



Ontario Grid Looks Like the Past — and the Future — of the US 'Cross-Threaded' Government Policies Hamper Market Development

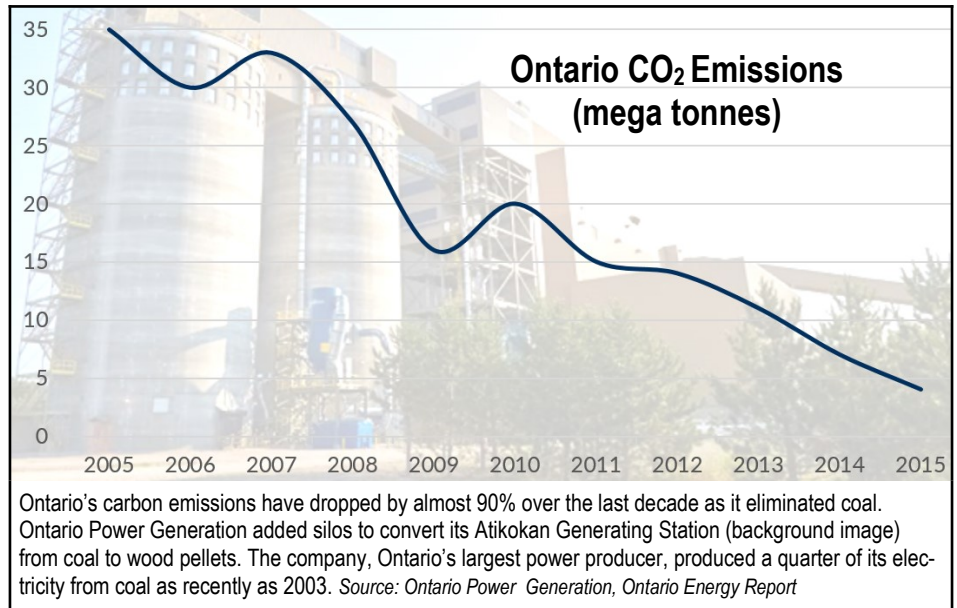
By Rich Heidorn Jr.

TORONTO — On April 8, 2014, the Thunder Bay Generating Station belched out the last kilowatt of coal-fired electricity in Ontario, a signature achievement for Canada's most populous province. "The single largest climate change initiative in North America," the Ontario Power Authority boasted.

While the province is far ahead of its U.S. counterparts in reducing its CO₂ emissions, it is in other ways trying to catch up to the U.S. Provincial and local governments own most of the generation, and most of the non-government generation is under long-term contracts. Hourly prices are set province-wide with no locational pricing. It began regional planning in 2013 and is only now considering a capacity market.

It was against this backdrop that about 650 industry participants gathered here last week for the Association of Power Producers of Ontario's (APPRO) 27th Annual Canadian Power Conference & Networking Centre.

Many of the discussions would be familiar to



those in the U.S.: flat load growth; the threat and promise of distributed generation and storage; the need to improve coordination between generators and gas pipelines; and concern over the future of an aging nuclear

fleet.

Speakers at the conference included Dan

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FERC Orders RTOs to Report on Out-of-Market Actions, Uplift

By Rich Heidorn Jr.

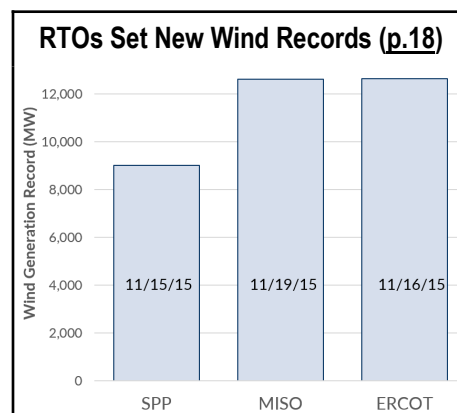
FERC last week ordered RTOs and ISOs to file reports detailing their current practices and planned changes on five price formation issues, saying it needed more information before taking substantive action.

The order (AD14-14) continues an initiative the commission began in 2014 with the first of three workshops. (See [FERC to Tackle RTO Uplift, Price Formation](#).)

In September, the commission issued a Notice of Proposed Rulemaking that would require RTOs and ISOs to align their settle-

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Cuomo to Mandate 50% Renewables by 2030; Offers Lifeline to Upstate Nukes (p.8)



Also in this issue:



Proposal to Mitigate Generators' Risk Faces Resistance

An initiative that would allow generators to avoid underperformance penalties in PJM's Capacity Performance was met by pushback. (p.10)



GridEx III Tests Risk of Terrorist Attacks to Grid

Amid increasing concern over threats to the power grid, NERC ran a rigorous, two-day drill that simulated terrorist attacks. (p.16)

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Northeast Energy Direct Files for FERC Certificate

By William Opalka

KINDER MORGAN Tennessee Gas Pipeline on Friday filed an application with FERC for a certificate of public convenience and necessity for the Northeast Energy Direct pipeline (CP16-21).

Tennessee Gas, a unit of Kinder Morgan, is seeking FERC approval in the fourth quarter of 2016, with construction starting in January 2017 and an in-service date of Nov. 1, 2018. The company estimates the project will cost \$5.2 billion.

“Adding the NED project capacity to

transport incremental natural gas supplies will ease natural gas capacity constraints and is expected to provide significant benefits to energy consumers in the region in the form of lower natural gas and electricity prices,” the application says.

The project consists of two components that will transport natural gas from the Marcellus shale gas region of Pennsylvania to New England.

The supply path component is a 174-mile segment from Bradford County in northern Pennsylvania to an existing compressor in Wright, N.Y. The segment can transport 1.23 million dekatherms per day, of which Tennessee Gas says it has long-term con-

tracts for 552,262 dekatherms per day.

The market path component continues from Wright for 188 miles through New York and Massachusetts, turning slightly north into New Hampshire and then moving south to its end in Dracut, Mass. This route has a capacity of 1.3 million dekatherms per day, with contracts for 751,650 dekatherms per day.

The staff of the New Hampshire Public Utilities Commission has released a report that said NED is its preferred project of several proposed natural gas pipelines to ease supply constraints. (See [NH PUC Staff: Northeast Energy Direct Pipeline Would Lower Power Prices.](#))

Northern Pass Facing Challenges over Siting

By William Opalka



The developers of the Northern Pass transmission line may have to fight in court before they turn the first shovel of dirt on their project to deliver Canadian hydropower to the New England grid.

The Society for the Protection of New Hampshire Forests on Thursday sued Northern Pass Transmission to prevent it from using land the society owns. The lawsuit says Northern Pass does not have the legal right to access Forest Society lands and should be permanently barred from using it.

The suit came three days after New Hampshire environmental officials said that the developers' siting application is incomplete because they had not shown they have property rights along the entire 192-mile route.

The [letter](#) from the state Department of Environmental Services to the New Hampshire Site Evaluation Committee said the application lacks “proof that the applicant will have a legal right to undertake the project on the property if a permit is issued.” The department was asked to weigh in on the application due to the project's “alteration of terrain” and wetlands disturbances.

Northern Pass filed the siting application

last month, starting a process that is expected to take 14 months. Developers hope to put the line in service in 2019. (See [Northern Pass Files for Siting Approval, Revises Cost.](#))

In announcing the Forest Society's lawsuit, President Jane Difley said the group “has a legal and ethical obligation to defend” its land against commercial development.

“Northern Pass cannot show that it has the property rights it would need to build the facility it is looking to permit through the Site Evaluation Committee. Nor does Northern Pass, as a merchant transmission project, have the ability to use any form of eminent domain to acquire those rights,” Difley said in a statement.

The lawsuit asks the Coos County Superior Court for a declaratory judgement that Northern Pass has no right to excavate along Route 3 in land known as the Washburn Family Forest. The land is in an 8-mile section near the Canadian border where the developers have proposed to bury the line. The Forest Society is also seeking intervenor status before the siting committee.

“Northern Pass is a private entity seeking to make use of Forest Society lands for the exclusive use of Hydro-Quebec,” said the group's attorney, Tom Masland. “It is our strongly held view that they cannot do so without the Forest Society's permission.”

The society says the project, as a merchant transmission line not deemed necessary by the state Public

Utilities Commission, is not entitled to use highway rights of way the same way as other utility infrastructure.

“We are disappointed but not surprised that the Forest Society has today taken legal action to circumvent the N.H. Site Evaluation Committee's authority,” Northern Pass said in a statement. “We are confident that our [siting committee] application meets the standards outlined in N.H. statutes and SEC rules, and that the Forest Society's claims to the contrary have no basis in fact or law.”

Northern Pass also said that use of a public road is a legitimate use for projects that would benefit the region by providing access to affordable electricity.

“It is hypocritical that the Forest Society has long argued for additional underground construction but is now challenging our



Northern Pass transmission line route Source: Eversource Energy

Continued on page 3



Massachusetts Attorney General's Study: Pipelines Unneeded

By William Opalka

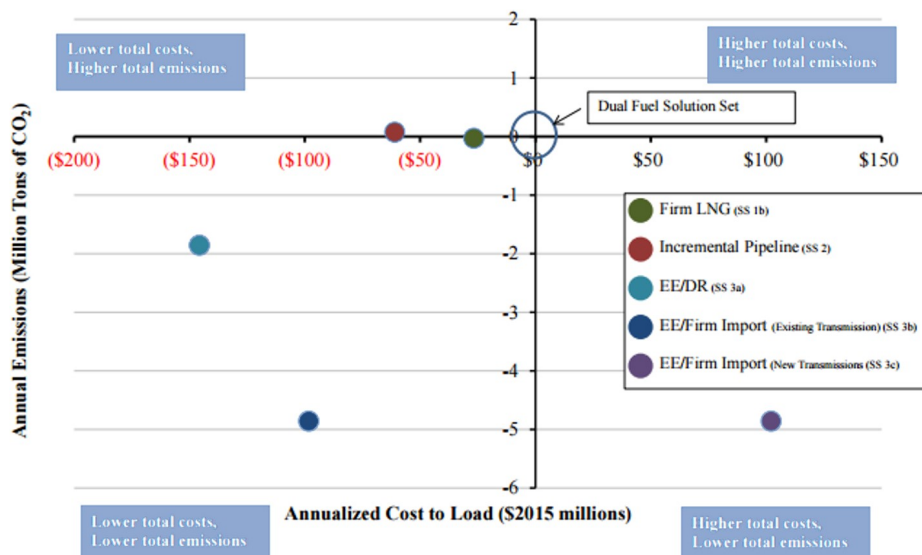
Massachusetts Attorney General Maura Healey on Wednesday released a [study](#) that said additional interstate natural gas pipelines are not needed to guarantee the reliability of New England's electric grid over the next 15 years.

Instead, reliance on demand response and energy efficiency would protect consumers and also help the region reach its greenhouse gas emissions goals, according to the study.

"This study demonstrates that we do not need increased gas capacity to meet electric reliability needs, and that electric ratepayers shouldn't foot the bill for additional pipelines. This study demonstrates that a much more cost-effective solution is to embrace energy efficiency and demand response programs that protect ratepayers and significantly reduce greenhouse gas emissions," Healey said in a statement.

The study by the Analysis Group runs counter to the view of many regional officials that massive pipeline construction is needed as New England becomes more reliant on natural gas for power generation. In October, the Massachusetts Department of Public Utilities ruled that electric distribution companies can sign contracts for natural gas capacity and pass the costs on to electric ratepayers if the companies can prove that they will save ratepayers money. (See [Massachusetts Regulators Endorse Pipeline Contracts](#).)

The authors said the study used "extremely



The Analysis Group study concluded that only the energy efficiency/demand response and EE/firm import option using existing transmission would both reduce ratepayer costs and greenhouse gas emissions relative to the current reliance on dual-fuel capability. Both adding natural gas pipelines and reliance on firm LNG supplies could reduce total costs but not GHG emissions. EE and the firm import of distant low-carbon energy over new transmission lines would cut emissions but increase ratepayer costs, the study said.

conservative assumptions," including applying winter conditions from 2004, one of the coldest years in two decades.

"Under the base case analysis, power system reliability can and will be maintained over time, with or without additional new interstate natural gas pipeline capacity," the report said.

The study concedes additional natural gas infrastructure would lower electricity prices, but with a steep cost. "Investment in new interstate pipeline capacity generates sig-

nificant wholesale electricity price benefits but would require up-front and long-term ratepayer commitments," it said.

Analysts also considered the impact of new transmission needed to import Canadian hydropower, the most expensive option for ratepayers, it indicated.

The study accounted for the recent announcement that the Pilgrim nuclear power plant would close no later than June 2019, resulting in the loss of 680 MW of non-GHG emitting power.

Northern Pass Facing Challenges over Siting

Continued from page 2

proposal to do just that," the developers said.

The New England Power Generators Association also raised objections to the project in a [letter](#) to the site committee.

It said the relationship between Northern Pass and its parent company Eversource Energy raises "concerns about potential undue preference and a slanted playing-field harming competitive outcomes for the electricity marketplace and consumers. This is particularly true when a competitive energy affiliate may use property, services or receive other benefits provided by utility ratepayers for

utility purposes."

A Northern Pass spokeswoman said it is not uncommon for applicants to be asked for additional information.

"We are confident that any potential issues will be resolved in a timely manner and our application will be deemed complete by the SEC," Lauren Collins said.

The project is in a 60-day window for the siting committee to determine if the application is complete.

The Environmental Services Department said enough information was provided to begin its technical review while the application's deficiencies are addressed.

ISO-NE NEWS



FERC Denies Rehearings on Pay-for-Performance

FERC denied rehearing of three orders related to ISO-NE's Pay-for-Performance program that is intended to boost reliability starting in 2018. In jump ball proceedings, FERC had said neither ISO-NE's nor the New England Power Pool's proposals in themselves addressed performance adequacy, but the commission adopted elements of both.

- The first order directed ISO-NE to adopt a modified version of its proposed market design (ER14-1050, EL14-52-001). The commission accepted ISO-NE's Tariff revisions regarding the increased reserve constraint penalty factors, the treatment of energy efficiency resources and ISO-NE's proposal to retain the capacity performance payment rate and the dynamic de-list bid threshold.
- In the second order, FERC denied rehearing on a commission order regarding an ISO-NE compliance filing (ER14-2419, EL14-52-002). Connecticut and Rhode Island had argued that the order failed to ensure that the dynamic de-list bid threshold is reasonably calibrated in light of the increased reserve constraint

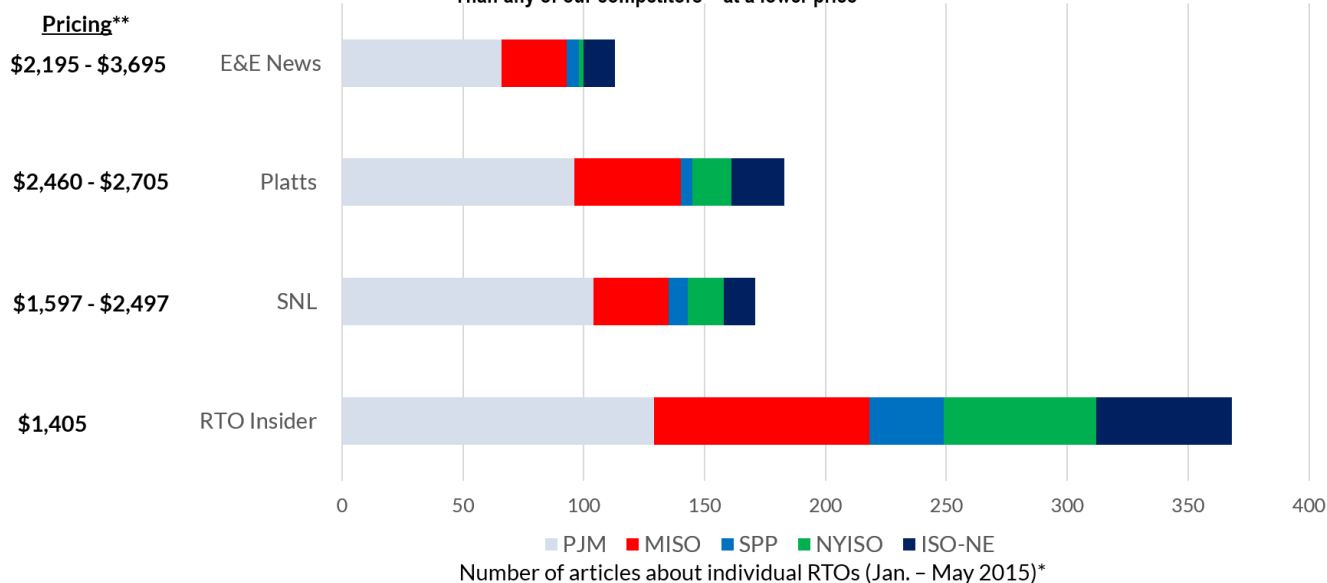
penalty factors. The commission said their assumptions are based on an oversimplification of the relationship between the penalty factors, resource performance and the inputs into the dynamic de-list bid threshold formula.

