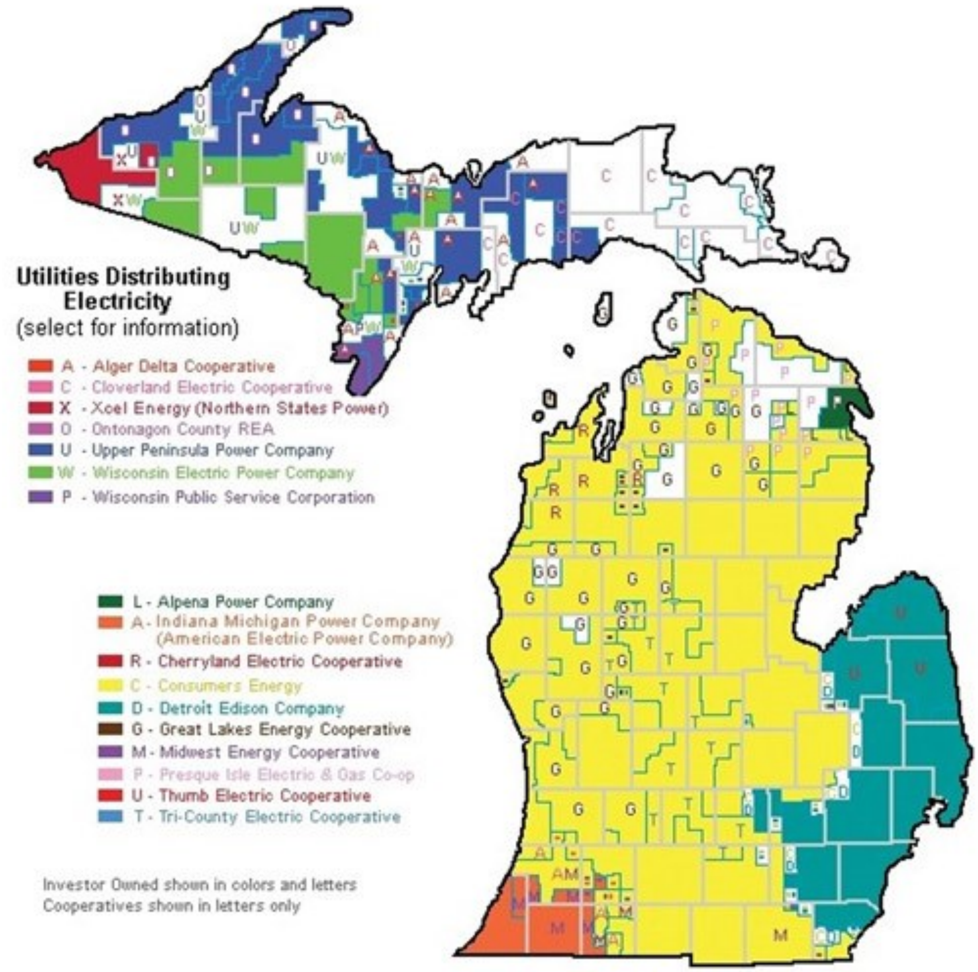
Cliffs CEO Lourenco Goncalves said the new generators are a "strategic energy solution for the Upper Peninsula [that] optimizes affordability and improves reliability for all ratepayers for decades to come."

The $255 million plan will need to be approved by the Michigan PSC.

MISO NEWS

Michigan Asks MISO to Study Tx Links to Ontario

By Amanda Durish Cook



Source: Michigan Public Service Commission

Michigan is asking for another assessment from MISO, this time to study grid improvements across the state's peninsulas and Canada.

The latest request, signed by Gov. Rick Snyder, asks MISO to study the reliability and affordability benefits of transmission and generator expansion in the northern part of the RTO's footprint.

"Since Michigan has some of the highest prices for transmission in the MISO footprint, it makes sense to ask whether, in the long term, we can all spend less while increasing reliability by strengthening our ties to each other and our neighbors," Snyder said.

The Michigan Agency for Energy (MAE) also joined in on the request.

"Michigan is in the middle of a transformation of our energy infrastructure in both peninsulas, and Ontario's generation has changed a great deal, including the area just across the Soo," said Valerie Brader, executive director of the agency, referring to the region encompassing the twin Sault Ste. Marie cities in Michigan and Ontario. "This study will help us identify whether, due to all these changes, there are new opportunities for infrastructure that will make Michigan more adaptable."

MISO spokesman Jay Hermacinski said the RTO has contacted Michigan officials to discuss the governor's request and the state's Aug. 9 call for a reliability analysis that assumes simultaneous outages at the Palisades and Fermi 2 nuclear plants. (See *Michigan Asks: Will the Lights Stay on If Nukes Go Dark?*)

"At this early stage in the process, it is too soon to comment on the substance of requests or to establish a definitive timeline," Hermacinski said.

The new request asks the RTO to study:

- Connecting Sault Ste. Marie, Ontario, to Michigan's eastern Upper Peninsula in Zone 2;
- Strengthening the connection between the Upper Peninsula and the northern Lower Peninsula in Zone 7 at the Straits of Mackinac down to "the northernmost part of the existing 345-kV transmission line near Gaylord, Mich.";
- Production cost savings, reliability, resource adequacy and power flows assuming a large natural gas plant is built in Otsego or Kalkaska County in the northern Lower Peninsula. Michigan officials say that the area is ripe for a natural gas plant, as pipelines and storage in the area have available capacity, and an adequate transmission network exists.

MISO last completed a study of its northern footprint in 2012, but the connections to Canada were not analyzed, MAE said.

This time, Michigan is asking MISO to work with Ontario's Independent Electricity System Operator and pointed out that the province's next Long-Term Energy Plan process begins this summer. Since the 2012 study, the agency said, the area has experienced "significant infrastructure changes" with more to come. The letter points out that "many fundamental characteristics of the Bulk Electric System have evolved over the last five years on both sides of the international border, and change to the system is expected to accelerate within Michigan."

Ontario ended coal-fired generation in 2014. Nuclear power, now 60% of the province's generation output, is expected to drop to 40% by 2025. The province expects to add as much as 3,000 MW of capacity between 2021 and 2032. (See *Ontario: Clean — and Expensive*.)

MISO NEWS

Planning Advisory Committee Briefs

MISO to Give PAC More Consideration in Interregional Process; Stakeholders Wary of PAC Vote in IPSAC

Eric Thoms © *RTO Insider*

MISO said it will work to improve the role of the Planning Advisory Committee in interregional matters following complaints that the committee was hearing after the fact about Interregional Planning Stakeholder Advisory Committees (IPSAC) decisions.

Eric Thoms, MISO manager of planning coordination and strategy, said the PAC's seven voting sectors should decide the RTO's IPSAC vote on study approvals or whether potential interregional projects should proceed to regional review. However, Thoms said those votes should continue to be conducted at IPSAC meetings.

The MISO-SPP IPSAC's nonbinding votes — one vote from each RTO — are taken under advisement by the MISO-SPP Joint RTO Planning Committee, a group of RTO staffers that has ultimate say over what interregional issues the RTOs pursue.

For interregional matters involving PJM, the PAC will continue to provide advice and recommendations to MISO planning staff participating in the MISO-PJM Joint Planning Committee. No votes are conducted in the MISO-PJM IPSAC.

To become more proactive, MISO plans to make presentations to the PAC on issues scheduled at subsequent IPSAC meetings. "We need to do our due diligence to get out in front of PAC with a list of issues that we're going to present," Thoms told the committee during an Aug. 17 meeting. "We will give you forewarning in person. We need to come in front of you with these topics beforehand."

Transmission Owners sector representative Cynthia Crane expressed reservations with the PAC's vote being conducted in the IPSAC where she said a different set of stakeholders are in attendance. She said fewer sector representatives typically attend IPSAC meetings versus the PAC.

"I think you may end up with a different vote. I have some concerns," Crane said.

PAC Chair Bob McKee agreed with the voting concern. "It's tough to have this sort of conversation in front of a different body," he said.

Sean Brady of Wind on the Wires asked for a timeline on what interregional efforts MISO is undertaking, such as scopes, study and approval processes. Thoms said he would take the comments under advisement.

MISO-SPP Coordinated Study Focusing on 5 Interregional Areas in Dakotas

Thoms also said MISO is proposing to look at five needs in its coordinated study with SPP, focusing on potential project spots along its seam with SPP's Integrated System in North Dakota, South Dakota and Iowa. The study is currently expected to last through April. The final scope discussion is expected at the Sept. 7 joint meeting with SPP.

"Once we identify the needs, we can hit the ground running," Thoms said.

Adam McKinney of the Missouri Public Service Commission questioned why MISO would embark on this study when it couldn't approve a single interregional project after the 2015 study. (See "MISO Rethinks Coordinated Study with SPP," *MISO Planning Advisory Committee Briefs*.) He likened it to an ill-matched girlfriend and boyfriend getting married. "It's like if I go on a trip with my girlfriend for three days, and we can't stand each other, then we decide to get married for five years," he said.

McKinney also said he didn't want smaller projects set aside in a quest to identify larger projects only. "I want my smaller problems fixed, and I don't want them ignored in some big overlay bonanza."

Thoms said that threshold for conducting regional reviews of projects with SPP is low: a requirement to reduce congestion by 5% or more on either side of the seam.

