RTO Insider

Your Eyes and Ears on the Organized Electric Markets

CAISO ▪ ERCOT ▪ ISO-NE ▪ MISO ▪ NYISO ▪ PJM ▪ SPP

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March 31, 2020

RTOs RESPOND TO COVID-19 AS ECONOMY SHUTS DOWN

Moody's: Coronavirus Recession to Cut GDP 2.3%

Predicts 18% Drop in Q2, Rebound in Q3

COVID-19 S1 10% Upside	COVID-19 Baseline	COVID-19 S3 10% Downside
• Milder recession in 2020Q1 and Q2, stronger recovery in 2020Q3 and after • Peak unemployment 8% in 2020Q2 • Peak-to-trough real GDP of -4% • Return to full employment by 2022	• Recession in 2020 Q1 and Q2 • Peak unemployment rate near 9% in 2020 Q2 • Peak-to-trough real GDP of almost -6% • Partial bounce back 2020 Q3, then slow growth • Acceleration later in 2021 • Return to full employment by 2023	• Deeper recession in 2020Q1 and Q2, modest rebound in 2020Q3, then renewed decline through 2020Q1 • Peak unemployment 13% in 2020Q2 • Peak-to-trough real GDP of -9% • Return to full employment by 2025

Moody's three main economic scenarios for the COVID-19 outbreak include a base case with a 72% probability and a 10% upside and 10% downside case. Not displayed are extreme upside and downside cases with 4% probabilities each. | *Moody's Analytics*

By Rich Heidorn Jr.

Moody's Analytics said Friday it expects U.S. gross domestic product to drop by 2.3% for 2020 as a result of the "sudden stop" in the economy because of the COVID-19 coronavirus pandemic.

Moody's expects a 2.2% drop in first-quarter GDP to be followed by an 18% drop in Q2 before rebounding with an 11% gain in Q3 and a 2.4% increase in Q4, Chief Economist Mark Zandi said during a *webinar* Friday.

The second-quarter GDP drop would be closer to 30% if Congress had not passed its more than $2 trillion in rescue packages, Zandi said.

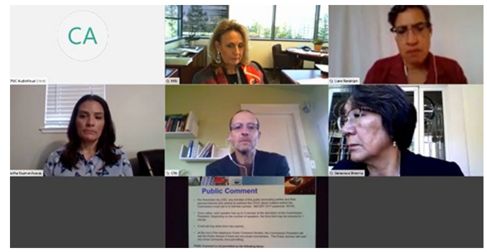
Mark Zandi, Moody's Analytics | *Moody's Analytics*

He noted "about half the country is in some kind of lockdown," with travel and restaurant sales down drastically and the equity market having lost $10 trillion in market capitalization. He predicted this week's unemployment claims will be similar to the record 3.3 million filings reported Thursday. Moody's expects the unemployment rate to peak at 8.7% in Q2 and to remain above 6%

Continued on page 4

CPUC Approves Big Boost in Storage, Solar Targets

Critics: Plan Doesn't Do Enough to Reduce GHG Emissions



California PUC commissioners met virtually March 26 because of the state's coronavirus lockdown. | *CPUC*

By Hudson Sangree

The California Public Utilities Commission approved historic increases in the state's clean energy targets Thursday, calling for almost 25 GW of renewable energy and storage by 2030 at an estimated cost of $45 billion (*16-02-007*).

The CPUC's new reference system portfolio (RSP) targets adding 11 GW of utility-scale solar; 3.4 GW of wind; 1 GW of pumped storage; and 8.9 GW of battery storage — eight times the total installed battery capacity nationwide

Continued on page 8

MORE COVERAGE

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In this week's issue

Stakeholder Soapbox

IPPs Band Together on COVID-19 Response

EDITOR's NOTE: Independent power producer and transmission developer LS Power, which operates 29 power generation facilities totaling 14,000 MW, has been an aggressive competitor for Order 1000 transmission projects. Marji Philips, LS Power's vice president of wholesale market policy, is a fixture at PJM stakeholder meetings and a tenacious advocate for the company. But the COVID-19 crisis has it and its competitors working together, Philips says. Here is her account of a week that was.

By Marji Philips

Marji Philips, LS Power | *© RTO Insider*

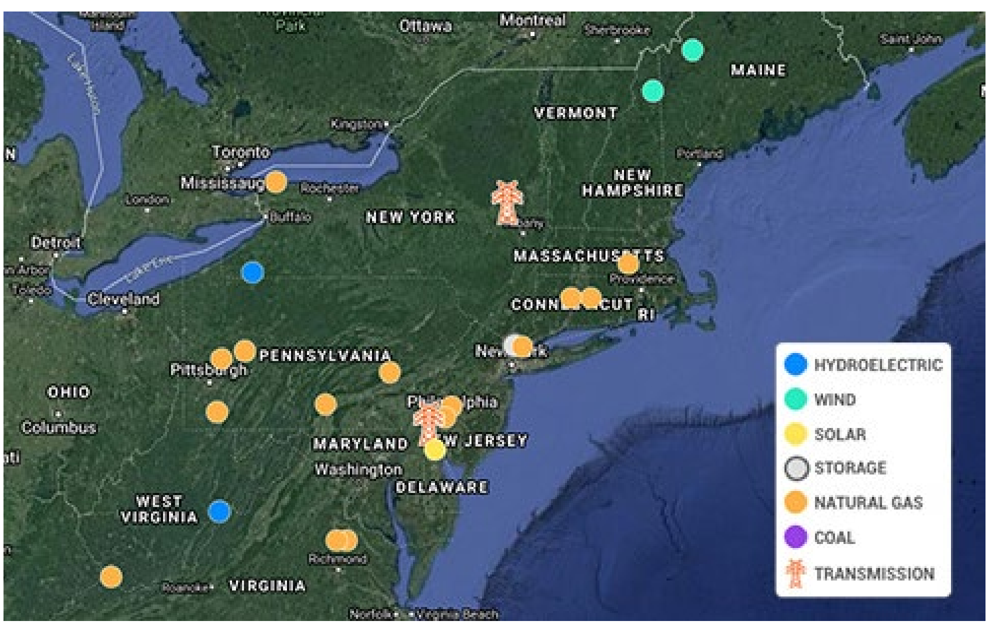
A remarkable thing happened recently that merits a shout-out. The independent power producers in the Eastern RTOs set aside competitive differences and came together as a collective to protect our communities. Alongside other generation owners, we dedicated all of our resources to ensure our power plants will remain online during the COVID-19 coronavirus pandemic. Unfortunately, this is probably only the beginning, and not the end, of what will require long-term and sustained efforts to ensure the lights stay on during this crisis. Fortunately, the amount of cooperation we experienced with our local and state officials augurs well for the future.

There are some lessons learned already. It was not that long ago that the RTOs were required to outline their resilience plans for FERC. As part of that, we debated what resilience meant and viewed it as low-probability, high-impact events, with the concern that the RTOs were too focused on natural gas pipelines disruptions. We had been through Hurricane Katrina, saw what happened in Puerto Rico with Hurricane Maria and declared ourselves basically ready for a disaster, but as events unfolded, we found that we as an industry were not as prepared as we could have been. While initially slow to organize community discussions and reach out to local and state governments, RTOs quickly adapted to a more proactive stance to support us in getting our needs identified and addressed.

This came to a head on the weekend of March 21, when the Electricity Subsector Coordinating Council (ESCC) announced it was shifting into high gear to deal with the pandemic. Our national association, the Electric Power Supply Association, started working with all the other industry associations through the ESCC at the federal level.

Not surprisingly, the primary concern was ensuring the ongoing safety of our workers and their ability to get to our power plants. This will require access to priority testing despite short supply and waivers regarding any transportation limitations. We grappled with communication challenges, as conference call networks were initially overwhelmed by the volume created by the widespread shift to remote operations. We had to identify and address all related issues. This included ensuring equipment, services and products (e.g. chemicals) could get to our plants, and that those suppliers also had testing and transportation available, in addition to our plant employees. Further, it became apparent that we would need to ensure that hotels remained open so we could house our workers, although contingencies were also made to allow for on-site work and shelter-in-place if need be. Thanks to the expediency and effectiveness of our regional associations — the PJM Power Providers (P3 Group), the New England Power Generators Association (NEPGA) and the Independent Power Producers of New York (IPPNY), as well as all of the dedicated state personnel responding to the crisis — none of the state lockdowns issued thus far has prevented us from keeping our power plants running.

So, what's in the future? We are working to further refine our shift work so our employees stay healthy. We remain focused on continued access to ongoing supplies for a sustained duration. There is concern that supplies may be interrupted, which may require emissions permits to be temporarily exceeded in order to keep some plants online; the need to keep the lights on in our hospitals and home will require temporary tradeoffs. It also may be necessary to defer generation and transmission maintenance. The challenge will be to determine how long that maintenance can be deferred, especially if we have a hot summer. We will have to understand the market impacts of changes in transmission and generation outage scheduling. We will have to forecast the expected impacts of the shelter-in-place restrictions on our economy. On top of all this, we need to get back to work. In PJM, we have to get the capacity market running again. In ISO-NE, we need to get the Energy Security Initiative moving. And in NYISO, we need to address market power mitigation and carbon issues. Hopefully, in the near future we will return to the "new normal," and all the hours we now have at home will enable us to successfully engage FERC to help keep the RTO electric markets operational and efficient. In the meantime, I'd like to extend LS Power's appreciation for the hard work of our employees, partners and industry colleagues in these challenging times. ■



LS Power operates 29 power generation facilities totaling 14,000 MW in the U.S. | *LS Power*

FERC/Federal News

Moody's: Coronavirus Recession to Cut GDP 2.3%

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Continued from page 1

until 2022, not returning to full employment (4.5%) until late 2022 or the beginning of 2023.

PJM and ISO-NE use Moody's Analytics' projections as inputs in their load forecasts. The company has been criticized for overly optimistic predictions about the 2008 financial crisis. (See related story, *PJM Staff Ponder Pandemic Effect on Load Forecast*.)

Worldwide Recession

Moody's expects worldwide GDP to drop 2.1%, with virtually every country in recession. "I've never seen anything like it," Zandi said. "The entire global economy will be in recession," he said. "The breadth of this is just incredible. … It's going to be a very difficult couple of years."

It estimated China, where the outbreak originated, will see a 29% GDP drop in Q1 but will have a 15% jump in Q2 and just a 0.1% drop for the year.

Europe will take much longer to get back to full employment because it has "fewer policy resources" than the U.S., Zandi said.

The good news in the U.S. is that the economy's fundamentals are far better than they were in 2008, with financial institutions less leveraged and household debt also lower.

Moody's expects the impact of the outbreak on business in the U.S. to diminish by the third quarter. "By July 4, the disruptions are largely played out," Zandi said, adding that the country will likely need one or two additional economic stimulus packages as the impact of the initial spending recedes later in the year.

Moody's has developed three main epidemiological scenarios for the virus. The baseline assumes confirmed infections in the U.S. range between 3 million and 8 million, with new infections peaking in May. With 10% of those infected requiring hospitalization and 1.5% dying, Moody's said the nation would have a 4% excess capacity of intensive care unit beds and 17% excess capacity of ventilators. Moody's cautioned that some regions could face shortfalls of ICU beds, ventilators and trained medical staff even under this scenario.

Moody's S3 scenario — rated as a 10% probability — is much grimmer, predicting infections peak in June with 9 million to 15 million total, a 20% hospitalization rate and a 4.5% fatality rate. With so many people infected, hospitals would have a 125% "capacity deficit" for ICU beds and a 56% deficit for ventilators.

The company also produced varying scenarios on the impact of the $2.2 trillion rescue fund — with a downside risk that the distribution of funds is delayed by bureaucratic bottlenecks — and whether there is a fourth or fifth stimulus bill.

It also highlighted other policy risks. The government "could botch the crisis management," Zandi said. "The discussion about opening up the economy quickly by Easter would qualify as a mistake in all likelihood, and that would lead to a more significant downside scenario."

'We have not bent the growth curve.'

Cris deRitis, Moody's Analytics | *Moody's Analytics*

Moody's Senior Director Cris deRitis said the number of confirmed cases in the U.S. grew by 27.5% on Thursday with the addition of 18,000 cases — equal to the U.S. total a week before — as the number of tests reached 580,000.

"We have not bent the growth curve," deRitis said. "As we look at the testing data, we still see that the positive rate is … growing, [which] indicates that the rise in the total number of confirmed cases is not just due to the increased number of tests that we're running but that the virus truly is continuing to spread at a rapid pace."

The baseline scenario assumes that the Federal Reserve will ensure liquidity and serve as a "firewall" to protect the financial system from the real economy, Zandi said.

But Moody's Damien Moore highlighted the risk of the "already stressed" corporate debt market. He said high yield spreads have increased in recent weeks, "but it's nothing like what we saw in the financial crisis."

U.S. companies have about $10 trillion of nonfinancial corporate debt outstanding, including $2.5 trillion in speculative grade leveraged loans or high-yield bonds.

"In a well-functioning world — sales [and] cash flow are solid — [leveraged debt is] not a problem," Zandi said. "But in a world like the one we're in, where sales are potentially zero and cash flow highly disrupted, these companies will now have a Hobson's choice — no choice at all really. Do I make my debt payments, or do I cut investment and hiring?"

Defaults would impact the Fed's ability to serve as the firewall; cuts in investments and hiring would exacerbate the downturn and slow the recovery, he said.

Zandi said there will be a large number of bankruptcies by small businesses that lack the cash or credit to survive the disruption. "How widespread the failures are will have a lot to say about the severity of the downturn and also the nature of the recovery — whether we have a more V-shaped or U-shaped or L-shaped kind of recovery."

'We will all be changed by this.'

"We will all be changed by this. Normal will be different, just like the financial crisis changed us," Zandi said. "I can't imagine that anyone who lived through this won't remember this and not be affected by this. Even the young people in their teens and 20s. They're going to remember this. And I do think it's going to have an impact just like the Great Depression did on that generation and World War II did. This event certainly will have [a] long-lasting imprint on people's thinking and behavior."

He said he is concerned it will "cement" anti-globalization sentiments and nationalism. He lamented the impact on low-income households and those who were just getting back into the labor force after the Great Recession.

"Wage growth among low-income groups was even higher than high-income groups because of the tight labor market among unskilled workers," he said. "Now that's all been derailed. I fear the income and wealth distribution … now will widen out again."

Zandi said he was not worried that the extended unemployment benefits approved by Congress will prove a disincentive for people returning to work. "The effect of the stimulus is not just about dollars and cents but people's psyches," he said. "People are freaking out." ■

FERC/Federal News

Renewable Tax Credit Extensions Left out of Stimulus Bill

By Michael Brooks

The wind and solar industries were disappointed last week that Congress' massive $2 trillion stimulus bill did not include extensions of the production and investment tax credits.

In a *joint letter* to Congress, the American Wind Energy Association (AWEA) and the Solar Energy Industries Association (SEIA) said the COVID-19 coronavirus pandemic was causing "delivery delays, necessary employee absences, serious financing concerns, and project cancellations or postponements. This is jeopardizing the jobs of our combined 364,000 workers, threatening to sidetrack tens of billions of dollars in investment."

President Trump on Friday signed the bill, the largest stimulus legislation in U.S. history, as shelter-in-place rules grind the U.S. economy to a near halt.

The major provisions of the Coronavirus Aid, Relief and Economic Security (CARES) Act (*S. 3548*) include $1,200 checks for millions of taxpayers "as rapidly as possible"; programs to disburse nearly $900 billion in loans to business impacted by the pandemic; and an expansion unemployment benefits.

AWEA CEO Tom Kiernan said "relief provisions ensuring renewable projects can secure financing and meet safe harbor continuity schedules are critical to preserving a strong domestic clean energy sector. Making these adjustments to existing tax credits would provide the industry the flexibility needed to accommodate COVID-19 delays, without costing the federal government any additional money. ... Without assistance, 35,000 American jobs, $43 billion of investment and $8 billion in payments to local communities are at risk."

SEIA CEO Abigail Ross Hopper acknowledged that some of the bill's provisions for individuals and displaced workers would benefit solar industry workers. But she warned that "as a result of this pandemic, the solar industry stands to lose half of our jobs."

The tax credit extensions were also not part of a separate *bill* introduced by House Democrats while Senate leaders and Treasury Secretary Steve Mnuchin negotiated over the Republican-crafted CARES Act, though the House bill did include emission limitations for airlines. When Democrats blocked passage of the Senate bill March 22, Majority Leader Mitch McConnell (R-Ky.) the next day falsely *accused* them of holding up the bill over the extensions and emission limits.

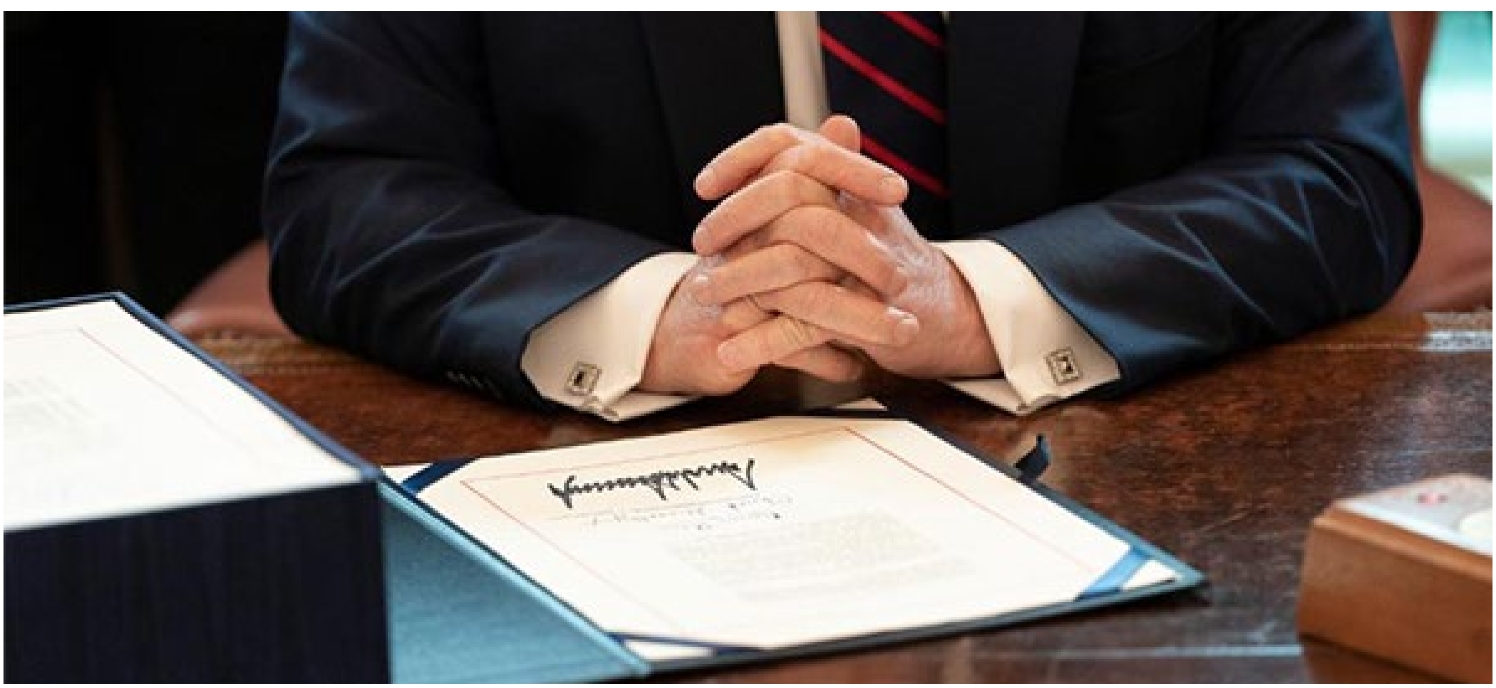
"Democrats won't let us fund hospitals or save small businesses unless they get to dust off the Green New Deal," McConnell said. "They're continuing to hold up emergency measures over tax cuts for solar panels."

In truth, McConnell was outraged by Democrats blocking a procedural motion on the bill after he had rallied his caucus members to bite their tongues and pass a House Democrat-crafted bill the week before as an initial response to the crisis. Minority Leader Chuck Schumer (D-N.Y.) and his caucus were likewise peeved that Republicans had included a $500 billion fund in the CARES Act to bail out corporations harmed by the crisis without any oversight provisions. The partisan rancor led to a rare, actual *debate* on the Senate floor, between McConnell and Sen. Joe Manchin (D-W.Va.).