- FERC also denied rehearing of a complaint by the New England Power Generators Association that alleged that the interaction between the penalty factor and ISO-NE's peak energy rent mechanism is unjust and unreasonable (EL15-25). The PER requires suppliers to issue rebates to customers when energy prices exceed a strike price. The penalty factor, a component of the real-time dispatch and pricing algorithm, serves as a cap on the price that ISO-NE may pay to procure additional reserves. The commission found in its earlier order denying the complaint that NEPGA had not met its burden under Section 206 demonstrating that the existing Tariff provisions were unjust and unreasonable. (See [FERC Upholds ISO-NE New Entry Pricing: Rejects Challenges by Generators.](#))

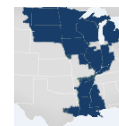
– William Opalka

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FERC Rebuffs MISO's Push for Mandatory Capacity Auction Participation

By Amanda Durish Cook

FERC last week reaffirmed its rejection of MISO's proposal to institute a mandatory capacity market, denying rehearing of its 2012 order on the issue.

In June 2012, FERC conditionally approved revisions to improve deliverability of capacity resources in the MISO footprint, but the commission rejected MISO's request that the Planning Resource Auction become obligatory and subject to a minimum offer price rule. More than 15 entities, including MISO's Independent Market Monitor, requested a rehearing.

Capacity suppliers complained that MISO's capacity construct is discriminatory because it requires sellers, but not buyers, to participate. Others took issue with MISO's use of a vertical demand curve and two-month forward period before the auction.

In its order last week, FERC again rejected MISO's proposed mandatory auction for resource deficiencies and upheld the use of a vertical demand curve ([ER11-4081-001](#)).

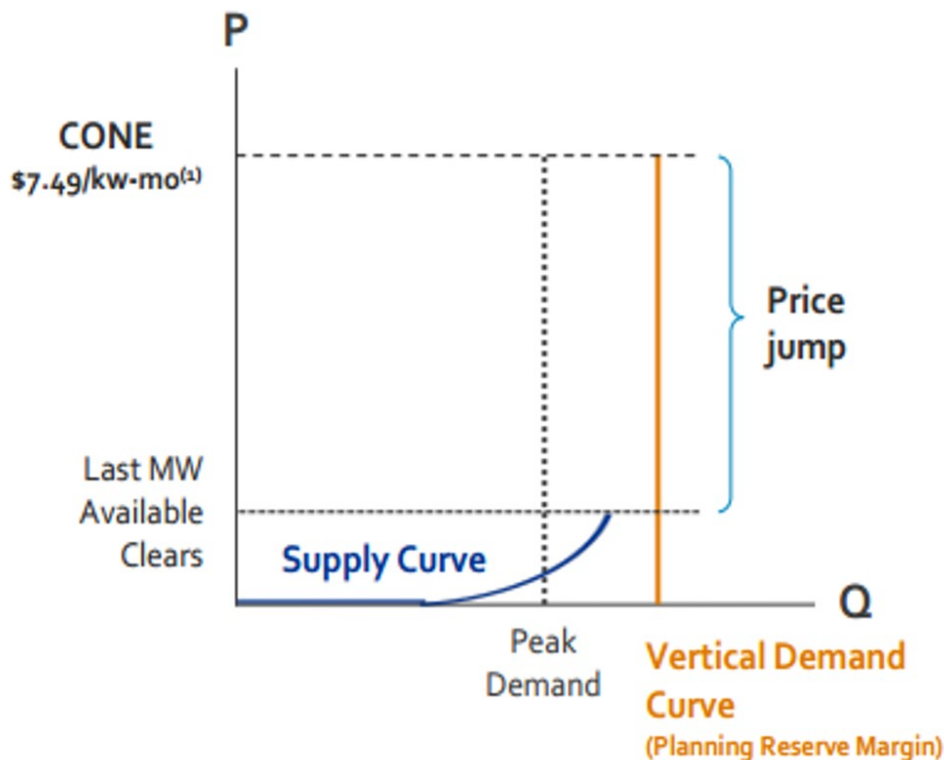
Load-serving entities, "as buyers of resources, must obtain sufficient resources to meet their planning resource margin requirement or pay a significant penalty of 2.748 times [the cost of new entry]. We do not consider this requirement and its associated penalty to be a 'free pass,' as characterized by capacity suppliers, or that buyers have no incentive to purchase capacity, as NRG [Energy] claims," FERC ruled.

It also said MISO had not met its burden of proving its proposal was just and reasonable.

The commission also denied rehearing of the decision to reject MISO's proposed minimum offer price rule, again concluding that customers "lacked the incentive to suppress auction prices in the MISO capacity market." On the other hand, FERC reiterated its defense of MISO's fixed resource adequacy plan, saying LSEs do not "have an incentive to exercise market power in the MISO region" and market manipulation is "unlikely."

Daily Peak Load

The rehearing request by the Coalition of MISO Transmission Customers, a group of industrial customers, challenged MISO's use



Critics say vertical demand curve like that in MISO results in excessive price volatility. Dynegy included this chart in a presentation to investors last year, saying that when resources fall short of requirements, prices spike to the cost of new entry (CONE). Source: Dynegy

of daily peak load, a method FERC directed the RTO to use three years ago, replacing the grid operator's proposed daily *pro rata* method.

"We find that the use of the daily peak load contribution methodology until sufficient data exists to use the peak load contribution methodology does not represent undue discrimination against LSEs in retail choice states. ... Requiring MISO to use available historical information, as Coalition of MISO Customers recommend, does nothing to resolve this data gap because MISO cannot force electric distribution companies to provide the necessary data," FERC decided.

To comply with the commission's June 2012 ruling, MISO revised its Tariff language. FERC accepted the edits, conditionally approving MISO's map of zonal boundaries that pinpoint major transmission constraints and local balancing authorities and instructing the RTO to remove a reference to a minimum offer price rule ([ER11-4081-002](#)).

In the same order, FERC responded to Illinois Commerce Commission's concern that

the Tariff could hinder state commissions' responsibility for enforcing resource adequacy, saying it was beyond the scope of the compliance proceeding.

LaFleur: Room for Improvement

At FERC's open meeting Thursday, Commissioner Cheryl LaFleur said she supported the order "because I believe, based on this record and in the context of the primarily vertically integrated MISO region, the resource adequacy construct that we have approved is just and reasonable."

"I've often noted that we need to take account of legitimate regional differences and I think we've tried to do so in this order. But I do want to comment to say that a determination that a market construct is just and reasonable does not mean that it cannot be improved. I want to recognize that there are a lot of efforts underway in the MISO region to consider reforms to the adequacy construct and I very much encourage parties to stay engaged in those processes, and I'll be continuing to follow them closely."



FERC Reverses ALJ Ruling on Canceled Entergy Project Costs

By Tom Kleckner

FERC last week reversed an administrative law judge's 2013 finding preventing Entergy from including the costs from an abandoned repowering project in the company's allocation of costs to its operating companies.

Judge Philip Baten in June 2013 rejected efforts by Entergy Services and the Louisiana Public Service Commission (LPSC) to pass on to ratepayers through its "bandwidth formula" \$200 million in canceled costs from the \$1.8 billion Little Gypsy repowering project ([ER12-1384-001, et al.](#)).

FERC's Nov. 20 ruling said Baten's reading of a provision in Entergy's system agreement was "unreasonably narrow." It said adopting his interpretation would negate the inclusion in the bandwidth formula of other production-related costs that were just and reasonable, and found Entergy's proposal to include Little Gypsy cancellation costs in the bandwidth formula consistent with the system agreement.

Entergy uses its bandwidth formula to allocate production costs among its half dozen operating companies under its system agreement. Payments are made annually by low-cost operating companies to the highest-cost company in the system, using a



Little Gypsy power plant Source: Entergy

bandwidth remedy that ensures no operating company has production costs more than 11% above or below the Entergy system average.

FERC also reversed Baten in including the project's cancellation costs in the bandwidth formula as being "consistent with the purpose of the bandwidth remedy." It disagreed that the inclusion of the costs "would constitute a landmark policy shift for the Entergy system," as Baten had said, noting that the commission had already determined the propriety then-current version of the system agreement.

The commission disagreed with the initial ruling and interventions by the Arkansas and Mississippi regulatory commissions,

which argued the cancellation costs should be considered "construction work in progress" and excluded from the bandwidth formula. Noting that Entergy had securitized the cancellation costs, FERC found them to be production costs "and, therefore, "the kinds of costs that are appropriate for inclusion in the bandwidth formula."

At the same time, FERC affirmed Baten's decision that the repowering project met the needs of the Entergy System "as a whole," and not just regional needs. It rejected the Mississippi Public Service Commission's allegation that the LPSC "avoided cost responsibility for its ratepayers" by approving the project's cancellation, rather than require it be completed.

The commission also sided with the judge in ruling that the LPSC had failed to provide sufficient evidence backing its complaint that his ruling was discriminatory.

The Little Gypsy project would have converted an old gas-fired generator on the Mississippi River west of New Orleans into a petroleum-coke burner. Entergy cited the shale-gas boom and resultant drop in natural gas prices in suspending the project in 2009. It wasn't until 2011 that the LPSC officially canceled the project and granted cost recovery.

Steering Committee Addresses Timely Posting, Merges Two Working Groups

MISO's Steering Committee put its own operations under inspection during a Nov. 19 meeting, when it addressed stakeholder concerns that meeting materials are being posted too late.

Michelle Bloodworth, MISO's executive director of external and stakeholder affairs, said meeting and agenda materials should be posted at least a week before the meeting under governance guidelines.

"We have not forgotten this and we're taking a lot of strides internally," Bloodworth said, adding that MISO is looking at different options on how to notify stakeholders when materials are posted.

MISO management will address the committee's concerns on posting and discuss verbal updates versus updates accompanied by posted materials at an informational forum Dec. 15.

The Steering Committee went over a tentative schedule of monthly 2016 meetings. In light of the impending stakeholder redesign, the committee is embracing a "business as usual" policy through March until a more defined plan emerges from the stakeholder redesign committee. (See [MISO Board Reduces Meeting Schedule: AC Likely to Follow.](#))

Also during the meeting, the closed Operations Working Group and the closed Operations Planning Working Group were merged by vote into the temporarily named Confidential Reliability Working Group. The Steering Committee also gave the go-ahead on a draft charter and management plan for the newly merged entity. The group's purpose is to "provide a forum to promote the reliability of the Bulk Electric System and to develop, review and recommend operational planning practices," according to the draft management plan.

Kent Feliks, chair of the Market Subcommittee, asked the Steering Committee for ideas on how the subcommittee should address projects that are withdrawn from MISO's market roadmaps. Currently, there's no procedure in place for projects that drop out of the 2017-2019 Market Roadmap. Feliks said a possible procedure and improvements to MISO Market Roadmap process will be discussed at the Dec. 1 Market Subcommittee meeting.

— Amanda Durish Cook



News from FERC

Northern States Wisconsin to Share Expense of Abandoned Nuclear Expansion

Northern States Power's Wisconsin ratepayers will be billed for 15% of the nearly \$79 million spent on the now-abandoned Prairie Island nuclear project under an agreement approved by FERC last week. The 15% share, totaling \$12 million, reflects the most recent coincident peak demand ratios approved for the Wisconsin utility's interchange agreement with Northern States Power Minnesota, FERC said (ER15-698).

Northern States had planned to expand the capacity of two existing units at the Prairie Island site. Northern States said the shrinking cost of alternative energy and delays in obtaining Nuclear Regulatory Commission approvals "reduced [the project's expected benefits] to an extent that the project was no longer economical."

The Minnesota Public Service Commission, which granted a certificate of need for the project in 2009, approved its cancellation in February 2013. In late August, the commission found that Northern States acted in good faith in the development and cancellation of the project.

No Rehearing in MISO Wind Interconnection Study Matter

FERC denied MISO's request for rehearing of an order that found that the RTO violated its obligations to an interconnection customer regarding network upgrade studies. The commission said that MISO had not alleged any specific errors in a 2013 order that found the RTO had improperly concluded that the Jeffers South wind generation facility was obligated to fund construction of a \$43 million 161-kV line from Dotson to New Ulm, Minn. (EL10-86-004).

Jeffers South said MISO neglected its duty to identify the least expensive network upgrade option. In its rehearing request, MISO argued that the study process was valid because Summit Wind, Jeffers South's predecessor, had agreed to it.

In last week's order, FERC told MISO to permit Jeffers South to name a new point of interconnection at Heron Lake. "We expect all of the parties to endeavor to perform their obligations pursuant to the Tariff and in a cooperative manner going forward," FERC said.

No Time Value Refunds in Michigan Contract Dispute

FERC reversed an administrative law judge ruling requiring the payment of time value refunds in a dispute between the 1,633-MW Midland Cogeneration plant and Consumers Energy (ER10-2156). The dispute concerned the plant's interconnection agreement with Consumers and a second agreement in which Consumers



Midland Cogeneration Plant Source: Midland Cogeneration Venture

bought most of the output of the plant. Consumers later sold its transmission to Michigan Electric Transmission. "If Consumers Energy and Michigan Electric were required to refund the time value of payments received, or to be received, from Midland for services performed prior to acceptance of the facilities agreement, they would necessarily have operated at a loss, contrary to long established commission policy," the commission said.

FERC Rejects Louisiana Rehearing Bids on Entergy Depreciation

FERC rejected two rehearing requests by the Louisiana Public Service Commission in cases involving Entergy's depreciation rates:

- FERC denied the Louisiana PSC's request to reconsider a previous order that affirmed an administrative law judge's initial determinations approving depreciation rates for Entergy Arkansas (ER10-2001). The Louisiana regulators had challenged the judge's decisions regarding the admissibility of witness testimony.
- FERC also denied rehearing of the Louisiana PSC's complaint that the state could not use state-determined depreciation inputs in the bandwidth formula used to equalize production costs among Entergy's operating companies (EL10-55). The order affirmed FERC's finding that the PSC had not shown the commission's use of the depreciation rates was unjust or unreasonable.

— Amanda Durish Cook and Tom Kleckner

MISO Launches 'Jargon-Free' Blog

MISO last week introduced a blog, MISO Matters, an effort to increase understanding of RTO operations by simplifying technical topics. The first entry features breakdowns of peak load, automatic reserve sharing and the MISO Transmission Expansion Plan.

"We will feature what MISO is doing around big topics, like [the Clean Power Plan] and transmission planning, but also try and explain some of the day-to-day business operations," MISO spokesman Andy Schonert said. "Most of all, the goal of the blog is to tell MISO's story free of jargon and acronyms, and explain what MISO does on a daily basis."

— Amanda Durish Cook





Cuomo: 50% Renewables by 2030, Keep Some Nukes Going

By William Opalka

Nuclear power plant owners are welcoming reports that Gov. Andrew Cuomo wants state regulators to mandate that half of the state's energy come from renewable energy sources by 2030 while creating incentives for nuclear to remain viable in the interim.



Cuomo

Getting 50% of its energy from wind, solar and other renewable resources by 2030 is currently a state goal, but it lacks the force of an order from the New York Public Service Commission. The governor is also seeking a way to keep the R.E. Ginna and James A. Fitzpatrick nuclear plants on Lake Ontario in the state's fleet to help New York meet the federal Clean Power Plan. The hope for those in the nuclear industry is that these combined efforts will mean their plants will serve as the primary source for low-carbon power in the near term.

The New York Times first reported the proposed mandate on Sunday. A source told *RTO Insider* the details could be released in the governor's annual State of the State address in January, with final action by the PSC hoped for about six months later.