This newest study will take place as MISO considers making changes to align its study timeline with SPP and scrapping the "triple hurdle" of interregional and separate regional reviews of joint projects. (See *MISO, SPP Disagree on 2016 Joint Study*.)

Thoms asked for stakeholder feedback on the coordinated study by Aug. 24.

He also told stakeholders that MISO and PJM are working on a cost allocation method for a new project type: targeted market efficiency projects, short-term projects of $20 million or less to relieve congestion. (See *MISO, PJM Unveil JOA Process for 'Targeted' Market Efficiency Projects*.)

Thoms said MISO will report to the PAC once it determines how to split costs within the RTO. "We haven't quite figured out the cost allocation yet," Thoms said.

Longer, More Detailed Tx Overlay Study in Works

Citing a changing resource mix, MISO this year has set out a more detailed regional transmission overlay study, which identifies transmission needs and the most efficient solutions.

MISO said the draft scope for the multi-year study will use the three futures developed for MISO's 2017 Transmission Expansion Plan (MTEP) to "identify regional needs and develop long-term overlay roadmaps." (See *MISO Proposes 3 New MTEP 17 Futures*.)

MISO plans to finalize the overlay scope at the Sept. 21 PAC meeting.

The study will result in a list of regional transmission needs by the end of 2017 and identify transmission project candidates in 2018. In 2019, MISO envisions setting up business cases and cost allocations on selected projects.

McKee said the overlay scope resembled the vetting process for the market efficiency project (MEP) and multi-value project (MVP) portfolios.

PAC liaison Jeff Webb said the overlay may fit some of the MEP and MVP criteria as MISO's changing fleet is driving a more

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detailed study.

"It's not something we ought to do every year, but our fleet is changing," Webb said. "If it looks similar, that's because it is, but I don't want to judge it just yet. Let's see what the analysis shows. … We haven't done the analysis yet so let's not get ahead of ourselves."

$104 Million in MISO South Projects Recommended to Board

MISO's Market Congestion Planning Study has identified five projects totaling about $185 million to recommend to its Board of Directors.

Arash Ghodsian, of MISO's economic studies department, said four of the five projects being submitted for recommendation are in MISO South. The four are spread across Arkansas, Mississippi, North Louisiana and Southeast Louisiana, and Ghodsian said none of them meet the 345-kV voltage threshold to become an MEP:

- The $7.6 million, 6.5-mile long rebuild of the Trumann–Trumann West 161-kV line in Arkansas comes with a benefit-to-cost ratio of 13.36 and an estimated 2018 in-service date.
- The $6.7 million relocation of the existing 500/230-kV Lakeover transformer near Jackson, Miss., has a 1.43 B/C ratio and is estimated to be in service by 2020.
- Upgrading the Minden–Sarepta 115-kV terminal equipment in northern Louisiana will cost about $1.9 million with a 1.83 B/C ratio and is estimated by 2020.
- The construction of a new 230-kV transmission line and substation south of the existing Ninemile substation in Southeast Louisiana will cost about $88 million and have a B/C ratio ranging from 1.96 to 3.42 with an in-service date by 2022.

Ghodsian said the projects will be reviewed to see if any should be expedited.

Zheng Zhou, with MISO's economic studies department, said the RTO also intends to recommend the $81 million Huntley–Wilmarth 345-kV line project from Minnesota to Iowa as an MEP in MISO North. The line, expected to be in service in early 2022, comes with a 2.02 B/C ratio.

Zhou said stakeholders generally supported the Minnesota project.

PAC liaison Jeff Webb said if the projects are approved by the board, they will move into MTEP 16.

Arash Ghodsian © *RTO Insider*

MISO asked stakeholders provide opinions on the five projects to the Economic Planning Users Group by Aug. 24.

MISO: MVP Savings Top $10 Billion

MISO says it received $10.5 billion to $35.8 billion in net benefits from in-service MVPs since authorizing them in 2011.

The results are part of MISO's second annual limited review of MVPs. The RTO said congestion and fuel savings account for 75% of overall MVP benefits.

Davey Lopez, MISO advisor of planning coordination and strategy, said the MVP B/C range is about 2 to 2.7, in line with expectations when the RTO approved the 17 MVP projects in 2011.

— Amanda Durish Cook

11 Developers Vie for MISO Duff-Coleman Project

Eleven respondents have submitted proposals for MISO's Duff-Coleman transmission project, the RTO's first competitive project under FERC Order 1000.

MISO said Friday that all 11 proposals were judged complete.

"Now that we have finalized our review of the proposals for purposes of completeness, we will begin evaluating the proposals based on the criteria set forth in the MISO Tariff and our Business Practices Manual," said Priti Patel, MISO North regional executive and executive director of the RTO's competitive transmission administration.

MISO identified the developers as:

- Ameren Transmission Company of Illinois and PPL TransLink;
- Duke-American Transmission Co.;
- Edison Transmission;
- GridAmerica Holdings;
- ITC Midcontinent Development;
- Midcontinent MCN, with the Missouri Joint Municipal Electric Utility Commission;
- NextEra Energy Transmission Midwest;
- Republic Transmission, a subsidiary of LS Power Transmission, with Big Rivers Electric;
- Vectren Energy Delivery of Indiana, a unit of Southern Indiana Gas and Electric, and Public Service Enterprise Group;
- Transource Energy, a partnership between American Electric Power and Great Plains Energy, with subsidiaries Transource Indiana and Transource Kentucky; and
- Xcel Energy Transmission Development.

The request for proposals window on the project opened in January and closed early last month. (See *MISO Duff-Coleman RFP Deadline Passes; RTO Reviewing Bids*.) The $67.4 million project was approved by the MISO Board of Directors as part of the 2015 MISO Transmission Expansion Plan.

MISO expects to announce its selection no later than Dec. 30. Construction on the pair of substations and the 28.5-mile 345-kV connecting line in Southern Indiana and Western Kentucky is expected to last through 2020, with the line in service by the beginning of 2021.

— Amanda Durish Cook

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MISO: Retirement Coordination with PJM Possible Without Tariff Revisions

MISO is working to coordinate its generator retirement studies with PJM without changing the RTOs' Tariffs.

"We're not going to overhaul the individual Tariffs," Neil Shah, MISO advisor of seams administration, said during an Aug. 16 meeting of the Planning Subcommittee. "The coordination will align to the extent possible with the Tariffs. We don't see the need to change anything in the Tariff requirements just yet."

FERC ordered that MISO coordinate its generator retirement studies with PJM in response to a complaint by Northern Indiana Public Service Co. (EL13-88). (See "MISO Outlines Work Plan for PJM Retirement Coordination," *MISO Planning Subcommittee Briefs*.)

Shah said MISO will continue to exchange retirement notification and study information with PJM. "We've been doing that before the FERC order came out, so there's nothing new there," he said.

MISO is proposing to consult with PJM on how it uses its 30-day window to study generators seeking deactivation for adverse reliability impacts so MISO can consider incorporating those methods in its own reliability impact studies. MISO also wants to exchange study models with PJM as they are updated.

Shah also said MISO plans to use the Interregional Planning Stakeholder Advisory Committee to discuss impacts to the RTOs and analyze upgrades proposed in place of the retiring generator.

Shah said MISO's suggested approach allows for RTOs to conduct their own studies "with inputs and common assumptions of adjacent system conditions."

He said MISO will comb through the RTOs' joint operating agreement to see if any language needs to be revised to include the proposed coordination. MISO is asking for stakeholder feedback on its proposal by Sept. 7 to shape the draft JOA language. Before then, stakeholders will offer opinions on the JOA language at a Nov. 15 Joint Common Meeting. A final filing in the NIPSCO order is due Dec. 15.

Shah said a key difference between the RTOs' retirement obligations is that PJM cannot force a resource owner to stay online, while MISO can order system support resource agreements.

The RTOs' retirement timelines are also mismatched. PJM requires 90 days' notice before retirement while MISO requires twice as long.

Shah also noted that MISO keeps retirement information confidential unless there's a need for SSR designation while PJM announces retirement notifications.

"That's not as much of a concern," Shah said of addressing the confidentiality issue.

Possible MISO-PJM Joint Model in Works

In the NIPSCO ruling, FERC also ordered MISO to explore the potential for a joint regional model with PJM with the same assumptions and criteria to coordinate the two regional transmission planning processes.

MISO started the process at last week's subcommittee meeting by asking stakeholders to envision what a MISO-PJM joint model would look like.

MISO engineer Adam Solomon said it is possible to model power flow and economic models that contain both MISO and PJM assumptions. However, Solomon said MISO is opposed to creating common assumptions such as production cost models.

"Our approaches are so different that it doesn't make sense," he said.

An informational filing on a possible joint model is due Oct. 18. Solomon said MISO isn't certain of the action it would have to take after that.

"If [FERC] likes our answer, they might require us to incorporate some of the things into our joint operating agreement, but for now, it's just informational," he said.

MISO Releases Minimum Requirements for Competitive Tx Projects

MISO released the first revision of Business Practices Manual 029, which governs requirements for competitive transmission projects.

MISO principal adviser Matt Tackett said the Minimum Design Requirements Task Team added minimum normal rating requirements that borrow from current minimum emergency ratings. Tackett also said the manual includes a default table for minimum transmission circuit ampere ratings.

"The biggest trick was coming up with a default table based on typical percentages," Tackett said.