After two days of negotiations, however, the Senate ended up passing the bill early Wednesday morning, 96-0. The House of Representatives followed on Friday, passing the bill by voice vote, rather than unanimous consent off the floor as Speaker Nancy Pelosi (D-Calif.) and Minority Leader Kevin McCarthy (R-Calif.) had wanted, after Rep. Thomas Massie (R-Ky.) indicated he would object and attempt to force members to record their votes.

This forced 218 members of the House to travel back to D.C., some of whom drove to avoid flying, to assemble a quorum to block Massie's motion — this despite the Centers for Disease Control and Prevention's *advisory* not to have 10 or more people gathered in one place.

Trump signed the bill into law hours after the House passed it. ■



President Trump signed the CARES Act on March 27. | *The White House*

CAISO/West News

CAISO Board OKs $141.7M Tx Plan, RMR Contracts

By Robert Mullin

CAISO's Board of Governors on Wednesday approved $141.7 million in transmission spending and reliability-must-run contracts covering three power plants in Central California.

The 2019/20 transmission plan covers nine projects CAISO says are needed to maintain reliability according to NERC and ISO planning standards. Seven of the projects (totaling $120.7 million) will be located in Pacific Gas and Electric's service territory, one ($16 million) in Southern California Edison and another ($5 million) in the Valley Electric Association/GridLiance West area straddling the California-Nevada border.

In his *presentation* to the board, CAISO Vice President of Infrastructure Development Neil Millar characterized the plan as a "modest" capital program and pointed out that all the projects are reliability-driven.

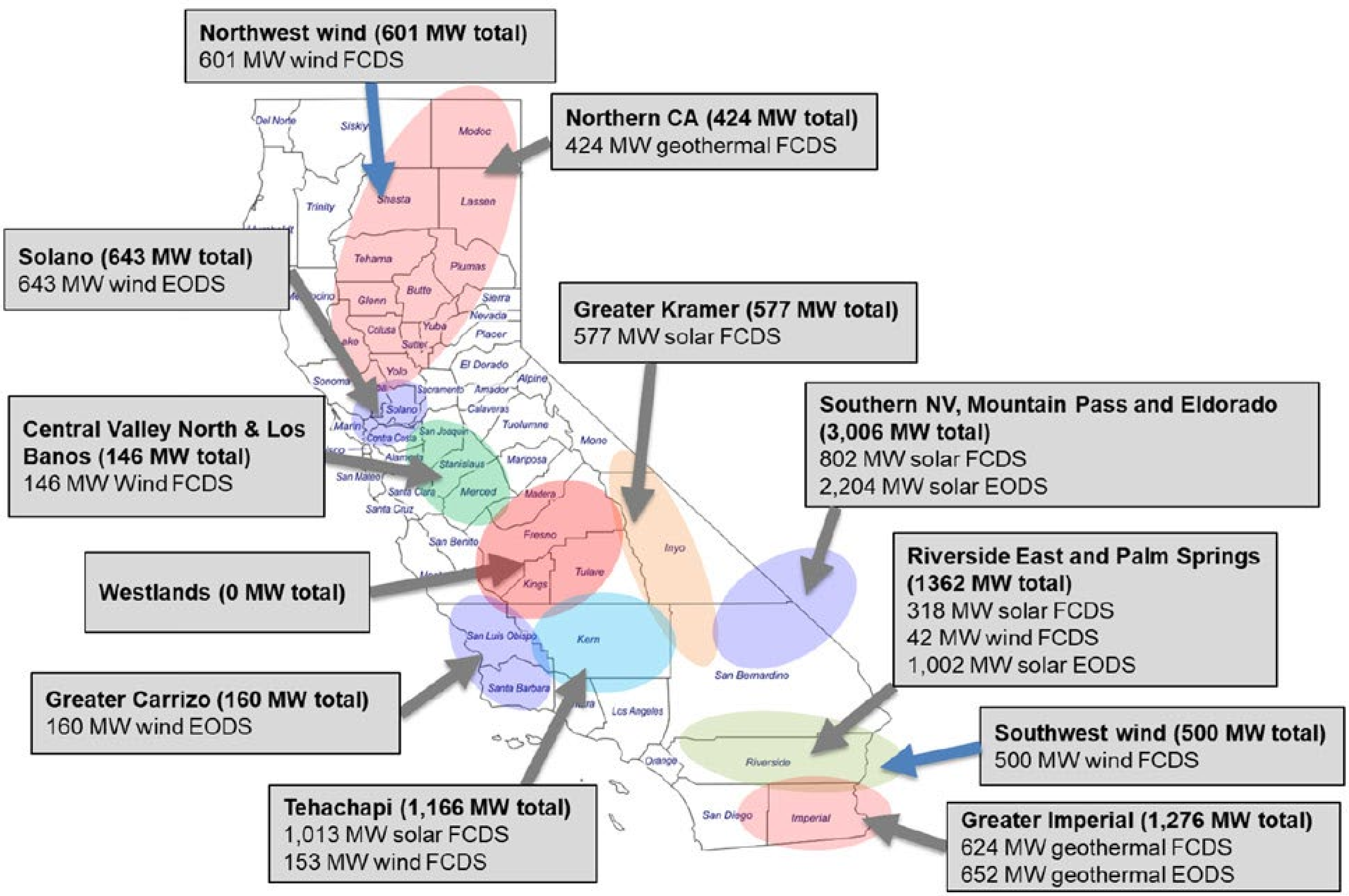
"We did not identify the need for any policy-driven projects or economic-driven projects in this cycle. The one qualifier was that the economic-driven analysis did identify the benefit of advancing a reliability project, but the driver remains the reliability requirement for that project," Millar said, referring to the $16 million, 230-kV Pardee-Sylmar line-rating-increase project in SCE's territory.

Millar said CAISO's analysis of potential policy-driven projects relied on assumptions gleaned from the California Public Utilities Commission's 2017/18 integrated resource planning cycle. The CPUC's IRP *reference system plan* assumes that California's electricity sector will cap its annual greenhouse gas emissions at 42 million metric tons by 2030 through a generation portfolio consisting of at least 60% renewables. It includes a "generic" base portfolio concentrated in various parts of the state needed to meet that target (see graphic below).

"I'm not an engineer, but as a matter of common sense, can you explain how we can go from a 33% to 60% renewable system" without spending on new policy projects? Governor Ashutosh Bhagwat asked.

Millar responded that, in past years, utilities developed renewable portfolios under the expectation that the resources must be deliverable as resource adequacy under CPUC rules. But those portfolios have "started to shift" where some of the output can be energy-only, he said.

"So with the upgrades that were already put in place, we saw that we had considerable



This shows the CPUC's determination of a "generic" base portfolio of renewables needed for California's electric sector to meet a target of 42 million metric tons of GHG emissions by 2030. | *ISO-NE*

CAISO/West News

capability to take advantage of filling out those areas where developments had already taken place, as well as capacity to meet energy-only requirements where resources would be providing energy and not necessarily resource adequacy capacity," Millar said.

The scope of the past transmission buildout accounts for the lack of policy-driven needs today, he said.

But Millar pointed to one "qualifier."

"When you move to these higher [renewable] goals, we're also seeing a steady escalation in the amount of transmission-related curtailments that's showing up in the model, and unless there's a policy requirement to address that curtailment, that would transition over to being an economic requirement," he said. "Those could drive considerable transmission to address economic-driven transmission needs."

The board additionally approved CAISO management's recommendation to put three previously approved projects on hold for further review. The projects are all located in PG&E's territory and include the North of Mesa upgrades, the 115-kV Morage-Sobrante line reconductoring and the Wheeler Ridge Junction substation project.

Not a Trend — Yet

The board also approved the designation of three Central California power plants as RMR resources for the summer peak season. The approvals are conditional because they will be revoked for any resource that obtains a resource adequacy contract by that time. The facilities include:

- Starwood Energy Group's Greenleaf II Cogen, which is required to help meet the 734-MW local capacity requirement (LCR) for the Drum-Rio Oso subarea within the Sierra local area. The 49.5-MW unit is not currently active in the CAISO market following termination of its Public Utility Regulatory Policies Act contract and is going through a qualifying facilities conversion process to become an ISO participating generator. The 230/115-kV Rio Oso transformer replacement project, which will mitigate the subarea's reliability need, is not scheduled to be in service until June 2022.
- California State University Channel Islands' Channel Islands Power, which is required to help meet the 288-MW LCR requirement in the Santa Clara subarea of the Big Creek/Ventura local area. The 27.5-MW unit was under a resource adequacy contract that expired Monday. While 195 MW of new energy storage resources have been procured to meet the expected LCR shortfall in the subarea, they won't become available until June 2021.
- Atlantic Power's E.F. Oxnard, which is also needed for the Santa Clara subarea. The 48.5-MW plant is currently under a resource adequacy contract that expires May 24. The unit will need to convert from a QF participant arrangement to a conventional market participant arrangement.

Governor Severin Borenstein noted that last year saw just one CAISO unit secure an RMR designation for the summer.

"Are we seeing an increase, or should I not think this is a trend?" Borenstein asked.

"From a local capacity perspective, we wouldn't expect to see this being indicative of a trend," Millar said. "Two of these units are qualifying facilities as opposed to being conventional market participants, and there's a relatively small number of those. The other issue we're dealing with is that we do have reinforcement projects under way generally to backfill for a number of these items, so there are individual cases that we're going to have to deal with from a local perspective. So we don't see this as a trend — at least yet."

CAISO CEO Steve Berberich interjected: "I think the operative word being used is 'yet.' With the fragmentation of the load-serving entities in California, we expect that this could very well be the case. I agree with Neil that this doesn't necessarily indicate a trend, but we're going to continue to be vigilant about this issue." ■

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CPUC Approves Big Boost in Storage, Solar Targets

Critics: Plan Doesn't Do Enough to Reduce GHG Emissions

Continued from page 1

as of 2018, the commission said.

Load-serving entities — including the state's three big investor-owned utilities and a growing number of community choice aggregators — must use the reference portfolio figures, which the CPUC describes as "optimal" outcomes, in their individual integrated resource plans in 2020. The RSP also is used by CAISO in its annual transmission planning process.

The goal of the effort is to help the state reach its goal of providing 100% "renewable and zero-carbon" energy to retail customers by 2045, as mandated by Senate Bill 100, passed in 2018.

CPUC President Marybel Batjer thanked fellow commissioners, staff and stakeholders before the unanimous vote.

"I think [this] is a very, very good decision, one that will double the clean energy capacity of the state over the next 10 years and one I do believe will keep us on track for the 2045 goals that we must meet … not only for the good of California, but really for the good of the world."

GHG Reduction not Enough?

Not everyone was as thrilled as Batjer with the result.

The Natural Resources Defense Council issued a statement Thursday saying the CPUC's order didn't do enough to address climate change because it maintained a target of reaching a greenhouse gas emissions level of 46 million metric tons by 2030 — the same figure the CPUC adopted in its last two-year IRP cycle.

"Despite recommendations to the contrary from the entire environmental community, multiple electricity providers and even the CPUC's own Public Advocates Office, the commission adopted a proposal with a relatively high emissions scenario as the state's reference system plan to guide California's electricity providers for the next two years," the NRDC said.

However, the plan also requires retail electric providers to outline how they would reach a more ambitious target of 38 million metric tons, a concession to the chorus of those calling for greater GHG reductions.

Commissioner Clifford Rechtschaffen voted for the plan but expressed support for the stricter target in his comments.

Commissioner Liane Randolph, who headed the effort to draft the new reference portfolio, acknowledged not everyone was completely satisfied with the result but said there would be opportunities to revisit the GHG reduction target in the next two years.

"Having LSEs submit their plans toward the additional target of 38 MMT [million metric tons] will allow us to conduct a more practical and less theoretical analysis of what resources are needed to achieve that … target from the perspective of the individual LSEs doing the planning and procurement," Randolph said.

The 46 MMT figure is 56% below 1990 levels and would exceed the state's legislative mandate to reduce GHG by 40% below 1990 levels over the next decade, the CPUC said.

Renewables, Storage to Double

Randolph said the dramatic increase in renewable energy and storage statewide deserves praise.

"The decision adopted today provides guidance to load-serving entities to go out and procure approximately double the amount of renewable and storage capacity that is currently online in the electric system in California," she said in a statement.

From 2020 to 2030, the reference portfolio projects a total increase in utility-scale solar from 16,310 MW to 25,905 MW and wind power from 7,367 MW to 10,293 MW, including 606 MW of wind power from new out-of-state transmission.

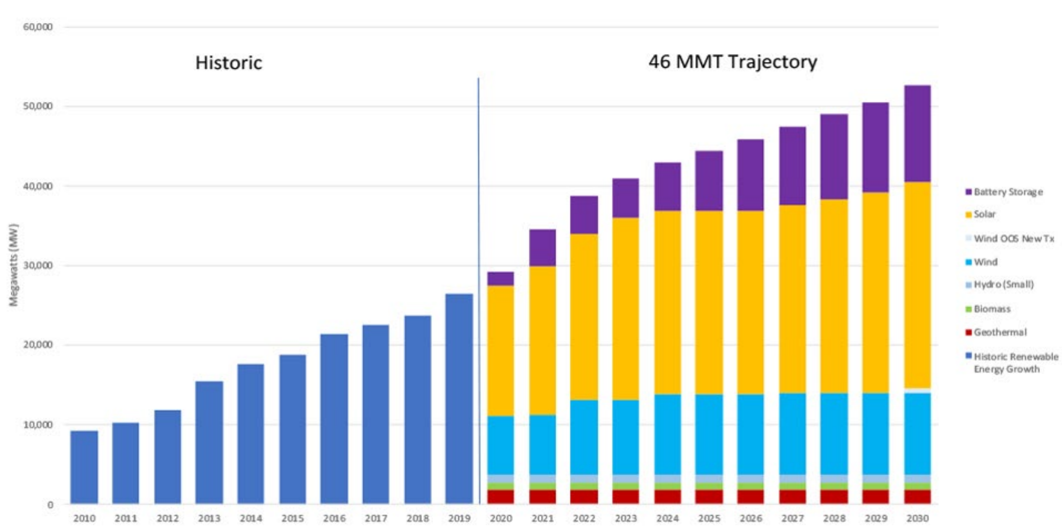
Natural gas generation would decrease by about 2.5 GW over the same period but remain as one of the state's two main power sources, along with large-scale solar.

Commissioner Martha Guzman Aceves called for more effort to eliminate natural gas from the state's resource mix. Methane, which accounts for about 12% of GHG emissions, has a more potent effect than carbon on global warming, she noted.

Wednesday's vote was the culmination of a process that began with an administrative law judge seeking input in November 2018 and dozens of utilities, environmental groups, consumer advocates and others commenting on the plan's iterations during the past 16 months.

The commissioners made their decision in a web conference because of the COVID-19 coronavirus pandemic. Technical problems with the phone company's virtual setup plagued the commissioners, who also regulate the state's telecommunications industry.

While obviously irritated, they didn't threaten repercussions. ■



The new RSP could dramatically increase solar and battery storage through 2030. | *CPUC*

CAISO/West News

CAISO Protecting Control Room Staff

ISO Monitoring Grid Impact of Calif. Stay-at-home Order

By Hudson Sangree

CAISO is focused on keeping its control room running and isolating key employees from those who might be carrying the COVID-19 coronavirus, CEO Steve Berberich told the ISO's Board of Governors on Wednesday.

Some employees are working off site, Berberich said. Others have shifted to CAISO's secondary control room at a 35,000-square-foot backup facility in Lincoln, Calif., about 20 miles north of the ISO's Folsom headquarters near Sacramento.

"We're doing our best to particularly make sure we protect our control room personnel and leveraging our backup site to make sure we have separation between them," Berberich said. "Our focus though right now is to make sure we protect our staff but also ensure our primary missions of running the reliable grid and credible markets remains intact."

Like other regions, CAISO has seen shifts in demand as a result of the coronavirus threat. The ISO has experienced a 3 to 5% load reduction, with Californians under a statewide stay-at-home order, he said. Mild weather and other factors may be disguising more pronounced effects on the state's demand curve, he noted.

"We're tracking that," Berberich said. "I know [Vice President of Market Quality and California Regulatory Affairs] Mark Rothleder's group is focused on making sure we take that into consideration as we make our forecasts."

CAISO has had a pandemic plan in place since 2015 as part of its business continuity plan and has put it into effect, the CEO said.

The ISO is continuing with business as usual in other ways too, he said.

CAISO is continuing to perform its role as reliability coordinator for much of the West and running the Western Energy Imbalance Market, so far without significant disruption, he said.

However, Berberich acknowledged that some of RC West's "advanced tools continue to be challenged." CAISO's advanced computer applications run contingency analyses based on a system model that is changing, he said.

"We're working through some of the issues getting that system model completely correct," he said.

"We do expect to move forward on all our policy initiatives," Berberich said. "The stakeholder processes will continue to go forward on a telephonic basis. We'll continue to manage the interconnection queue, transmission planning and all the other efforts we have to support California, but also the region and its decarbonization goals."

He said developers have asked not to postpone projects, so CAISO won't meddle with interconnection timelines.

"We are mindful that there are a lot of strains out there on the system — local regulatory authorities, the permitting agencies, financing and all those things," Berberich said. "We are in a position where we will do what's right to try to make sure that people can move through the queue, [that] they can successfully bring in projects and they can add to California's goals of decarbonizing the grid.

"To the extent that we need to work with FERC and the stakeholders to find ways through that, we will. We have explored changing the queue dates and the schedules. After consulting with the industry, we got resounding feedback that they would like to keep those dates and requirements as is, so that will be our plan."

Berberich plans to retire this summer, and a nationwide search has commenced for his successor.

Board Chair David Olsen took time at the start of Wednesday's meeting to tell stakeholders that the ISO's policy goals, including the expansion of the Western Energy Imbalance Market across the West and to a day-ahead market, won't change during the CEO transition.

"That will not change any of our current commitments and forward-looking policies," Olsen said. "The board wanted to communicate that unambiguously." ■

CAISO's Folsom control room | *CAISO*

CAISO/West News

FERC Denies Rehearing of PG&E Interconnection Case

By Hudson Sangree

FERC on March 20 rejected Pacific Gas and Electric's request to rehear a case in which it ruled that interconnection customers could be harmed by changes occurring outside of their boundaries (*EL15-55-003*).

The case began in 2015 when Modesto Irrigation District and Turlock Irrigation District claimed PG&E had denied their rights under interconnection agreements to the PG&E-owned section of the California-Oregon Transmission Project, a 340-mile, 500-kV line that runs from southern Oregon to Central California.

The districts, which supply power to large areas of California's Central Valley, are members of the Transmission Agency of Northern California and hold shares in the agency's entitlement to capacity on the project. They use those entitlements to transfer energy from the Pacific Northwest. Their interconnection agreements with PG&E provide that either party can request a joint study of any proposed "modification, new facility addition or long-term change to operations that may reasonably be expected to result in an adverse impact."

"If an adverse impact is identified through either study process, [the interconnection agreements impose] the obligation on the primary party to avoid, fully mitigate or compensate the coordinating party for all costs incurred due to the adverse impact," FERC said.

The California Department of Water Resources, which owns generation and pumping resources connected to the transmission project, had been part of a remedial action scheme to maintain reliable operations during disruptions. When the department dropped out of the scheme in March 2015, PG&E "reprogrammed" the scheme but didn't notify the irrigation districts and then refused them a study of the potential impacts.

The districts sought FERC intervention. The commission initially denied their complaint, finding that the relevant terms of the interconnection agreements did not apply to resources beyond their immediate control.

"The districts do not own or control any portion of the California-Oregon Transmission Project, [and it cannot] be considered part of the districts' systems as defined in the interconnection agreements," FERC wrote.

The districts appealed to the 9th U.S. Circuit Court of Appeals, which decided in September 2018 that FERC had read the agreements too narrowly in "concluding that an adverse impact must be a direct, physical effect on a line or component inside the districts' systems and did not include a physical effect on a line or component outside the districts' systems that makes it more difficult for the districts to transfer power into their systems."