"If true, this new policy would be a welcome and constructive step that promotes the transition to clean energy," said David Tillman, a spokesman for Ginna's owner, Exelon. "We believe that with the governor's leadership, a state clean energy standard can be implemented that would recognize the zero-carbon, economic and reliability attributes of nuclear energy while maintaining New York's focus on renewable energy and efficiency."

Ginna is scheduled to close in 2017 at the conclusion of a reliability support services agreement that is now pending before FERC and the PSC. (See *Ginna Lifeline to End in 2017: Profits After 'Unlikely'*.)

A spokesman for FitzPatrick could not be reached for comment. (See *Entergy Closing FitzPatrick Nuclear Plant in New York*.)

Advocates from different sectors of the power industry were generally pleased by the news. "The clean energy standard as proposed by the governor is an important and forward-looking approach that will help attract investment in renewables and address market problems that need fixing," Gavin Donohue, president of the Independent Power Producers of New York said in a statement. "The alternative is the potential loss of nuclear power in New York due to currently low natural gas prices — a scenario that would be catastrophic for both ratepayers and the environment."

Anne Reynolds, executive director of the Alliance for Clean Energy New York, supported the plan but is less sanguine about the nuclear component. "Gov. Cuomo's reported directive to the Public Service Commission to mandate the 50% renewables by 2030 goal is great, encouraging news for the renewable energy industry," she said. "Nuclear power, while emitting less carbon than coal or oil, nevertheless does not meet the definition of renewable technologies. Supporting uneconomic and aging power plants should not be the long-term solution, but should be a transition to a renewable energy future."

Iberdrola USA, whose Rochester Gas & Electric unit negotiated the

RSSA with Exelon, would not comment on the purported extension of Ginna's operation. "We're working to complete the Ginna Reliability Transmission Alternative to meet our requirement, anticipating it will be completed in mid-2017 when the plant is supposed to be retired," spokesman John Carroll said.

GRTA is intended to provide access to other generation sources to supply the Rochester area and render Ginna unnecessary.

In contrast to the lifeline Cuomo is offering to the upstate nuclear units, the governor has repeatedly called for the closure of Entergy's Indian Point plant, citing concerns over the safety of New York City, 30 miles south.

The PSC was supposed to take action on several clean energy orders at its meeting on Thursday, including one on a retail renewable portfolio standard, but the items were pulled from its agenda at the last minute.

"Because these programs are so important, we wanted to make sure we are examining all the issues. It is absolutely our intent to pursue these programs. Nobody should read anything into this, other than they are complex matters for our state energy policy and it's important that we get it right," commission chair Audrey Zibelman said to open the meeting.

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Utilities: Removal of Net Metering Caps Violates Law

By William Opalka

New York utilities last week challenged an order by regulators to temporarily remove the 6% cap on net metered solar-powered systems, saying the move violated state law by failing to provide adequate notice and that the regulators did not adequately justify that the move was in the “public interest” ([15-E-0407](#)).

The utilities asked for rehearing of the New York Public Service Commission’s Oct. 16 order that removed caps statewide while the commission develops a long-term solution to determine the value of distributed solar. (See [Net Metering Caps Temporarily Lifted in NY](#).)

“The order contravened the statutory requirement that limits the commission’s role to increasing the ‘percent limits’ of the net metering cap, not removing them,” the

petition alleges.

One of the six distribution utilities, Orange and Rockland Utilities, said in the summer that it was close to reaching its limit of 6% of load for net-metered systems.

The PSC responded with an administrative notice in the New York State Register on Aug. 5 seeking comments on the O&R petition. “The commission ... may extend relief, in whole or in part or as modified or related, to other electric utilities,” the notice said, naming the other five.

The utilities contended last week, however, that “there was no reasonable basis to assume that a request for comments on a compliance filing made by a single utility would be the basis for the commission implementing a new generic policy with respect to net metering, especially considering the manner in which the commission had properly noticed and duly considered its intended ac-

tion to increase the net metering cap on two prior occasions.”

First raised from 1% to 3% in June 2013, the cap was boosted to 6% in December 2014.

Commissioner Diane Burman dissented from the PSC’s October order, saying the process used to adopt it failed to give adequate notice to the public or other utilities that a sweeping change was under consideration.

The utilities also say that state law authorizing the PSC to raise the cap restricts the commission to impose a “percent limit.”

“Although the commission characterizes its action as a ‘floating’ cap ... this nomenclature does not change the fact that the actual and practical import of the order is that there is no cap at all during the interim period and the commission thereby exceeded the statutory constraint,” they wrote.

FERC Denies Rehearing on NY Buyer-Side Mitigation

By William Opalka

FERC on Thursday denied a merchant transmission owner’s request for rehearing of a 2013 order that denied its complaint that NYISO improperly implemented its buyer-side market power mitigation exemption test. However, the commission granted a limited clarification and directed NYISO to make an additional compliance filing ([EL12-98](#)).

Hudson Transmission Partners filed the complaint against NYISO after the exemption test was employed for the developer’s 660-MW HVDC merchant transmission line between Ridgefield, N.J., and New York City, which went into service in 2013. The developer had argued that the NYISO Tariff defining “generator” did not apply to its “controllable line.”

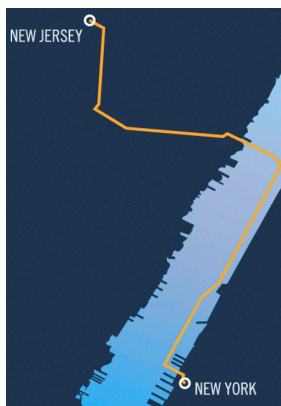
“The commission addressed HTP’s argument in the November 2013 order and found that the NYISO Tariff’s references to generators are intended to include controllable lines,” FERC wrote, also citing commission precedent.

FERC also clarified whether a holder of unused unforced deliverability rights (UDRs) has the ability to retain or sell them. The

NYISO Tariff permits a UDR holder to either use the rights to offer generation from outside the NYISO footprint into the NYISO installed capacity auctions, or to return its UDRs to NYISO for a given year.

“We agree with HTP that retention of such unused rights in this circumstance, i.e., when the offered ICAP does not clear, does not constitute market manipulation without additional showings under the commission’s anti-manipulation rule,” FERC wrote.

The order said that NYISO fulfilled its compliance requirements to provide the specific scaling factor used for the HTP Project. But it required an additional filing “reflecting Tariff provisions that provide the conceptual basis and general framework for a scaling factor and that are sufficiently broad and flexible to allow for the kinds of variations that exist with respect to UDR projects.”

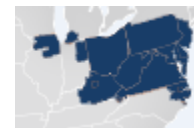


Source: Hudson Transmission Partners

FERC Briefs

- FERC last week accepted a compliance filing by NYISO regarding its revised compensation methodology governing the provision of frequency regulation service under Order 755. “We believe that NYISO has demonstrated that its interim market power mitigation measures have successfully limited opportunities for firms to benefit from bidding regulation movement above marginal costs, and therefore meet the requirements of Order No. 755,” FERC wrote ([ER12-1653](#)).
- FERC granted New York Transco’s request to delay the posting of its net adjusted revenue requirement, which had been due Sept. 30, 2015. The commission noted that some of the elements of the revenue requirement are the subject of ongoing settlement judge procedures and thus not available ([ER15-572](#)). The case relates to five transmission projects intended to serve New York City and respond to the potential closure of the Indian Point nuclear plant. (See [Divided FERC Trims ROE on NY Tx Projects, Orders Hearing](#).)

— William Opalka



Proposal to Mitigate PJM Generators' Risk Under CP Faces Resistance

By Suzanne Herel

WILMINGTON, Del. — An initiative that would allow generators to avoid underperformance penalties in the redesigned PJM capacity market was met by pushback from members who said it was premature and could undermine the new reliability product.

The problem statement presented by Bob O'Connell on behalf of on behalf of PPGI Fund A/B Development would allow generators to minimize penalties by netting them against over-performing generators.

O'Connell introduced the initiative in October, saying the Capacity Performance rules allow companies with multiple generators to offset poor performance with over-performing units but does not allow after-the-fact offsets, such as bilateral trades, that could help smaller generators. (See [Generators Seek to Reopen PJM Capacity Performance Rules](#).)

"I'm not sure why it makes sense to the market to retroactively switch around performance," Market Monitor Joe Bowring said during a discussion at the Markets and Reliability Committee meeting. "Capacity Performance is about performing at the time you're supposed to perform."

Bankruptcy Threat

"We have a performance obligation to meet those," responded O'Connell, who agreed to delay a vote on the initiative to try and address stakeholder concerns. "But to the extent that a unit has a legitimate problem that forces it to be out of service during one of these periods of time, the exposure that

unit faces with possibly having to buy back its position in real time and pay a penalty ... exposes it to financial stress.

"It doesn't make sense to push that financial stress to the point that they can't meet their obligations financially. ... Sitting back until half a dozen units go into bankruptcy is something that's not effective from a reliability standpoint or an investment standpoint."

O'Connell said customers ultimately would benefit because the proposal would allow generators to reduce the risk premiums they will otherwise include in their offers.

"The only way to handle underperformance now is to write a check," he said. "Give the insurance company a way to physically offlay that risk."

Tangible Problem?

Rene Demuynck of the New Jersey Board of Public Utilities asked for proof of a problem or of consumer benefit.

"We're at a loss as to what the failure of Capacity Performance is right now except to avoid the obligation that you want to avoid and cleared the market on," he said. "What is the tangible problem?"

"Consumers are being asked to pay upfront with the understanding that units would offer their capacity and, when most needed, deliver the capacity," he said. "I would suggest that the risk of negative penalties would be substantially diminished, and therefore the incentive to perform would be substantially diminished. There's no perceived reason we can see to even consider this, and before [FERC] addresses other

issues that are pending."

Susan Bruce, of the Industrial Customer Coalition, said the problem statement was one-sided.

"When we talk about Capacity Performance, we talk about risks and rewards," she said. "I see this as looking at the risk side."

While there may be legitimate issues there, she said, "This is so narrowly drawn that it doesn't look at the other side of the equation, the customer side of the equation. ... There's nothing in this to recognize the other side of the ledger."

O'Connell protested that since he introduced the idea for the problem statement at the September MRC meeting, he hadn't received any calls or questions about how it might be changed to include the customer side. "How long do I have to wait?" he asked.

"At that last meeting there was a chorus of concern," Bruce responded. "To be honest, I was sort of hoping it would go away."

Brian Garnett of Duke Energy supported the problem statement, saying it would be a way for smaller generators to hedge financial risk in the way that larger generators can.

Alan Ellison of Veolia added that his company's Grays Ferry Cogeneration plant in Philadelphia could go bankrupt if it stumbles in the new market.

Premature

Jim Jablonski of the Public Power Association of New Jersey said the problem statement was premature.

"Is it time to be tweaking it already?" he said of Capacity Performance. "Or should we wait for a sensitivity analysis?"

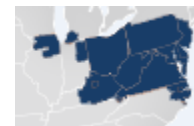
"PJM does have some concerns regarding the substance of the problem statement," said Stu Bresler, PJM senior vice president for markets, noting that a fundamental piece of the new product's design is unit-specific evaluation of performance.

"I don't have an opinion how long we should wait," he said. "But I certainly agree that experience would be helpful."

The committee plans to vote on the problem statement at its December meeting.



Storms flooded Central Maine Power's substation in Bath in September 2015. Source: Central Maine Power



FERC Denies Consumer Reps' Complaint, Upholds PJM's Load Forecasting

By Suzanne Herel

FERC last week rejected a request by consumer advocates that it force PJM to update its 2015 peak load forecast using recent modeling enhancements to prevent over-procurement of resources in this year's capacity auctions.

"While there will inevitably be some difference between PJM's load forecast and the amount of capacity that PJM ultimately needs in a given delivery year, the record indicates that PJM has taken steps to ensure the reasonableness of the 2015 load forecast, including making a statistical adjustment based on a percentage of error it had seen in the load forecast over recent years, to account for the effects of energy efficiency programs," the commission said

([EL15-83](#)). "The mere fact that PJM is working on a revised forecast methodology does not render the prior one unjust and unreasonable."

The complaint was filed in June by a group that included industrial customers, environmental organizations, state regulators and consumer advocates. It said that using updated methodology released by PJM in December would reduce the peak load forecast for 2016/17, 2017/18 and 2018/19 by at least 7,000 MW, potentially saving consumers more than \$600 million. (See [Model Change Results in Lower Load Forecast for PJM](#).)

PJM responded that the revised forecasting model would not be complete and ready for use until November, after the Base Residual Auction and transition auctions had been held. It was approved by PJM's Markets and

Reliability Committee last week. (See related story, [MRC Briefs, p.13](#).)

Last week's order denied the consumers' request that the auctions be delayed — a moot point since they have already occurred.

The commission also rejected the complainants' request that PJM be compelled to reinstate a 2.5% "holdback" that was eliminated in FERC's approval of the new Capacity Performance product.

"The commission specifically found in the Capacity Performance order that the holdback was not necessary to address load forecast errors," FERC said. "The issue of whether it is appropriate to remove the 2.5% holdback is currently pending on rehearing of the Capacity Performance order and will be addressed in that proceeding."

FERC Rejects Environmentalists' Rate Complaint vs. Duke



FERC rejected a North Carolina environmental group's request to reconsider its decision not to investigate the group's market manipulation allegations against Duke Energy ([EL15-32](#)).

The North Carolina Waste Awareness and Reduction Network (NC WARN) had complained that Duke was building excess power plants instead of purchasing power from neighboring utilities, resulting in unjust rates. It asked that the commission fund a study evaluating the benefits of Duke joining an RTO. In its request for

rehearing, the group asserted the study would show that the creation of a southeastern RTO would result in savings for customers.

FERC denied NC WARN's request for lacking certain filing requirements, including a "statement of issues."

"This requirement is not a mere formality," the commission said. "Rather, the purpose of this requirement is to ensure that the filer, the commission and all other participants understand the issues raised by the filer, and to enable the commission to respond to these issues and avoid wasteful litigation."

— Michael Brooks

FirstEnergy Ordered to Report ODEC Load Data



FERC upheld an administrative law judge decision that FirstEnergy is responsible for reporting data related to Old Dominion Electric Cooperative load in Virginia ([ER12-2399](#)).

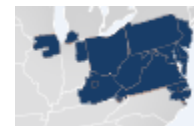
The dispute stems from ODEC's purchase of the distribution facilities and service territory of Potomac Edison, a FirstEnergy subsidiary, in Virginia. FirstEnergy argued that it was no longer responsible for calculating and reporting data for Potomac Edison, such as total hourly energy obligation, peak load contribution and network service peak load, to PJM.

FERC, however, affirmed the judge's finding that because ODEC did not purchase the transmission facilities of Potomac Edison, FirstEnergy was still responsible for reporting the data in the entire Allegheny Power System zone, which encompasses parts of Pennsylvania, Maryland, West Virginia and Virginia. "As the initial decision found, requiring ODEC to perform the metrics would result in unduly discriminatory treatment of ODEC when compared to other wholesale LSEs in the APS zone," the commission said.

— Michael Brooks

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FERC: PJM Entitled to Recoup Line-Loss Credits Paid to Virtual Traders

By Michael Brooks

PJM is entitled to recoup \$28 million in line-loss credits paid to virtual traders, FERC ruled last week, reaffirming a 2011 decision that the D.C. Circuit Court of Appeals ordered it to justify.

In its response to the court's 2013 remand, the commission found that repayment of the refunds would not have a negative impact on the PJM market (EL08-14). If anything, FERC said, "recoupment will have a positive effect on the market because market participants know they will not be permitted to retain erroneously paid refunds."

PJM told the commission that it has already recovered \$9 million of the approximately \$37 million the RTO paid out to virtual traders through its marginal loss surplus allocation (MLSA), which refunds a portion of transmission loss charges to companies who contribute to the fixed costs of the grid.

PJM collects transmission loss charges to account for electricity lost as it flows over the lines, but because the RTO treats every transmission as the last in the system, its collections exceed actual losses. MLSA was approved by FERC in 2006 to account for this.

FERC decided in 2008 that up-to-congestion traders were entitled to the refunds but reversed its policy in 2011. The D.C. Circuit upheld the reversal but told the commission it had to justify why the traders should be required to pay back their refunds. (See [Split Decision for Financial Traders on PJM Line-Loss Collections](#).)