MISO has also developed what it calls adequacy validation ratings to verify that the circuit conductors specified by developers provide adequate load capacity.

The ratings factor in wind speeds along with ambient temperatures. MISO North assumes an ambient temperature of 35 degrees Celsius in the summer and 0

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degrees in the winter; all other MISO regions will use 40 degrees Celsius in the summer and 10 degrees in the winter.

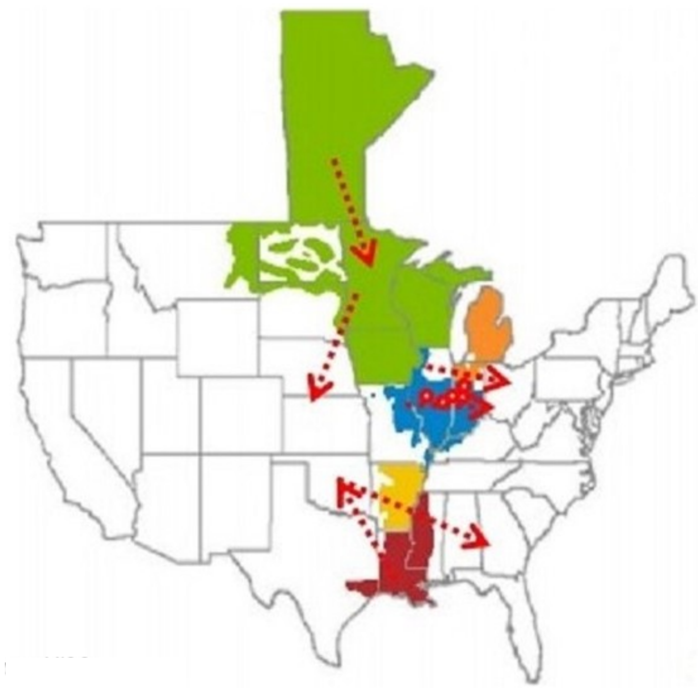
Tackett said BPM 029 will undergo more refinements based on stakeholder feedback before another presentation at the October PSC. It is set to become effective in January.

Meanwhile, Tackett said BPM 020, which guides use of non-transmission alternatives and describes how storage can qualify for interconnection, needs another monthlong round of vetting in the subcommittee before final language is reviewed before the Planning Advisory Committee.

Transfer Limits Range from 1,400 to 4,500 MW in MTEP16 Analysis

MISO senior engineer Scott Goodwin announced preliminary linear thermal limits for MISO's 2016 Transmission Expansion Plan transfer analysis:

- MISO North to SPP has a transfer limit of 3,600 MW;
- Two paths from Manitoba Hydro to MISO North have limits of 1,400 MW or greater;
- MISO North to PJM Ohio has a limit of 4,000 MW;
- Limits from Missouri and Illinois to PJM Ohio range from 2,800 to 3,600 MW depending on different contingencies;
- SPP to Southern Co.'s territory has a limit of 4,100 to 4,500 MW depending on different contingencies; and



MTEP16 transfer studies *Source: MISO*

- MISO South to SPP has a limit of 1,800 MW.

Goodwin said the transfer limit results will be finalized by the middle of September and MISO will report final numbers in October.

– Amanda Durish Cook

Vice President of Finance Biggers Exits MISO

Vice President of Finance Jo Biggers has left MISO after 16 years, the RTO announced last week.

MISO said Biggers exited her position "to pursue other opportunities" and that it is beginning a search for a replacement. Biggers was responsible for procurement, facilities, accounting and FERC financial reporting. She joined MISO in August 2000, remaining in the same position throughout her tenure.

Until a replacement is found, MISO has delegated corporate service tasks to Senior Vice President of Compliance Services Steve Kozey. Finance and corporate planning responsibilities will be handled by Vice President of Strategy and Business Development Wayne Schug.

MISO declined to comment further on the departure. Beyond its short announcement, spokesman Jay Hermacinski said the RTO did not "have anything else to add." Biggers could not be reached for comment.

– Amanda Durish Cook

Biggers with MISO CEO John Bear *Source: MISO*

NYISO NEWS

Marketers Seek Rehearing on NY Low-Income Moratorium

By William Opalka

The National Energy Marketers Association has asked for a rehearing of New York regulators' moratorium on the enrollment of low-income customers by energy service companies (98-M-0667).

The New York Public Service Commission last month imposed the moratorium because stakeholders were unable to reach a consensus on reforms. (See *NYPSC Declares Moratorium on Low-Income Sign-ups*.)

In a petition filed Aug. 15, NEM said regulators violated stakeholders' due process rights by adopting the moratorium without notice, violated state law and made other procedural errors.

State law "does not grant the commission authority to institute a moratorium on ESCO service to low-income customers," the petition states.

NEM cites the same procedural mistakes the commission made in its February order attempting to revamp ESCO practices for customers not receiving public assistance. A state Supreme Court justice ruled that the PSC failed to give adequate notice. (See *New York ESCO Order Vacated by Court*.)

"The July order erroneously concludes that low-income consumers should not be permitted to make their own energy purchasing decisions," the petition says, calling the PSC's action "unfounded and [a] paternalistic view of low-income consumers'" shopping decisions.

The petition also asks for a clarification of the order, saying it fails to address how and under what circumstances the moratorium would be lifted.

"Despite the intention expressed that the moratorium be temporary in nature, the order itself provides no detail of the circumstances or timeline under which it will be lifted. NEM recognizes that the resolution of other related proceedings potentially impacts the duration of any moratorium," NEM wrote. "However, ESCOs should be provided with some guidance and regulatory certainty about the potential duration of the moratorium in order to properly inform their decisions about serving New York state customers."

FitzPatrick Sale Filed with New York Regulators

By William Opalka

Entergy and Exelon filed a petition with New York regulators Monday seeking approval of Exelon's $110 million purchase of the James A. FitzPatrick nuclear plant (16-E-0472).

The companies asked the Public Service Commission to approve the acquisition by Nov. 18. The PSC has a regularly scheduled meeting on Nov. 17.

"Prompt approval is warranted here because ... the transfer does not raise any issues regarding retail energy sales to captive ratepayers, it does not raise any market power concerns in the competitive wholesale markets in New York or the adjoining regions and it is consistent with commission precedent," the companies said.

The petition says an "investment decision" on refueling the plant must be made soon, as FitzPatrick's current fuel cycle is expected to end about Jan. 31, 2017.

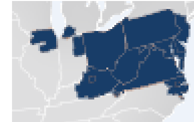
Entergy said last year it would close the money-losing plant in early 2017. Exelon agreed to purchase the generator after the PSC adopted a subsidy for the no-carbon emission attributes of nuclear power. (See *Entergy Sells FitzPatrick to Exelon*.)

FitzPatrick, which produces an average 7 million MWh annually, is licensed to operate through 2034.

If approved, Exelon would own all of the upstate nuclear fleet in New York: FitzPatrick, R.E. Ginna and Nine Mile Point 1 and 2. They total 2,267 MW, or 5.9% of the generating capacity in NYISO, according to the companies.

Entergy would still own the only other nuclear plant in the state, Indian Point in the Lower Hudson Valley.

PJM News



Co-ops, Munis Call for Reset of PJM Capacity Model

Continued from page 1

New Jersey.

Also part of the coalition are the dominant utility in PJM's largest vertically integrated state, Dominion Virginia Power, and retailer Direct Energy.

Although the initiative is likely to be greeted coolly by many, it has a good chance of winning the majority support needed to proceed because PJM stakeholders rarely reject problem statements.

But how AMP and its supporters would build a larger coalition to replace the RPM — or what that replacement would look like — is far from clear.

Winning approval for Tariff changes would take a two-thirds sector-weighted vote at the MRC and Members Committee. The current coalition includes 31 of 43 members of the Electric Distributors sector but only one of 13 Transmission Owners, one of 353 Other Suppliers and none of the 23 End Use Customers or 90 Generation Owners.

PJM's public power members have long complained that they could meet their capacity needs more cheaply through self-supply than through the RTO's capacity auctions. AMP said the restoration of public power systems' ability to self-supply is a "minimum step to reform the capacity construct." (See *Capacity Market Attracts Praise, Criticism at FERC*, "APPA, ISO-NE Spar on Capacity Markets," *NARUC 2016 Winter Meetings Briefs*.)

Neither the problem statement nor the proposed issue charge suggests any broader solution.

But in a press release quoting from her comments at PJM's Grid 20/20 conference Thursday, Lisa McAlister, AMP's deputy general counsel for FERC/RTO affairs, outlined some options.

"PJM could still specify resource adequacy requirements for its footprint and local distribution companies of concern. The load-serving entity or electric distributor would be responsible for securing its peak load obligation plus a predetermined reserve margin and would face significant penalties absent securing the capacity," McAlister said. "These LSEs/EDs could procure bilaterally resources on a long-term portfolio basis in compliance with a state's resource adequacy requirements. PJM could conduct a residual auction to accommodate supply that did not enter into a long-term arrangement."

The RPM, which took effect June 1, 2007, replaced PJM's voluntary Capacity Credit Market, which produced less than 10% of PJM's total capacity obligation. It was based on daily market clearing prices that were uniform across the RTO's footprint.