On remand, FERC ruled in favor of the districts and ordered PG&E to conduct a study of potential adverse impacts.

PG&E sought a rehearing, claiming that it had not breached its interconnection agreements and that no adverse impact had occurred. It said the 9th Circuit and the commission misread the interconnection agreements.

FERC rejected all of PG&E's arguments.

"Although PG&E asserts that the commission ignored the plain meaning of the interconnection agreements, PG&E essentially focuses on whether PG&E, in its own estimation, believed that it was not making a long-term change to operations on its system that may reasonably result in an adverse impact to the districts' systems.

"However, the commission in the remand order found that PG&E breached the interconnection agreements by failing to undertake a study … which considers the perspective of the coordinating party, here, the districts.

"Equally unavailing," FERC continued, "is PG&E's assertion that the term 'adverse impact' under the interconnection agreements was not intended to cover changes occurring outside the districts' systems. As an initial matter, the 9th Circuit already ruled that adverse impacts should not be so narrowly construed. From a technical perspective, the districts' ability to transfer power into their systems may be affected by changes occurring outside of their boundaries, and this specific scenario could result from PG&E's reprogramming of its remedial action scheme. … PG&E must participate in a study to assess the potential adverse impacts to the districts' systems." ■

The Modesto Irrigation District supplies water and power to a section of California's agricultural Central Valley. | *MID*

ERCOT News

Texas PUC Briefs

Commission Creates COVID-19 Relief Fund, Forbids Disconnects

Meeting in a hearing room absent of staff and regulatory lawyers, the Texas Public Utility Commission last week approved several measures addressing delinquent customer accounts and other issues related to the COVID-19 coronavirus pandemic.

The commissioners on Thursday voted unanimously to issue an *order* that will temporarily suspend a series of rules allowing retail electric providers (REPs) and other utility participants to disconnect service for nonpayment. Instead, all REPS must suspend late fees and offer a deferred payment plan upon customer request (*50664*).

The PUC also created the *COVID-19 Electricity Relief Program*, a funding mechanism through which REPs may recover a "reasonable portion of the cost of providing those uninterrupted services to customers facing financial hardship." The program will last for six months, unless the PUC extends it (*50703*).

The commission said the initial funding mechanism is temporary and requires further review. Transmission and distribution utilities will collect funds from customers in ERCOT's customer-choice areas through a rider — based on 33 cents/MWh — which will reimburse the utilities for unpaid bills.

The commissioners plan to revisit the order in a month.

"We're going to do whatever we need to do to address this situation with electricity and the customers," Chair DeAnn Walker said during the open meeting. "I'm concerned [the rider] may be too low. If we had a moratorium on disconnects for the next three months, the market couldn't stand it. We need a reasonable balance to the needs of people losing their jobs with the needs of the market."


PUC Chair DeAnn Walker (right) properly coughs into her elbow while practicing social distancing with Commissioner Shelly Botkin during the March 26 open meeting.


PUC Commissioner Arthur D'Andrea

Commissioner Arthur D'Andrea agreed.

"We can't have disconnects while people have been ordered not to work by the government," he said. "I think it's the government's responsibility to make sure they at least have lights and water while they're sitting at home under government order."

TXU Energy and Reliant Energy have already pledged to stop disconnections and late fees.

The order also covers Entergy, El Paso Electric (EPE), Southwestern Public Service and Southwestern Electric Power Co., which operate outside of the ERCOT market under PUC-set rates. The companies may not charge late fees or disconnect customers for nonpayment during the emergency, the commission said.

The commissioners and an IT technician were the only four people in the meeting room. They practiced social distancing, with Walker once coughing correctly into her elbow.

"It's a new day for all of us," Walker said.

AEP Texas Gets CCN in South Texas

The PUC also approved a certificate of convenience and necessity for AEP Texas to construct a $78 million, 138-kV transmission line in South Texas. The line could be 50 to 85 miles long (*49347*).

The commissioners overcame their reluctance to approve the project, noting that ERCOT approved the line as a reliability project in 2015. AEP Texas reached an unopposed settlement agreement with landowners in January.

"It seemed like there was an abnormally long delay [from] when ERCOT approved it. I don't know what caused that, but it puts the study further out of date," D'Andrea said.

"I'm concerned about sending this back for remand, but based on the record, I would go ahead and approve the settlement," Walker said. "[In the situation] we find ourselves, I think it's the best way forward."

CenterPoint Energy Hit with $250K Fine

In other actions, the PUC:

- slapped CenterPoint Energy with a $250,000 administrative fee for failing to honor some customer-initiated switch requests while transitioning customers from a bankrupt REP (*50230*);
- signed off on EPE's interim fuel refund of $15 million to be returned to customers (*50292*); and
- approved Entergy's regulatory accounting treatment of the tax effects associated with a mark-to-market tax accounting method election with respect to its power purchase agreements. Entergy requested the change because it identified a specific PPA with its affiliate Entergy Louisiana that it can recognize as a significant tax loss. The company will provide ratepayers with net guaranteed upfront credits of $34 million, consisting of $3 million per year from 2021 through 2026 and $4 million per year from 2027 through 2030, based upon a gross credit of $46.72 million net of an estimated net operating loss of $12.72 million (*50540*). ■

— Tom Kleckner

ERCOT News

Appeals Court Sets Dates in Texas ROFR Challenge

By Tom Kleckner

The Texas Public Utility Commission has won extra time to respond to NextEra Energy's efforts to void a Texas law giving incumbent transmission companies the right of first refusal to build new transmission lines.

The 5th U.S. Circuit Court of Appeals in New Orleans on March 20 granted the PUC's request for a 14-day extension to file response briefs, giving the commission until April 22. NextEra will have seven days to file a reply brief (20-50160).

NextEra Energy Capital Holdings and four other NextEra transmission owner/developer entities appealed to the 5th Circuit after the U.S. District Court for the Western District of Texas in February refused their motion to overturn Texas *Senate Bill 1938*. (See *District Court Dismisses Texas ROFR Repeal*.)

On March 13, the district court also rejected NextEra's request for an injunction delaying the court's decision, saying NextEra is unlikely to prevail on appeal (*1:19-cv-00626*).

The Texas law grants certificates of convenience and necessity to the owners of a new transmission line's endpoints, essentially allowing only incumbent transmission companies to build new power lines in the state.

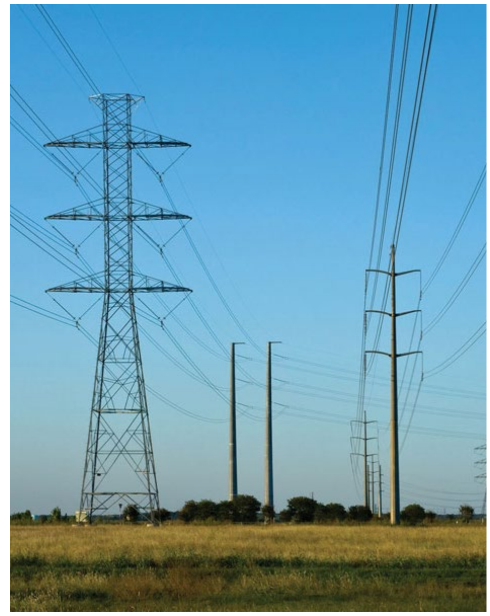
District Judge Lee Yeakel | *American Inns of Court*

"The court concludes that plaintiffs have failed to make a sufficient showing to warrant an injunction pending appeal," District Judge Lee Yeakel wrote.

The judge said an injunction would substantially harm the PUCT, the defendants in NextEra's lawsuit, because it would be unable to "plan and facilitate" new transmission projects.

At issue is NextEra Energy Transmission (NEET) Midwest's ability to build the $115 million Hartburg-Sabine Junction transmission project in MISO's East Texas footprint. NEET Midwest won the project's rights in 2018 through a competitive bidding process. (See *NextEra Wins Bid to Build MISO's 2nd Competitive Project*.)

NextEra has said it expects MISO to make a decision reassigning or canceling the project by today.



| *ERCOT*

Southwestern Public Service and East Texas Electric Cooperative have both appealed to the 5th Circuit to have their rejected intervention requests overturned. The district court denied both requests when it rejected NextEra's motion in February. ■

ERCOT News

FERC Conditionally OKs JP Morgan's Purchase of EPE

By Tom Kleckner

FERC on Monday conditionally approved J.P. Morgan's $4.3 billion purchase of El Paso Electric, directing the companies to file a mitigation plan addressing market power screen failures (*EC19-120*).

J.P. Morgan's Infrastructure Investments Fund (IIF), Sun Jupiter Holdings and EPE announced the transaction last June. FERC is the final regulatory body to sign off on the deal, which was approved by the Texas and New Mexico utility commissions earlier this year. (See *Texas PUC Approves EPE's $4.3B Sale*.)

At issue before FERC was IIF US Holding's ownership of the 595-MW Mesquite natural gas plant in Arizona. All the plant's capacity is committed to third parties.

Mesquite currently sells 271 MW to 20 parties under a power purchase agreement, with the balance of the plant's capacity sold to other parties not affiliated with IIF or Sun Jupiter. The PPA's term is set to terminate at the end of April 2021, when it will be replaced by a PPA that increases the volume of capacity committed under the contract to 483 MW. (IIF US Holding is one of three master partnerships that hold all investments for IIF, an open-ended infrastructure fund.)

The applicants submitted an "alternative analysis" of the Mesquite plant that assumed early termination of the PPA, which would result in more generation capacity from Mesquite becoming available for sale in the EPE balancing authority area under IIF's control, resulting in market screen failures for the region. FERC said the screen failures are "significant and occur in moderately to highly concentrated markets," indicating reduced competition. It directed the applicants to file a mitigation plan within 45 days that addresses the potential adverse effects on competition.

The commission found the transaction would not have an adverse effect on rates, noting it will retain its authority to approve EPE's rates for jurisdictional services and the state commissions will regulate its retail rates.

The commission rejected calls by Public Citizen for an evidentiary hearing over the transaction's complexity and the web of financial affiliates involved. Sun Jupiter is the sole shareholder of Merger Sub, a corporation formed for the purpose of merging with and into EPE, with EPE as the surviving entity. Sun Jupiter is an indirect, wholly owned subsidiary of IIF Sun Jupiter Ultimate Holdings.

J.P. Morgan Investment Management officials advise and help manage IIF's portfolio of 19 companies. EPE would become part of that portfolio. IIF and EPE officials have argued that does not mean J.P. Morgan is a legal affiliate of IIF or any IIF entities. The commission agreed with the applicants' assertion that any affiliation between the IIF companies with J.P. Morgan would not change its analysis under the Federal Power Act.

"Even if there are disputed issues of material fact in a proceeding, the commission is not obligated to establish an evidentiary hearing if [it] can determine whether the proposed transaction is consistent with the public interest based on the written record," FERC said. "[The applicants] have demonstrated that even if Sun Jupiter were affiliated with J.P. Morgan or any of its affiliates, such affiliation would not change the outcome of the commission's analysis." ■

EPE's Rio Grande Plant in Sunland Park, N.M. | *El Paso Electric*

ISO-NE News

NEPOOL Markets Committee Briefs

Committee Fails to Approve ESI for April 15 Filing

ISO-NE's Energy Security Improvements (ESI) initiative hit a stumbling block last week when the New England Power Pool Markets Committee failed to approve a motion to recommend that the Participants Committee back the measure at its April 2 meeting.

The proposal won only 52% support, below the 60% needed for a recommendation to the PC.

ESI seeks to improve the region's fuel security by creating option-based energy and reserve services that reflect the operational capabilities the RTO relies on but does not compensate in the day-ahead time frame. The RTO says it would incentivize resources providing those capabilities to firm-up their energy sources.

"We'll be presenting the proposal to the Participants Committee next week and will be making our filing by the April 15 deadline," ISO-NE spokesman Matthew Kakley told *RTO Insider*. "If the PC votes to support an amended version of the ESI proposal that we do not support, we will include that version in our filing, along with our proposal."

Stakeholders have for months been attending extra meetings of technical committees to ready the market design ahead of the April 15 filing deadline (*EL18-182*). (See "ESI Virtually Rolls to April Deadline," *NEPOOL Markets Committee Briefs: March 10-11, 2020*.)

Before the vote on the main ESI motion, as outlined in a *memo* from the RTO, the MC voted to amend the motion to reflect the changes contained in *materials* provided by the New England States Committee on Electricity (NESCOE) relating to setting replacement energy reserves (RER) to zero for non-winter months.

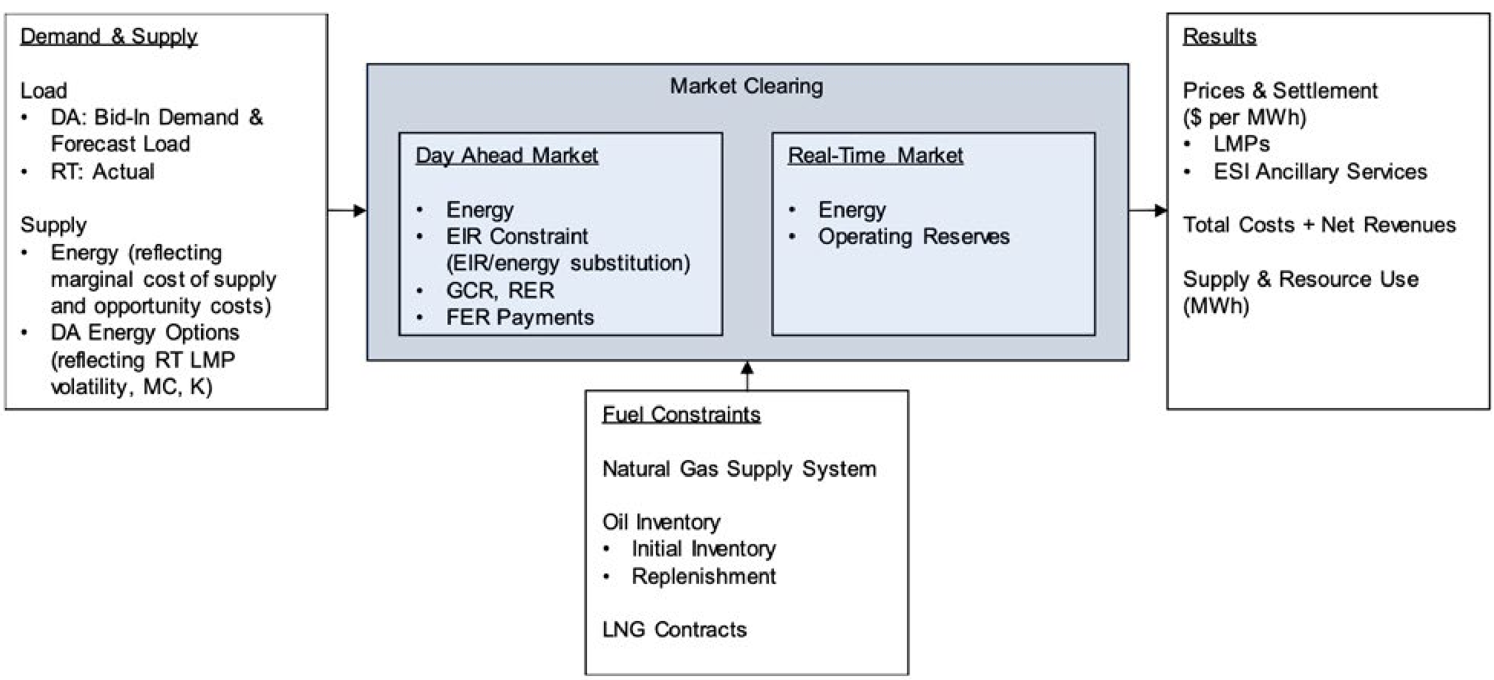
All sectors had a quorum, and the motion to amend the main motion was voted on by roll call, *passing* with a vote of 60.73% in favor, as *recorded* by the committee secretary.

Prior to the vote, ISO-NE economist Christopher Geissler *reviewed* additional tables incorporated into the draft impact analysis report. Andrew Gillespie, principal analyst with the RTO, reviewed a *memo* from the RTO's Market Development department and Internal Market Monitor on additional changes incorporated into the proposed Tariff language since the previous MC meeting.

The amended main motion was later voted on by roll call. The individual sector votes were: Generation (16.79% opposed); Transmission (13.43% in favor, 3.36% opposed, two abstentions); Supplier (6.72% in favor, 10.07% opposed, five abstentions); Publicly Owned Entity (16.79% in favor, 21 abstentions); Alternative Resources (5.50% in favor, 10.54% opposed, two abstentions); and End User (9.33% in favor, 7.46% opposed, four abstentions).

Amendments Fail; Tariff Changes Go Forward

The MC did not approve a separate NESCOE amendment to remove a load forecast error in RER, the motion failing to pass with a vote of



Overview of ESI modeling approach and model components | *Analysis Group*

ISO-NE News

59.61% in favor.

Before a motion was moved, the Massachusetts attorney general's office informed the committee it was withdrawing its *amendment* to eliminate RER from the RTO's day-ahead ancillary services design.

On the heels of that withdrawal, the Massachusetts attorney general's office and NESCOE informed the committee they were withdrawing a joint *amendment* to establish regular assessments of the competitiveness of the ESI and the call option offers, and withdrawing a separate joint *amendment* to establish the so-called "look-back" provision to enable evaluation of the market design's efficacy.

A separate NESCOE amendment to include a strike price $10 adder also failed to pass, with a vote of 56.68% in favor.

ISO-NE Assistant General Counsel for Operations and Planning Monica Gonzalez led the discussion before the MC voted to recommend the PC support Tariff *revisions* reflecting the early sunset of the Inventoried Energy Program (IEP), limiting the program to the winter 2023/24 period.

FERC in February rejected a request by ISO-NE and NEPOOL to roll back the sunset date for a Tariff provision that allows the RTO to retain a resource for fuel security reasons. The RTO submitted a *memo* to the MC explaining how it plans to refile the Tariff revision when it files its ESI proposal. (See *FERC Rejects ISO-NE Fuel Security Sunset Rollback*.)

Based on a voice vote, the IEP sunset motion passed with two oppositions and two abstentions in the Generation sector, one abstention in the Transmission sector, three oppositions and one abstention in the Supplier sector, four abstentions in the Alternative Resources sector, and one abstention in the End User sector.

Technology Type	Number of Units	Change in Holding Costs ($ / MW)	ESI FER Payments ($ / MW)	ESI DA Energy Option Revenue ($ / MW)	Change in Net Revenue ($ / MW)
Central Case					
Dual Fuel, Combined Cycle	17	-$112	$2,113	$61	$2,063
Dual Fuel, CT	14	-$124	$1,760	$1,199	$2,835
Oil Only, CT	70	-$88	$654	$2,032	$2,598
Oil Only, Steam	13	-$1,291	$2,646	$98	$1,453
RER Plus					
Dual Fuel, Combined Cycle	17	-$112	$2,628	$110	$2,627
Dual Fuel, CT	14	-$124	$2,410	$1,641	$3,927
Oil Only, CT	70	-$88	$891	$3,296	$4,099
Oil Only, Steam	13	-$1,288	$3,597	$230	$2,539
Strike Plus $10					
Dual Fuel, Combined Cycle	17	-$112	$2,096	$55	$2,039
Dual Fuel, CT	14	-$124	$1,685	$1,069	$2,630
Oil Only, CT	70	-$88	$630	$1,857	$2,399
Oil Only, Steam	13	-$1,291	$2,552	$102	$1,364
No RER					
Dual Fuel, Combined Cycle	17	-$6	$1,207	$23	$1,223
Dual Fuel, CT	14	-$116	$868	$416	$1,167
Oil Only, CT	70	-$80	$267	$339	$527
Oil Only, Steam	13	-$819	$1,316	$13	$509

Winter extended stressed scenarios | *ISO-NE*

"Back in August we communicated to the committee that what the ISO would be doing is ensuring that the two programs are not in place at the same time," Gonzales said. "What we're essentially presenting to the committee is the sunset of the IEP for the second winter so that we don't have the IEP program in effect at the same time as the ESI rules."

[Note: Although NEPOOL rules prohibit quoting speakers at meetings, those quoted in this article approved their remarks afterward to clarify their presentations.]