"We have determined that the virtual marketers ... should be required to repay refunds, with interest, to put the parties back in the positions in which they would have found themselves if the commission had not erred in requiring refunds in the first place," FERC said.

In its remand, the court agreed with virtual traders Black Oak Energy, EPIC Merchant Energy and SESCO Enterprises — whose December 2007 complaint originally spurred FERC to allow them to collect refunds — that the commission's order to re-



pay the refunds threatened to undermine the markets.

"Recoupment interjects regulatory uncertainty into a setting in which participants rely on the finality and predictability of commission rulings to assure a well-functioning marketplace," the companies told FERC in 2014. They complained that the order reflected a new policy, one without any time limits, parameters or sufficient notice.

FERC said, however, that it found sufficient legal precedent for its decision, citing cases in which it has required parties be made whole after it had made an error.

The commission also said that the companies "were on notice that the refunds paid based on the initial commission order were in question" and that they "had sufficient reason to preserve those funds in the event that the commission (or a court) subsequently reversed the commission's initial determination."

A Long, Messy History

FERC's 2011 reversal resulted in a Pandora's Box of market manipulation cases for the commission's Office of Enforcement.

It was through the MLSA that Powhatan Energy Fund made millions making riskless UTC trades to cash in on the credits. (See [PJM UTC Case Likely Headed to Court After FERC Notice](#).)

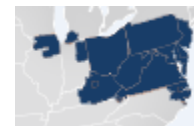
The company is now battling FERC in federal court over the commission's effort to collect \$34.5 million in penalties and disgorged

profits. In a [brief](#) to the court filed last month asking it to dismiss the case, Powhatan argued that FERC "approved the inclusion of virtual traders in the allocation of [transmission-loss credits] with no limitation other than that the traders pay into the fixed costs of the system, which as the commission expressly recognized, would include UTC transactions."

"Despite having had the opportunity to circumscribe the very conduct at issue in this matter, the commission did not ask PJM to limit or qualify the virtual traders' receipt of rebates for UTC transactions, nor did the commission issue any pronouncement or order advising virtual traders that it would consider trading for the rebates wrongful conduct," Powhatan told the Eastern District Court of Virginia.

FERC countered in its own [brief](#), saying that it had rejected an MLSA method that credited all virtual transactions for fear of it leading to an increase in trades meant solely to cash in on the credits. "It would be impossible for a reasonable person acting in good faith to read these orders and conclude that the commission was indifferent to whether traders engaged in circular trades solely to collect MLSA, regardless of whether those trades paid for transmission or not," FERC told the court.

City Power Marketing, fined \$15 million for similar allegations, filed a motion in the D.C. Circuit Nov. 2 to dismiss the case. In September, FERC issued the same charges against Coaltrain Energy. (See [FERC Charges Third Firm with UTC Scam in PJM](#).)



MRC Briefs

Members Ask for More Time to Consider EE Resource Manual Changes

WILMINGTON, Del. — The Markets and Reliability Committee last week delayed a vote on proposed manual changes over concerns that they could restrict energy efficiency participation in the capacity market. Members requested an additional education session on the issue.

The revisions aim to prevent EE resources from being counted both as capacity resources and as reductions in the load forecast. PJM proposes to use an add-back mechanism to accommodate continued EE participation when a new load forecast model is adopted.

Energy efficiency resources may be used to replace the commitment of a similar resource because such commitments would have been accounted for by the add-back. However, when it comes to using EE resources to replace non-EE capacity resources, they would be limited to the difference between the add-back of the third incremental auction for a delivery year and the cleared quantity of energy efficiency resources in that same auction.

“The concern is that the add-back might be greater than what might clear,” said Jeff Bastian, manager of capacity market operations.

Several members expressed concern that the eligibility requirements outlined in the changes restrict the time periods that EE resources may offer.

“I have an issue regarding the eligibility and the way EE is treated as a capacity resource. It becomes ineligible in the same year that it cleared in the [Base Residual Auction],” said Carl Johnson, representing the PJM Public Power Coalition. “I struggle to think of a resource that is ineligible depending on when it is offered in.”

“The resource is unique in that it can get buried in the load forecast,” explained Stu Bresler, PJM senior vice president for markets. “We’re doing everything we can to preserve EE as [a Reliability Pricing Model] option. The other option is to not include it in the auction.”

Bruce Campbell of EnergyConnect said he opposed the changes.

“I think it’s a really dangerous path to go down to say we’re not go-

ing to let resources participate as RPM resources because it will make our forecast look bad,” he said. “That’s just wrong.”

Responded Bresler: “The bottom line is if we don’t include it in the load forecast three years ahead, we miss the chance, and it’s been rolled in by the time that year comes around.”

The educational session on the revisions proposed for Manual 18: PJM Capacity Market and Manual 18B: Energy Efficiency Measurement & Verification is tentatively scheduled for Dec. 9.

Members Approve Manual Changes

Members endorsed the following manual changes:

- Manual 01: Control Center and Data Exchange Requirements. Adds requirements and changes terminology to be consistent with North American Electric Reliability Corp. standards. Adds two communications requirements: voice communications between transmission owners and distribution providers in the transmission owner area, and between transmission owners and generator operators. Adds term “interpersonal communication” for voice communication. Identifies satellite telephones as preferred method of communication. New section requires that communication failures lasting 30 or more minutes be reported within 60 minutes of detection. Makes minor edits for clarity. Removes dated reference to “floppy disk.”
- Manual 03: Transmission Operations. Changes resulting from bi-annual review include project updates, edits and reorganization of sections. Updates generator voltage schedule to define coordination. Changes will be implemented Dec. 1.
- Manual 12: Balancing Operations. Updates due to new instantaneous reserve check implementation. Eliminates mention of MISO as the interconnection time monitor. Replaces the term “supplemental reserve” with “secondary reserve.” Changes will be implemented Dec. 1.
- Manual 13: Emergency Operations. Updates day-ahead scheduling reserve requirement to 5.7% from 5.93% for Reliability First Corp. effective Jan. 1. Other changes made for consistency. Removes requirement that generators connected below 230 kV participate in voltage reduction.

- Manual 14B: PJM Regional Transmission Planning Process. Updates for compliance with NERC standards.

- Manual 14B: PJM Regional Transmission Planning Process. Changes reflect new process of considering energy market uplift in development of the Regional Transmission Expansion Plan.

	Auction	2019/2020 BRA	2019/2020 1 st IA	2019/2020 2 nd IA	2019/2020 3 rd IA
	Conducted in	May 2016	Sep 2017	July 2018	Feb 2019
	Peak Load Forecast Vintage	Jan 2016	Jan 2017	Jan 2018	Jan 2019
	Most Recent Complete Install Year included in Load History	2014/2015	2015/2016	2016/2015	2017/2018
EE Resource Installation Year	2015/2016	X			
	2016/2017	X	X		
	2017/2018	X	X	X	
	2018/2019	X	X	X	X

X denotes that the indicated EE Resource Installation Year is eligible to offer into that auction.

Energy efficiency eligibility - DY 2019/20 Source: PJM

Continued on page 14



Members Committee Briefs

Tariff Filing Will Allow Capacity Release, Includes Contingencies

WILMINGTON, Del. — A Tariff change endorsed by stakeholders last week will allow PJM to release Base Capacity resources to reflect the Capacity Performance resources it acquired in the transition auction for the 2016/17 delivery year.

PJM procured more than 4,200 MW of new capacity in that auction in August.

The resources would be sold in the third incremental auction for the delivery year, which is set for February. (See “Tariff Change Would Allow PJM to Sell Excess Capacity for 2016/17” in [PJM Markets and Reliability & Members Committee Briefs](#).)

PJM Assistant General Counsel Jen Tribulski said PJM would seek a waiver from releasing capacity if FERC ordered the removal of demand response from the capacity market before the third incremental auction as a result of a Supreme Court ruling upholding the Electric Power Supply Association’s challenge to FERC’s jurisdiction over DR.

Although the lower court ruling specifically addressed DR in the energy market, some legal experts believe a ruling against FERC would also apply to capacity.

If it ruled in such a manner after the auction but before the start of the 2016/17 delivery year in June, or after the delivery year started but with a retroactive clause, PJM would need to repurchase at least 4,000 MW. This could result in a net cost increase.

If FERC removed DR from the capacity market after the delivery year and did not make

the order retroactive, no further action would be necessary. The same holds true if FERC removed DR only from the energy market.

Market Monitor Joe Bowring questioned why PJM would release the capacity at all, given the contingencies and the potential of incurring additional cost.

“It’s not prudent to hold on to those megawatts when we can give value back to the load with megawatts we don’t need,” Tribulski said.

Higher IRM for Next Three Delivery Years Endorsed

With one “no” vote and 27 abstentions, the Members Committee approved an increase in PJM’s Installed Reserve Margin.

The IRM is used in the Reliability Pricing Model capacity auctions. The Reserve Requirement Study increased the IRM for the 2016/17 delivery year to 16.4% from 15.5%. IRMs also rose for the following two delivery years.

In previous discussions at lower committees, stakeholders had expressed confusion over why the IRM was increasing at the same time the Capacity Performance model is being implemented. (See “IRM, FPR Rising; PJM Methodology Challenged” in [PJM Planning Committee Briefs](#).)

On Thursday, PJM’s Tom Falin said that Capacity Performance on its own does not result in a lower IRM because the Reserve Requirement Study always has been conducted under the assumption that generators will perform at the CP level.

“CP is changing the market rules to match the assumption we’ve always made in the study,” he said.

Finance Committee, Sector Whips, Members Committee Vice Chair Elected

Members elected the following:

Finance Committee (three-year terms)

- End Use Customers: David Evrard, Pennsylvania Office of the Consumer Advocate
- Generation Owners: Michelle Greening, Talen Energy
- Other Suppliers: Marguerite Miller, Credit Suisse
- Transmission Owners: Jim Benchek, FirstEnergy

Sector Whips (one-year term)

- Electric Distributors: Steve Lieberman, Old Dominion Electric Cooperative
- End Use Customers: Susan Bruce, PJM Industrial Customer Coalition
- Generation Owners: Joe Kerecman, Calpine
- Other Suppliers: Katie Guerry, EnerNOC
- Transmission Owners: Jodi Moskowitz, Public Service Enterprise Group

Members Committee Vice Chair (one-year term)

- Susan Bruce, PJM Industrial Customer Coalition

— Suzanne Herel

MRC Briefs

Continued from page 13

New Load Forecast Model, Related Manual Changes Adopted

With three abstentions, members endorsed revisions to Manual 19: Load Forecasting and Analysis to reflect updates to the PJM load forecast model.

The changes add variables to account for trends in equipment and appliance saturation and energy efficiency; revise weather variables; update weather station assignment to zones; and revise the weather normalization procedure.

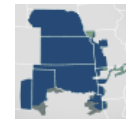
PJM will be publishing a white paper in 2016 to provide more detail on the forecast model.

PJM’s Tom Falin said the impact of the change in solar generation is being quantified, and the committee will be asked to endorse related manual changes in December.

Subcommittee’s Proposed Changes to Governing Documents OK’d

The committee endorsed modifications, clarifications and revisions to 12 terms in PJM governing documents.

— Suzanne Herel



News Roundup

SPP Continues Improvements to New Website

SPP has responded to stakeholder feedback by making several tweaks to its redesigned [website](#).

Many of the improvements were to the site's search function, which now returns results sorted with the most recently posted documents first and includes the ability to filter results by file type.

After logging in to their profiles on the site, users are now returned to the page they were previously viewing, rather than being taken to their profile page. Changes have also been made to simplify registration for meetings and other events.

Calendar (ICS) files sent to users after meeting registrations now include hotel information and have been reformatted to display all information in a more readable manner.

The RTO is accepting feedback on the revamped website, which went live last month, via [email](#). (See [SPP Unveils Redesign Website](#).)

The RTO said its website project team is already at work on another set of improvements, to come in the next several weeks.

ECC, Gas-Day Testing to Begin with 'Big Bang'

SPP staff told stakeholders last week to expect a "big bang" testing approach — an apparent reference to the complexity and breadth of the systems involved — next summer and fall as it continues to develop the markets system's enhanced combined-cycle (ECC) software. (See "Enhanced Combined-Cycle Project Moves Forward" in [SPP Board of Directors/Members Committee Briefs](#).)

The ECC project, intended to provide more sophisticated modeling that captures combined-cycle plants' flexibility, is being conducted in conjunction with improving gas market-clearing logic. SPP anticipates market participants will be able to begin gas-day testing in August and ECC testing in December.

The testing will involve more than a dozen systems or interfaces, four different vendors and seven SPP departments. At least two other system revisions will be released in addition to the ECC/gas-day releases.

Staff told SPP's Change Working Group — which is responsible for implementing changes affecting markets and members — said it would deliver quarterly releases of the markets systems through 2016, making incremental improvements to the ECC functionality. One project manager said the

team will have to see how downstream systems are affected as it gathers upstream system requirements.

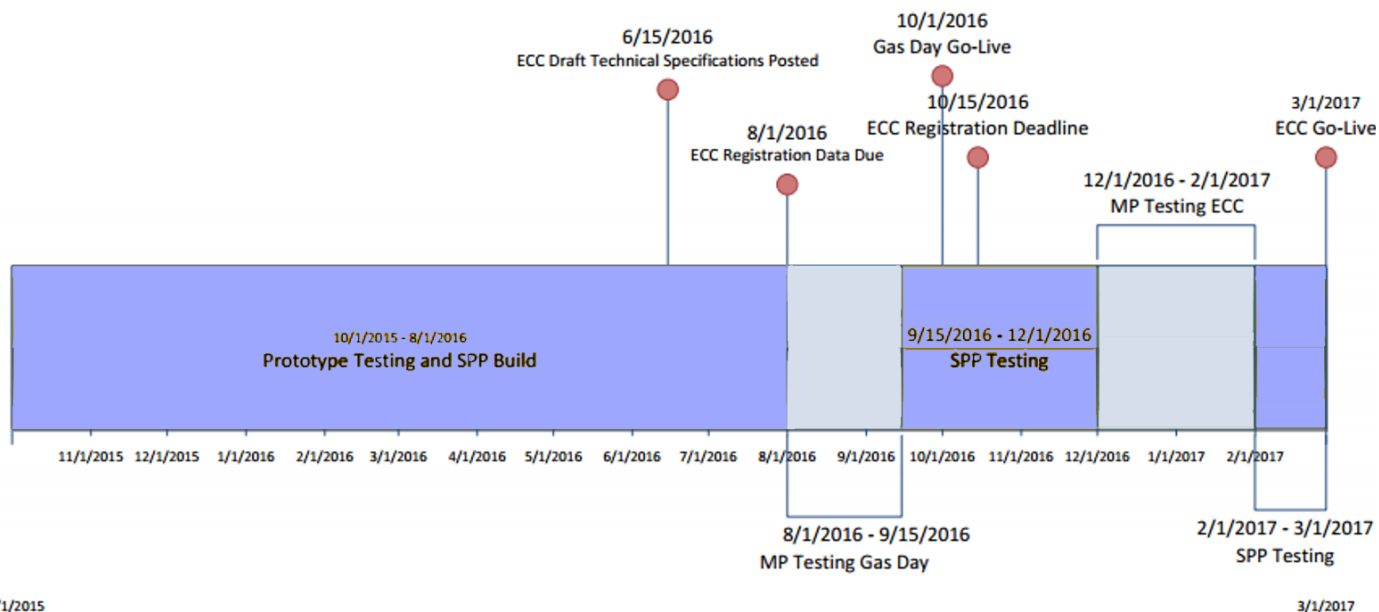
Adding to the project's complexity is the market-clearing engine, or, as SPP's Jim Gonzalez said, "The actual calculator." The ECC logic is so complex, Gonzalez said, the clearing engine has to run 20 times to produce a good solution.

FERC Grants SPP Waiver to Correct Tx Service Bills

FERC last week approved SPP's request to correct and resettle \$13.1 million of transmission-service invoices dating back to 2009, waiving a one-year limit in the RTO's Tariff. "The requested waiver is a one-time request related to [discrete] software issues, which SPP has resolved," FERC said ([ER15-2295](#)).