The "original CCM did not include explicit market power mitigation rules, provided only weak performance incentives and did not permit the participation of demand-side resources," according to a 2008 report by The Brattle Group. Prices were generally below the cost of adding new capacity and did not recognize the higher value of capacity in import-constrained areas in eastern PJM.

FERC ordered PJM to develop a replacement in April 2006.

The RPM, the product of more than two years of stakeholder negotiations, introduced the three-year forward auction with a downward sloping demand curve, locational pricing and included stronger performance incentives and market power protections. It allowed direct participation of demand-side resources and mandated participation by load.

More than 65 parties took part in FERC-mediated settlement discussions that resulted in the December 2006 RPM order (ER05-1410-001, *et al.*).

In the years since, AMP and its allies say, the RPM has proven it lacks the resilience to accommodate "unforeseen events."

AMP counts "24 significant filings" to modify the RPM since 2010. "According to PJM, the 2016 [Base Residual Auction] was the first BRA with no rule changes from the prior year," the problem statement says.

The new Capacity Performance construct was a reaction to the January 2014 polar vortex, when forced outages exceeded 20% and PJM nearly fell short of meeting its load. CP pays generators bonuses for fulfilling their delivery commitments when the system is stressed and charges them increased penalties when they fail to perform as agreed.

Opposed by environmentalists and demand response supporters for its phase out of summer-only resources, it's the subject of a challenge before the D.C. Circuit Court of Appeals.

AMP says the RPM continues to be beset by threats such as the subsidies FirstEnergy and American Electric Power have sought for their money-losing plants in Ohio. EPA's Clean Power Plan could provoke further changes, AMP says.

The proposed Ohio subsidies have spawned calls to extend the minimum offer price rule — currently applied only to new gas-fired generators entering the capacity auction — to existing units.

McAlister said that would be a mistake. "Public power does not want to be a source of increased capacity prices as a result of being considered subsidized because we have a lower cost of equity than an administratively determined reference resource," she said.

"Capacity Performance was particularly stressful to the stakeholder community due to the inclusion of operational performance requirements, a paradigm shift for seasonal resource participation and a near complete unwind of the market mitigation rules surrounding offer caps, all of which were enacted in an expedited timeframe," the problem statement says. "PJM needs a resource adequacy construct that is sufficiently robust to be reasonably able to withstand unforeseen exogenous events absent significant and reactionary rule change."

The issue charge proposes that work on the overhaul be performed by a new Capacity Market Construct Restructuring Senior Task Force reporting to the MRC. The group hopes to complete the work by the end of the third quarter in 2017.

McAlister suggested the effort could be successful even if the group doesn't win a complete overhaul.

"While the PJM stakeholder process attempts to achieve consensus, it also … provides an opportunity for minority views to be heard and ultimately enables the PJM board to be better informed as it decides how best to proceed."

PJM NEWS

PJM's Grid 20/20 Ponders Mixing Public Policy, Competitive Markets

Recipe for Indigestion?

By Suzanne Herel

PJM's Craig Glazer likened the pricing of power to apples at Grid 20/20. *Source: PJM*

VALLEY FORGE, Pa. — After PJM's Craig Glazer started with the food analogies, speakers at Thursday's Grid 20/20 symposium couldn't resist serving up a smorgasbord of edible metaphors.

Glazer, vice president of federal government policy, kicked off the conference, "Focus on Public Policy Goals and Market Efficiency," talking about apples as a stand-in for power. To the laughter of the overflow audience, a slide depicted a grocery store display pricing the fruit to reflect subsidies (49 cents), subject to partial FRR adjustments (58 cents), MOPR'D per PJM rules (60 cents) and cleansed of all subsidies (65 cents).

Currently, the recipe for competitive markets doesn't call for carbon reduction, the preservation of jobs and tax bases, or the retention of uneconomic plants, he said. But these are among the public policy goals that some states are looking to achieve.

"A state could say, 'Just add my one little ingredient,'" Glazer said. "The result isn't just the most efficient solution for state A. Everybody gets it. How do we not force it on states B and C, who haven't authorized us to put that ingredient into the blender?"

Symposium Follows PJM Study

The topic for the confab grew out of a controversial white paper PJM published in May, "Resource Investment in Competitive Markets." (See *PJM Study Defends Markets, Warns State Policies can Harm Competition*.)

Penned amid efforts by money-losing coal-fired generators in Ohio and nuclear generators in Illinois to win state-backed subsidies, the report concluded that PJM's markets efficiently manage the entry and exit of capacity resources, but they could be hamstrung by policies to protect social, economic or political interests.

The study drew a volley of critical correspondence to the Board of Managers from generators who said it presented a skewed view of the risks and benefits associated with competitive markets as compared with the traditional regulated model. (See *Generators Rebut PJM Study on Investment in Competitive Markets*.)

The subject incited just as lively of a debate at last week's forum, which consisted of three panels: defining the problem, discussing traditional responses and studying alternative solutions.

Tony Clark: 'A Real Challenge'

FERC Commissioner Tony Clark, who will be leaving his post next month, delivered the opening remarks. Clark said that integrating public policies into competitive markets has become an increasing challenge for regulators.

"It's going to be at the core and heart of what FERC is doing over the next several years and what states are going to be doing," he said. "It's going to last long past the next six weeks of my tenure, I can guarantee that."

Although FERC's job is not "passing philosophical judgement" on state policies, he said, those policies impact the commission's jurisdiction over wholesale markets.

"We have the responsibility for just and reasonable rates," he said. "There may be an iterative process where we try to set the boundaries and bumpers around what is permissible and what is not. But it's not going to be an easy process."

Even states that share a goal — such as the nine in the Regional Greenhouse Gas Initiative — can have differing ideas of how to reach the objective, said Marc Montalvo, president of Daymark Energy Advisors, who spoke with Glazer on the first panel.

State policies also can have unintended consequences, he said, citing the challenges faced by California and Hawaii, which are chasing ambitious renewable power goals.

"Every last region inside of the country is wrestling with the same issues. We want to make sure we're doing smart investments, protecting consumers, respecting competitiveness," he said. "All of us who are working in the markets are trying to figure a way to

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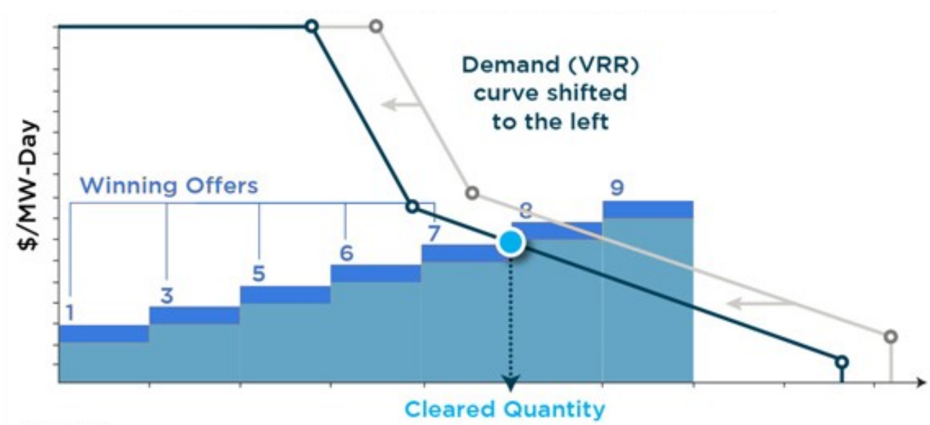

Subsidized supply offers and equivalent demand removed *Source: PJM*

PJM's Grid 20/20 Ponders Mixing Public Policy, Competitive Markets

Left to right: Hung-po Chao, PJM; Lisa McAlister, AMP; James Wilson, Wilson Energy Economics; Steve Schleimer, Calpine; Susan Bruce, McNees Wallace & Nurick; Joe Bowring, Monitoring Analytics
© RTO Insider

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mix that batter up to make a delicious pancake."

How Can PJM Markets Change?

The second panel was led by Hung-po Chao, senior director of economics for PJM. Panelists were Independent Market Monitor Joe Bowring; Steve Schleimer, senior vice president of government and regulatory affairs for Calpine; Susan Bruce, an attorney representing the PJM Industrial Customer Coalition; Jim Wilson of Wilson Energy Economics; and Lisa McAlister, deputy general counsel for American Municipal Power.

"The competitive wholesale market was designed to address and ensure reliable supply and an efficient market that includes resource adequacy issues," Chao started off. "It was not designed to accommodate many other social objectives, like a clean environment. Here the question is: As these policy challenges are upon us, are there things that the PJM electricity markets can change to accommodate positive externalities?"

Playing off of one of Glazer's analogies, McAlister said that just one kitchen tool — a blender — can't make every dish.

"Unlike a real competitive market, the current PJM capacity construct is not sufficiently robust to accommodate unforeseen events," McAlister said. "Adding another tweak to the 24 major adjustments since 2010 will only add another layer of complexity and uncertainty. It is time to look at simpler constructs that would be more resilient in the face of constant change."

At Thursday's Markets and Reliability Committee meeting, AMP's Ed Tatum will be seeking support for an initiative to consider an overhaul of the capacity market. (See related story, *Co-ops, Munis Call for Reset of PJM Capacity Model*, p.1.)

Wilson agreed that changes to the capacity market are needed.

PJM's changing resource mix is creating a need for flexible capacity, he said. "All of that is valued properly in the energy and ancillary services markets," he said, but not in the capacity market.