The MC also by voice vote recommended the PC support the RTO's compliance revisions to Market Rule 1 addressing FERC's March 10 order rejecting the economic life revisions associated with a permanent delist bid or retirement delist bid (*ER18-1770*). (See *FERC Reverses Ruling on ISO-NE 'Economic Life' Rules*.)

Timothy Helwick and Gregg Bradley from the IMM *said* the compliance filing reverts the calculation of economic life for Forward Capacity Auction 15 back to being the maximum evaluation period in which a resource's net present value is non-negative.

It asks FERC to prospectively apply the new economic life definition — the evaluation period in which a resource's net present value is maximized — beginning with FCA 16. ■

— Michael Kuser

MISO News

MISO Loads down as Region Faces COVID-19 Threat

By Amanda Durish Cook

MISO's weekday loads are looking more like weekends as social distancing measures to lessen COVID-19 cases take hold in more states in the footprint.

"We are starting to notice a few impacts," Vice President of System Planning Jennifer Curran reported during the Markets Committee of the Board of Directors' March 24 meeting, conducted via WebEx and teleconference. (See *Virus Fear Sends MISO Board Week to the Web*.)

Director Tripp Doggett asked if MISO is experiencing more load shapes on par with weekend usage as more people stay home across the footprint.

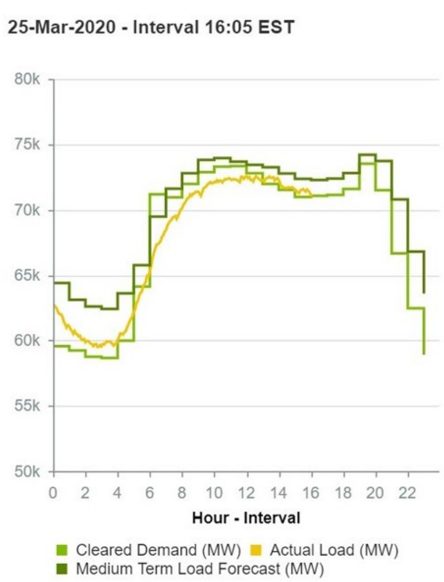
"In general, it's going in that direction; the peaks aren't as prominent," Executive Director of Market Operations Shawn McFarlane said.

For instance, McFarlane said, morning peaks are flattened absent the usual flurry of activity to get schoolchildren and workers out the door. In its place is a more dispersed demand over the morning hours, he said.

McFarlane said MISO hasn't yet quantified how much load has declined across the footprint.

"Things have been evolving. Last week, it was only schools closed. Now we have shutdowns in the industrial sector. It's very fluid at this time. It's certainly greater than 5% — now it could be even 10%" year-over-year, he said.

MISO's March 2019 Board of Directors meeting in New Orleans | © *RTO Insider*



A gentler MISO load curve at 5 p.m. ET March 25 | *MISO*

Complicating matters, MISO's load forecasting relies on historical information. "During this unprecedented time, we don't have historical data," Curran explained.

MISO Director Theresa Wise called the forecast challenges "completely understandable."

Independent Market Monitor David Patton said MISO load in the first three weeks of March was about 8% lower than it was a year ago, reflecting the closure of schools and business. "We've noticed a significant impact," he said.

"We expect that load effect to increase, and we're talking to MISO about the impact. … We do think the learning of their models will improve the forecast," Patton said, adding that in the meantime, RTO staff have manually adjusted short-term load forecasts.

MISO Director Baljit Dail asked if generators were scheduling maintenance outages to take advantage of the dip in demand as the economy slows.

"Actually, we're seeing the opposite. We're starting to see deferrals of planned outages," Curran said. She said the root cause is likely that utilities are making do with fewer personnel.

Directors asked if MISO anticipates other impacts related to the pandemic.

"It's early days yet, so we'll be in constant communication with our members," Curran said.

The RTO has convened incident response teams focusing on COVID-19 that meet daily and have escalation plans at the ready to protect grid operations, if necessary, Curran said.

"MISO's top priority is to ensure the safety of its staff and stakeholders and reliability of the bulk electric system," she said.

Although most MISO employees are working from home, Curran noted that the RTO has operations in four sites in three states: the headquarters and Central Region Operations Center in Carmel, Ind.; the North Region Operations Center in Eagan, Minn.; and the South Region Operations Center in Little Rock, Ark. "So, we have a built-in social distancing," she said.

Curran said MISO is also working with law enforcement to make sure the RTO's control room operators can get to and from work as more states order their residents to shelter in place. She also said control rooms are being disinfected more frequently, and MISO has limited access to control rooms to essential personnel only. MISO facilities continue to be closed to visitors through May 1.

"This situation seems to change daily so keep in mind these actions can change or be extended," Curran said.

Patton also reported Potomac Economics staff are all working remotely.

"We've seen no real problems in the functioning of the IMM or the software. Our software is run from a third-party data center, so we didn't anticipate any impacts there," Patton said. ■

MISO Records Mild Winter

By Amanda Durish Cook

The tamest winter in recent memory brought no emergencies for MISO, though the RTO's South region was the subject of three weather-related alerts.

Speaking during a teleconference of the Board of Directors' Markets Committee on March 24, Executive Director of Market Operations Shawn McFarlane said the winter resulted in "minimal drama" over the three months.

He said MISO's "lowest winter peak in recent years" was driven by relatively high temperatures. Winter load *peaked* early at 96 GW on Dec. 19, far short of the forecasted 104 GW. While Midwest region temperatures were higher than average, the South region experienced temperatures about 4 degrees lower on average than in early 2019.

McFarlane said low gas prices and smaller load brought a 28% decrease in prices from last winter. Real-time LMPs averaged $21/MWh, down 28% from last year's $29/MWh winter average.

"This is about as low as we've seen gas prices since they were deregulated in the '80s," Independent Market Monitor David Patton said. "It's fundamentally changing MISO's dispatch."

MISO declared just one maximum generation alert for its South region, on Feb. 21, when cold weather in the Southeastern U.S. caused tight conditions.

McFarlane said in addition to the cold that morning, three major long-lead generation units failed to come online, dropping the operating margin to 500 MW, which triggers a maximum generation alert. The no-shows led MISO to call up all area short-lead units. He said two of the three long-lead units eventually started.

"The alert was only in effect for 90 minutes to cover the morning peak from 7:30 to 9 a.m. We weren't at risk of not being able to serve load," McFarlane explained.

MISO South was also the subject of two separate severe weather alerts as tornados and heavy rain hit the region Dec. 16-17 and again Jan. 10-11.

MISO also set a new all-time wind generation peak of 18 GW on Feb. 22.

"It seems like it occurs every season other than summer," McFarlane said of wind peaks.

However, McFarlane said MISO also experienced a "nearly zero" wind output from Jan. 28-30, illustrating the need to continue the resource availability and need projects to better manage the intermittent nature of renewable resources. (See *MISO Forward Report Stresses Near-term Change*.) Altogether, the three days brought 39 hours of wind production below 200 MW.

Lake Erie Loop Flows Re-emerge

MISO's winter prices were impacted by loop flows on lines around Lake Erie that are not being controlled through phase angle regulators, Patton said.

Shawn McFarlane, MISO | © *RTO Insider*

According to the Monitor, Ontario's Independent Electricity System Operator (IESO) throughout January and February requested transmission loading relief (TLR) on the Michigan-Ontario interface related to the loop flows. IESO's requests resulted in PJM curtailing about 162 GW worth of exports to MISO across 80 hours in the winter, Patton said.

"Now that's a really big deal. That's like losing two nuclear units. MISO doesn't plan for this," Patton said. "This is hugely costly to MISO when IESO takes these actions."

As a result, Patton said hourly market-wide energy prices exceeded $370/MWh, and market participants that had scheduled imports from PJM in the day-ahead market lost about $3.5 million collectively.

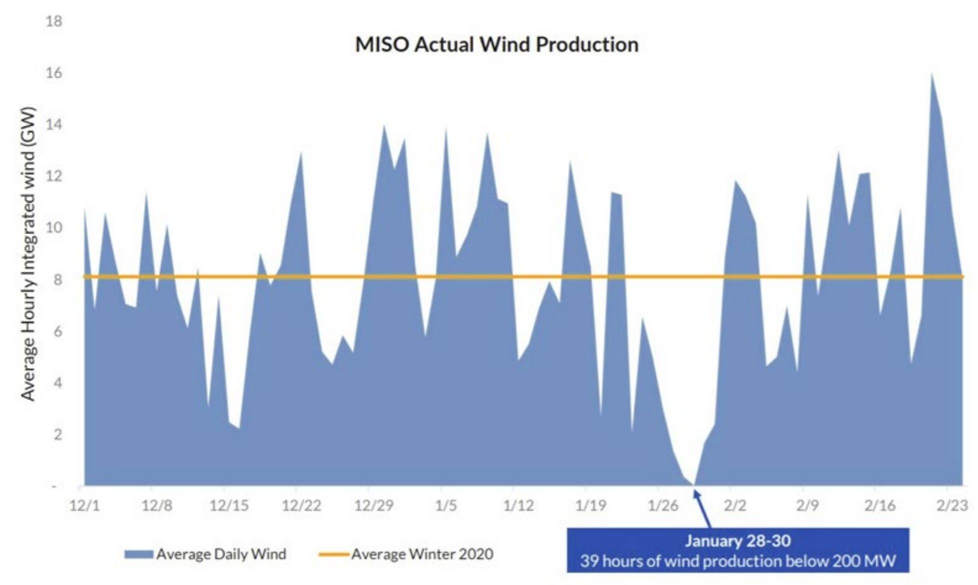
Patton said he's concerned that it appears IESO is calling for relief not because the Michigan-Ontario interface is overloaded, but because the PARs aren't enough to control the loop flows.

"It's important for IESO to tighten down and only take these actions when they're warranted," Patton said.

He said MISO is in discussion with IESO, PJM and NYISO about the appropriate criteria to call for TLR.

"This is an ongoing issue that we've been struggling with for years," MISO President Clair Moeller told board members. Unscheduled loop flows around the Lake Erie region have been a problem since the late 1990s. (See *MISO not Allowed to Allocate Lake Erie PARs Costs to PJM and NYISO*.)

MISO management said it plans to examine IESO's TLR requests to see if there may be a means to mitigate their frequency. ■



MISO winter wind production | *MISO*

MISO News

MISO Board of Directors Briefs

Board Pauses to Take in Unprecedented Pandemic Event

MISO Board of Directors Chair Phyllis Currie last week paused to reflect on the unprecedented circumstances that converted the RTO's Board Week into a teleconference format.

Currie expressed gratitude that MISO decided against in-person meetings for both Board Week and upcoming stakeholder committee meetings to help stem the spread of the COVID-19 coronavirus. The spring meetings were scheduled to be held in New Orleans, which has since become a *hotspot* for the disease.

"This is an extraordinary period of time with the coronavirus … and I thank MISO for accommodating the need for distancing," Currie said during the Thursday conference call.

Currie said MISO is faithfully executing its purpose: "Keeping the lights on across America" during crisis times.

"This is really our job, and this is our mission, and I thank you," Currie said to MISO staff and members. "You're providing a service that most people take for granted."

Currie said the board is likewise limiting its meetings to conference calls and canceling some meetups that don't translate well to phone format.

MISO will discuss COVID-19 impacts on the grid with members during its nonpublic Reliable Operations Working Group meetings, RTO executives said. The pandemic's effect on the grid will also be revisited in upcoming public meetings of MISO's Reliability Subcommittee.

"Clair and I have stayed in different cities, making sure we don't become ill at the same time," MISO CEO John Bear said of himself and President Clair Moeller. Bear said the idea is to make sure that the RTO has uninterrupted senior management in place.

Bear said MISO continues to monitor the latest information from the White House and Centers for Disease Control and Prevention, as well as conducting its own consultations with infectious disease experts and epidemiologists.

"We've not had any employees confirmed to have the virus, but we have had employees exposed to someone with the virus, and they're in self-quarantine," Bear told stakeholders.

MISO Board Chairman Phyllis Currie | © *RTO Insider*

Bear said most MISO employees began working from home beginning March 17. The RTO has also been holding virtual all-hands meetings on Fridays, where more than 1,000 employees log in, he said.

He said MISO is making sure that employees have certain basic necessities as supply chains struggle to keep up with consumers stockpiling supplies, "simple things like toilet paper and cleaners," he said.

Many utilities in the MISO territory have pledged to suspend disconnections for nonpayment but still meter usage for billing for when customers can catch up on payment.

Ameren is *suspending* all disconnections for nonpayment and forgiving any late payment fees for residential and business customers. It noted that normal billing for customers' usage will continue as usual.

DTE Energy said it was halting all shutoffs for nonpayment for low-income customers through April 5 and possibly longer, depending on the outbreak trajectory. Consumers Energy likewise said its shutoff pause applies to certain classes of residential customers. Northern Indiana Public Service Co. said its suspension of shutoffs "will remain in effect until further notice" for residential, commercial and industrial customers. It also froze late-payment charges through May 1. Entergy pledged March 14 to temporarily suspend disconnections for the next 30 days.

Indianapolis Power and Light said it "recognizes the impact and stress COVID-19 is causing in people's daily lives" when it announced a similar suspension through April 15.

"IPL recommends all customers do their best to maintain timely utility bill payments, as they will be responsible to pay all charges associated with usage during this period," the utility *said*. "We will continue to read meters and send bills. Customers should pay what they can to avoid building up a large balance that will be difficult to pay off later."

MISO on Budget

Three months into 2020, MISO is on track to meet its $264.7 million base expense *budget*.

CFO Melissa Brown said the RTO has so far spent $41.8 million of the $42.8 million it predicted it would spend by now. Brown said the $1 million in savings can be put down to smaller-than-expected building and computer maintenance costs.

The RTO is also trending toward a $50.7 million year-end spend on its $50.2 million investment expense budget. Brown said the overspending will likely be because it expended more time and resources on its resource availability and need solutions.

But Brown also warned that MISO has yet to account for any financial impacts from the COVID-19 pandemic. She said it will assess the financial implications and share them with the board at future meetings.

Nominating Committee Begins Work

MISO's Nominating Committee is ready to

Continued on page X

MISO News

FERC OKs Broader Market Protections for MISO

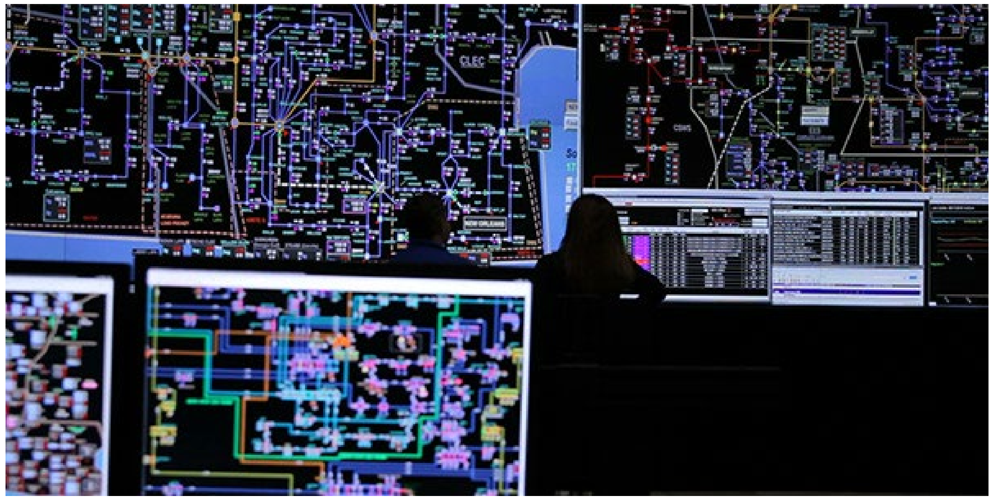
FERC on Thursday approved MISO's proposal to bar participants from its market when it identifies evidence of default, manipulation or unreasonable risk. The new procedures took effect Saturday (*ER20-877*).

The Tariff changes allow MISO to request additional collateral when it perceives an unreasonable credit risk from a market participant. The new rules will also allow the RTO to reject applications from new market participants and from former market participants that have an uncured financial default in its markets and attempt to rejoin under a different name.

Finally, the RTO will ask prospective and current market participants for more specifics on their annual certifications. It will inquire about past defaults, bankruptcies, dissolutions, mergers or acquisitions and any investigations. (See *MISO Looks Beyond FTRs for Market Protections*.)

"The proposed revisions will allow MISO to improve the protection of its market participants from financial losses that result from unreasonable credit risks and defaults while also providing additional clarity and transparency to market participants," FERC said.

The commission also pointed out that MISO has pledged to "preserve in writing" any



MISO control room | *MISO*

decision it makes to reject or suspend a market participant from participation. FERC said the RTO's written reasoning could "form a record before a commission proceeding if necessary."

FERC said MISO made the filing "in light of significant credit events in other" RTOs/ISOs, referencing GreenHat Energy's record default in PJM's financial transmission rights market in June 2018. PJM last week approved tightened credit requirements to prevent future defaults. (See related story, *PJM Members OK Tighter Credit Rules*.)

The revisions are an extension of stepped-up requirements in MISO's FTR market. The RTO received FERC permission in November to apply higher collateral requirements to the market (*ER20-73*). ■

— Amanda Durish Cook

MISO Board of Directors Briefs

Continued from page X

begin a search for candidates that could fill two seats on the board this year.

The RTO's Advisory Committee *installed* North Dakota Public Service Commissioner Julie Fedorchak and Otter Tail Power's Stacie Hebert, of the Transmission Owners sector, as the two stakeholder representatives on the Nominating Committee this year, which vets and selects board candidates to be put to member voting. The AC late last year decided against doubling the number of stakeholder representatives to serve on the committee. (See *No-go for MISO Board Election Changes*.)

Directors Theresa Wise and Baljit Dail will reach their term limits at the end of the year. Wise is eligible to serve another three-year term; Dail has already exceeded his total three-term limit through a special waiver in 2017, which was granted to retain his IT expertise. (See "Committee Permits Consideration of Extra Term for Dail," *MISO BoD Briefs: June 22, 2017*.)

MISO Reports IT Incident

MISO had one IT concern to report for the quarter during a scorecard *presentation* to the board during a Tuesday conference call of the board's Technology Committee.

Chief Information Security Officer Keri Glitch said the control room was forced to manage operations manually without the dispatch system for 75 minutes on Jan. 23.

Glitch said the problem originated during a planned market business continuity transfer for the day-ahead, real-time (DART) market system. During the data transfer, the DART system "could not connect to the market database, resulting in a unit dispatch system outage" from 4 to 5:15 p.m. ET. She explained that the root cause of the problem was that the system administrator selected an outdated option for direct connectivity to the failover site, which should have been removed from the tool.

Over that time, the control room managed operations manually without the dispatch system until connection to the market database was restored. Glitch said MISO members didn't incur any losses as a result of the downtime.

"If you can't hear it in my voice, I'm not happy. The bottom line is this should not happen and will not happen again," Glitch said. "We have had many, many conversations with the employees. … A lot of this is training awareness of how critical these systems are."

Glitch said MISO is retraining staff and looking into automating the manual portion of the process. She said she would speak more about the issue in closed session of the committee. ■

— Amanda Durish Cook

MISO News

Major MISO Tx Projects Face Various Hurdles

By Amanda Durish Cook

Two market efficiency transmission projects already approved by MISO face continued obstacles, while two others slated for belated inclusion in the 2019 Transmission Expansion Plan must wait longer for approval, stakeholders heard last week.

Speaking during a conference call of the Board of Directors' System Planning Committee on March 24, MISO Executive Director of System Planning Aubrey Johnson said uncertainty lingers for the nearly $129 million Hartburg–Sabine Junction project because of the passage of a Texas law granting incumbent utilities the right of first refusal for any transmission projects built in the state. The law may mean incumbent Entergy ultimately takes up the project. (See *Appeals Court Sets Dates in Texas ROFR Challenge*.)

The RTO is currently using its established *variance analysis* process to study the project and developments around it. The analysis is used to study projects already approved under the MISO Transmission Expansion Plan that are later disrupted by circumstances that affect the project's cost, schedule or "the ability of selected developers and transmission owners to complete."

"We are now continuing to gather information as part of the variance analysis and continuing to work with legal teams," Johnson said.

The proposed 23-mile 500-kV transmission line, four short 230-kV lines and new substation would connect three county networks in East Texas and alleviate longstanding congestion and import limitations in the area.