Approximately \$4.4 million of resettlements outside the one-year limitation date back to 2012, when SPP told FERC a transmission customer's inquiry led to the discovery of miscalculations of transmission losses and reactive compensation across DC ties with ERCOT and the Western Area Power Administration. The RTO said the software error affected invoices between January 2009 and May 2013.

— Tom Kleckner



10/1/2015

3/1/2017

Enhanced combined-cycle, gas day project schedule Source: SPP



Two-Day GridEx III Tests Vulnerability to Terrorist Attacks

By Ted Caddell

Amid increasing concern over threats to the nation's power grid, the North American Electric Reliability Corp. last week ran a rigorous, two-day drill that simulated terrorist attacks.

"There were cyberattacks on corporate computers, infiltration of transmission systems and substations, explosives and shootings," NERC CEO Gerry Cauley said in a press briefing Thursday, the final day of GridEx III. The exact scenarios were kept secret.

Cauley said that about 10,000 people at 315 organizations — electric generators, transmission companies, law enforcement, and local, state and federal government agencies — participated in or monitored the drill.

GridEx II, in 2013, drew 234 organizations and an estimated 3,000 participants. The first sector-wide grid security exercise was held in November 2011.

While details on the drills are kept close to the vest by NERC and the participants, a public report, expected out in January, will detail what the grid operators faced and how they fared.

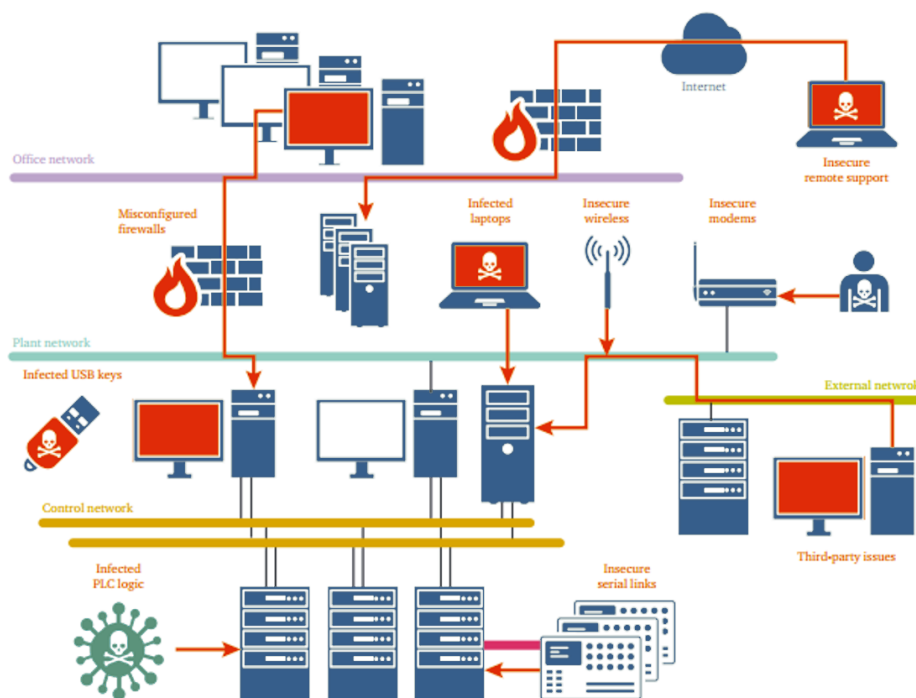


NYISO control room Source: NYS Smart Grid Consortium

The GridEx II [report](#) noted that the drill included simultaneous physical and cyberattacks. It laid out the "lessons learned" and recommendations, including efforts to enhance information sharing.

It also recommended expanding the capabilities and role of the industry group that coordinates with federal agencies on grid threats, the Electricity Sub-sector Coordinating Council.

Southern Co. CEO Tom Fanning, the head of ES-CC, said planning for the exercise began more than a year and a half ago and was essentially complete before the terrorist attacks in Paris on Nov. 13. So, although Fanning and his colleagues were in constant contact with federal counterparts after the



Control system vulnerabilities Source: "Cyber Security at Civil Nuclear Facilities: Understanding the Risk", Chatham House, September 2015

attacks, they did not have an effect on this year's drill.

That, he said, is an example of how grid operators must use current events to keep up with evolving threats. "The threat is ever changing," Fanning said. "We know we have to continually anticipate the threat and adapt our own strategy. Being perfect here is an aspiration. We know we are always going to have to get better."

"We are acutely aware of the recent events [in Paris] and the heightened urgency," Cauley said. However, he said, "we have intentionally not built that into the exercises."

This year's drill was intentionally challenging, if not overwhelming, Cauley said. "It is a national exercise, and includes Canada and observers from Mexico," he said. "The cyber vectors that we used started early [Wednesday] with attacks on public Internet and customer sites. We want to make sure this is not day-to-day stuff; it is rare," he said. "We wanted to test the system."

"There are cyberattacks in coordination with physical attacks, combined with trucks, and shootings to create some kind of enduring damage," Cauley said. "This is not to be a

simple, easy, one-day or two-day recovery."

Cauley said cyberattacks have a bigger role in GridEx III than they did in previous exercises. Recently, there have been several public conversations about grid's vulnerability to such attacks. Broadcaster Ted Koppel has been on a tour promoting his [controversial](#) book, "Lights Out," about the grid's vulnerability. Earlier this fall, a British think tank released a report asserting that U.S. nuclear power plants are at risk from cyberattacks. London-based Chatham House [said](#) the "risk of serious cyberattack on civil nuclear infrastructure is growing" because of its reliance on commercial "off-the-shelf" software.

"There are methods and tactics that exist to cause control systems to cause damage to equipment," Cauley acknowledged. "But as a practical matter, it is very, very difficult to carry out" a successful cyberattack on security-hardened grid facilities.

NERC, grid operators and all other sectors of the industry continue to assess threats and react to them, Fanning said. "I think we are the only industry with mandatory critical infrastructure protection" against cyberattacks, he said. "What we are trying to do here is go beyond the requirement."



RTOs to Report on Out-of-Market Actions, Uplift

Continued from page 1

ment and dispatch intervals, saying it was the first of a number of proposals on which the commission plans to act. (See [NOPR Requires RTOs Switch to 5-Minute Settlements](#).)

FERC said last week that the RTO/ISO reports, due in 75 days, will help it identify best practices and inform its future actions. It asked for information on:

- pricing of fast-start resources;
- commitments to manage multiple contingencies;
- look-ahead modeling;
- uplift allocation; and
- transparency.

"Identifying best practices for these five areas should provide incentives to maintain reliability, to facilitate accurate and trans-

parent pricing, to reduce uplift, and for market participants to operate consistent with dispatch signals," the commission wrote.

"We have selected these areas because the discussion at the price formation workshops and the comments received after the workshops suggest that a number of RTOs and ISOs have sufficient experience with these areas such that we may be able to discern best practices and understand unintended consequences.

"The commission seeks this information not only to answer technical questions regarding how each RTO/ISO addresses these topics, but also to understand the reasons why each RTO/ISO has made its set of policy choices," it added.

Commissioner Cheryl LaFleur said the issue is one of the commission's most important initiatives, particularly because of the shift from coal to lower carbon resources. "I know there's been a lot of anticipation and

even impatience for action in this area," she said. "This is the second in a series of orders; I don't believe it will be the last."

Commissioner Tony Clark said the energy markets "are our best performing and most mature markets."

"So it seems to me that this is an appropriate manner in which to deal with this ... so that we take it one bite at a time and we don't have secondary unintended effects [that might occur] if we were to act all at once."

Commissioner Colette Honorable noted that some have complained that work on price formation issues has "stalled" in RTO stakeholder processes.

"While we are working, I want to gently ask that [stakeholders] continue working, too, and that if you identify market flaws and other issues that need to be addressed, please continue to demonstrate your leadership."

PJM, NYISO, ISO-NE Gas Scheduling Filings OK'd



FERC last week approved PJM's proposal to move the deadline for submitting day-ahead offers to 10:30 a.m. ET from noon.

PJM made the change to comply with the commission's Order 809, which moved the timely nomination cycle deadline for gas to 2 p.m. ET from 12:30 p.m. The order, issued in April, also added a third intraday nomination cycle. (See [FERC Approves Final Rule on Gas-Electric Coordination](#).)

The commission required RTOs to revise their day-ahead market schedules in coordination with the new pipeline schedules or show why changes were unnecessary.

The commission approved PJM's schedule change effective March 31 ([ER15-2260](#) and [EL14-24](#)).

FERC also accepted compliance filings by NYISO ([EL14-26](#)) and ISO-NE ([EL14-23](#)), saying they had justified retaining their existing schedules, with day-ahead deadlines of 5 a.m. and 10 a.m., respectively.

— William Opalka

FERC Orders Seek to Boost Services for Voltage, Frequency Control

By Rich Heidorn Jr.

FERC on Thursday issued orders that seek to increase the supply of regulation service and reactive power.

Wind generators would no longer be exempt from responsibility for providing reactive power under a FERC Notice of Proposed Rulemaking ([RM16-1](#)).

The commission also issued a final rule to allow generators to sell primary frequency response service at market-based rates ([RM15-2](#)).

The wind order would require that *pro forma* large and small generator interconnection agreements eliminate the reactive power exemption for wind. The requirement also would apply to generators making upgrades that require new interconnection requests.

Reactive power is essential for controlling system voltage.

Comments on the proposal will be due 60 days after publication in the Federal Register.

The frequency response order is intended

to promote competition to meet increased demand for the service due to the Frequency Response and Frequency Bias Setting Reliability Standard (BAL-003-1), which will require balancing authorities to meet a minimum frequency response obligation effective April 1, 2016. (See [FERC to OK 3rd Party Sales of Frequency Response](#).)

The reliability standard was approved by FERC in January 2014. (See [FERC OKs Rules on Geomagnetic Disturbances, Frequency Response](#).)

The order defines primary frequency response service as a resource standing by to provide autonomous, pre-programmed changes in output to counter large changes in frequency until dispatched resources can take over to return the system to 60 hertz.

Although most balancing authorities will be able to use their own resources to meet the standard, FERC said some may choose to purchase the service.

Generators selling the service under market- or cost-based rates must report their sales in their Electric Quarterly Reports. The rule will take effect 90 days after publication in the Federal Register.



Briefs

FERC Reports \$27M in Enforcement Settlements for FY 2015

FERC last week [released](#) its annual Enforcement Report, noting that it had opened 19 new investigations and closed 22 others with settlements or no action in fiscal year 2015. Settlements resulted in more than \$26 million in civil penalties and disgorgement of \$1 million in unjust profits. The biggest settlements were over the 2011 Southwest power outage that left more than 5 million people without power for up to 12 hours.

Enforcement staff is currently seeking recovery of more than a \$500 million in civil penalties and disgorgement through federal court and administrative litigation.

The commission spent about \$316 million during the fiscal year, an increase of almost \$9 million over FY 2014. Three-quarters of spending was on salaries and benefits for 1,456 full-time equivalents, according to its annual financial [report](#) to Congress, which also was issued last week.

NERC Emergency Operations, Standards Win Approval

FERC approved two reliability rules proposed by the North American Electric Reliability Corp.:

- One order approves reliability standards EOP-011-1 (Emergency Operations) and PRC-010-1 (Undervoltage Load Shedding) ([RM15-7](#), [RM15-12](#), [RM15-13](#)). It also includes a revised definition of the term “remedial action scheme” and eliminates use of the term special protection system. NERC said the two had previously been used interchangeably, resulting in ambiguity.
- The second approves Transmission Operations (TOP) and Interconnection Reliability Operations and Coordination (IRO) reliability standards ([RM15-16](#)). The commission said the revised standards are more precise and clarify the delineation of responsibilities between applicable entities while eliminating gaps and ambiguities. Eight current TOP standards

were compressed into three. FERC ordered NERC to revise the standards within 18 months to include transmission operator monitoring of non-Bulk Electric System facilities; specify that data exchange capabilities include redundancy and diverse routing; and require testing of alternate or less frequently used data exchange capabilities.

Rehearing Denied on e-Tag Access

FERC denied rehearing in its 2012 order (Order 771) granting the commission, RTOs, ISOs and their market monitoring units’ access to electronic tags (e-Tags) used to schedule transmission ([RM11-12-001](#)). The National Rural Electric Cooperative Association, the Edison Electric Institute and Southern Co. filed rehearing requests, while Open Access Technology International filed a request for clarification. Before the 2012 order, RTOs could only access e-Tags for interchange transactions that flowed into, out of or across their footprints.

— Rich Heidorn Jr.

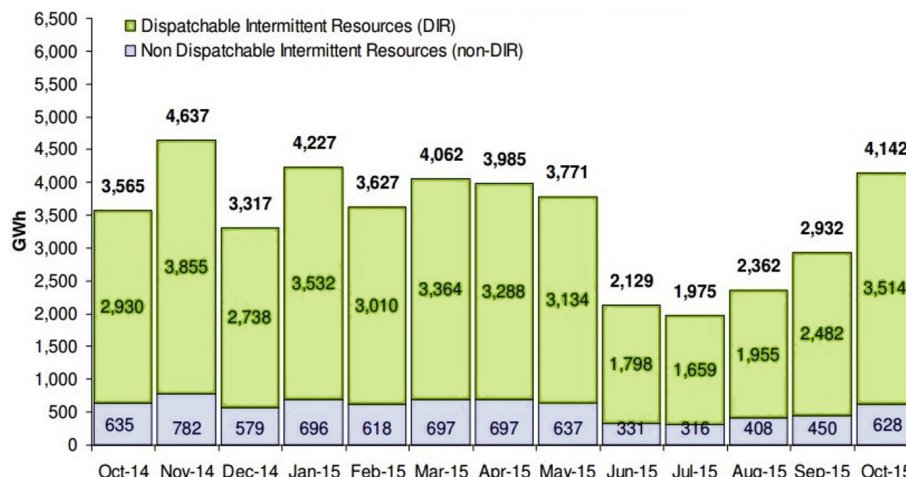
ERCOT, MISO, SPP All Record New Wind Peaks

ERCOT, MISO and SPP all set new generation records for wind in the last two weeks.

SPP has seen the most increased wind activity, setting six new generation peaks this season. The latest came Nov. 15, when SPP eclipsed 9,000 MW of generation for the first time with 9,013 MW. The RTO generated a record 38.3% of its electricity from wind energy Nov. 4.

MISO set its latest record peak with 12,613.9 MW on Nov. 19, breaking the previous mark of 12,006 set Oct. 28. Todd Ramey, the RTO’s vice president of system operations and market services, told an informational forum last week that wind generated 4.1 TWh in October, up from 2.9 TWh in September and 3.6 TWh in October 2014.

ERCOT reported a new high of 12,641 MW of wind at 9:36 p.m. on Nov. 16 — representing more than 75% of the Texas grid operator’s installed wind capacity — and accounting for almost one-third of its electricity production.



MISO monthly energy contributions from wind. Source: MISO

ERCOT’s previous high came Oct. 22, when it generated 12,238 MW of wind energy, meeting 36.8% of its load at the time.

The RTOs are home to many of the top wind-producing states, with the Dakotas, Iowa, Kansas, Minnesota, Nebraska, Oklahoma

and Texas all generating between 6.9% (Nebraska) and 28.5% (Iowa) of their energy from wind in 2014, according to the [American Wind Energy Association](#).

— Tom Kleckner and Amanda Durish Cook

COMPANY BRIEFS

NextEra Offers to Buy Oncor Transmission Business



NextEra Energy has offered to buy Energy Future Holdings' Oncor transmissions business, which is slated to be sold to an investment group led by Hunt Consolidated. NextEra made the offer in a filing with the U.S. Bankruptcy Court in Delaware, which is reviewing EFH's Chapter 11 exit plan.

The sale of Oncor is at the heart of EFH's \$42 billion reorganization strategy, but the company has chosen the Hunt-led group as the buyer.

"NextEra's alternative transaction is the only proposal that can provide several significant benefits to Oncor, its customers, its creditors and EFH," NextEra wrote in its bankruptcy court filing.