Schleimer took a different view, saying that without the capacity market, there would be no independent power producers, and consumers would be shouldering the risk of building generation under state integrated resource plans.

"When you have more apples on hand than you will ever need, costs are always going to be low. You can either have an energy market with scarcity pricing, or you can have a capacity market to allow investors a reasonable opportunity to recover their capital," he said. "Where do we want to end up 10, 20 years from now? In a world where new investment is only made from rate base?"

> **"Unlike a real competitive market, the current PJM capacity construct is not sufficiently robust to accommodate unforeseen events."**
>
> **Lisa McAlister, American Municipal Power**

"I don't know if we have a strong view decided on this because it's such a difficult question and the history of this issue is so important to it," responded Bruce.

She recalled 1997, when Pennsylvania's Electricity Generation Choice and Competition Act went into effect. "The ideas of markets and shifting the risk away from customers was something attractive to industrial customers," she said. "The driver was to reduce cost, reduce risk for customers."

The Origin of the Markets

Bowring agreed. "The markets have worked very well. You have to remember where restructured markets came from — they're an alternative to a regime in which public utilities commissions made decisions, many opaque, various policies of many kinds," he said. "It was a conscious decision to move to markets."

He said there exist ways aside from subsidies to achieve public policy goals. For example, he said, "If you want to deal with carbon, have a carbon price; don't subsidize nuclear, have a carbon price."

He was referring to New York's recent adoption of the Clean Energy Standard, which includes a zero-emission credit for struggling nuclear power plants. (See New York Adopts Clean Energy Standard, Nuclear Subsidy.)

"Markets can't handle the recent attempts to intervene in the market in Ohio on behalf of companies that wanted subsidies in their favor," Bowring said. "That's fallen by the wayside for various reasons, but we do need tools to address that type of intervention. We need to continue to react to change. The market has to be flexible, and the market designers have to be flexible.

"The reason we have markets is to provide

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PJM NEWS

PJM's Grid 20/20 Ponders Mixing Public Policy, Competitive Markets

Continued from page 23

power to customers at the lowest possible [cost]. We have to be careful not to let other aspects of the debate interfere with that or undermine them. Markets are more fragile than we all think, and they could go away fairly easily."

Capacity Market at Risk?

The third panel, moderated by Vince Duane, PJM's senior vice president for law, compliance and external relations, hosted William Berg, vice president of wholesale market development for Exelon; Peter Fuller, vice president of market and regulatory affairs for NRG Energy; Stu Bresler, PJM's senior vice president of operations and markets; Raymond DePillo, senior director of market development for PSEG Energy Resources and Trade; and John Moore, senior attorney for the Sustainable FERC Project.

Asked if the capacity market is at risk, Bresler said, "I certainly think a do-nothing approach going forward puts the goals of the markets in general at risk. The risk of a do-nothing approach is a detrimental effect on the long-term price signal."

"Yes, I do think we are putting the capacity market at risk," DePillo said. "We're going through what is effectively a fleet transformation. How do we do that in the most effective way possible? We are going to need uneconomic retention," he said, referring to state initiatives such as New York's nuclear subsidies.

Craig Glazer © *RTO Insider*

Left to right: Vince Duane, PJM; Stu Bresler, PJM; Ray DePillo, PSEG; Peter Fuller, NRG Energy; John Moore, NRDC; William Berg, Exelon © *RTO Insider*

"The more we attempt to use the capacity market, particularly in isolation, to solve all the blender issues we are facing today, the more distorted it gets," Berg said.

He advocated a holistic approach. "That starts with an honest conversation about what constitutes a subsidy so onerous it needs to be subject to mitigation," he said.

For his part, Moore said the Sustainable FERC Project supports a goal of 80% carbon reduction by 2050.

"There are a lot of good state policies that get us a long way that we should protect," he said. "I wonder if we're going down the wrong fork in the road adding complexities to the capacity market."

Bresler introduced an idea for a two-stage capacity auction that would integrate subsidized resources but prevent them from impacting the prices of other generators.

Fuller expressed concern that the model would place the risk of state policy implementation on resources at the margin.

"My first thought is if there was ever any doubt that marginal resources will bid zero, this is it amped up on steroids," Berg said.

Bresler introduced an idea for a two-stage capacity auction that would integrate subsidized resources but prevent them from impacting the prices of other generators. Fuller welcomed PJM's effort to respond to out-of-market state policies but expressed concern that the model would place all of the risk of state policy implementation on resources at the margin, which could defeat the goal of protecting price formation.

The concern, which PJM's proposal acknowledges, is that resources will bid zero to ensure they clear in stage 1; those that don't won't receive any capacity revenue through the second, higher-priced stage, clearing after subsidized units are removed. "It is unclear whether this potential would have any significant impacts on resource offer behavior in the capacity auctions," PJM said.

Berg wasn't so sure. "My first thought is if there was ever any doubt that … resources will bid zero, this is it amped up on steroids," he said.

PJM CEO Andy Ott closed out the session, saying, "I see this issue as fairly large for us." He added, "It's no secret that PJM feels strongly about its competitive markets."

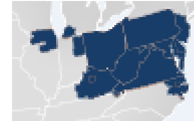
Stakeholders can expect the dialogue to continue, he said.

"Don't worry," he reassured the audience. "We're not going to make a filing tomorrow."

"The more we attempt to use the capacity market, particularly in isolation, to solve all the blender issues we are facing today, the more distorted it gets."

William Berg, Exelon

PJM NEWS



Heeding Stakeholders, PJM Reduces Proposed Fuel-Cost Penalties

By Rory D. Sweeney

Acknowledging stakeholders' criticism, PJM removed capacity-deficiency and administrative penalties it had proposed for its fuel-cost policy rules and instead offered a single formula-based one. The proposal was made in the compliance filing PJM submitted to FERC on Aug. 16 (ER16-372-002).

The filing was supposed to focus on improving flexibility for hourly generation offers, but PJM also proposed changes to its policy-approval rules and penalties that it said were "integral to the effective clearing of cost-based hourly offers." The RTO announced it was simultaneously initiating a petition under Section 206 of the Federal Power Act to get the additional changes implemented in case FERC decided their inclusion was outside the scope of the compliance order.

The debate over the rules governing fuel-cost policies stems from a 2015 FERC order to allow day-ahead offers that vary by the hour and the ability to update offers in real time. FERC wanted the changes made by November 2015, but PJM said at the time that the required revamp to its market system would make that timeline impossible.

In this week's filing, PJM requested an effective date of Dec. 1 for the penalty and policy-approval rules contingent on FERC issuing its approval by Oct. 17. Implementation on Dec. 1 would maximize the benefit of the rules, PJM said in the filing, because "winter is the season in which price volatility in the natural gas markets are most likely to occur."

The Independent Market Monitor has requested a 10-day extension to the Sept. 6 deadline for submitting comments on PJM's filing. The Delaware Public Service Commission filed comments in support of the Monitor's request.

For the hourly offer market rules, PJM said it couldn't accurately estimate an implementation date because it "will be one of the most in-depth and complicated undertakings in PJM's recent history, as PJM's systems have been designed and implemented on the basis of daily offers." The RTO suggested it will take at least a year, but it requested approval of a timeline that gives it 30 days after FERC's ruling to propose an estimated effective date and up to 30 days before that proposed date to determine a final effective date.

PJM kept much of its original submission for real-time offer regulations, but it proposed several definitions and revisions. Among them are:

- Prohibiting generators from oscillating between market-based and cost-based offers;
- Increasing the cutoff for real-time offers from 60 minutes to 65 minutes prior to the applicable clock hour to account for PJM's ancillary services optimization engine; and
- Prohibiting increases to a generator's incremental energy offer, but allowing it to increase its market-based offers in real time to reflect increases in costs. (PJM proposes defining incremental offers as those pairing price and megawatt quantities, in dollars per megawatt-hour, which combine to include all of the energy segments above a resource's economic minimum. It excludes no-load costs.)

The fuel-cost policy rules are designed to provide clarity for how policies will be reviewed, delineate submission requirements, define consequences and outline the role of the Monitor.

Sellers without a PJM-approved fuel-cost policy could only be price takers, making offers of $0/MWh. They would also be subject to the penalty, which is up to 75% of the product of the LMP paid to the seller and the unit's capacity during the hour. The percentage starts at 5% on the day the seller is notified about not having an approved policy and increases 5% each day until a policy is approved. It caps out at 15 days, after which the seller continues to be penalized at that rate.

Natural gas plants in PJM's energy market, such as UGI's Hunlock Creek Energy Center in Luzerne County, Pa., would be subject to the RTO's rules on fuel-cost policies. *Source:*

PJM proposes using the same penalty for a seller who submits an offer that doesn't comply with its existing policy. The penalty structure is based on a formula used by ISO-NE.

Sellers who have policies rejected by PJM or the Monitor would revert to a previously approved policy until the rejected policy is satisfactorily amended. The RTO also proposed a procedure to revoke a seller's policy altogether — meaning it would no longer have any approved policy — but said it would only be used in cases of fraud or when a policy doesn't "remotely reflect" applicable fuel costs.

PJM also proposed an annual review process, in which sellers would have to submit by June 15 of each year any updated policies or confirm that the existing policy remains compliant. PJM would then have until Nov. 1 to provide the seller with a compliance determination.