MISO has acknowledged the recent court action, but confidentiality restrictions limit its ability to talk publicly about the project. Spokesperson Allison Bermudez said the RTO will make a further statement once it completes the variance analysis, which is expected soon.

"MISO is committed to delivering the benefits of the Hartburg-Sabine Junction transmission project in East Texas. Under our Tariff, MISO is currently executing a process to assess the Texas state law developments and their impact on the project," Bermudez told *RTO Insider* earlier this month.

Huntley-Wilmarth Costs Up

MISO is similarly conducting a variance analysis on the nearly $156 million Huntley-Wilmarth line, which now faces cost overruns after a route change.

| © RTO Insider

Huntley-Wilmarth met the criteria to qualify as a market efficiency project in MISO's 2016 Transmission Expansion Plan. It would have been open to competitive bidding if not for Minnesota's right-of-first-refusal law. Original estimated costs on the project ranged from $88 million to $108 million.

MISO said costs increased 30% because of state-ordered changes to the routing plans. The new permitted *route* will cross the Watonwan River in Minnesota.

Johnson said a variance analysis is automatically triggered when a project experiences cost overruns of more than 25% of original baseline costs.

MISO President Clair Moeller said the analysis is performed to provide a clear public record of the project, not to re-evaluate its merits or halt work.

"Once we approve a project, we don't really have the ability to stop it," Moeller said.

MISO executives said they believe Huntley-Wilmarth will still be able to deliver benefits in excess of its cost.

Meanwhile, MISO's first competitively bid project from 2016 — the $67 million Duff-Coleman 345-kV transmission project in Southern Indiana — is making progress and could be completed as early as June 2020.

MISO-PJM Interregional, 1st SATA Projects not yet Approved

Two holdover projects from MTEP 19 have yet to receive the board approval MISO hoped for by March.

MISO's first-ever storage-as-transmission project is now on hold after FERC deferred ruling on the RTO's contentious ruleset for such assets. (See *MISO SATOA Proposal Set for Technical Conference*.)

"We will not seek approval until Tariff revisions are approved," Johnson said, noting that MISO staff must first attend a technical conference that will probably be set for late spring.

American Transmission Co.'s Waupaca area energy storage project was meant to ease transmission reliability issues in central Wisconsin.

"What happens — is this project just in limbo? So how do we deal with the congestion that this project was supposed to alleviate?" Director Nancy Lange asked.

Vice President of System Planning Jennifer Curran said MISO wants to "let the process play out a little more" before it decides on a direction or project alternative. She said it is in communication with the developer in the meantime.

MISO also faces more work before the board can approve its first major interregional market efficiency project with PJM.

The $22 million reconstruction of the 138-kV Michigan City-Trail Creek-Bosserman line in the northwestern corner of Indiana can save about $5 million in congestion costs per year, MISO said. (See *MISO, PJM Poised for 1st Major Interregional Project*.) PJM's Board of Managers has already approved the project.

But MISO doesn't yet have an approved regional cost allocation for interregional projects with PJM. FERC rejected its newest interregional cost allocation filing in late March, finding the proposal to reserve regional allocation for market efficiency projects 230 kV and above ignored the potential regional benefits of lower-voltage projects. MISO proposed that its share of interregional economic projects with voltages below 230 kV — but at or above 100 kV — be allocated 100% to the transmission pricing zones where the project is located, barring lower-voltage projects from cost-sharing.

Before the order, MISO staff said the Michigan City-Trail Creek-Bosserman project would not be regionally allocated in, reasoning that the project's 138-kV rating disqualified it from a regional allocation.

The commission ordered MISO to instead use a design based on adjusted production costs for economic interregional projects 100 kV and above with PJM. MISO has a month to make the filing. (See "Interregional Filing Also Rejected," *Another Rejection for MISO Cost Allocation Plan*.)

MISO will submit the filing within FERC's 30-day deadline, Johnson confirmed. He said the wait for FERC's response would probably push approval of Michigan City-Trail Creek-Bosserman to MISO's June Board Week. ■

MISO News

Board OKs 11th MISO Sector, Orders Redesign

By Amanda Durish Cook

MISO's Board of Directors last week cleared the Advisory Committee to create an 11th stakeholder sector while also instructing the committee to overhaul its sector design to produce a fuller participatory model.

The board said the committee's recent recommendation to create a new "Affiliate" sector for hard-to-define members works only in the short term. It directed it to develop a long-term solution that guarantees all members full participation in the stakeholder process. (See *MISO Advisory Committee OKs 11th Sector*.)

In the meantime, MISO should file with FERC revisions to its Transmission Owners' Agreement (TOA) to include the new sector, the board said.

Board Chair Phyllis Currie said the board met to discuss the proposal and agreed that it should be in place only until the AC creates a new proposal focused on fair participation for sectors and mindful of voting power. She also said the AC should ensure that sectors are divided into groupings of likeminded members.

"I say 'short term' because I think in the longer term, there still needs to be more discussion on how various sectors participate," Currie said during a committee conference call Wednesday. The meeting took place via conference call instead of in New Orleans as originally planned because of the spread of the COVID-19 coronavirus. (See *Virus Fear Sends MISO Board Week to the Web*.)

Currie urged the AC to examine its current voting structure and think about affording members an equal voice. She said the board would give the committee a year to draft a fuller solution for incoming — and increasingly diverse — members.

The new sector would not be allowed a vote in either AC or Planning Advisory Committee matters, but it would have one designated seat for AC meetings and be allowed to offer opinions during the committee's quarterly hot topic discussions.

The sector would serve as a home for any MISO member that isn't participating in another sector. Prospective MISO members must declare a sector affiliation before they can join the RTO.

"I think other interest groups, other businesses, other NGOs will come to the table," Director Nancy Lange told the AC.

The AC began debating the merits of an 11th sector last year when Lignite Energy Council, a North Dakota coal lobbying group, approached MISO about membership. The organization did not fit neatly into any of the existing 10 *sectors* and was almost relegated to the Environmental and Other Stakeholder Groups sector. But some AC members said it wasn't appropriate for a sector to contain entities with diametrically opposed views and said the new sector was necessary to allow the Environmental/Other sector to have a singular voice. The Environmental/Other sector would be able to drop its "other" designation if FERC accepts the changes to the TOA.

Environmental/Other sector representative Beth Soholt said that, save for the Energy Storage Association, all other entities in the sector have an environmental focus.

So far, the proposed Affiliate sector seems destined for a fossil-fuel focus — at least at the onset. LEC indicated that it has drummed up interest among other entities interested in joining the new sector, including coal and iron mining organizations, coal trade organization *America's Power* and various chambers of commerce.

LEC CEO Jason Bohrer said his organization had been "working on earning a seat at the table for the past 18 months." He said the board's decision was "a significant step in this long process."

"We applaud the work of the MISO Advisory Council, the Board of Directors and MISO staff, as well as our partners like America's Power, for their support of opening up the regional market planning stakeholder process to more voices and perspectives, which now will include coal producers along with chambers of commerce and other organizations that have strong electricity market interests," Bohrer said in an email to *RTO Insider*. "We look forward to providing a strong voice for the coal miners and utilities who provide the electricity that is the 'always-on' backbone for the electric grid and the economy in our region."

Hot Topic Panel Delayed

On the same conference call, the AC postponed the policy discussion portion of its meeting until June.

The committee was supposed to hold a panel-style discussion featuring industry experts as its quarterly hot topic discussion during the March Board Week. The panel was meant to focus on how RTOs deal with resource transition and would have featured one executive apiece from NYISO, CAISO and ERCOT. However, AC leadership said a panel discussion was too difficult to navigate in a teleconference-only format. ■

The MISO Advisory Committee last March | © *RTO Insider*

NYISO Management Committee Briefs

Ops Staff Sequestered as COVID-19 Precaution

NYISO has sequestered approximately two-thirds of its operations staff on site at its two control centers to prevent possible infection by the COVID-19 coronavirus from interfering with reliable grid operations, CEO Rich Dewey told the Management Committee on Wednesday.

"First and foremost, from a reliability standpoint, we do not feel at this juncture that we have any reliability concerns specific to the pandemic or the readiness of any market participants, whether generators or utilities, to comply with what we need to do," Dewey said.

The regular staff are working almost 100% from home, and there have been no reports of infection, he said.

"We have moved two full operational crews on site, provided trailers for sleeping [and] separate food facilities, and have walled off access to any of the individuals participating in that program," Dewey said. "We've got a rotation that will help us maintain grid operations for the foreseeable future."

The ISO also has been in regular contact with generators and transmission owners, and some of them are also beginning to implement on-site sequestration for staff, he said.

"Similarly, we've also been in touch with all the other RTOs and ISOs around the country ... and everyone is thinking along the same lines," Dewey said.

"We've also initiated, at the request of the [New York] Public Service Commission, some outreach to the generation community to try to get an understanding — for each of the generation plants — what level of readiness or preparedness exists, and to get a sense if we're going to have any concerns with respect to their ability to perform."

2019/20 Winter 5th Mildest in 200 Years

Vice President of Operations Wes Yeomans delivered the Winter 2019/20 Cold Weather Operations *report*, which showed a seasonal peak load of 23,253 MW on Dec. 19, compared with a seasonal 50/50 forecast of 24,123 MW. NYISO's all-time winter peak load was 25,738 MW on Jan. 7, 2014.

Yeomans said there were no "critical issues" to report to stakeholders after a season without "critical operating conditions."

"It feels strange to give a winter report when the winter was so mild," he said. "Just how mild was this? Relative to the top 10 mildest winters ... dating all the way back to 1820, this one tied with 1906 as the fifth-warmest January in the last 200 years."

Transmission performance was also excellent, he said.

Yeomans also delivered the monthly operations *report*, highlighting the mild weather in February that saw natural gas and distillate prices lower compared to the previous month, and natural gas prices down 32.2% year-over-year.

ESR Tariff Revisions Approved

The MC also approved Tariff modifications related to energy storage resource (ESR) participation, as recommended by the Business Issues Committee earlier this month. (See *NYISO BIC Briefs: March 19, 2020*.)

Energy Market Design Manager Zachary Stines presented the background *material* for the discussion and vote on proposed Tariff language, which spells out details regarding day-ahead margin assurance payments; the method for setting feasible day-ahead and real-time schedules; generator offer caps, mitigation and reference levels; and installed capacity supplier bidding requirements.

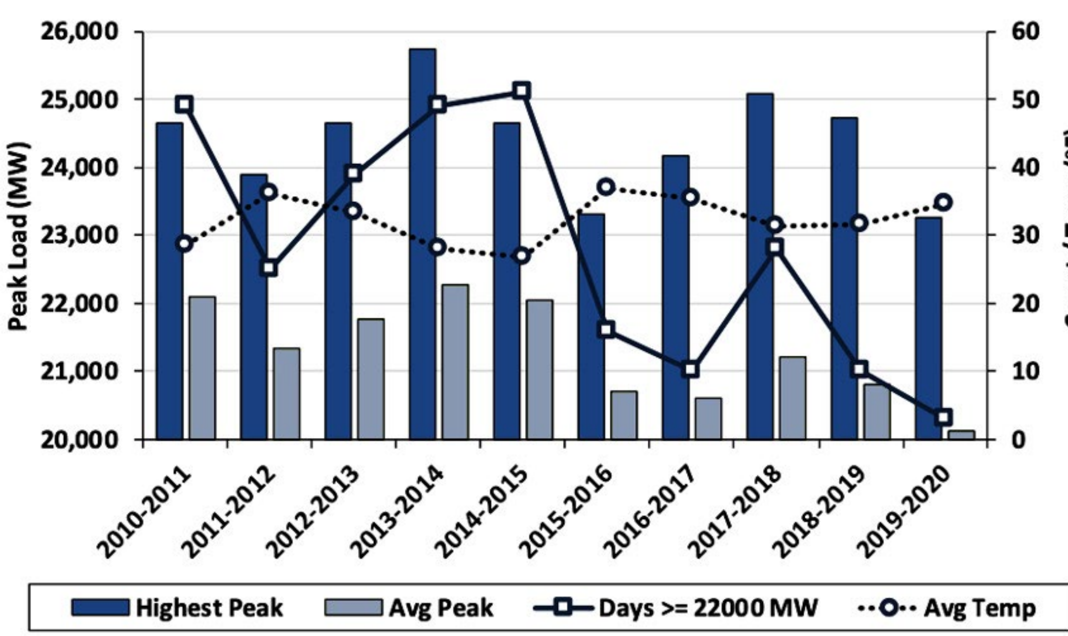
If approved by the Board of Directors in April, the ISO will file the changes with FERC and anticipates making them effective simultaneously with the rest of its ESR participation model.

CIO Doug Chapman said the ISO wants to activate the new software in June and would delay the rollout until September if unable to do so to avoid implementing new software in summer conditions, because it represents a significant change to the system.

"If the summer was mild enough, our operations teams might elect to go ahead, but our default decision would be to avoid the summer and its tight operating conditions," Chapman said.

Committee Chair Jane Quin, vice president of energy policy and regulatory affairs for Consolidated Edison, announced that the MC will hold a special meeting April 15 to act on buyer-side mitigation rules. ■

— Michael Kuser



NYISO 2019/20 winter daily peak loads in perspective | *NYISO*

PJM Members OK Tighter Credit Rules

Response to GreenHat Default OK'd Overwhelmingly

By Rich Heidorn Jr.

Stakeholders on Thursday overwhelmingly approved an overhaul of PJM's rules for managing the credit risks of market participants.

"I applaud the investment by stakeholders and members in their actions to protect our energy markets," PJM Chief Risk Officer Nigeria Poole Bloczynski told the Members Committee after the final vote.

The new rules were developed by the Financial Risk Mitigation Senior Task Force (FRMSTF) in response to the GreenHat Energy default in the financial transmission rights market.

The Markets and Reliability Committee approved the Operating Agreement and Tariff revisions in a 4.5 to 0.5 (90%) sector-weighted vote after PJM officials agreed to accept three friendly amendments and members rejected a motion to delay the vote. The MC later endorsed the rules by acclamation with one vote in opposition and three abstentions.

Exelon's Sharon Midgley called the changes a "significant leap forward in PJM's credit and risk management program."

What Changes

After the default of Tower Research Capital's Power Edge hedge fund in 2007, FERC ordered an end to collateral-free trading with the issuance of Order 741. PJM and other RTOs tightened their credit rules as a result.

But the changes weren't enough to protect PJM against GreenHat, which purchased a staggering 890 million MWh of FTRs — the largest FTR portfolio in PJM — before defaulting in June 2018. (See *Doubling Down – with Other People's Money*.)

PJM Chief Risk Officer Nigeria Poole Bloczynski | *© RTO Insider*

PJM formed the FRMSTF to implement recommendations made by an independent investigation of the debacle, which led to the departure of the RTO's CEO, CFO and general counsel and the hiring of Bloczynski. (See *Report: 'Naive' PJM Underestimated GreenHat Risks*.)

The new rules require companies wanting to become a market participant to provide PJM with financial records, corporate information and details of any prior defaults in energy markets or involvement in market manipulation.

To allow PJM to conduct ongoing risk evaluation, companies also must make annual officer certifications and notify the RTO of any "material adverse change in the financial condition of the participant or its guarantor."

PJM will determine whether a company presents an "unreasonable credit risk" based on factors including "a history of market manipulation based upon a final adjudication of regulatory and/or legal proceedings, a history of financial defaults, a history of bankruptcy or insolvency within the past five years, or a combination of current market and financial risk factors such as low capitalization, a reasonably likely future material financial liability, a low internal credit score … and/or a low externally derived credit score."

Unbeknown to PJM, GreenHat's principals, Andrew Kittell and John Bartholomew, had come to FERC's attention for their roles in J.P. Morgan Ventures Energy Corp.'s scheme to manipulate the CAISO and MISO markets between 2010 and 2012.

The new rules also seek to prevent applicants who have defaulted from participating in PJM markets under a different name. Factors for determining whether an organization should be treated as the same market participant that experienced a default include "the interconnectedness of the business relationships, overlap in relevant personnel, similarity of business activities, overlap of customer base and the business engaged in prior to the attempted re-entry."

After GreenHat's default, Kittell continued trading in PJM for a time under a new corporate name, Orange Avenue.

Steve Huntoon | *Steve Huntoon*

Amendments

PJM officials made several changes to the language Thursday in response to stakeholder comments at a second "page turn" on the proposals March 13. In addition, PJM accepted three "friendly" amendments to the proposal it had negotiated with stakeholders in the days before the MRC vote.

Bloczynski acknowledged before the votes that some members were concerned the new rules would result in "unintended consequences."

"We do not believe this is the case," she said. "However … I commit to you that we'll continue to review and reform the language to ensure that what the Tariff contains is what we all intended."

One amendment, sponsored by attorney Steve Huntoon, representing H-P Energy Resources, modified the definition of the term "market participant."

Huntoon's amendment eliminated the phrase "or any other PJM member whose application to participate in the PJM markets has been approved by PJM."

As amended, the definition is "a market buyer, a market seller, an economic load response participant, an FTR participant, a capacity market buyer or a capacity market seller."

"The problem is the definition of 'PJM markets' is very, very broad," Huntoon said.

PJM News

As originally written, Huntoon said, it could have inadvertently included generators that provide ancillary services directly, rather than through a wholesale affiliate, as well as transmission owners and customers, including hundreds of municipals and cooperatives that participate in PJM markets through wholesale entities like American Municipal Power and Old Dominion Electric Cooperative. It was an issue Huntoon had raised at the first "page turn" session in February. (See *PJM Stakeholders Debate Credit Rule Changes*.)

Gary Greiner, director of market policy for Public Service Enterprise Group, won two amendments, including one that makes the judgments of rating agencies such as Standard & Poor's, Moody's Investors Service and Fitch Ratings, if available, "the source" for calculating the unsecured credit allowance of market participants. If no external ratings are available, PJM's internal credit score will apply. If there is difference of opinion among rating agencies, the lowest rating will apply.

"It's a metric that's monitored by members, consistently applied and transparent," Greiner said. "It's what investors use to buy our stock and bonds."

Bloczynski supported the change, saying, "We do not believe that this takes anything away from us."

The rules include a scale ranging from "very low risk" (S&P/Fitch: AAA to AA-; Moody's: Aaa to Aa3) to "high risk" (S&P/Fitch: BB- and below; Moody's: Ba3 and below).

PSEG also won a change that PJM only "consider" rather than "apply" any changes to best practices or principles by third-party industry associations relating to risk management in the North American electricity, natural gas or electricity-related commodity markets.

PJM will "bring [the new policies] into the equation, but it won't be applied it in a hard way that … members would be forced to put into their policies," Greiner said.

Paul Sotkiewicz of E-Cubed Policy Associates, representing Elwood Energy, moved to delay the MRC vote to give other members time to submit friendly amendments.

But Bloczynski said the "amendments do not change the substance of anything that's been put in front of you since December" and cautioned that a delay would prevent PJM from winning FERC approval of the changes in time to apply them for FTR auctions in June.

Gary Greiner, PSEG | © *RTO Insider*

"We do not believe that more time to review the package is necessary or advisable," she said.

Members voted almost 4 to 1 (80%) against a delay. ■

Stakeholders Seek TO 'Engagement' on End-of-life Tx

By Rich Heidorn Jr.

PJM stakeholders seeking to improve the transparency of transmission owners' spending on end-of-life (EOL) projects urged the RTO last week to swiftly conclude work on proposals that can be brought to a vote.

Over four special Markets and Reliability Committee meetings on transparency and end-of-life planning, American Municipal Power, Old Dominion Electric Cooperative and LS Power have proposed rule changes that would require TOs to share how they make EOL determinations, create a new category for EOL projects within the Regional Transmission Expansion Plan and open them to competition.

Ed Tatum, AMP | © *RTO Insider*

"I just wanted to note I've only heard a solution from AMP, ODEC and LS Power. I'm aware that PJM is working on a solution. But … I'm not seeing a whole hell of a lot of engagement from others," said Ed Tatum, AMP's vice president for transmission, during the March 24 meeting, held via WebEx because of the coronavirus pandemic.

"I appreciate that we're in times that no one has ever lived through before. [But] there's not a whole lot of new stuff coming here. … We are to a point in this process that we are very close to being able to finish it up."