More: [Wall Street Journal](#); [Reuters](#)

Duke Completes Storage System On Site of Retired Coal Plant



Duke Energy, working with two other companies, has installed a 2-MW battery storage system on the grounds of its retired W.C. Beckjord coal-fired plant near New Richmond, Ohio. Duke said the Beckjord site allowed the company to take advantage of existing transmission infrastructure that connected the battery system to the grid.

The battery storage system will be used in grid frequency regulation — to either release energy onto the grid instantaneously or absorb excess energy — without the grid operator having to dispatch a generator. The battery system is faster and cheaper than a power plant, which could take 10 minutes or more to ramp up.

Duke worked with LG Chem, which provided the lithium-ion batteries, and Green-smith, which provided the software necessary for the frequency synchronicity. It is Duke's third battery storage system.

More: [Duke Energy](#); [Charlotte Business Journal](#)

Susquehanna Unit 1 Back Online After Nov. 12 SCRAM

Talen Energy's Susquehanna Unit 1 in Pennsylvania came back online Thursday night after being off for a week following an unscheduled automatic shutdown.

Talen reported that during routine testing of equipment on Nov. 12, one of eight large valves controlling steam from the reactor to the generator closed. The unit automatically shut itself down.

The company said it conducted other maintenance tasks while the unit was down. "We made the choice, while the unit was out of service during a period of mild fall weather and lower wholesale power prices, to advance some maintenance tasks we had planned for the refueling outage next spring," said Jon Franke, Susquehanna site vice president.

More: [Talen Energy](#)

Retired Talen Coal Plant Site Has Potential Buyers



Talen Energy is in talks with potential buyers of a site in Billings, Mont., where the defunct J.E. Corette coal-fired power plant is being dismantled.

The 153-MW plant, which operated for 47 years, was closed in April because it didn't meet mercury pollution standards.

Talen, which acquired the site during its spinoff this year from PPL, did not identify the prospective buyers.

More: [The Billings Gazette](#)

NRG Names Frotte Treasurer As Stock Continues to Plummet

NRG Energy announced a small management shakeup Nov. 19 as its stock value closed below \$12/share for the first time in 11 years.

NRG named Gaetan Frotte as senior vice president and treasurer. Frotte, who served

as the senior vice president of finance and strategy of NRG Yield, replaces G. Gary Garcia, who left the treasurer position for undisclosed reasons at the end of June. Chad Plotkin, vice president of investor relations, will fill in for Frotte at NRG Yield.



Frotte

The company is in the midst of cutting costs and shifting away from its renewable-power businesses. Although NRG turned a small profit in the third quarter, the company is struggling with declining revenues from its coal-fired power plants, while its solar business is draining money and still finding its footing.

More: [Houston Chronicle](#)

PSE&G Gets OK to Replace 510 Miles of Gas Mains with Plastic

Public Service Electric and Gas has received regulatory approval for a \$905 million plan to replace more than 500 miles of cast iron and steel gas mains with plastic mains over the next three years.

PSE&G said it wants to pursue the project while the price of natural gas remains low.

The work, set to begin after the ground thaws early next year, is expected to raise gas rates by about 1.5% annually for four years.

More: [Associated Press](#)

Oil Rig Counts Continue to Fall in Conjunction with Prices

The number of working oil rigs fell by 10 this week to 564, down more than 1,000 in a year, according to oil field services company Baker Hughes.



Some of the rigs will go back into operation if the price of oil climbs, but for now, it is becoming common for companies to idle them.

More: [Houston Chronicle](#); [Baker Hughes](#)

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COMPANY BRIEFS

Continued from page 19

Eversource Customers in Mass. To See Cut in Electric Rates

EVERSOURCE ENERGY The Massachusetts Department of Public Utilities approved a 28% rate decrease for some Eversource Energy customers. The residential rate on Jan. 1 will be set at 10.804 cents/kWh, compared to last winter's price of 15.046 cents/kWh.

The typical monthly residential bill in the Greater Boston and MetroWest areas will be about \$101, compared to \$122 last winter. Average residential bills in the South Shore, Greater New Bedford and Cape Cod regions will fall from \$124 to about \$103.

More: [WCVB](#)

Equinix Partners with NextEra, Invenergy to Power Data Centers

Equinix, a provider of interconnection and data center services, has signed power purchase agreements with affiliates of NextEra Energy Resources and Invenergy for wind

energy in Oklahoma and Texas.

Equinix said the agreements will provide a combined 225 MW of capacity, fully powering all of the company's data centers in North America by the end of 2016, and nearly doubling its worldwide purchases of renewable energy.

A NextEra affiliate will supply 125 MW of wind capacity that is expected to produce 556 GWh a year from the Rush Springs Renewable Generation Facility in Oklahoma.

More: [Equinix](#)

Iberdrola USA Name to Change



Iberdrola USA plans to change its name to Avangrid following its merger with UIL Holdings, according to a filing with the Securities and Exchange Commission.

The subsidiary of Spanish energy giant Iberdrola indicated when it announced the merger with UIL that it would take on a new name. UIL owns United Illuminating in Connecticut and three New England gas distribution companies. Iberdrola USA, which has

a large wind energy business, also owns Central Maine Power, Maine Natural Gas, New York State Electric and Gas and Rochester Gas and Electric.

Michael West, a spokesman for UIL, said the new name involves only the U.S. holding company. The utilities will continue to operate under their familiar names.

More: [New Haven Register](#)

GE Moves Renewable Energy Unit to Paris



General Electric has officially moved its renewable energy headquarters from New York state to Paris following its \$10 billion acquisition of the energy business of French conglomerate Alstom SA.

The move was a concession to the French government, and Alstom's offshore wind business was regarded as the stronger business unit. The new renewable energy business will focus increasingly on offshore wind. GE's onshore wind unit will remain in Schenectady.

More: [Albany Times Union](#)

FEDERAL BRIEFS

FERC Puts Conditions on Berkshire Hathaway Utilities Joining EIM



FERC said last week that three Berkshire Hathaway Energy utilities that plan to join CAISO's energy imbalance market (EIM) failed to demonstrate a lack of market power.

The order — one of four the commission issued regarding the ISO's expansion plans — said market power analyses by PacifiCorp and NV Energy's Nevada Power and Sierra Pacific Power were deficient ([ER15-2281](#), et al.).

The order also noted the commission's concerns regarding the ability of CAISO to mitigate the companies' market power. It said the Berkshire Hathaway companies must offer units participating in the EIM at or below each unit's default energy bid. It also required the companies to cooperate with CAISO's enforcement of internal transmission constraints in the PacifiCorp and NV Energy balancing authority areas.

The commission also granted CAISO's request to include in its local market power mitigation procedures transfer constraints between the NV Energy balancing authority area and the CAISO and PacifiCorp East balancing authority areas ([ER15-2272](#)).

A third order approved CAISO's proposed readiness requirements for entities joining the EIM ([ER15-861-004](#)). The order also accepts CAISO's proposed thresholds for measuring the entity's readiness and its process for granting exceptions to the thresholds.

Another order accepted the ISO's proposal regarding modeling unscheduled flows and enforcement of physical flow limits on its interties ([ER14-2017-001](#)).

More: [CAISO Expands Reach to 7 States with Imbalance Market](#)

Justice Department, EFH Settle on NM Uranium Mines

The Justice Department has reached a settlement with Energy Future Holdings over

claims the company's bankruptcy could leave taxpayers on the hook for millions of dollars to clean up long-shuttered uranium mines in northwest New Mexico that one of its subsidiaries inherited.

An attorney for EFH, which primarily owns utilities and power generation assets, announced a "settlement in principal" in U.S. Bankruptcy Court in Wilmington, Del., on Nov. 19.

More: [Dallas Morning News](#)

EPA Settles with Pa., W.Va. Natural Gas Processing Plant Operators



Elkhorn Investments and Elkhorn Gas Processing will pay a \$50,221 penalty under a settlement with the Environmental Protection Agency for alleged violations at five natural gas processing plants in Pennsylvania and another in West Virginia.

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FEDERAL BRIEFS

Continued from page 20

The plants, in McKean, Warren and Putnam counties, have come into compliance with risk management and safety requirements, EPA said. The violations occurred under two separate sections of the Clean Air Act.

More: [State Impact](#)

Entergy Tells Feds FitzPatrick Closing



Entergy officially notified the Nuclear Regulatory Commission that it intends to close the James A. FitzPatrick Nuclear Power Plant in New York by early 2017 "due to the current continued deteriorating economics of the facility."

New York officials had held out hope that they could convince Entergy to keep the plant on Lake Ontario open, even after Entergy made a public announcement that it intended to shut it down. (See [Entergy Closing FitzPatrick Nuclear Plant in New York](#)). Entergy, in keeping with a requirement to notify NRC promptly of any decisions, told the agency that it does, indeed, intend to shut down the plant near Oswego.

"Entergy and state officials worked very hard over the past two months to reach a constructive and mutually beneficial agreement to avoid a shutdown, but were unsuccessful," said Entergy spokeswoman Tammy Holden.

More: [Syracuse.com](#)

Sens. Against EPA Rules Got Big Contributions from Coal

The 52 U.S. senators who voted last week to scrap two controversial Environmental Protection Agency regulations that would affect coal interests accepted an average of \$75,802 in campaign contributions from coal interest groups, according to a CNBC review of public records.

Senate Majority Leader Mitch McConnell, a Kentucky Republican, accepted \$350,000 in campaign contributions since 2009. Sen. Joe Manchin of West Virginia, another state where coal is king, has accepted nearly \$500,000 from coal groups since 2009.



Manchin

Manchin is unapologetic. "The president's energy agenda has had a crushing impact on West Virginia and other energy states," he said in a statement released last week.

More: [CNBC](#)

DOE Awards \$800K to Penn State to Study Nuke Waste

The Energy Department is sending \$800,000 to Pennsylvania State University researchers who are trying to find ways to isolate and strip cesium and strontium from nuclear waste, according to Hojong Kim, assistant professor of materials science and engineering at the university.



Kim

"Alkali and alkaline-earth elements are very strong and reactive metals, so it is hard to separate them from other elements," Kim said. "Cesium and strontium have a relatively short half-life — about 30 years — so they produce the highest amount of heat in the short term of all radioactive elements created through nuclear fission."

More: [Penn State](#)

House Dems Investigating Oil, Coal Companies

A group of House Democrats is investigating whether oil and coal companies have lied to the public about climate change.

The lawmakers said they were prompted to action by recent news reports that Exxon Mobil knew as early as the 1970s that oil and natural gas cause global warming but later emphasized doubt about the science. The lawmakers want to see if other companies have a similar history.

Reps. Ted Lieu (D-Calif.) and Peter Welch (D-Vt.) are asking colleagues to sign letters that will be sent to Chevron, Exxon Mobil, ConocoPhillips, BP, Royal Dutch Shell and

Peabody Energy to ask what the companies knew about global warming and when they knew it.

More: [The Hill](#)

Exelon's Byron Nuclear Station Renewal Application OK'd by NRC



The Nuclear Regulatory Commission has approved Exelon's request for 20-year extensions to the operating licenses of the two units at Byron Generating Station in Illinois.

Exelon, however, said it has not made a final decision on whether or not it will continue to operate the economically challenged plants for another five years, let alone 20. The energy giant has said that Byron is losing money, and without government incentives it may be forced to shutter the plant.

It said a decision on the plant's future has been deferred for at least another year.

More: [WREX](#)

NRC Issues EIS for Possible Fourth Reactor at Artificial Island

The Nuclear Regulatory Commission issued the environmental impact statement on a possible fourth reactor to be built on the grounds of Public Service Enterprise Group's Salem and Hope Creek nuclear stations.

NRC found no major environmental barriers to building a reactor on the site, where three nuclear reactors currently operate. PSEG submitted the EIS in 2010 for a possible new nuclear plant but says it has no immediate plans to go forward with the project.

"We don't have any plans right now with the economics [being what they are]," said Joseph Delmar, a spokesman for PSEG Nuclear, which operates Salem I and II and Hope Creek reactors on Artificial Island in the Delaware Bay. "It doesn't make sense."

More: [NJ Spotlight](#)

STATE BRIEFS

ARKANSAS

ADEQ Begins Gathering Feedback on CPP Compliance



The Department of Environmental Quality conducted the first of four conference calls Nov. 18 for stakeholders to submit data and feedback for the

department's final comments on the Environmental Protection Agency's Clean Power Plan. (See [MISO, SPP Join in as Ark. Begins Crafting CPP Strategy.](#))

The first call, which was hampered by poor sound quality, focused on the regulatory framework and the CPP's impact. Several public speakers indicated they had not yet formed a position.

Future calls will discuss the federal plan's structure, the mass-based implementation approach and the rate-based implementation approach. A face-to-face meeting will be scheduled in early January.

More: [Arkansas Department of Environmental Quality](#)

CONNECTICUT

Woodbridge Microgrid to be Ready in a Year



United Illuminating will start work next spring on a microgrid that will allow municipal buildings in the Town of Woodbridge to operate independently of the grid, powered by a 2.2-MW fuel cell.

The centerpiece of the microgrid is a fuel cell that under normal conditions will generate power for the regional electric market. But if the grid fails, the generator will provide power to town hall, the library, the fire station, the police department, the public works department, a senior center and a high school.

The fuel cell, to be owned by UI, will be manufactured by Danbury-based Fuel Cell Energy and will be located on the grounds of Amity Regional High School. Waste heat from the fuel cell will be captured to produce domestic hot water and to heat the school.

More: [New Haven Register](#)

ILLINOIS

Probe: Did Execs Mislead ICC About Ballooning Project Costs?

The Commerce Commission will investigate whether executives involved in the \$5.7 billion buyout of Peoples Gas failed to disclose the escalating costs of a massive pipe-replacement program during merger proceedings.

The probe grew out of a Sept. 30 auditor's report that said Peoples Gas executives knew in January, well before they testified before the commission in May, that the estimated cost of replacing 2,000 miles of aging Chicago gas mains had nearly doubled to more than \$8 billion.

While the commission dismissed Attorney General Lisa Madigan's petition asking for a wide-ranging investigation, it will permit her to present other evidence of suspected misrepresentations. The gas utility's new owner, WEC Energy Group, is expected to propose cost-cutting measures to the ICC this month.

More: [Crain's Chicago Business](#)

IOWA

Rock Island Line Stalls as Landowners Turn down Easement

ROCK ISLAND CLEAN LINE The proposed Rock Island Clean Line that would transmit

3,500 MW of wind power has hit a roadblock after the developer failed to secure easements from a large number of landowners along its route.

Clean Line Energy Partners told the Utilities Board to halt its technical review of the project while the company considers "whether and how to proceed." Clean Line has secured easements from just 176 of the 1,540 parcels needed for a route that crosses 16 counties, according to the Preservation of Rural Iowa Alliance, an opposition group.

Landowners say delays in the transmission line's progress has cast a cloud over potential real estate deals and development along the proposed route. A lawmaker says he intends to introduce a bill to establish a deadline for completing the collection of voluntary easements. The bill will also stipu-



Madigan

late that a transmission developer cannot exert eminent domain until at least 80-85% of affected landowners voluntarily grant easements.

More: [Midwest Energy News](#)

KENTUCKY

Construction to Begin on State's Largest Solar-Powered Site

Construction is expected to begin this month on the state's largest solar-powered generating facility, according to Louisville Gas & Electric and Kentucky Utilities.

The 10-MW solar farm will consist of about 45,000 photovoltaic panels erected on 50 acres at the E.W. Brown Generating Station, a Mercer County coal and gas plant owned by the two utilities, which are subsidiaries of PPL.

The \$36 million facility is expected to generate 19 GWh of energy, enough to power 1,500 homes, when it starts operating in the late spring.

More: [Lexington Herald-Leader](#)

Toyota Plant Supplements Power with Methane from Dump



TOYOTA

A Toyota manufacturing plant in Georgetown is tapping into the energy trapped in a landfill to generate power. Toyota officials said the system that captures and

burns landfill methane is capable of producing 1 MW currently but can be upgraded to produce 10 MW.

The automaker has installed a generator at the Central Kentucky Landfill that will send power to its plant via a 6-mile transmission line.

There are 645 landfill methane projects operating across the nation with a capacity to produce 2,066 MW, according to the Environmental Protection Agency's Landfill Methane Outreach Program.

More: [Lexington Herald-Leader](#); [EPA](#)

New EV Charging Stations in the Works

Kentucky Utilities and Louisville Gas & Electric have filed requests to each install 10 new electric vehicle charging stations.