Solar, storage and run-of-river hydro would be required to have a cost of $0, while wind would need to account for energy and tax credits. Waste-to-electricity resources, such as landfill gas and biomass facilities, would have to include fuel costs even if the facility is paid to accept the waste — meaning their fuel costs would be negative.

The policies would also need to include maintenance adders, heating requirements, unit-specific performance factors and start-up cost calculations.

The filing also detailed PJM's understanding of the Monitor's role, noting stakeholder confusion over its involvement in initial policy approval and ongoing oversight. In previous discussions on the topic, the Monitor has questioned PJM's proposed regulations, saying they cross into its authority.

FERC "has made clear that the act of approval or disapproval of fuel-cost policies is one to be undertaken by PJM and not the IMM," PJM said in its filing. Penalties would only be assessed if both PJM and the Monitor agree on it. In the event that they disagree, PJM proposed that the matter be referred to FERC's Office of Enforcement.

During a conference call last week to review

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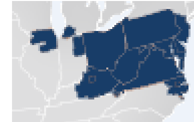
PJM NEWS



MRC/MC Preview

Below is a summary of the issues scheduled to be brought to a vote at the Markets and Reliability Committee on Thursday. Each item is listed by agenda number, description and projected time of discussion, followed by a summary of the issue and links to prior coverage in ***RTO Insider***. The Members Committee does not meet in August.

RTO Insider will be in Wilmington, Del., covering the discussions and votes. See next Tuesday's newsletter for a full report.

PJM Manuals (9:10-9:40)

Members will be asked to endorse the following manual changes:

A. Manual 3A: Energy Management System Model Updates and Quality Assurance. Changes reflect administrative and modeling process updates.

B. Manual 11: Energy & Ancillary Services Market Operations. Conforming changes, updated references and spelling and grammatical corrections are the result of a periodic review.

C. Manual 12: Balancing Operations. Administrative and conforming updates align with NERC reliability standard BAL-001-02, which went into effect July 1, and with the frequency bias calculation in BAL-003-1.

D. Manual 14D: Generator Operational Requirements. Changes include updates to the cold weather generation resource preparation section. Amends cold weather testing process effective with winter 2016/17. Generators that cleared as Capacity Performance in the current delivery year will no longer be eligible for compensation for conducting the exercise but may test and receive compensation as a self-scheduled resource. (See "PJM Plans to End Compensation for CP Units Participating in Winter Testing," *PJM Operating Committee Briefs*.)

E. Manual 37: Reliability Coordination. Updates are the result of an annual review.

Heeding Stakeholders, PJM Reduces Proposed Fuel-Cost Penalties

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the filing, PJM staff clarified that specific implementation processes would be outlined later in changes to Manual 15. The changes will be reviewed by the Market Implementation Committee.

If FERC approval allows for an effective date prior to the beginning of the annual review process, PJM plans to concentrate initially on generation units without any policies or ones that received tacit PJM approval based on negotiations with the Monitor. It would then rely on the annual review process to ensure all units had approved policies. Under PJM's existing protocols, some units have not been under any requirement to get a policy approved and others have undergone lengthy negotiation processes with the Monitor.

Both PJM and the Monitor described "significant philosophical differences" in their perspectives on the correct oversight scheme.

The "fundamental difference," according to Monitor Joe Bowring, is his group's role in the process. PJM made some "significant mistakes" in the filing and isn't "correctly observing that division of labor set forth in the Tariff," he said.

Ed Tatum of American Municipal Power asked about the differences in opinion on how short-run marginal costs should be handled.

Bowring responded that PJM's proposed protocols should be adjusted. PJM's Jeff Schmitt said that would be addressed in changes to Manual 15.

Jason Cox of Dynegy suggested that the penalty have tiered levels corresponding to whether a noncompliant offer affected the market price, but PJM said that was not part of the filing.

SPP News

SPP Seeks Feedback on Transmission Studies at Engineering Summit

By Tom Kleckner

SPP Senior Engineer Kirk Hall presents at the Engineering Summit. © *RTO Insider*

LITTLE ROCK, Ark. — SPP's engineering staff updated members on the RTO's current regional and interregional transmission planning studies during an engineering summit last week.

In return, the engineers asked for stakeholders' input.

"It was very important that we are able to get in the feedback at the front end of the process," SPP Director of Transmission Planning Antoine Lucas told members, who spent much of the day delving deep into the 2017 Integrated Transmission Planning's 10-Year Assessment (ITP10). "Most of you will be pleased with" the process.

Juliano Freitas © *RTO Insider*

"As soon as you guys can provide feedback, please do it," requested SPP's Juliano Freitas, manager of economic planning.

ITP10

SPP plans to present its final 2017 ITP10 to the Markets and Operations Policy Committee in December.

Staff is using three futures for the study: regional compliance with EPA's Clean Power Plan; state-level CPP compliance; and a reference case that assumes the CPP will not be implemented.

The two CPP studies will eventually be combined into a single portfolio, with the reference case also moving forward for additional benefit calculations, using multiple model years and costs derived from the RTO's annual transmission revenue requirement formulas.

Transmission projects would be deemed to satisfy economic needs by meeting up to 25 constraints with greater than $50,000 in annual congestion costs.

SPP will also produce a near-term reliability assessment early next year. Staff is currently working on a needs assessment but doesn't expect to produce a final portfolio recommendation and report until March.

Interregional Studies

Adam Bell, SPP's interregional coordinator, updated members on the status of SPP's work with three of its interregional partners: MISO, Associated Electric Cooperatives Inc. (AECI) and Southeastern Regional Transmission Planning (SERTP).

SPP and MISO have both voted to pursue a joint study this year, using their regional planning as a starting point. Bell told members they would be able to propose solutions for the final set of needs, currently being developed.

The RTOs are scheduled to meet again Sept. 7. "We want to get this scope approved so we can get this study done," Bell said.

SPP and AECI are determining the scope of a study of five target areas: potential overloads and voltage issues in northeast Oklahoma and Brookline, Kan.; potential low voltage issues in mid-Missouri and east of Kansas City; and potential upgrades in Wheaton, Kan. They expect to produce a final report and recommendations in January.

Adam Bell © *RTO Insider*

Bell said SPP had its annual meeting with SERTP representatives in June. The staffs reviewed their regional plans to "see if anything made sense," Bell said, adding later, "it's more coordination than joint planning or joint study."

"There could be potential here as we move forward," he said.

SPP NEWS

Arkansas Landowners Seek to Stop Plains & Eastern Clean Line Project

By Tom Kleckner

Two Arkansas landowner groups have filed suit to block Clean Line Energy Partners' planned 700-mile HVDC transmission line, questioning the legality of the project's approval and its right to use eminent domain (3:16-cv-00207-JLH).

The groups, Golden Bridge and Downwind, filed their complaint Aug. 15 in U.S. District Court in Jonesboro, Ark., listing the U.S. Department of Energy, Secretary of Energy Ernest Moniz and the Southwestern Power Administration (SPA) and its administrator, Scott Carpenter, as defendants.

In March, the Energy Department approved Clean Line's $2.5 billion Plains & Eastern Clean Line project, which would deliver 4,000 MW of wind power from the Oklahoma Panhandle to the Tennessee Valley Authority near Memphis, Tenn. (See *DOE Agrees to Join Clean Line's Plains & Eastern Project*.)

The department said it would participate in the project under Section 1222 of the Energy Policy Act of 2005 (EPACT), which authorizes it to take part in "designing, developing, constructing, operating, maintaining or owning" new transmission. The department will do so through SPA, a federal agency that markets hydroelectric power from 24 dams in six states.

The lawsuit questions the process by which the Energy Department approved the project, saying it acted "arbitrarily and capriciously" in giving "undue consideration to nonstatutory, policy considerations." The landowners said the department and SPA approved the project's construction and operation, "completely [ignoring]" existing Arkansas siting laws "and without the necessary approval of the appropriate Arkansas siting authorities." They are asking the court to declare the federal agencies' use of eminent domain in violation of EPACT and force the department to withdraw its approval of the project until it is in compliance with state-level siting requirements and federal laws, including the Fifth Amendment.

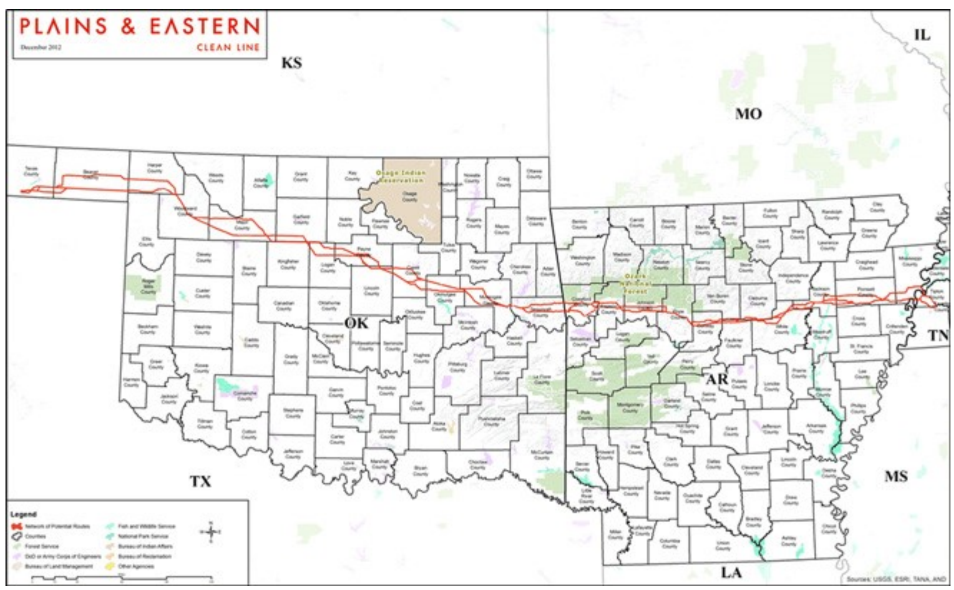
A Golden Bridge spokesman told local media the landowners should have been given a "significant opportunity to engage on a meaningful and substantive level."