Proposals

The proposals would require TOs to have a transparent process for making EOL determinations based on industry averages, manufacturers' recommendations and "good utility practice." Once a TO has made a determination that a facility had reached the end of its life, that information would become part of the RTEP baseline planning process.

Currently, EOL projects developed under Tariff Attachment M-3 are designed based on assumptions and needs presented in local transmission planning meetings. For TOs that include EOL projects in FERC Form 715 planning criteria, the needs are presented in Transmission Expansion Advisory Committee and subregional RTEP meetings.

The proposals would require all TOs to have a minimum 10-year look-ahead EOL program and to present their program's criteria and guidelines to stakeholders at least annually.

TOs would have to present the methodology of their programs "in sufficient detail that stakeholders … can understand and, to the extent feasible, replicate the results for individual facilities determined to be EOL."

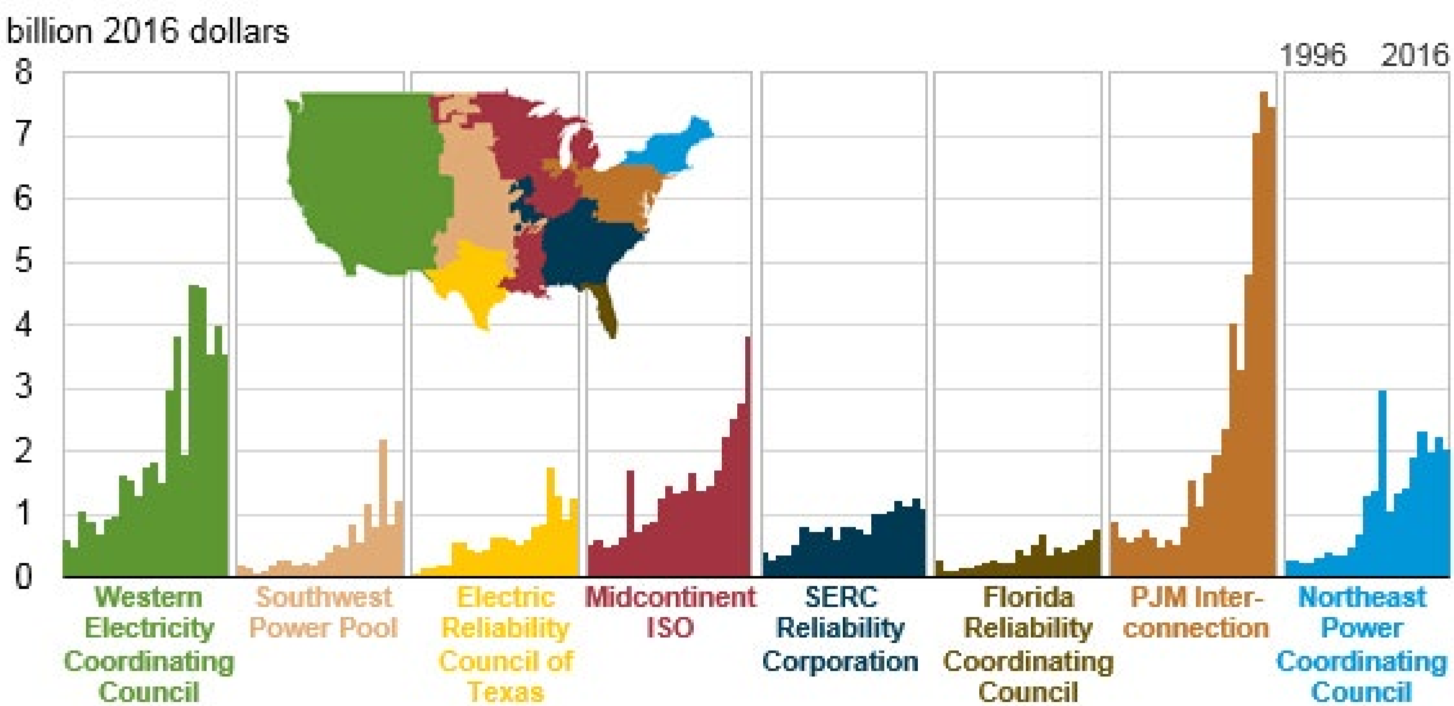
Mark Ringhausen, vice president of engineering for ODEC, said this would apply to "bright line criteria" such as triggering new infrastructure based on the volume of outages. "I don't think there's going to be a lot of these, but we haven't seen the TO criteria behind the scenes that are used for end-of-life determinations," Ringhausen said.

EOL needs solutions developed by PJM would be subject to competitive bidding and would not be considered supplemental projects assigned to the incumbent TO.

PJM would conduct planning for all TO EOL replacements and retirements to ensure they don't compromise reliability or create new critical facilities under FERC reliability standard CIP-014.

Timing Differences

The AMP/ODEC proposal would require TOs to notify PJM and stakeholders of any EOL conditions at least six years before the EOL date so that the project could be included in five-year planning models and opened to competitive bidding. The LS Power package would require six years' notice for lower-volt-



Utility transmission investments by NERC region (1996-2016) | *EIA*

PJM News

age facilities and at least eight years' notice for facilities 230 kV and above.

Tatum and others have been attempting to gain more input on EOL spending since at least 2016. (See *PJM TOs Oppose Proposal to Develop End-of-Life Criteria*.)

Ringhausen said he believed the AMP-ODEC proposal complied with FERC precedent and existing rules and agreements.

But Exelon's Robert Taylor said, "We don't share the same view that there's no legal or contractual problems with" the proposal. "We want to see what PJM will say," he added.

"These exact issues have recently been ruled on by FERC in the M-3 order, and some stakeholders want to go back to FERC and take it further," Taylor said later via email. "We supported the changes in M-3 and are engaged in conversations to further improve transparency and address stakeholder needs; but to say we have been working on this for three years and done nothing is not accurate." (See *FERC Upholds PJM TOs' Supplemental Project Rules*.)

Ken Seiler, PJM | *© RTO Insider*

PJM Vice President of Planning Ken Seiler said RTO staff were "really looking hard at the three issues our board has asked us to work with the stakeholders on: … transparency, authority, as well as competition."

And the authority to make the EOL determination, Seiler said, is with the TOs. "We've been very consistent about that message from day one: We are not in a position to make EOL decisions on transmission assets."

He said any package backed by PJM must be consistent with FERC precedent and "be supported from a process and staffing viewpoint."

He noted the new rules could have impacts on the planning process, the interconnection queue and cost allocation. "Does the load pay or does the generation interconnection customer pay?" he asked. "We have to be very careful and very surgical."

In a *letter* to members Oct. 4, Dean Oskvig, chair of the Board of Managers' Reliability Committee, pledged that the RTO would continue efforts to improve transparency.

"PJM does not have the authority or expertise to assume responsibility for asset management decisions or to determine when a facility is at the end of its useful life or otherwise needs to be replaced. Those decisions are the sole responsibility of the transmission owner," Oskvig said. He added, however, that in developing the RTEP, "in some circumstances, PJM may be in the best position to determine the more cost-effective regional solution to replace a retired facility."

No Rush?

Taylor also pushed back on Tatum's urgency.

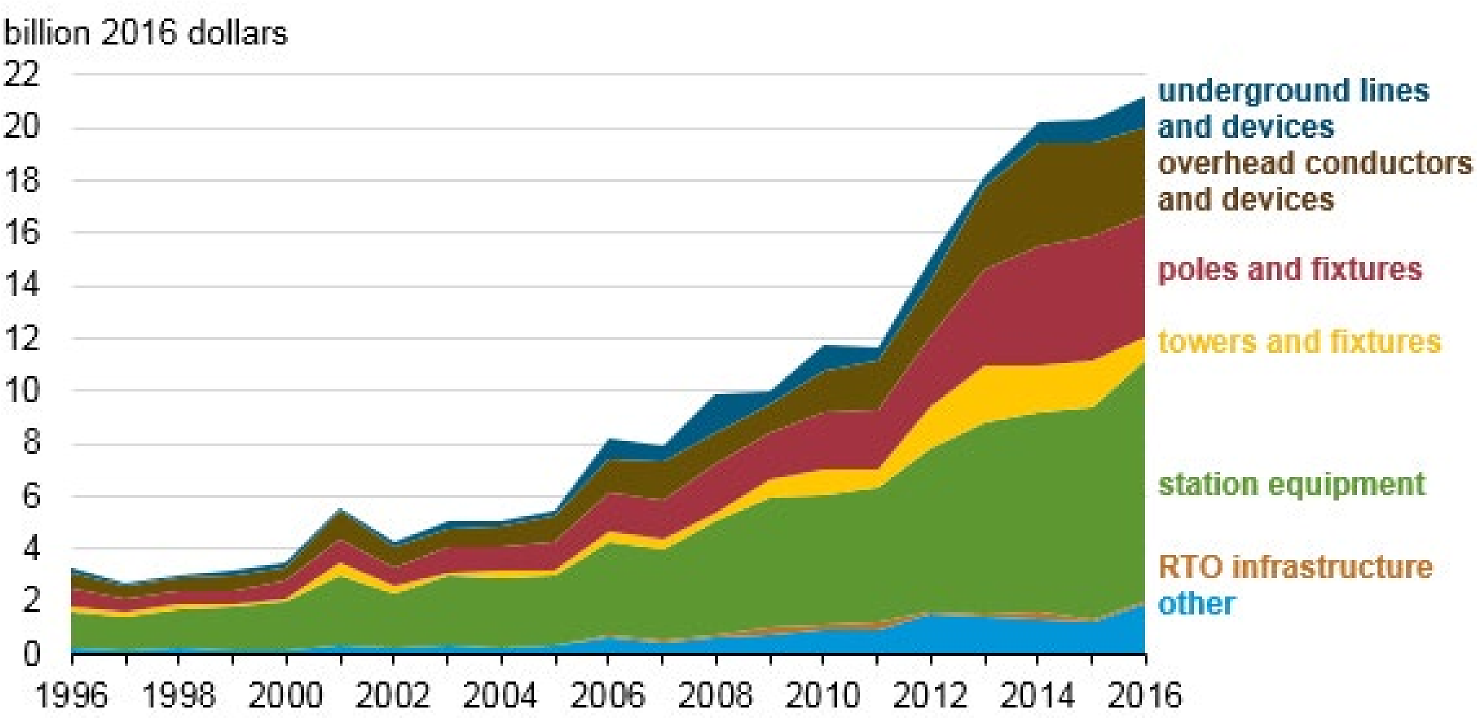
"It is not the time to rush. Let's get this right," he said. "There [are] so many interlocking pieces."

"We're still anxiously waiting to hear from your organization as to what [Exelon's proposal] would look like," Tatum responded. "And so far, we've heard nothing. Part of the stakeholder process is to engage and to try to be part of a consensus solution."

Taylor said the pandemic was occupying the minds of "a lot of folks who make these decisions for us."

The project's work plan is to target a vote on proposed packages at the MRC's May 28 meeting, following a first read on April 30.

The MRC is scheduled to return to the issue in a special meeting April 17, but PJM staff said it may seek an earlier meeting date. ■



Investment in transmission infrastructure by major utilities (1996-2016) | *EIA*

PJM News

PJM Staff Ponder Pandemic Effect on Load Forecast

Preventing the Algorithm from Learning

By Rich Heidorn Jr.

Chris Pilong, PJM | © RTO Insider

PJM staff normally count on their near-term load forecasting algorithm "learning" as it goes to improve its accuracy. But the COVID-19 pandemic was such an unexpected and unprecedented shock to the system, PJM's Chris Pilong said Thursday, that they're trying to make the algorithm "not quite as smart."

"That's part of our challenge here," Pilong, director of operations planning, told the Markets and Reliability Committee in a *briefing* on the RTO's plans for updating its load forecasts to reflect the new normal. "We're trying to use our near-term load forecasting algorithm for something it's not designed to do."

Earlier in the day, the U.S. Labor Department announced 3.3 million unemployment claims for the week — almost five times the previous record set in 1982. Only three weeks ago, the economy was humming along at "full" employment, with claims totaling only 200,000.

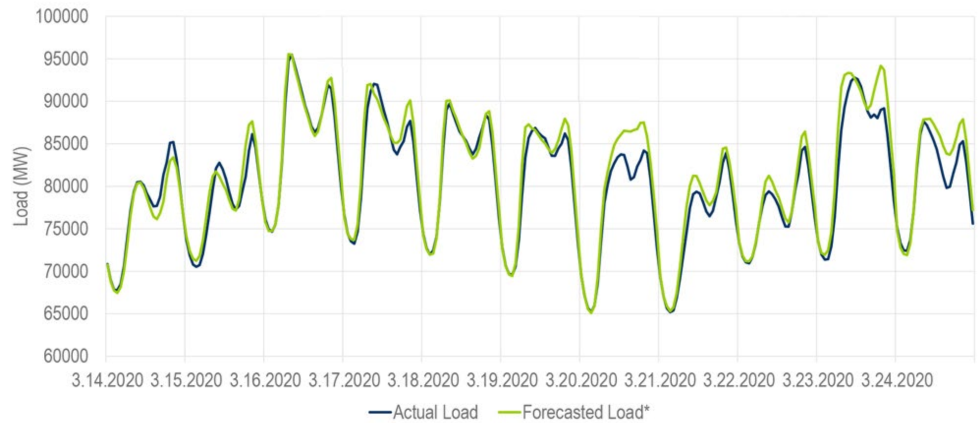
Limited Visibility

PJM's residential load normally equals its commercial load (37% each), with industrials representing the remaining 26%. Pilong said PJM expects the reduced commercial load from business closures will cause an increase in residential load as employees work from home, adding lighting, computer, and heating and air conditioning demand. Any reductions in industrial loads are not expected to shift to residential.

Pilong said PJM can only observe changes in net load, however. "We're not receiving updated information … that distinguishes between residential and commercial and industrial load usage," he said. "What's happening beyond a transformer [in] distribution is not something we have the ability to see."

Between March 14 and 23, peak loads were 3 to 12% lower than the five-year average for March, while total electricity usage has been down 2% to almost 12%.

Those figures do not account for weather: March 14 and 17-20 were warmer than usual.



Actual load (blue) vs. forecast load (green) for March 14-24. The green line was adjusted — replacing the forecast weather with actual weather — to eliminate weather variability and show what the forecast would have been "if we had life proceeding as normal," said PJM's Chris Pilong. | *PJM*

Tom Falin, PJM | © *RTO Insider*

Tom Falin, director of resource adequacy planning, estimated that about half of the 12% peak drop on March 20 was because of mild weather. (The Electric Power Research Institute *reported* last week that Italy has seen an 18 to 21% reduction in peak and energy use year-over-year following its nationwide lockdown.)

Pilong said PJM has seen the morning peak a bit later on some days, suggesting people are getting up later because they have no commute. "The peaks are moving some days. Some days they're going down. Some days there's no difference. We don't have a ton of history."

He noted that not all schools were closed during the time period. "We may see more patterns once the situation stabilizes," he added.

Teams Collaborating

PJM has its operations load forecasters and resource adequacy forecasters working together to adjust their load projections during the crisis.

The RTO will post updates on the load analysis methodology each Monday on the Operating Committee's *webpage* and discuss them at the OC and System Operations Subcommittee meetings. The postings will include actual and forecasted hourly data so market participants can conduct their own analyses.

PJM expects to continue updating load models to reflect load behavior for the duration of the economic shutdown and prepare for a transition to normal conditions. Results of the modeling will be shared with the Planning Committee.

Falin said PJM will be adjusting its long-term forecasts (2021-2035) once it receives updated economic forecasts from Moody's Analytics for the "metro level." Falin said staff hope to have a forecast reflecting the impact of the crisis by the PC's April 14 meeting.

Moody's doesn't expect much change in the long-term gross domestic product from what it predicted before the outbreak last fall, Falin said. Moody's expects a 2.2% drop in first-quarter GDP to be followed by an 18% drop in Q2 before rebounding with an 11% gain in Q3 and a 2.4% increase in Q4. (See related story *Moody's: Coronavirus Recession to Cut GDP 2.3%*.)

"Once we have this behind us, the rebound will be quite sharp" according to Moody's, Falin said.

Economist James Wilson said PJM should consider other economic forecasts in additions to Moody's, recalling that the company predicted the impact of the 2008 financial crisis "wouldn't be much of a recession or would be very V-shaped.

"Moody's was quite wrong, and we suffered about a decade of forecasts that were way too high" as a result, Wilson said. ■

FERC OKs PJM Regulation Deal over Monitor's Opposition

By Rich Heidorn Jr.

FERC on Thursday approved settlements of two complaints over PJM's regulation market design despite opposition from Dominion Energy and the Independent Market Monitor (*ER19-1651*).

Regulation service is the injection or withdrawal of real power by facilities that respond to PJM's automatic generation control (AGC) signal to maintain system frequency.

The settlements resolve complaints filed in 2017 by the Energy Storage Association (EL17-64) and Invenergy and Renewable Energy Systems Americas (RESA) (EL17-65), which alleged PJM's January 2017 regulation market redesign violated commission precedent and discriminates against faster, dynamic "RegD" resources such as battery storage.

The complaints alleged that the January 2017 signal redesign directed RegD resources to operate outside of their design parameters, resulting in performance and efficiency issues, reduced compensation and damaged equipment.

FERC partially granted the complaints, finding that PJM implemented the redesign improperly through its manuals and not its Tariff. After initially ordering a technical conference on the issue, the commission initiated settlement proceedings in June 2018. (See *FERC Postpones Tech Conference on PJM Regulation Market*.)

The commission said the "overall effect of the settlement is just and reasonable" because the compromise between PJM and the battery owners "outweigh the expense and uncertainties of further litigation, which could result in a very different regulation market design. The settlement supports grid reliability by facilitating the continued operation of short-duration resources on the PJM system, which reduces the potential for sharp market disruptions."

Invenergy said it supported the settlement, despite its continued exposure to the "30-minute conditionally neutral signal" implemented in 2017 "because it believes that the limited window of market and operational stability the settlement provides is preferable to continued litigation," the commission said.

PJM estimated the settlement will cost about $8 million over its three-and-a-half-year term.

The commission said the settlement "is no worse for Dominion and the IMM than the likely result of continued litigation."

AES' 32-MW Laurel Mountain battery storage project in Elkins, W.Va., is one of the resources covered by the regulation market settlement approved by FERC. | *AES*

"Load-serving entities like Dominion will benefit from the settlement's contribution to controlling ACE [area control error] while the cost of the settlement to load is minimal."

FERC said the Monitor failed to provide evidence to back its contention that the compensation under the settlement exceeds that which was available to batteries before 2017. "Further, the commission need not find that the settlement rate is exactly the same as the rate the commission would establish on the merits after litigation. Settlements by nature are compromises, and the commission typically does not require settling parties to justify individual elements of a settlement package."

The commission on Thursday also denied rehearing of its March 2018 order rejecting PJM's proposed revisions to build on the January 2017 redesign (*ER18-87*).

The March 2018 order rejected PJM's regulation changes, saying they were inconsistent with commission regulations and Order 755 because it did not compensate for actual mileage — the absolute amount of regulation up and down a resource provides in response to the system operator's dispatch signal — and did not compensate all regulation resources based on the quantity of regulation service provided.

Monitor Joe Bowring criticized the rehearing ruling Thursday during a Markets Committee *briefing* on his recently released State of the Market Report, which found that the regulation market design is "flawed."

FERC "said the regulation market was just fine," Bowring said. "It's actually not just fine. Its horrifically bad."

The Monitor's report said the design fails "to correctly incorporate a consistent implementation of the marginal benefit factor in optimization, pricing and settlement" and uses an incorrect definition of opportunity cost. The IMM also said the market structure is "not competitive" because it failed the three-pivotal-supplier (TPS) test in almost 91% of the hours in 2019.

However, it concluded that participant behavior and market performance are competitive because market power mitigation requires competitive offers when the TPS test is failed "and there was no evidence of generation owners engaging in noncompetitive behavior."

"We had a hard time deciding whether we wanted to call the regulation market results competitive because the regulation market design is so bad," Bowring told the MC. "It's not compensating people correctly. It's not calculating the economic value of regulation." ■

PJM News

FERC Denies Rehearing on PJM Arbitrage Fixes

By Rich Heidorn Jr.