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STATE BRIEFS

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Under the filing with the Public Service Commission, the utilities propose that the full cost of charging stations will be borne by those who request the stations or who use the charging service.

More than 15,000 EVs have been registered in the past five years in Kentucky, where there are about 30 public charging stations. The Electric Power Research Institute recently published a [report](#) that indicates interest in EVs is growing.

More: [WKMS](#); [LGE-KU](#)

MAINE

Retail Power Prices Drifting Lower



Home and small-business customers of Central Maine Power who buy electricity through the utility's standard offer will see slightly lower rates in 2016. The Public Utilities Commission has accepted a bid for energy supply that is 3.7% lower than last year's average, which will translate to savings of \$1.35/month on a typical residential bill.

According to the commission, energy supply rates will dip to 6.46 cents/kWh next year from 6.71 cents currently. About 40% of the utility's customers receive the standard offer rather than buying power from a competitive supplier.

"The standard offer prices set this week reflect the best bids received in a strongly competitive auction process," said Mark Vannoy, PUC chairman. "We are pleased that prices remain stable or slightly decreasing, allowing retail customers and businesses to benefit from recent downward trends in energy markets that have been reflected in New England wholesale prices."

More: [Portland Press Herald](#)

MARYLAND

Enviros: Cut the Chicken Crap out of RPS

The environmental group Food & Water Watch has launched a campaign to force legislators to remove chicken manure as a resource from its renewable portfolio standards.

Poultry farms in the state produce more than 650 million pounds of chicken manure annually. As an incentive to keep the waste out of the Chesapeake Bay, legislators in 2011 added the waste to the RPS, in the same top-tier category as solar and wind.

However, few chicken-manure methane capture projects have materialized, and environmentalists say that burning the manure produces toxic chemicals.

More: [Think Progress](#)

New PSC Regs Promote Community Solar Pilot Plan

Public Service Commission staff have drafted regulations that would allow residents to subscribe to a community solar energy generation system through a pilot program.

The public may submit comments until Dec. 4. The commission will consider the regulations at its Dec. 14 meeting.

Community solar projects, which may appeal to customers who are unable to install rooftop solar, would be permitted up to 2 MW in size.

More: [Maryland Public Service Commission](#)

MASSACHUSETTS

House, Senate at Stalemate On Solar Incentives, Caps

Lawmakers failed to complete a deal to update the state's solar incentives before wrapping up for the year. Leaders appointed a conference committee to hammer out a deal that could delay any agreement at least until formal sessions resume in January.

The sticking point is cost. The House's proposal would significantly curb the state's net metering credits once the state hits a target of 1,600 MW, while a Senate bill was considered to be more generous to the solar industry.

The law now caps the amount of net metering credits allowed in a particular utility's system. Those caps have already been reached in National Grid's territory for non-residential projects, delaying a number of installations. Both the House and Senate bills would increase the caps.

More: [Boston Globe](#)

MISSOURI

Clean Line to Appeal for Approval on Grain Belt Express



Clean Line Energy will again try to convince the Public Service Commission to ap-

prove the Grain Belt Express transmission line that would carry wind-generated electricity from Kansas through Missouri and Illinois to Indiana.

State regulators, who rejected the a certificate of need for the project in July by a 3-2 vote, are the last remaining hurdle for the \$2 billion 780-mile transmission line, which was recently approved by Illinois utility regulators. A certificate of need would allow Clean Line to acquire property through eminent domain.

Landowners who oppose the line are also seeking to block the project.

More: [Columbia Daily Tribune](#)

Group Tries Using Farming Law to Stop Mark Twain Tx Line



NEIGHBORS UNITED AGAINST AMEREN'S POWER LINE

Opponents of Ameren's proposed 100-mile Mark Twain

transmission line are challenging the project on the grounds that it would allegedly violate the state's recently enacted "right-to-farm" amendment. The line would deliver wind power from the Iowa border to the grid, according to Ameren.

The group, called Neighbors United Against Ameren's Power Line, contends that the project would "permanently remove citizens' property from production and prevent these citizen farmers and ranchers from engaging in farming and/or ranching practices."

The Public Service Commission rejected the group's motion to dismiss Ameren's application for a certificate of necessity, but it said the amendment could still potentially be used in a court challenge. Ameren told the commission that the argument advanced by the activists is "patently absurd" because it would potentially outlaw "every single new electric line, gas line, water line, sewer line" that would "take any farm land whatsoever out of production."

More: [St. Louis Post-Dispatch](#)

Continued on page 24

STATE BRIEFS

Continued from page 23

NEW JERSEY

Gas Utility Files For \$148M Rate Boost



New Jersey Natural Gas has asked the Board of Public Utilities to increase rates

by \$148 million, which it says it needs to upgrade its infrastructure.

The increase would boost a typical customer's bill by about 24%, or about \$236 more a year.

The utility says that wholesale natural gas prices are dropping, so it needs to increase delivery rates to make up the difference in revenue. The rate-increase request is the company's first since 2007.

More: [Energy Manager Today](#)

NEW MEXICO

Wind Farm Generating Electricity for Xcel Energy



Two wind farms being built for \$430 million are nearing completion. Construction was delayed because of excessive winds.

Contractor Cielo Wind Power, which manages the projects, said the wind created some problems in the last two months for construction crews, but employees have been able to make up for most of the setbacks by working weekends and other off days.

The Roosevelt Wind Project's 125 turbines are already energized. The Milo Wind Project, which includes 25 wind turbines, is not yet operating. Roosevelt's 250 MW is committed to Xcel Energy and Milo's 50 MW of energy will be sold on SPP's open market.

More: [Portales News-Tribune](#)

NEW YORK

Cuomo Pushing NRC To Shutter Indian Point

The Cuomo administration is urging the U.S. Nuclear Regulatory Commission to deny Entergy's applications to extend the licenses of two reactors at the Indian Point Energy Center.

"Allowing Entergy to operate these facilities for another 20 years puts the lives of too many New Yorkers at risk," wrote Jim Malatras, director of state operations. He said the plant's location near New York City "makes it absolutely impossible to have an effective safety and evacuation plan."

The administrative law judges of the Atomic Safety and Licensing Board are currently hearing testimony on the request.

More: [Cuomo Administration](#)

NORTH DAKOTA

Bald Eagles Given Consideration in Wind Farm Development

The Public Service Commission has approved a 100-MW, 59-turbine wind farm on 15,000 acres near the Canadian border. The \$175 million project's developer, Rolette Power Development, agreed to several concessions to minimize the wind farm's impact on bald eagles.

The U.S. Fish and Wildlife Service determined that there were no eagle nests in the project area, but it did find nests nearby. Rolette amended its application "to allow for various stipulations to minimize impact on the birds." The company pledged to remove dead livestock and roadkill from the site so as not to attract eagles.

More: [The Bismarck Tribune](#)

PENNSYLVANIA

Grant Supports Shifting Grid from AC to DC

The University of Pittsburgh has received a \$2.5 million grant to research ways to shift the grid from alternating current technology to direct current, reviving the 19th Century "War of Currents" between George Westinghouse and Thomas Edison over which type of power transmission would dominate.

"Very few items today require three-phase alternating current," said researcher Greg

Reed, who founded and runs the university's Direct Current Architecture for Modern Power Systems program.

"The use and development of today's evolving energy mix, which includes more DC resources such as solar photovoltaics, as well as electric vehicles and battery storage systems, also makes transition to DC more sensible and viable for future power-delivery needs."

More: [TribLive](#)

SOUTH DAKOTA

PUC Approves 103-MW Willow Creek Project



The Public Utilities Commission does not consider many new wind projects, as a state law exempts wind farms that

produce less than 100 MW from having to get a permit.

So the PUC on Nov. 12 had the rare opportunity to approve the 103-MW Willow Creek wind farm. It was the first wind project for the two newest commissioners, Chris Nelson and Kristie Fiegen. They joined the remaining commissioner, long-time member Gary Hanson, in approving the proposal by Colorado-based Wind Quarry.

Wind Quarry intends to erect 45 turbines, each 440-feet tall, across three townships in Butte County. The project would connect with a Western Area Power Administration transmission line.

More: [Rapid City Journal](#)

VIRGINIA

ODEC Moves Forward With Two Solar Projects

Old Dominion Electric Cooperative selected Hecate Energy to build two solar projects in Northampton and Clarke counties.

The Cherrydale project, in Northampton, is expected to deliver about 20 MW. The Clarke County project will produce about 10 MW. They are expected to be in service by the end of 2016.

More: [Work It, SoVa](#)

Continued on page 25

STATE BRIEFS

Continued from page 24

Entrepreneur Building Community-Based Solar Farm

Leesburg entrepreneur Karen Schaufeld is developing what is thought to be the state's largest privately funded solar array on her 63-acre farm in an effort to create a community-based grid.

She wants to develop a model of solar power that is less expensive and more efficient than the power offered by Dominion.

The practice is called Agriculture Net Metering, and Schaufeld's project is expected to generate more than 450 kW.

More: [Loudoun Times-Mirror](#)

Dominion to Spend \$11.7B on Infrastructure



Dominion

Dominion Resources said last week it plans to invest \$11.7 billion over the next six years in capital projects, including new generating plants, transmission lines, a gas pipeline and environmental cleanup.

About half the spending is targeted for the state, where the projects are expected to make an economic impact of \$1.68 billion

annually.

Only one project on the list, a gas-fired generator in Brunswick County, has been approved. Others are at various stages of development.

More: [Bacon's Rebellion](#)

WISCONSIN

PSC Considers WPS Hike Request ... And Cuts Rates for Electric and Gas



Wisconsin Public Service may regret the day it filed a request with the Public Service Commission to raise electric rates by 9.7% and natural gas rates by 2.7%.

On Thursday the commission voted to cut the utility's electric rates by 0.7% and to reduce gas prices by almost 2%. An average residential electric bill will decrease from \$80.93 to \$80.80, and the typical gas bill will drop from \$53.93 to \$52.84.

The commission did approve a \$2 increase in the utility's fixed monthly charge for electric customers, bringing it to \$21 from \$19. WPS had asked the customer charge to be set at \$25.

More: [Associated Press](#); [WXPR](#); [Milwaukee Journal Sentinel](#)



Diane D'Arrigo, radioactive waste project director for Nuclear Information and Resource Service, testifies against the proposed merger of Exelon and Pepco Holdings Inc. at a D.C. Public Service Commission community hearing Nov. 17. To her right is Lynn Mento, executive director of Friends of the National Zoo. The soccer ball behind them was used by activists to protest what they've dubbed "Socccergate," the accusation that Mayor Muriel Bowser dropped her opposition to the merger in exchange for naming rights to a new soccer stadium for DC United. A total of 259 people signed up to speak over the course of the two-day hearing. Source: [D.C. Public Service Commission](#)

APPo 2015

Ontario Grid Looks Like the Past — and the Future — of the US

Continued from page 1

Dolan, president of the New England Power Generators Association, and Gavin Donohue, president of the Independent Power Producers of New York, who commiserated with their Canadian counterparts over what they view as government interference in the markets.

But “New York and New England don’t have as much political intervention in picking winners and losers” as Ontario, said Jason Chee-Aloy, former director of generation procurement at the Ontario Power Authority.

Like Moths to Light

Evan Bahry, executive director of the Independent Power Producers Society of Alberta, said the result has been “cross-threaded policies.” Government has “this reflexive instinct to jump in and solve it for us,” he said. “They can’t help themselves. They’re attracted like moths to light.”



Several speakers lamented the fact that Canada lacks FERC and the Federal Power Act to clearly establish independent regulatory control over the sector and limit tinkering by elected officials.

APPo Executive Director Jake Brooks says Canada’s electric industry is operating un-



David Butters (left) and Jason Chee-Aloy © RTO Insider

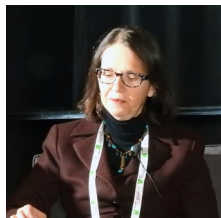
der a fragmented governance structure, with each province and territory, as well as the federal government, having its own energy legislation, its own energy ministry and its own energy regulator. As a result, he said in an [editorial](#), “many viable projects never get financed because benefits are viewed myopically by each level of government without considering the gains being delivered to other levels of government.”

Capacity Market

The shortcomings are evident, speakers said, in policymakers’ consideration of a capacity market.

The Independent Electric System Operator (IESO), which has managed the grid since 1999, merged in January with the Ontario Power Authority, combining short-term and long-term resource planning for the province, whose electric market is about the size of ISO-NE. (See related story, [Ontario: Clean — and Expensive](#), [p.27](#).)

IESO inherited from the OPA fixed term contracts for about 19 GW of operating capacity for a region whose peak is less than 22 GW.



“Ontario is in an awkward spot,” said **Linda Bertoldi**, chair of the National Electricity Markets Group for law firm Borden Ladner Gervais. “[It’s] so heavily contracted [that]

there’s little liquidity for a capacity market.”

“It’s really hard to be half pregnant on markets,” agreed Dolan. “If you do go down the path of capacity markets, you pretty much have to be all in. I don’t think you can say we’re only going to do it for this portion and not that portion.”

APPo President David Butters said the province must address its governance issues if it is to adopt a capacity market. “How do we limit the ability of government to interfere in markets and to undermine the value of investments and contracts?” he asked. “That is the really big issue to me.”

Jasmine Bertovic, vice president and general manager for eastern energy at TransCanada, said the market’s current price signals are muted. And he’s not sure the changes being contemplated will be improvements.

“I’m worried that we may be introducing new signals that just add complexity without changing behavior, or have some purpose or some cost-benefit.”

He likened “bolt-ons” to the market to the “Whac-a-Mole” arcade game, with unintended consequences popping up. “These things have to be part of an overall framework,” he said.

Regarding a move to LMPs, he said: “Every little piece that’s connected to the grid has a separate price. It’s all nice to know that information, but if it’s not leading to improved transmission infrastructure or transmission does not participate in locational pricing, then why have that signal?”

Going to War Without a Target

Adam White, president of the Association of Major Power Consumers, also expressed reservations.

“Planning without a vision is like going to war without a target. What are we planning for? Market evolution is inexorable. It’s inevitable. Evolution is all the [stuff] that happens over time. But that’s not a plan. That’s not a vision for the future we want,” he said. “The Ontario market’s evolved quite a lot in the years since it’s been opened ... but it’s still sort of a 1.0 version of the market.”

Version 2.0, he said, needs to acknowledge the shift to distributed energy systems.

JoAnne Butler, IESO vice president for market development, also cited the growth of distributed generation, along with solar power and storage, as drivers for the future. “The change we’re going to see in the next 10 years — going off coal pales in comparison,” she said.

The Ontario Electric Board, which regulates prices for small consumers, last week issued a Regulated Price Plan [Roadmap](#) that seeks to address those changes, calling for phasing in fixed distribution rates and decoupling for commercial and industrial customers.

“I’m confident that regulation won’t disappear, at least not in the short term,” said Rosemarie Leclair, chairman of the board. “But what we regulate and how we regulate will change. It has to.”

Continued on page 29

APPrO 2015

Ontario: Clean — and Expensive

Ontario's Independent Electricity System Operator serves a population of 13.8 million, almost 40% of Canada's total population, making it nearly equivalent in population and peak demand to ISO-NE.

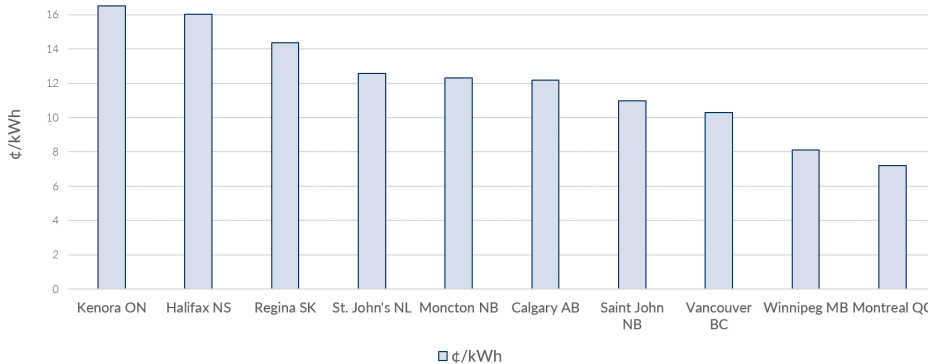
After peaking about a decade ago at almost 160 TWh, Ontario's annual electricity use has dropped to 140 TWh — equivalent to that in 1990 — as growth has been offset by conservation, distributed generation and a decline in the pulp and paper industry. Loads are not expected to rise until 2028.