"Unfortunately, it is not uncommon to see legal complaints filed against the most important infrastructure projects," Clean Line said in a statement. The Houston-based company called on the private and public sectors to "come together to bring new infrastructure projects to fruition."

Clean Line said it has invested nearly $100 million of private capital in the project's development and it expects to make more than $30 million in payments to Arkansas landowners for easements and building transmission towers on their property. It said it was "very confident" in Section 1222's validity and the "extensive process" behind the Energy Department's decision to participate.

The Plains & Eastern Clean Line project has also drawn opposition from Arkansas' all-Republican Congressional delegation. Rep. Steve Womack advanced a bill in the U.S. House of Representatives in June that would amend EPACT to require approval from a state's governor and legislators before using eminent domain. The state's senior senator, John Boozman, has filed a matching bill that hasn't moved since May. (See *House Panel OKs Bill Targeting Clean Line Project*.)

Clean Line expects to begin construction on the project as early as next year.



COMPANY BRIEFS

NIPSCO to Raze Long-Shuttered Ind. Coal Plant

Northern Indiana Public Service Co. announced that it will demolish its Dean H. Mitchell power plant on Lake Michigan and conduct an environmental cleanup.

NIPSCO will spend $18 million and two years demolishing the Gary, Ind., coal plant, built in 1955 and taken offline in late 2001. The company said it plans to work with city officials to develop the site.

"This is a positive step forward for the community, our customers and the environment as we clear the path for new investments and opportunities for the future," NIPSCO Executive Vice President Violet Sistovaris said in a statement.

More: *Post-Tribune*

Consumers Opens Solar Plant at Mich. Campus

Western Michigan University

Consumers Energy's new 8.5-acre solar array located in Western Michigan University's Business Technology and Research Park has begun generating power.

The 1-MW solar plant is Consumers' second large-scale project in Michigan. The first was a 3-MW solar plant opened in April at Grand Valley State University.

Both projects are part of the company's Solar Gardens program. Ratepayers who subscribe to the program receive a varying credit on their monthly bills depending on how much power is produced at the plants.

More: *MLive*

Consumer Group Calls for Deeper Ameren Rate Decrease

Ameren ILLINOIS

Consumer advocate group Citizens Utility Board is arguing that Ameren's proposed 2017 cut in electric rates for its Illinois customers is not enough.

CUB, along with an industrial customer group, says ratepayers are owed $30 million, more than double the $14.4 million cut that Ameren set forth in its filing. The group is urging the Illinois Commerce Commission to approve a more substantial decrease.

"We are glad that Ameren Illinois has proposed a rate cut for its customers, but our expert testimony shows that customers deserve double the decrease," Citizens Utility Board Executive Director David Kolata said. "We're going to do everything we can to make sure customers get a fair rate cut."

More: *The Southern Illinoisan*

JCP&L to Invest $387M in Infrastructure by Year-end

Jersey Central Power & Light plans to complete $387 million in infrastructure projects in its northern and central service areas by the end of the year.

The FirstEnergy subsidiary already has spent $233 million to pay for the final phase of a 115-kV transmission line through Mercer, Middlesex and Monmouth counties, a substation expansion in Morris County and 2,000 miles of tree trimming.

"Last year, JCP&L experienced its best service reliability in over a decade, and our goal is to make our system even better," said Jim Fakult, the company's president.

More: *FirstEnergy*

LP&L Management Considers Building Compatibility Study

LUBBOCK POWER & LIGHT

Lubbock Power & Light is hiring a contractor to take a closer look at concerns that many downtown buildings may not be able to connect to new power lines that are being buried underground.

The municipal utility told the Lubbock Electric Utility Board that the contractor would identify the number of structures that are and are not compatible with the new system. The utility is moving downtown aerial wires to underground conduits in a series of phases.

More: *A-J Media*

SWEPCO Issues RFP for 100 MW of Wind Energy

AEP SWEPCO

American Electric Power's Southwestern Electric Power Co. subsidiary has issued a request for proposals for up to 100 MW of wind power capacity.

SWEPCO wants to buy wind assets that can be put into commercial operation by 2019. The assets must be interconnected to SPP and located in the states of Arkansas, Louisiana, Texas, Oklahoma, Kansas or Missouri.

Bids will be accepted through Sept. 15. The application forms and additional information can be found here.

More: *SeeNews*

FEDERAL BRIEFS

Groups Praise Completion of Block Island Wind Farm

Deepwater Wind announced it has completed the 30-MW, five-turbine Block Island Wind Farm, an announcement that drew the praise of the National Ocean Industries Association and others, including the Sierra Club.

"The completion of any offshore energy project is no small feat; the road from concept to completion can be very lengthy and rife with challenging regulatory hurdles, unanticipated permitting delays, and vocal environmental opposition alongside enthusiastic public support," NOIA President Randall Luthi said.

"Our untapped offshore wind energy potential is enormous and it holds the key to creating thousands of good paying clean energy careers, cleaning up the dangerous fossil fuel pollution endemic in many our coastal cities, and provides another effective solution to addressing the climate crisis," said Mary Anne Hitt, director of Sierra Club's Beyond Coal Campaign.

More: Morning Consult; USA TODAY

Workers finish installation of a turbine at the Block Island Wind Farm in Rhode Island. It is the first offshore wind farm completed in the U.S. *Source: Deepwater Wind*

EIA: CO2 from Natural Gas to Surpass Coal

For the first time in more than 40 years, carbon emissions from natural gas this year are expected to exceed those from coal, according to data released last week by the Energy Information Administration.

Though natural gas is less carbon-intensive, Americans are using more of it, as the country eases its reliance on coal-fired generation.

At the same time, annual carbon intensity rates have been decreasing, in part because of the growing consumption of carbon-free generation such as nuclear and renewable power.

More: StateImpact

DOE: US a World Leader In Wind Generation

The U.S. remains No. 1 in the world for electricity generated by wind power and No. 2, behind China, for wind power capacity, according to an annual report released last week by the Energy Department and its Lawrence Berkeley National Laboratory.

Nearly 8,600 MW of wind capacity were installed in the U.S. in 2015, a 77% increase over the previous year's installations.

By comparison, China installed 30,293 MW of wind capacity last year.

More: Windpower Engineering & Development

River Group Sues Portland General over Dam Operation

An Oregon environmental group has sued Portland General Electric in federal court, alleging that the utility's dam operations along the Deschutes River are violating the Clean Water Act.

The focus of the lawsuit is a $100 million, 273-foot underwater tower and fish-collection facility that PGE built in 2009 in partnership with the Confederated Tribes of Warm Springs, co-owner of the Round Butte Dam.

The Deschutes River Alliance alleges the tower's operation violates standards for water temperature and dissolved oxygen, while also contending that the Oregon Department of Environmental Quality is not enforcing water quality standards. The utility countered that the facility is intended to restore salmon and steelhead runs and that restoration will entail a long-term effort.

More: The Bulletin

NASA Study Shows Methane Hot Spot Comes from Natural Gas Leaks

Researchers say an unusual concentration of the atmospheric methane over the Southwest appears to come mostly from leaks in natural gas production.

NASA's Jet Propulsion Laboratory and the California Institute of Technology released a report Aug. 15 that listed more than 250 sources of a methane hot spot over the Four Corners region, including gas wells, storage tanks, pipelines and processing plants. Only a handful were natural seeps from underground formations, according to researchers. The study said about 25 locations are responsible for most of the methane leaks.

Evidence of the hot spot dates back to 2003, and a satellite image released in 2014 showed it in vivid color, but the origin wasn't clear until recently. The new study identified the sources with spectrometers aboard aircraft that flew 3,000 to 10,000 feet above the ground over about 1,200 square miles in the Four Corners in April 2015.

More: The Associated Press

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Federal Briefs

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Dakota Access Says It Will Halt Until Hearing

Developers of the Dakota Access Pipeline said last week they will halt construction on the $3.8 billion oil pipeline that is to run from North Dakota to Illinois pending a hearing in federal court in D.C. this week. The Standing Rock Sioux Tribe is suing regulators for issuing permits for the pipeline that the tribe says goes through sacred land and poses a threat to its drinking water.

Members of the tribe and its supporters blocked construction equipment last week while it waited for its request for a temporary injunction, which was approved this week.

More: *The Associated Press*

Judge Erred in Blocking BLM Fracking Rules, Law Profs Charge

Law professors arguing for the Obama administration said that a judge was mistaken when he ruled against the Bureau of Land Management's rules concerning fracking on federal land.