FERC on Thursday denied rehearing requests on two orders rejecting PJM's efforts to prevent capacity market participants from attempting to arbitrage between the Base Residual Auction and Incremental Auctions.

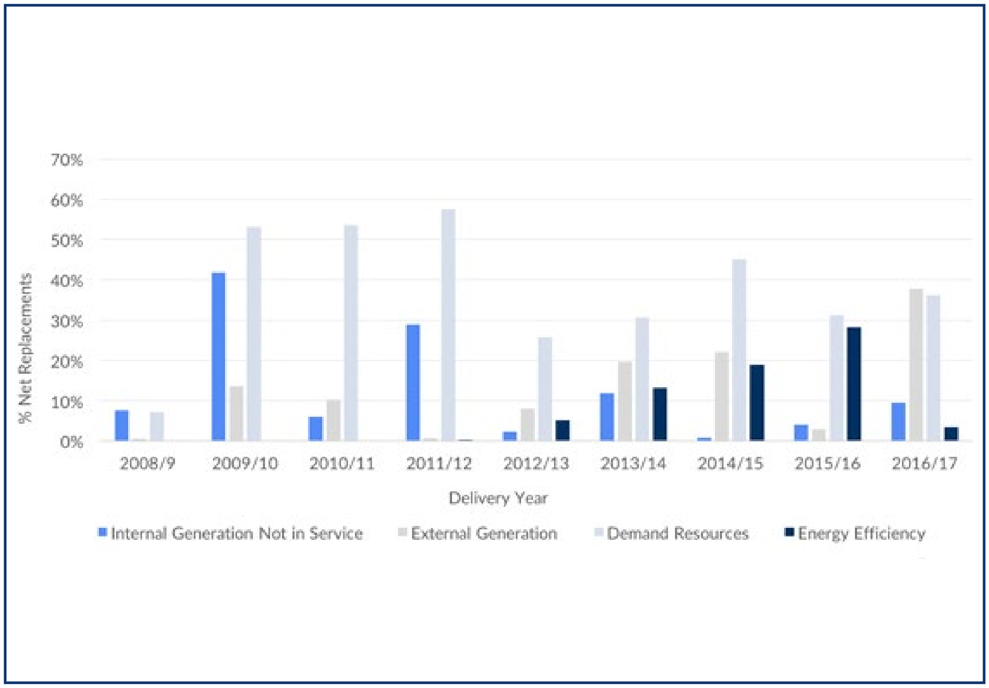
PJM and several of its member utilities requested rehearing and clarification of the commission's May 2018 and May 2014 orders that rejected the RTO's proposed rule changes to prevent participants from obtaining capacity supply obligations in the BRA and buying out of them with lower-priced replacement capacity in subsequent IAs (ER18-988-001, EL14-48-001, ER14-1461-002).

The 2014 order rejected a proposal to prohibit the submission of capacity sell offers not tied to an underlying physical capacity resource. (See PJM Wins on DR, Loses on Arbitrage Fix in Late FERC Rulings.)

The 2018 order rejected PJM's proposal to create a sell-back offer floor at the relevant BRA clearing price and eliminate two IAs while increasing charges and penalties. (See FERC Closes Book on PJM's 'Paper Capacity' Concerns.)

"As explained in the May 2018 order, and as reaffirmed here, PJM failed to justify the Incremental Auction modifications that have been proposed," FERC said.

The commission said PJM's evidence that resources, particularly demand resources, seek to buy out of their BRA commitments "may not necessarily demonstrate that resources are engaging in speculative behavior." It noted that the commission approved changes in 2014 requiring DR providers to designate that their resources will be available in the delivery year.



Net replacements to cleared capacity by resource | *PJM*

It also noted that PJM's Capacity Performance rules impose large penalties on resources that fail to perform during a performance assessment interval. "This creates a substantial downside risk for would-be speculators or any market participant … that fails to buy out its capacity obligation in the Incremental Auction."

And it said PJM was attempting to address the cause of the price differentials between the BRA and IAs by revising its load forecasting methodology in 2015 to reduce over-procurements.

"We do not find it advisable to design a market on the assumption that over-procurement in capacity auctions will result in lower energy market prices," the commission said. "Each market ought to be designed properly."

The commission added that it encouraged PJM and its stakeholders "to continue to monitor the issues raised in this proceeding and to develop, if appropriate, solutions to address them." ■

PJM News

DC Circuit Upholds FERC on BGE Rate Case

By Rich Heidorn Jr.

The D.C. Circuit Court of Appeals on Friday upheld FERC's 2017 ruling denying Baltimore Gas and Electric's bid to recover $38 million in taxes deferred over more than a decade (*18-1298*).

In 2016, BGE sought approval for three adjustments to its formula rate for how taxes are recovered, seeking recovery of $38 million from future ratepayers for costs incurred by the company dating to 2005 (ER17-528). The commission rejected the request, saying BGE took too long to make the adjustments. (See *FERC Denies BGE Recovery of $38M in Deferred Taxes*.)

The three-judge panel described the case as arising from FERC's "effort to apply its 'matching' principles to divergences between the timing of deductions for tax purposes and timing for purposes of allocating costs to ratepayers. While Congress and other bodies imposing taxes may want to allow early depreciation of an asset (to encourage investment), for example, the commission wants a cost (less offsetting tax benefits) to be charged in the period over which the resulting asset provides services to the utility's customers."

FERC ruled that BGE had violated Order 144 by failing to file for recovery of these amounts in its "next rate case," which the commission said was BGE's 2005 rate filing.

BGE's appeal alleged that FERC's ruling was arbitrary and capricious under the Administrative Procedure Act and that the commission had failed to explain why it had previously allowed delayed recoveries under Financial Accounting Standard 109 (FAS 109) to four "similarly situated" entities: MISO, PPL Electric Utilities, Duquesne Light Co. and Virginia Electric and Power Co. (VEPCO).

FERC contended that the four prior actions were not binding precedent because three of them were issued by staff exercising subdelegated authority and that none of the four "squarely presented" or "necessarily resolved" the issues raised by BGE.

The court rejected part of FERC's defense, saying "the commission cannot lend its authority to staff and then disclaim responsibility for the actions they take. Delegated staff actions are actions of the agency."

"It is not enough for FERC to say, 'The staff did it,'" the court continued. "Reasoned decision-making requires FERC to explain differential treatment under the same rules."

| BGE

However, the court found the commission ultimately did provide an adequate explanation to distinguish BGE's case from the prior decisions.

The court noted that its standards for arbitrary and capricious review apply a lower burden of explanation for agencies when applying existing rules in individual cases. When an agency changes policy, it must meet the standards of *FCC v. Fox Television Stations Inc.*, which require the agency to "display awareness that it is changing position," show "the new policy is permissible under the statute" and "show that there are good reasons for the new policy."

"The commission reasonably determined BGE waited far longer than the other four utilities to collect accumulated FAS 109 amounts and failed to offer an adequate reason for the delay (noting PPL and Duquesne involved delays of four and seven years, respectively, compared to BGE's 12). Moreover, FERC offered specific ways in which each of the four prior cases differed from BGE's filings in at least one key respect (distinguishing BGE from PPL, Duquesne and VEPCO based on the type of makeup provisions sought and on specific accounting matters) [and] (noting [MISO] and VEPCO sought collection on deficiencies going forward rather than accumulated amounts)."

Senior Circuit Judge Stephen F. Williams filed a partial dissent arguing that agencies such as FERC need not explain disparate outcomes under the same rule unless parties opposed the agency's administration of the rule in the prior cases.

"Given the number of uncontested issues that an agency typically resolves — uncontested, we may infer, either because any adversely affected parties got no notice or, having notice, thought it not worth the trouble to oppose — a requirement that an agency address its past vermicelli, either by reconciling its current decision with the earlier record or by applying *Fox Television*, would tie courts and agencies in linguistic knots for little or no benefit to the rule of law," Williams wrote.

"Indeed, the majority's approach invites a litigant to dive deep into the records of past agency cases, find one with facts loosely comparable to its own case, and then require the agency to adjudicate, *ex post* and likely on a limited record, whether and to what extent each past case is like the present one. Our precedents do not require this." ■

PJM News

Revised Fuel-cost Policy Rules Approved by PJM MC

By Michael Yoder

The PJM Members Committee approved *changes* Thursday to the RTO's fuel-cost policy (FCP) rules, but not before another round of animated debate over *force majeure* events.

The new rules, which are spelled out in revisions to Schedule 2 of the Operating Agreement and Manual 15: Cost Development Guidelines, were approved by a sector-weighted *vote* of 3.9 (78%).

The package, proposed by the PJM Industrial Customer Coalition, was approved by the Markets and Reliability Committee last month on a sector-weighted vote of 3.57 (71%) despite concerns that new safe harbor provisions would create loopholes permitting the exercise of market power. (See *PJM MRC OKs Revised Fuel-cost Policy*.)

It eliminates the FCP annual review, the FCP requirement for zero-marginal-cost offer units, and market seller submission deadlines. The deadlines for reviewing FCPs was changed: The Independent Market Monitor will have an initial 10 business days to review a policy and an additional five business days when a market seller revises the policy. PJM will have 20 business days to review a policy and an additional five business days for reviewing revisions, although that time frame can be changed if agreed to by PJM and the market seller.

The ICC included a safe harbor provision proposed by generators but modified the terms for imposing penalties for noncompliance. It would impose the full penalty if the unit clears in the day-ahead market or runs in real time on a cost-based offer and is paid day-ahead/balancing operating reserves. The full penalty also would apply if the unit fails the three-pivotal-supplier (TPS) test for constraints or the cost offer is above $1,000/MWh.

Susan Bruce, representing the ICC, said the concerns raised in February about the proposal "resonate with industrial customers," but she said she will continue to support the measures.

"We offered [changes] in the spirit of compromise, and we believe that compromise is an essential element of the stakeholder process," Bruce said.

The safe harbor section of the proposal allows a generator to avoid penalties if it deviates from its FCP because of a *force majeure* event.

PJM will determine whether the evidence proves the *force majeure* event "directly impacted the market seller's ability to conform to the methodology" in its FCP. "The applicability of this provision shall not apply for economic hardship nor obviate the requirement for a market seller to submit cost-based offers that are just and reasonable, and utilize best available information to develop fuel costs during a *force majeure* event," the revised OA says.

Greg Poulos, executive director of the Consumer Advocates of the PJM States, cited concerns over the safe harbor provision in requesting a sector-weighted vote on the proposal, saying he was surprised to see the revisions listed in the consent agenda because it had been the subject of a contentious vote at the MRC. "Many of us will be voting 'no,'" he said of his group's members. He said he would like to see PJM create a policy on what items can be included in the consent agenda.

Greg Poulos, CAPS | © RTO Insider

Monitor Joe Bowring said he continued to oppose the revised *force majeure* language because no one has identified an event that would prevent market sellers from following their fuel-cost policies. With the emergence of the COVID-19 pandemic since February's meeting, he said, sellers could argue "that every single fuel-cost policy would now be moot."

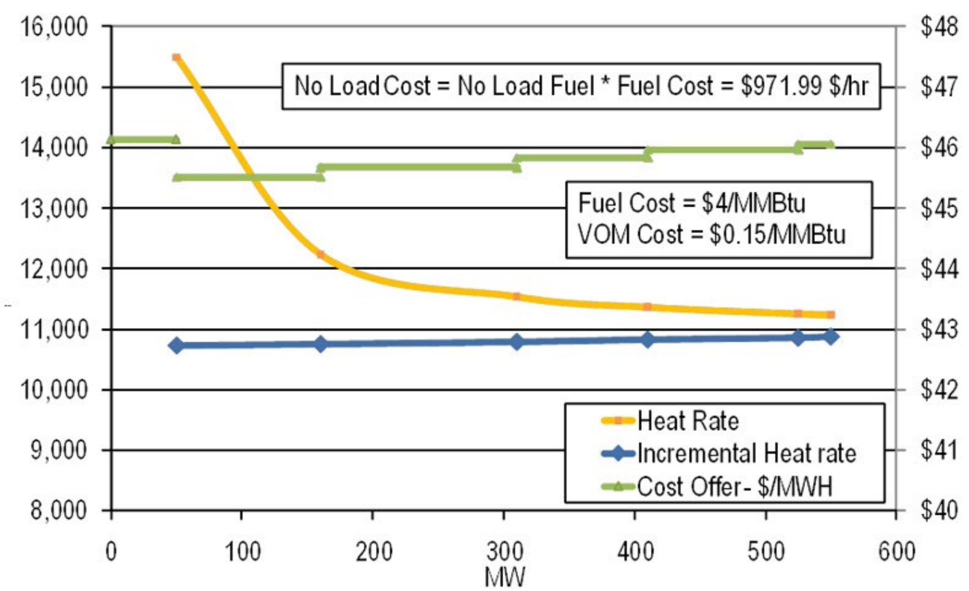
PJM Monitor Joe Bowring | © RTO Insider

"There's actually no reason to have a *force majeure* exception, and the current state of the world indicates that even more clearly," Bowring said. "The proposal is equivalent to not having any fuel-cost policies now and having every single unit be subject to unit-specific review based on the actual facts. That is not workable. The purpose of fuel-cost policies is to address unusual and unexpected conditions, and current fuel-cost policies do that."

Paul Sotkiewicz, E-Cubed Policy Associates | © RTO Insider

Paul Sotkiewicz of E-Cubed Policy Associates disagreed with the classification of the current pandemic, saying he believed it was "alarmist and also wrong" to use the coronavirus as a *force majeure* event because there have been no issues in getting pricing for fuels.

"I think the fuel-cost policies are still in effect here, even with the coronavirus," Sotkiewicz said. "It's a scare tactic." ■



Heat rate and cost curves for 550-MW natural gas-fired team unit | P JM

PJM MRC/MC Briefs

Markets and Reliability Committee

Compliance Hotline Announced

PJM Board of Managers Chair Ake Almgren opened the Markets and Reliability Committee meeting Thursday by introducing a redesigned compliance *hotline* for RTO personnel and stakeholders to anonymously report violations of laws, regulations or RTO rules.

| PJM

Almgren said the RTO broadened the existing PJM employee hotline as part of its commitment to a "ethical conduct and the culture of compliance." Anonymous callers can send tips on violations of the PJM *Employee Code of Conduct*, RTO governing documents, FERC orders and NERC reliability standards.

The *hotline* (1-866-776-6942), which will be operated by an independent third-party organization (Navex Global), can also be used to report issues with PJM's financial reporting.

"In addition, credit risks to the organization that are not being addressed by PJM may also be reported to the hotline," Almgren said. An *independent investigation* of the 2018 GreenHat Energy default concluded PJM staff ignored red flags about the company's assets and exhortations from other members.

Posters highlighting the hotline will be hung around the PJM campus beginning next month.

"I believe the compliance line provides another way for PJM to achieve transparency and continue communications with members and stakeholders," Almgren said.

Paul Sotkiewicz of E-Cubed Policy Associates called the hotline "an absolutely fabulous idea."

"We should have had it much earlier in the game," he said.

Sotkiewicz asked how much authority the third party has to serve as a "mediator" to resolve issues brought to its attention.

"I'll have to come back to answer that more precisely," Almgren responded. "The idea is to have an escalation."

The *question-and-answer* document for the hotline states that the PJM board "has a formal escalation policy — like that of many of our member companies — that requires certain types of concerns to be escalated promptly to the board. Then the board has the ability to direct the next steps including engaging other independent outside expertise to investigate or otherwise assist with the resolution of the concern."

The Code of Conduct outlines rules for PJM employees on subjects including conflicts of interest, receiving gifts and maintaining confidentiality. Employees are prohibited from accepting gifts worth more than $150 in any 12-month period and must report all gifts exceeding $50 to Ombudsman Jim Burlew.

The code says the third party will relay details of calls to the ombudsman with a copy to General Counsel Christopher O'Hara. Depending on the nature of the concern, the ombudsman may relay the information to the director of business operations, the director of internal audit, the director of human resources or the senior director of physical security and facilities, "who will conduct a prompt, impartial and thorough investigation."

"If the violation involves a subject matter which may impact the ability of individuals who should otherwise receive a report to be impartial, the situation will be investigated accordingly," it says.

PJM declined to say how many calls the existing hotline has received in the past year.

Shift to IMM Opportunity Cost Calculator

Stakeholders approved a *compromise proposal* to eliminate use of the RTO's opportunity cost calculator and make the Independent Market Monitor's calculator the required tool for market sellers. The action will take effect beginning June 1.

The proposal was approved on an acclamation vote with one abstention.

The new policy required changes to Manual 15: Cost Development Guidelines to document the Monitor's calculator and provides for an annual review of the calculator to ensure compliance with the manual and Operating Agreement. (See "PJM Seeks to Retire Opportunity Cost Calculator, Use IMM Tool," *PJM MRC/MC Briefs: Feb. 20, 2020*.)

The *calculator* is intended to ensure generators are made whole for being scheduled by PJM outside their most profitable time periods.

An opportunity cost adder can be included in a cost-based offer when a unit faces environmental restrictions on how much they can operate, an equipment manufacturer imposes an

PJM News

operational restriction because of equipment limitations, or the unit faces a fuel limitation resulting from a *force majeure* event. The value of the adder is based on historical LMPs and forecasted future fuel prices.

Jim Davis of Dominion Energy thanked PJM officials for the change.

"It seems like we've been talking about these things for not just months, but years," Davis said. "We look forward to the continued discussion and documentation as changes are made to the calculator."

Black Start Resources Initiative on Hold for 4-8 Months

PJM said it could take eight months or longer to complete additional analysis in the contentious initiative that could tighten fuel requirements for black start resources.

The RTO told stakeholders March 2 that the initiative would go on "hiatus" for up to six months to conduct the analyses, as *requested* by the Organization of PJM States Inc. (OPSI). (See *PJM Backs off Black Start Fuel Rule*.)

But PJM's Janell Fabiano told the MRC that the analyses could take four to eight months, and possibly longer, because of the need to reconsider the prioritization of other pressing issues in light of the COVID-19 pandemic.

PJM plans to analyze restoration times, the impact of gas supplies costs and economic impact. It called for the initiative in 2018, noting that the only fuel assurance requirement for black start resources is that they maintain enough for 16 hours of run time.

The RTO has estimated that requiring 100% of black start units to have a secondary fuel source would require $513 million in capital spending, increasing annual revenue requirements by $67.2 million over the current $65 million. A proposal that would limit such fuel assurance requirements to one resource per transmission owner zone is estimated to cost $13 million, or $1.9 million per year.

Manual Changes OK'd

The MRC endorsed six manual changes, including updates from periodic cover-to-cover reviews and updated procedures:

- *Manual 12: Balancing Operations* as part of a periodic review.
- *Manual 13: Emergency Operations* as part of a periodic review.
- *Incorporated changes* to Manual 14A: New Services Request Process, Manual 14E: Upgrade and Transmission Interconnection Requests and Manual 14G: Generation Interconnection Requests, related to FERC Order 845 on generator interconnection procedures and agreements.
- *Manual 22: Generator Resource Performance Indices* as part of a periodic review.
- New sections in *Manual 33: Administrative Services for the PJM Interconnection Operating Agreement* for member roles and responsibilities and contact management and company account manager roles and responsibilities. Some existing sections were relocated.
- *Manual 37: Reliability Coordination* as part of the periodic review.

Members Committee

Voting Rule Waived

The Members Committee unanimously approved one-time revisions to Section 11.11 of Manual 34 regarding voting requirements for board elections in response to the cancellation of PJM's annual meeting originally scheduled for May 4-5 in Chicago.

Section 11.11 calls for votes on board members to be taken by secret paper ballot by those at the meeting and by secret ballot over the phone for members participating by teleconference, PJM's Dave Anders said.

Anders said that because this year's meeting will now take place solely by teleconference, the members have been left with an "untenable situation" with collecting votes over the phone. PJM suggested a one-time waiver of the requirement of a secret ballot to allow the use of the RTO's voting application.

In response to members' concerns to keep the vote secret, Anders said PJM staff will delete the record of individual votes immediately after tabulating the results.

Some members suggested using an independent third party to tally the votes.

Anders said using a third party was a legitimate suggestion for future votes but would be difficult to implement in time for the May vote.

The revision passed unanimously by acclamation.

January Minutes Still not Approved

The *minutes* for the Jan. 23 MC meeting were not approved for a second consecutive month. Initially the minutes weren't approved at the February meeting because they weren't posted in time.