Nuclear power, now 60% of the province's generation output, is expected to drop to 40% by 2025 following the retirement of the 3,252-MW Pickering plant. Two other nuclear plants with a combined 8,400 MW of capacity, Bruce and Darlington, are scheduled to be refurbished from 2016 to 2032.

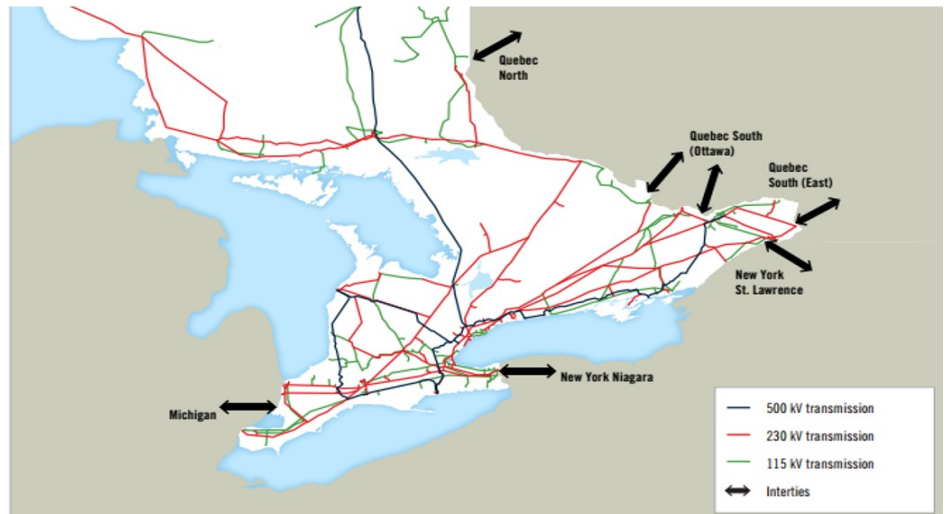
Because of the lost nuclear output, the province will need to add as much as 3,000 MW of capacity between 2021 and 2032.

Prices

As in New England, prices are relatively



Electricity rates in Canada. Source: Manitoba Hydro



Ontario grid interties Source: IESO

high, and that has prompted frequent interventions from government.

Sergio Marchi, president of the Canadian Electricity Association, lamented that Canada's electric rates are much more politicized than in Europe. "Electric rates, rightly or wrongly, have become a go-to tool to clobber the incumbent government."

"I'm really surprised that Ontario ratepayers aren't up in arms with pitchforks and the like," said Jason Chee-Aloy, a consultant and former director of generation procurement at the Ontario Power Authority. "I think that is going to be an issue in the next election because we've baked in a lot of these costs."

Jasmine Bertovic, vice president and general manager for eastern energy at TransCanada, said opening the market to more imports would provide price discipline.

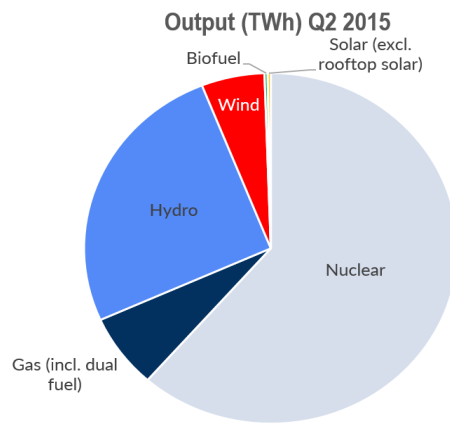
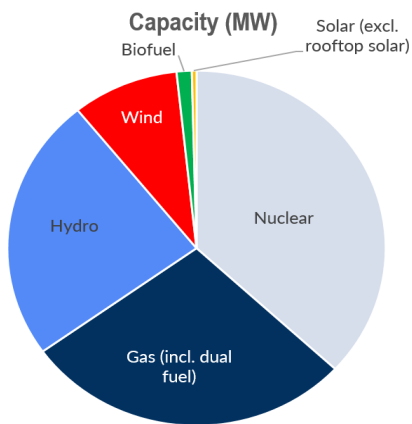
The province is a net exporter with Michigan (46%) and New York (39%) its biggest export markets. About 85% of its imported power comes from Quebec.

"When you tie yourself to another jurisdiction and now you're competing beyond Ontario ... it is another check on your market. ... It can't be a check valve. It has to be open seams, open import-exports."

Cap and Trade

Canada's electricity system is among the cleanest in the world, says Marchi, noting that 80% of its generation does not emit greenhouse gases. That compares, he said, with Germany (41%), the U.S. (31%) and Japan (15%).

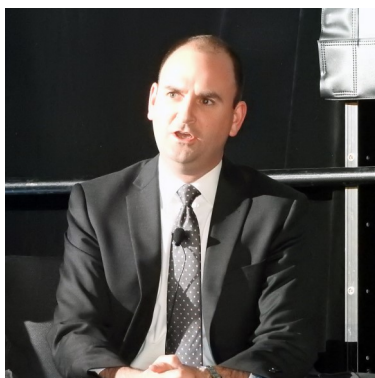
In 2017, Ontario plans to begin trading emissions through cap-and-trade auctions. The first auction will be for the province only, but Ontario plans to link its prices to those of California and Quebec, which already trade allowances. The province's goal is to reduce CO₂ to 15% below 1990 levels by 2020.



Ontario's generation mix Source: Ontario Energy Report

— Rich Heidorn Jr.

APPrO 2015



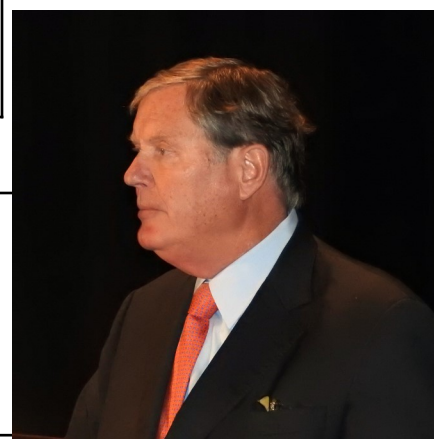
Dan Dolan, president of the New England Power Generators Association, complained about interventions by New England's governors into the energy market, such as a drive to obtain Canadian hydropower through transmission and long-term power contracts, and a proposal to fund new natural gas pipelines through electric distribution rates. "That regulatory risk right now is the single biggest issue that we face."



Gavin Donohue, president of the Independent Power Producers of New York, said the dearth of electric transmission is a "huge problem" in the state. "New York state has not sited a major transmission line from the west to the east since 1987. So we're unable to move power across the state. So now we have stranded generators across the state that can't get their products to the markets," he said. "You've all probably heard about the Energy Highway. It was proposed over six years ago and we still don't have an identified project to move that electricity across our state."



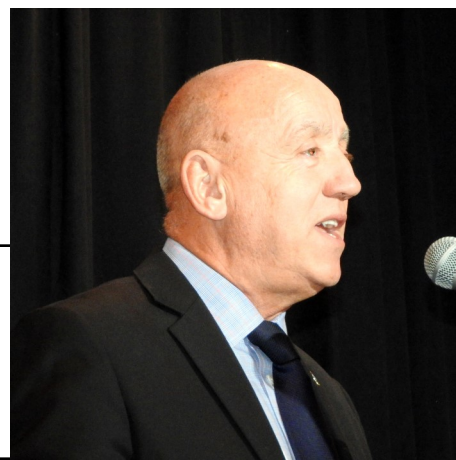
"NextEra's view is that storage economics are improving at such a pace that it's possible that after 2020 the U.S. is not adding peaking generation capacity," said former **FERC Chairman Joseph T. Kelliher, now NextEra Energy's executive vice president for federal regulatory affairs**. "We're adding storage in lieu of peakers."



Gordon Kaiser, former vice chair of the Ontario Energy Board, noted the Oct. 23 decision by the California Public Utilities Commission to award Southern California Gas a tariff to provide combined heat and power (CHP) services to customers on or near their premises. The PUC said it acted because there wasn't enough CHP below 20 MW going into service because the customer base didn't have necessary expertise or capital. "So you might say that gas is the new electric," he said. "You're going to see examples of that throughout North America. The gas companies will be one of the new entrants into this new market. ... By 2020, 20% of the electricity in Toronto will be distributed and generated locally [and] stranded assets will equal 20% of the [electric] rate base."



"I'm not really controlling this [slideshow]," said **Ontario Minister of Environment and Climate Change Glen Murray**, joking about a non-working remote. "This is like being a minister — the levers aren't really attached to anything. They give these things to you so you think you have some authority."



Duncan Hawthorne, CEO of Bruce Power, said he is frustrated that more people don't recognize that nuclear power was essential to Ontario's ability to eliminate coal-fired generation. "Seventy percent of the power that was replaced from the coal plants came from a Bruce nuclear facility."



JoAnne Butler, vice president of market and resource development for IESO: "I've worked in four countries — Canada, the U.S., Mexico [and] United Arab Emirates — five countries if you count Alberta."

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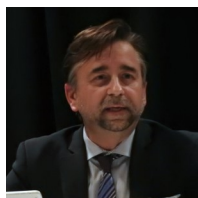
Ontario Grid Looks Like the Past — and the Future — of the US

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Bill 135

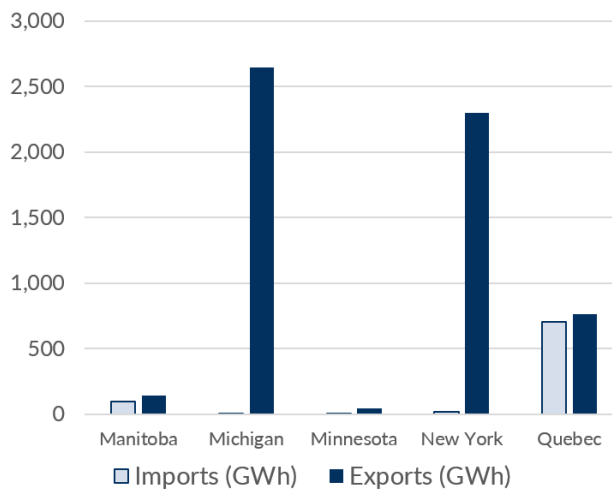
Some worry, however, that the OEB's efforts to pursue its plan will be undermined by a bill the provincial legislature is considering.

George Vegh, former general counsel of the OEB, said [Bill 135](#) would effectively give the province's minister of energy IESO's responsibility for electricity planning and procurement and the OEB's authority for approving transmission. It also would ex-



tend the government's procurement authority to energy storage and transmission.

"The net result of Bill 135 is therefore to ensure that the main energy institutions — the IESO and the OEB — are focused almost exclusively on implementing government plans and directives," Vegh, now head of the Toronto energy regulation practice for law firm McCarthy Tétrault, wrote in a [commentary](#). "The government has always been steering the direction of energy policy. It is now rowing as well: It is in direct control of every policy instrument available."



Import-export markets Source: Ontario Energy Report

Clarification

An article in last week's newsletter stated that as public entities, the Long Island Power Authority and New York Power Authority are prohibited from joining NY Transco. They are not banned but would need enabling legislation to form a public subsidiary company that could then join the organization. A NYPA spokesman said the authority has not yet decided whether to pursue a legislative solution.

Chee-Aloy, now a consultant with energy management firm Power Advisory, said the government is "doubling down" on its "command and control" oversight.

"Of course the government could say: 'IESO, use a capacity market to procure those resources.' But it's kind of hard for a market to work as a market when you don't have a lot of participants competing to build or to upgrade those resources," he said.

IESO CEO Bruce Campbell said he disagreed with those who think the bill will constrain the ISO. "I'd like to argue the exact opposite — that with the directing authority being taken away from the minister and going up to the cabinet level, it will inevitably be a much more policy-oriented framework. I view us as having a great future with-

in that framework in implementing policy in the best possible way."

Jack Burkom, senior vice president of commercial development for Brookfield Energy Marketing, said that while he hopes for "more significant market price signals ... we'll also continue to use contracting mechanisms."

He urged IESO to act more quickly.

"The IESO shouldn't wait for a trigger. The trigger is here. There's existing infrastructure in the province that should be given the opportunity to compete to provide services when they come off of contact," he said. "As JoAnne [Butler] said, 'it's not either/or.' We're not going to turn into PJM overnight."

RTO Insider

Editor & Publisher: [Rich Heidorn Jr.](#)
Marketing & Operations: [Merry Eisner](#)

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

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From left to right: Jasmine Bertovic, TransCanada; Adam White, Association of Major Power Consumers; and Jason Burkom, Brookfield Energy Marketing. © RTO Insider

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MRC/MC Preview

7. ENERGY MARKET UP-LIFT SENIOR TASK FORCE (EMUSTF) Charter (11:00-11:10)

Members will be asked to approve the charter for the Energy Market Uplift Senior Task Force (EMUSTF). The MRC approved the creation of the task force in May to take a broad review of its method of providing Operating Reserve payments.

PJM said the changes were needed to reduce growing uplift costs resulting from Operating Reserves, "make whole" payments that ensure generators dispatched out of merit for system reliability don't operate at a loss.

See [PJM Proposes Operating Reserve Changes to Cut Uplift](#)

Mission
The Markets and Reliability Committee (MRC) approved the creation of the Energy Market Uplift Senior Task Force (EMUSTF) on May 22, 2015 to evaluate causes for energy market uplift charges, identify steps to minimize them while maintaining prices that are consistent with operational reliability needs, and explore new methodologies for the allocation of make-whole payments.

PJM Proposes Operating Reserve Changes to Cut Uplift
April 20, 2015
PJM called Thursday for a broad review of its method of providing Operating Reserve payments, saying changes were needed to reduce growing uplift costs.
Operating Reserves are "make whole" payments that ensure generators dispatched out of merit for system reliability don't operate at a loss. Because they are collected through uplift charges and not reflected in day-ahead or real-time locational marginal prices, they cannot be hedged.
In 2012, operating reserve payments totaled a near record \$649 million, 2.2% of total billing. Day-ahead operating reserve charges increased by about 90% in 2012, spiking in September after PJM increased the number of "must run" units dispatched in the day-ahead market.

• Voting summaries

Trading Limits

Reason for Change: PJM proposed the cap because high bid volumes can make it difficult for the RTO's day-ahead markets software to reach solutions.

Impact: PJM can limit market participants to no more than 3,000 UTC transactions each in the day-ahead market when necessary for market operations. (A similar cap also applies to increment offers and decrement bids.)

• Federal and state regulatory news briefs

OHIO

Industry Likes Efficiency Rule, Wants Spending Cap
The Ohio Manufacturers Association favors the state's energy efficiency standards but wants a cap on how much utilities can charge for efficiency riders. The group said it is still studying provisions of a bill that has been introduced to make changes in the program.
Meanwhile, wind energy supporters argued against a provision in the bill that would eliminate requirements that utilities buy a certain amount of in-state renewable energy.

Columbus Biz Insider
Nov 20, 2015, 3:49pm EDT
Ohio Manufacturers' Association says fix energy mandates, but don't dilute them

The Columbus Dispatch
Velocity rises in wind-power debate

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Current Capacity Imports OK: Study
October 1, 2013
PJM should be able to absorb the more than 7,000 MW of imports that desired in May's capacity auction for 2016-17, officials said. [more](#)

PJM Likely to Limit Capacity Imports
September 17, 2013
PJM will seek to set a limit on capacity imports before next year's Base Reliability Auction under a [problem statement](#) approved Thursday by the Planning Committee. [more](#)

PJM to Consider Storage as Capacity
October 1, 2013
Members agreed to consider new rules to allow batteries, flywheels and other advanced storage technologies to bid in the capacity market. [more](#)

Installed Reserve Margin May Increase for 2014
September 17, 2013
PJM's recommended Installed Reserve Margin (IRM) will increase slightly because of the increasing alignment of the RTO's peak demand with demand outside of the region, according to a [preliminary analysis](#) presented to the Planning Committee Thursday. [more](#)