The bureau in 2015 issued rules that would have required energy companies to disclose what materials they used in the fracking process. District Judge Scott Skavdahl of Casper, Wyo., vacated the rules, saying the bureau didn't have the authority to regulate fracking.

In his ruling, Skavdahl pointed to an article written by Florida State University professor Hannah Wiseman to support his conclusion. Wiseman, however, joined 35 other law professors in a brief filed with the 10th U.S. Circuit Court of Appeals, saying the judge misinterpreted her piece.

More: *The Associated Press*

NRC Reports Violations at Entergy's FitzPatrick Plant

The Nuclear Regulatory Commission released a report citing Entergy's James A. FitzPatrick nuclear plant for two violations of "very low safety significance," including sending workers into high radiation areas without first meeting with the plant's radiation protection department and for failing to address a long-term radioactive leak.

The report, which covered the second quarter of 2016, said an atmospheric control system failed and was not addressed within the required 30 days. It also cited the plant for allowing radioactive material to escape from a filter sludge tank in the radioactive waste building, though no radiation was leaked into the atmosphere.

Entergy says it has developed a corrective action that will be implemented within the next month.

More: *CNY Central*

State Briefs

ARIZONA

Broderick Resigns from ACC After 1-Year Stint


Broderick

Thomas Broderick, the director of utilities for the Corporation Commission, is leaving after a little more than a year on the job. Broderick provided no reason for his departure and said he was not taking another job.

Broderick was hired last summer after a nationwide search to replace the longtime agency staffer who previously held the position, which manages 60 regulatory experts and oversees a $5.5 million budget. Commission Chair Doug Little said he was "truly disappointed" to see Broderick go.

His departure comes as the commission considers a pending rate case for Arizona Public Service, the state's largest utility.

More: *The Arizona Republic*

CALIFORNIA

IID to Launch Biggest Battery in West

The Imperial Irrigation District (IID) will inaugurate a $38 million battery storage facility next month, the largest power storage unit in the western U.S.

The 30-MW facility will be capable of discharging as much as 20 MW in an hour. The massive battery will help the publicly owned utility to firm up intermittent output from the region's renewable resources and to support the grid in the face of unexpected problems.

"The energy industry is ever-changing and fast-paced, and regulations are changing daily almost, it seems like," IID spokesman Robert Schettler said. "So this is a way we're trying to get ahead of an issue."

More: *KPBS*

COLORADO

Boulder Approves Annexation Package

The Boulder City Council voted unanimously to approve the annexation of 16 properties adjoining the city, overcoming an obstacle in its bid to municipalize the electric distribution system of Xcel Energy.

The annexation eliminates the need to build separate distribution facilities to serve those customers after Boulder takes ownership of Xcel's local system. The state Public Utilities Commission had ordered the city to pay for construction of separate facilities to allow Xcel to continue to serve the customers in unincorporated Boulder County.

The annexation prevents "a lot of unnecessary, expensive additional construction," according to the city staff.

More: *Daily Camera*

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STATE BRIEFS

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KENTUCKY

Customers to Cover Upgrades at Coal Plants

Kentucky Utilities ratepayers will pay an additional surcharge to cover the utility's environmental upgrades through 2024 under a settlement approved in early August by the Public Service Commission.

The PSC said the surcharge amount increases over time, beginning with 30 cents in 2016 and climbing to $1.37/month in 2017 and $2.32 in 2018. The amount crests in 2022 at about $3.32/month.

KU and Louisville Gas & Electric asked the PSC for permission to spend more than $900 million on pollution-control measures at their coal-fired plants to comply with federal coal ash storage requirements and to limit emissions under EPA's Mercury and Air Toxic Standards.

More: Lexington Herald Leader

MARYLAND

PSC Revamps Shutoff Regs After Customer Deaths

The Public Service Commission has approved new notification requirements for service terminations after a Princess Anne family that was using a generator inside their home for heat died of carbon monoxide poisoning last year.

Delmarva Power had removed the home's electric meter after it discovered that it had been stolen and terminated service to the home.

Under the new regulations, customers whose service is terminated because of allegations of theft or hazardous conditions must be notified by the utility, either in person or in writing, and the notice must include safety precautions. The utility must also notify the commission within one day of the cancellation. The PSC would then add the address to a database for use by local governments, so they can provide assistance to the customer.

More: Maryland PSC; The Baltimore Sun

MICHIGAN

Regulators Say No Reason to Shut Down Mackinac Pipelines

State regulators say they found no evidence to support an order to shut down Enbridge's Line 5, a pair of underwater petroleum pipelines that go under the Straits of Mackinac, and ordered more studies into their integrity.

Environmental advocates who have called for a shutdown accused the state of dragging its feet. They complained that the studies by the Department of Environmental Quality could take 18 months to complete. The department said it was unable to shut the pipeline down without "clear violations" of environmental easements and evidence that there is "imminent threat" of pipeline failure.

More: Midwest Energy News

MONTANA

Proposed Bills Would Slap Fees on Colstrip Owners

The State Legislature's Energy and Telecommunications Interim Committee has drafted seven bills that would impose millions of dollars in fees on the Colstrip power plant's owners for 10 years following the closure of two of the plant's units.

The committee will decide next month whether to file the bills for the 2017 legislative session. Closure of the units by 2022 is required in a legal settlement filed last month.

More: The Associated Press

NorthWestern Fails Again to Recover Costs from Outage

The Public Service Commission has rejected NorthWestern Energy's second attempt to pass on costs related to a 2013 outage at the Colstrip power plant to consumers through a rate increase. The PSC rejected the company's appeal of an earlier decision by a 3-2 vote.

NorthWestern had to buy $8.2 million of electricity on the market when a malfunction shut down Colstrip's Unit 4 three years ago. The commission in March found that the outage was avoidable and NorthWestern didn't meet requirements for the replacement costs to be passed along to consumers.

"I'm not sure what part of 'no' NorthWestern doesn't understand," Commissioner Roger Koopman said in a press release.

More: Billings Gazette

Land Board Approves Lease For Potential 70-MW Wind Farm

The Land Board approved the lease of 450 acres near Billings for a possible 70-MW solar development. The lease includes a two-year option to MTSun while regulators conduct an environmental study.

More: Billings Gazette

NEW MEXICO

Regulators Approve PNM's Energy Contract for Facebook Data Center

The Public Regulation Commission last week unanimously approved a special services contract between Facebook and Public Service Company of New Mexico outlining how the state's largest utility would supply power to the technology giant's proposed data center.

The contract, approved Aug. 17, describes a mechanism for providing renewable energy to the data center, which would include the construction of three solar facilities and a high-voltage electric line. Under its terms, PNM would receive about $31 million a year for providing electricity to the data center.

The Los Lunas Village Council has already approved up to $30 billion in industrial revenue bonds for the project.

More: Albuquerque Journal

NORTH CAROLINA

Erin Brockovich Points to State In Call to Set Toxin Standard

Brockovich

Famed environmental activist Erin Brockovich cited the ongoing coal ash dispute in the state in a request to EPA to set groundwater standards for hexavalent chromium.

A state toxicologist had warned residents living near Duke Energy coal ash

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State Briefs

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storage sites that tests showed unsafe levels of the compound, a finding disputed by Gov. Pat McCrory's administration. Brockovich pointed to the dispute in a letter she and the Environmental Working Group sent to EPA calling on the agency to set safety levels of the compound.

"It is clear that the delay [in setting safety levels] is sowing confusion among state and local regulators, utilities and the public about how much hexavalent chromium is safe in drinking water," the letter reads. The current federal level for the compound is 100 parts per billion. It was set 25 years ago and is considered by many to be outdated.

More: *News & Observer*

OKLAHOMA

Settlement Results in $30.3M Windfall for OG&E

The Corporation Commission approved a $30 million settlement that allows Oklahoma Gas and Electric to recover some lost revenues from its popular SmartHours energy efficiency program. More than 110,000 residential OG&E customers have signed up for the program.

OG&E will recover $30.3 million for lost revenue from 2013 to 2015, when the case was first filed.

The settlement among the utility, the commission's public utility division and the OG&E Shareholders Association resolves a dispute in calculating the amount of lost revenue under SmartHours. The division said the annual amount was closer to $5 million.

More: *The Oklahoman*

PENNSYLVANIA

Refunds Start Flowing from Polar Vortex Settlements

Utility customers are beginning to see refunds as state officials conclude their cases with energy suppliers accused of misleading consumers about energy prices during the polar vortex of 2014.

Customers of Pennsylvania Gas and Electric, IDT Energy and Hiko Energy will receive $15.6 million. Respond Power will pay $4.1 million. One case, against Blue Pilot Energy, is pending.

More: *The Morning Call*

WYOMING

State Considers Increasing Nation's Only Wind Output Tax

A proposal by lawmakers to raise the state's tax on wind output is meeting resistance from a large wind farm developer.

Bill Miller, CEO of the Power Company of Wyoming, which has proposed building two wind farms rated at 3,000 MW total, is attempting to thwart the tax increase. "Just about every legislator we've met with asks us, 'You tell us how much we can tax you before we put you out of business,'" said Miller. "I just shake my head and say, 'Zero.'"

The state is the only one in the country that taxes output from wind turbines, currently collecting $1 for every megawatt-hour produced. The state's take since implementing the program: $15 million. Power Co.'s proposed Chokecherry and Sierra Madre projects could potentially triple revenues.

More: *Los Angeles Times*