Sharon Midgley of Exelon requested Thursday that the minutes not be approved because of potential "voting anomalies" at the meeting. Midgley said she relayed questions to PJM after the meeting regarding the vote, but the voting discrepancies have not been resolved and are still being investigated.

Anders confirmed that Midgley had told the RTO that a member who voted at the January meeting may be affiliated with another member. The member organization was not identified.

Anders said PJM is working with legal staff to resolve the inquiry by Midgley. He said he had no issues with deferring the approval of the January minutes until the next meeting scheduled for May 4.

"Our concern is around two companies who appear to potentially be affiliates that both participated in the voting at the MC that day," Midgley explained after the meeting.

Liaison Committee Meeting Rescheduled

Katie Guerry, vice chair of the MC, said the Liaison Committee meeting with the board scheduled for April 21 has been rescheduled until July. Guerry said members decided it was "not a responsible decision" to move forward with an in-person meeting for April because of the COVID-19 pandemic and have instead looked to have it in the summer. An additional Liaison Committee meeting will also be added on the calendar for December, Guerry said, so that four meetings can still be held within the calendar year.

Guerry also said PJM officials are considering whether to re-evaluate priorities in the MC Annual Plan because of the pandemic.

"There's a mindfulness of the reality of the situation that we are all in and the limited resources that we all have," Guerry said. "We want to minimize the burden on folks in this extreme time."

New Finance Committee Member Elected

Mike Peters of industrial and medical gas producer Messer LLC was selected to fill an open position on the PJM Finance Committee within the End Use Customer sector.

Peters will fill the seat vacated by George Waidelich of Safeway, which recently left PJM membership. Peters' term expires at the end of 2020. ■

— Michael Yoder

PJM News

PJM MRC Moves Forward on Storage, Hybrids

By Michael Yoder

PJM members last week advanced efforts to integrate the growing volume of energy storage and hybrid resources in the RTO, endorsing one issue charge and hearing a first reading of another at Thursday's Markets and Reliability Committee meeting.

The MRC approved an *issue charge* to consider using effective load-carrying capability (ELCC) to set the capacity value of limited-duration resources such as battery storage. The initiative, which will be run by a new Capacity Capability Senior Task Force (CCSTF) reporting to the MRC, was approved by acclamation with one objection.

Alternative to 10-hour Minimum Run Time

Andrew Levitt, PJM | *© RTO Insider*

PJM's Andrew Levitt *said* ELCC, which was already under consideration for solar and wind resources, could be an alternative to the 10-hour minimum run time requirement for storage that was rejected by FERC in October.

FERC partially approved PJM's Order 841 compliance filing but set a paper hearing to determine whether its 10-hour minimum for storage seeking capacity obligations was unjust and unreasonable. (See *FERC Partially OKs PJM, SPP Order 841 Filings*.)

In February, PJM *requested* the hearing be held in abeyance until Jan. 29, 2021, when it hopes to file Tariff changes applying ELCC to capacity storage resources. FERC responded March 2 by *extending* the deadline for initial briefs to April 27 and reply briefs to May 27. It said it could extend them further depending on its ruling on PJM's request (EL19-100). "We're optimistic" FERC will approve the request, Levitt said.

ELCC, which is already used by MISO, NYISO and CAISO, evaluates reliability in each hour of a simulated year and compares a resource mix with limited resources against one with unlimited resources. A resource that contributes a significant level of capacity during high-risk hours will have a higher capacity value than a resource that delivers the same capacity only during low-risk hours.

Levitt said the new senior task force will build on previous Planning Committee discussions on using ELCC for intermittent resources.

"We thought there was enough similarity there that it made sense to put them all under the same effort," Levitt said. "The new senior task force we're considering here to start with is essentially a blank slate, although one that is informed by prior efforts."

Phase I of the effort will focus on solar, wind and energy storage, including batteries and pumped hydro. Phase II, expected to begin in 2021, will cover all other intermittent and limited-duration resources, including hybrids and resources for which part of the capacity is limited-duration and part is unlimited.

Brian Kauffman of Enel N.A. praised PJM's strategy for resolving the storage issue. "I think it will save a lot of money and resources to have this discussion at PJM rather than in front of FERC," he said.

Jim Davis of Dominion Energy said he appreciated PJM splitting the process into two phases, especially when looking at hydro resources. "We view run-of-river … as different than pumped storage and other types of storage," he said.

Hybrid Resources Issue Charge

PJM's Scott Baker presented a first read of an *issue charge* that would create a new senior task force to clarify how existing rules for intermittent and energy storage resources would apply to inverter-based solar-battery hybrids. The task force would also consider new requirements needed to incorporate hybrids into PJM markets. The committee will be asked to endorse the issue charge at its next meeting on April 30.

| *Connexus Energy*

There are more than 10,000 MW of co-located generation and energy storage hybrid resources in the PJM interconnection queue, Baker said, and more than 95% of those megawatts are solar-battery hybrids.

"Given the amount of solar-battery hybrid resources in the interconnection queue and the existing rules clarification and gaps needed to be addressed for this resource type prior to operation in the PJM market, it is recommended that this work begin immediately and that the senior task force target completion of its work by the end of 2020," the issue charge says.

Some areas are being considered out of scope of the issue charge, Baker said, including PJM's implementation of compliance with FERC Order 845, stakeholder engagement related to the FERC directive regarding capability of energy storage resources in the capacity market and providing new capabilities to "toggle" the accounting for solar output between sales to PJM and the self-supply to the battery component.

Pete Fuller of Autumn Lane Energy Consulting asked why some of the items are being considered out of scope and when they may be addressed going forward.

Baker said other PJM committees are working on Order 845 compliance and that issues surrounding battery technology would make the initiative too complex to be resolved on an expedited timeline.

"It's our preference to keep it out of scope just because we think that they are complicated enough that it may slow down the effort," Baker said.

Ken Foladare of Tangibl thanked the PJM staff for bringing forward the issue charge. "With the entrance of hybrid resources recently into the PJM queue, we think it's very important to clearly define the market rules for these resources and also to educate PJM stakeholders on the different configurations and how they affect the PJM grid," Foladare said. ■

SPP News

SPP, MISO Tweak Pseudo-tie Practices in JOA

By Tom Kleckner

FERC on March 19 approved SPP's revisions to its joint operating agreement with MISO that improve pseudo-tie coordination requirements between the RTOs, effective Monday (*ER20-904*).

The commission accepted revisions addressing definitions, requirements, modeling, interchange schedules and general pseudo-tie coordination. SPP said the changes would improve transmission system efficiency along its seam with MISO by including obligations already in pseudo-tie agreements where MISO is the external balancing authority.

The changes include:

- adding certain definitions set forth in the NERC glossary of terms used in reliability standards;
- incorporating language requiring the native BA and the attaining BA to coordinate the pseudo-tie's modeling in accordance with the rules of the native BA and attaining BA, respectively;
- adding new subsections to the JOA that outline authorities for pseudo-ties from one RTO into the other; and
- revising the requirements with language that includes the impacts of pseudo-ties in the attaining BA's market flow impacts for the purposes of congestion management procedures. "Neither MISO, nor SPP, nor the entity seeking to pseudo-tie shall tag or request to tag the energy flows from a pseudo-tie into the attaining BA," the language says.

SPP borrowed from the MISO-PJM JOA to define pseudo-ties as involving the real-time transfer of a generating resource's or load's control from the native BA where resource or load is physically located to an attaining BA that is responsible for operating the grid in a different geographic location.

Its pseudo-tie agreement permits load and generating resources external to the SPP BA to be served by SPP. It also allows load and generating resources internal to SPP to function as part of an external BA.

ESR Data Added to Interconnection Procedures

FERC on March 24 accepted SPP's Tariff revisions to include specific information related to energy storage resources (ESRs) in the grid operator's generator interconnection procedures (*ER20-918*).

With the commission's approval, the generator interconnection forms will now ask whether or not ESRs will take energy from the system when operating in charging mode and the maximum rate of charge capability.

SPP filed the request on Jan. 31, shortly after stakeholders agreed to form a steering committee charged with determining how best to integrate energy storage. (See *SPP Planning Approach to Battery Storage*.) ■

MISO's control room in Carmel, Ind., where the RTO manages pseudo-tie connections. | *MISO*

Company Briefs

Ameren Supplier Targeted in Ransomware Attack

Dozens of data files from LTI Power Systems, an equipment supplier of Ameren Missouri, appeared on a ransomware server in late February, including equipment diagrams and schematics from two Ameren facilities. No customer information appears to have been involved.

The data files, which range from 1996 to 2017, involve Ameren's Sioux Power Plant and Labadie Power Plant and include detailed schematics of uninterruptible power supply equipment used to provide temporary backup power during outages.

A spokesperson for Ameren said the company was investigating the breach but added it has "no reason to believe the information obtained is confidential or critical to our operations."

More: *St. Louis Public Radio*

SunPower Slashes Executive Salaries, Withdraws 2020 Guidance

SunPower last week announced several capital-tightening measures and slashed executive salaries, along with withdrawing guidance it offered in February for all of 2020, citing uncertainty related to the COVID-19 coronavirus pandemic. The company said the efforts could save up to $50 million.

The salaries of CEO Tom Werner and SunPower Technologies CEO Jeff Waters, who will lead Maxeon Solar Technologies after the company separates from its international manufacturing arm, will drop by 30% to $420,000 per year. Pay for executive vice presidents will drop 25%. "Progressive" salary cuts trickled down to senior managers as well, though managers and senior employees' salaries remained unaffected.

Though the company has not cut any jobs, Werner said "the world is changing very fast" and other workers may be impacted as infections continue. SunPower said in Q4 of last year that it had already expected losses of up to $195 million in 2020.

More: *GreenTech Media*

Tri-State Wins Partial Waiver of PURPA Requirements

FERC last week granted Tri-State Generation and Transmission Association a partial waiver of the commission's regulations implementing Section 210 of the Public Utility Regulatory Policies Act.

Tri-State — a consumer-owned utility serving 43 member systems in Colorado, Nebraska, New Mexico and Wyoming — had sought waiver of its obligations to purchase energy and capacity from qualifying facilities and to sell energy and capacity to QFs. The utility and its members drafted an alternative implementation plan they contended was consistent with PURPA because it reflected the commitment to encourage cogeneration and small power production.

FERC agreed, saying the plan wouldn't "frustrate the PURPA mandate to encourage power production by QFs because no QF will be deprived of an avoided cost sale of its power" and because Tri-State's members will offer uninterrupted backup and maintenance power to QFs at reasonable rates.

More: *EL16-101*

Federal Briefs

Reviews Delay Mountain Valley Pipeline Again

The Fish and Wildlife Service, along with five energy companies and Mountain Valley, sent a letter to FERC last week notifying the commission that they have agreed to take another 32 days to finish their reconsideration of the $5.5 billion Mountain Valley natural gas pipeline's impact on endangered or threatened species of fish and bats. It is the third such delay since December and pushes the review's completion date to April 27.

In asking for another delay, FWS said that while "considerable progress" has been made, more time is needed for Mountain Valley to analyze the impact of construction sediment washed into streams populated by the Roanoke logperch and the candy darter.

According to Height Capital Markets, an investment banking firm, delaying the review until April 27 is not expected to change the project's completion goal of late 2020.

More: *The Roanoke Times*

US Production, Consumption of Renewable Energy Increased in 2019

The national production of energy from solar resources increased by 13.85% in 2019, while that of wind grew by 10.06%, according to data recently released by the Energy Information Administration.

The latest "Monthly Energy Review" revealed that last year, for the first time, energy from solar topped 1% of total U.S. energy production while wind reached 2.71%.

Despite the growing numbers, energy production from all renewable energy sources increased just marginally last year (0.24%), as hydropower, biofuels and biomass were all down. The consumption of renewable energy expanded by only 0.53%.

More: *Renewables Now*

Global Wind Capacity up Nearly 20% in 2019

The Global Wind Energy Council (GWEC) announced last week it found that the world's wind power capacity grew by 60.4 GW, or 19%, compared to 2018. The growth was powered by a record year for offshore wind, which grew by 6.1 GW to make up 10% of new wind farm installations for the first time.

The GWEC said it expected 2020 to emerge as a record year for the rollout of wind projects and forecasted a growth of 20%. But it cautioned that the impact of the global coronavirus pandemic was yet unknown.

The U.S. and China remain the world's largest markets for onshore wind power development. Together they make up almost two-thirds of the globe's wind power growth.

More: *The Guardian*

State Briefs

CALIFORNIA

Pacific Power to Cut Bills

Pacific Power last week said it is decreasing bills by approximately $6.50 (5%) per month for the average residential customer. The decreases, which total 10% since February, will appear as credits on bills and will last for three years.

The company credits the cuts to streamlined operational efficiencies and the lingering effects of tax savings created by the Tax Cut and Jobs Act of 2017.

More: *Daily Energy Insider*

COLORADO

Coal Interests Funneled Money, Experts to Influence PUC

Documents obtained through a Freedom of Information Act request by the watchdog group Energy and Policy Institute show that The Coalition of Ratepayers, which was formed by the libertarian-leaning Independence Institute to oppose the proposed closing of two coal-fired plants at Xcel Energy's Comanche Station in Pueblo, received $45,000 and legal and technical experts from The Energy Policy Network (EPN). EPN, according to a tax filing, has received donations from coal companies and Wyoming state and local governments.

According to EPN, it provided an expert who testified before the Public Utilities Commission on behalf of the coalition and offered criticism of the way Xcel accounted for and modeled the value and benefits of the utility's 2018 plan. The PUC found several points valid and adopted them in its evaluation.

Nevertheless, the PUC ruled the plan did represent savings for customers and approved the closure of the units by 2026.

More: *The Colorado Sun*

MAINE

Judge Kicks Referendum Back After Alleged Forged Signatures

Superior Court Judge **Michaela Murphy** last week kicked the question of whether signatures for a referendum aimed at killing Central Maine Power's (CMP) proposed $1 billion New England Clean Energy Connect

project are invalid back to Secretary of State Matt Dunlap after two people said their names were forged. The order gives Dunlap's office until April 1 to decide whether the signatures gathered by the project's opponents are illegitimate.

Attorneys for the CMP-funded political committee Clean Energy Matters, which brought forth the lawsuit last month, say notaries hired by their opponents engaged in other campaign services, which would be in violation of state law and possibly invalidate some of the signatures. The lawsuit could remove the anti-corridor question from the November ballot if enough signatures are invalidated.

Both parties will have an opportunity to present evidence to Dunlap's office. The issue will then go back to the courts for a final decision.

More: *Bangor Daily News*

MICHIGAN

Consumers Continues Construction While DTE Halts Plans amid Virus

Consumers Energy said it will continue construction on renewable energy projects while DTE Energy has halted work on a new $1 billion natural gas plant in St. Clair County.

President and CEO Patti Poppe said that as a critical infrastructure company, Consumers will largely continue business as usual as workers take increasing safety measures despite Gov. Gretchen Whitmer's stay-home order. The company will also continue to connect new customers.

Conversely, DTE said it is pausing noncritical and maintenance work, along with halting construction on its $1 billion Blue Water Energy Center. The utility will continue residential connections, as well as restore power outages and respond to gas leaks and downed power lines.

More: *MiBiz*

MISSOURI

PSC Approves Agreement to Reduce Ameren Revenue

The Public Service Commission last week approved an agreement in a rate case filed by Ameren Missouri that will reduce the company's revenues by approximately $32 million, effective April 1.

Under the agreement, residential customer rates will drop by approximately 1.15% while the monthly customer charge for residential customers will remain at $9. It also will provide new rate options for customers once they receive an advanced metering infrastructure (AMI) meter, which are to be implemented this summer.

Under a separate agreement, Ameren will donate $7 million to the 14 state consumer action agencies that administer low-income weatherization assistance programs.

More: *Missouri PSC*

NEW MEXICO

Pandemic Could Delay Nuclear Waste Facility Licensing

A letter signed by members of the state's congressional delegation last week called on the Nuclear Regulatory Commission to extend the 60-day public comment period, which began March 20, for an environmental impact statement on the nuclear waste repository proposed by Holtec International until public hearings can be held. The request comes after the state banned gatherings of more than 10 people amid the coronavirus outbreak.

Victor Dricks, public affairs officer at the commission, said it was reviewing the letter and a public decision would be forthcoming.

More: *Carlsbad Current-Argus*

NEW YORK

Load Shifts as Residents Respond to Crisis

NYISO last week announced on its blog that it has seen daily energy use decline by roughly 2 to 3%, with daily peak energy use roughly 2% below peak for the same time last year.

The ISO said that between 6 and 10 a.m. (the time when energy use typically ramps up as residents arrive at work), it is seeing a delay in the timing of the ramp and a reduction in usage of 6 to 9% relative to typical patterns. That means energy load is increasing later in the day and remaining at a lower level.

More: *NYISO*

NORTH DAKOTA

PSC Wrestles with Otter Trail ‘Renewable Rider’

In an effort to lessen the drastic jump in customer bills at the end of a 10-year tax credit, the Public Service Commission last week voted 2-1 to approve a $4.01 charge for Otter Trail Power residential customers starting next month.

The proposal, which is known as the “Renewable Resource Cost Recovery Rider,” is a method to account for the production tax credit for the Merricourt Wind Farm and to even out the charges. Otter Tail paired the wind farm with a new natural gas peaking plant in South Dakota to replace the soon-to-be-shuttered Hoot Lake coal plant in Minnesota.

More: *Prairie Public News*

OHIO

Davis-Besse Plant Shut down After Coolant Pump Issue

The Davis-Besse nuclear power plant was shut down Wednesday after experiencing a problem with two of its four reactor coolant pumps and started up on Thursday without issue. The reactor was manually tripped by operators per the response procedures and training based on the loss of two reactor coolant pumps.

The Nuclear Regulatory Commission said that while the unit was operating at 0% power while starting up from a refueling outage at 12:40 p.m. on Wednesday, the reactor was “manually tripped due to a trip of two of four reactor coolant pumps.” It was characterized as a nonemergency and having no impact on the safety of the public or plant personnel.

More: *The Blade*

OKLAHOMA

Utilities, Companies Suspend Disconnects

State officials said Oklahoma Gas and Electric, Public Service Company of Oklahoma, Oklahoma Natural Gas and other service providers adopted voluntary policies to temporarily suspend power shutoffs for nonpayments in response to the coronavirus. Other providers that do not fall under commission authority, such as cooperatives and cities served by the Oklahoma Municipal Power Authority and Grand River Dam Authority, have also voluntarily adopted provisions to offer relief.

“The majority of Oklahoma’s utilities agreed it is an issue and put their policies in place voluntarily,” said Brandy Wreath, director of the public utilities division.

More: *The Oklahoman*

WASHINGTON

PSE to Purchase Zero-carbon Energy

PSE PUGET SOUND ENERGY

Puget Sound Energy last week signed a 15-year agreement with Energy Keepers, the tribally owned corporation of the Confederated Salish and Kootenai Tribes, to purchase 40 MW of zero-carbon energy from the Selis Ksanka Qlispe hydroelectric project.

The project, located at Flathead Lake in Montana, is the first tribally owned hydroelectric dam in the U.S. It has three units capable of generating 208 MW.

More: *The Suburban Times*

WYOMING

New Utility Pact Could Give State More Autonomy over Energy Plans

The Public Service Commission last week unanimously approved a new agreement with PacifiCorp to ensure the cost of generating and transmitting electricity across six states within its service territory remains fairly distributed. The interjurisdictional agreement makes changes to a previous 2017 agreement to extend greater flexibility and autonomy to states in PacifiCorp’s territory. The company will have a four-year transition period to implement the changes.

The call to update the multistate agreement came when some states announced plans to divest from coal and transition to more renewable energy. In response, some Wyoming lawmakers doubled down on their support for coal-generated electricity. The swings in energy portfolio preferences put a wrinkle in the collaborative approach PacifiCorp takes to providing reliable and inexpensive electricity to customers and left those involved to decide how to fairly distribute energy costs.

With the new agreement, Wyoming will be able to accept a $5 million credit from PacifiCorp’s shareholders, with the amount growing after 2023. The state will also have the authority to determine if it wants to increase its stake in a coal-fired power plant when other states choose to withdraw their share in a plant.

More: *Casper Star-Tribune*