

The Energy Daily

Friday, 11 January 2019 | ED Vol 47 • No 8

theenergydaily.com

Power prices broadly up in 2018, Texas most of all

By Jeff Beattie

Providing some relief to the beleaguered merchant power sector, wholesale power prices rose in many parts of the country last year due largely to stronger demand, with the biggest increase coming in Texas' unique energy-only market, where prices at times last summer were nearly four times as high as in 2017, the Energy Information Administration announced Tuesday.

Wholesale prices also were dramatically more volatile last year than in 2017, particularly in New England, which saw startling price spikes during a January cold

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Washington officials slam DOE plan to reclassify Hanford tank wastes

By George Lobsenz

Washington Gov. Jay Inslee this week strongly opposed an Energy Department regulatory proposal that he said would illegally give the agency unfettered discretion to abandon dangerous high-level nuclear waste in leaky, decades-old underground storage tanks at DOE's Hanford site—and violate cleanup commitments DOE made to the state in a legally enforceable environmental compliance agreement.

In comments filed with DOE Wednesday, Inslee (D), Washington Attorney General Bob Ferguson (D) and the head of the Washington Department of Ecology said DOE was improperly trying to “reinterpret”

federal nuclear waste laws so that DOE could save money on Hanford cleanup by leaving thousands of additional gallons of highly radioactive and long-lived wastes in the site's 177 tanks, which collectively hold 56 million gallons of nuclear and toxic residues.

They said the proposed reinterpretation appeared to be an effort by the Trump administration to circumvent provisions in the Tri-Party Agreement—DOE's cleanup agreement with the state—and a court-ordered consent decree that require the department to remove as much waste from the tanks as possible.

And they said the DOE plan would allow the department to unilaterally reclassify

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California sets physical security rules for distribution grid assets

By Jim Day

In response to an alarming and still largely unexplained 2013 rifle attack on a San Francisco-area grid substation, the California Public Utilities Commission Thursday unanimously adopted what appear to be the nation's first comprehensive state rules to improve the physical security of critical distribution grid facilities that serve drinking water systems, hospitals, military bases and power systems with more than 60,000 meters.

The rules require both investor-owned and public power utilities in the state to identify

the specified facilities requiring increased protection, and then develop detailed plans to better secure the assets; ensure availability of spare parts in the case of outages; and ensure they have the expertise to repair the facilities quickly in the event of sudden outages.

Elements of the rules are built on guidelines adopted by the Federal Energy Regulatory Commission and North American Electric Reliability Corp. (NERC) in 2014 in response to the April 2013 attack on Pacific Gas and Electric's Metcalf substation near San Jose, in which unknown assailants cut telecommunications lines to the facility and

then shot up numerous transformers, disabling them and threatening power supplies in the region.

The Metcalf attack did not cause any significant power failures, but left the station with \$15.4 million in damage and served as a wake-up call across the industry about the potential physical vulnerabilities of grid assets. The motivation for the attack remains unknown, but FBI officials in 2014 told California media outlets they saw no evidence indicating that it could have been a terrorist attack.

The NERC physical security requirements cover critical high-voltage transmission assets, defined broadly as those that are not redundant and the failure of which could cause cascading failures across regional grids, according to the CPUC order.

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tank wastes as low-level wastes that could be disposed of in burial grounds at Hanford in eastern Washington, rather than being sent to an offsite deep geologic repository.

“We have heard DOE officials indicate that the new high-level waste interpretation is a way to change current cleanup plans in order to reduce costs,” Inslee said in a letter to Ann White, head of DOE’s cleanup office.

“At Hanford, this can only mean one thing: a cleanup that provides less protection for workers and nearby residents from the harmful chemicals and long-lived radionuclides in Hanford’s high-level waste. This will inevitably involve DOE proposals to leave waste in tanks and walk away, leaving the Columbia River and the surrounding community with unacceptable levels of risk. Any cleanup less robust than the one DOE committed to in the Tri-Party Agreement and the consent decree will be unacceptable to the state of Washington.”

Inslee urged White to drop the proposed reinterpretation, and instead negotiate with the state on changes to waste disposal at Hanford.

DOE officials Thursday did not respond to requests for comment on Inslee’s letter.

If DOE does not withdraw the proposal, which it released for public comment in October, state officials and green groups say they will sue because DOE is illegally seeking to revise nuclear waste definitions set in federal law that only Congress has authority to change.

DOE last year made its first proposal to leave residual waste in tanks at Hanford. Green groups say DOE is planning to leave 4 percent of the total waste volumes previously in 16 tanks in Hanford’s C tank farm, the first tanks to be mostly emptied at the site. That plan would leave about 62,900 gallons of waste in the tanks carrying about 500,000 curies of radioactivity.

DOE officials said the C Tank Farm plan does not depend on the proposed high-level waste reinterpretation, but state officials and green groups are contesting DOE analyses that say that amount of waste can be safely abandoned in the tank under current cleanup requirements for the site. They say the aging tanks already are leaky and pumping cement-like grout into them will not prevent leakage for very long, adding to a massive plume of radioactive and toxic waste in groundwater at Hanford headed for the Columbia River.

In proposing to reinterpret the definition

of high-level waste, DOE contends the plan is needed to give it more flexibility to reclassify tank wastes that are not actually as dangerous or long-lived as high-level waste.

However, Washington officials say the department already is reclassifying some 90 percent of the tank wastes under flexibility provisions in the court-approved cleanup agreement with the state.

The state officials said the Hanford cleanup agreement—and waste reclassification efforts DOE has undertaken at other department sites with high-level tank waste—spell out detailed safety and technical criteria for reclassification that the department long ago set in conjunction with the Nuclear Regulatory Commission and officials in other affected states. In addition, DOE has followed those criteria in leaving some residual wastes in tanks at its Savannah River Site (SRS) in South Carolina, subject to state approval.

However, the Washington officials said DOE’s proposal to reinterpret the definition of high-level waste departs in crucial respects from the reclassification criteria set in the Hanford cleanup agreement and previously used by DOE at SRS and DOE’s Idaho National Laboratory, which also has high-level tank wastes.

Currently, the federal Nuclear Waste Policy Act (NWPA) defines high-level radioactive waste as all waste generated in the reprocessing of spent nuclear fuel, as was done at Hanford, SRS and Idaho in the past to extract plutonium for use in nuclear weapons and other missions. Further, the NWPA requires that all high-level waste be disposed of in a deep geologic repository so contaminants do not leak out into soil or groundwater for thousands of years.

However, DOE—and independent nuclear waste experts—agree that much of the waste in the tanks at DOE sites poses relatively low risks and can be safely buried in shallow landfills at DOE sites rather than sent to a deep geologic repository.

As a result, Congress passed a law in 2005 allowing DOE to reclassify tank wastes as low-level wastes at Idaho and SRS if the department meets safety criteria, including processing the wastes to ensure their radioactivity is reduced to levels at or below those in Class C low-level waste, the hottest form of low-level waste. The department also must solidify the wastes—either in cement-like or glassified forms—to ensure

they do not leach contaminants into soil and groundwater beneath landfills for centuries.

The department also can invoke the reclassification process to leave residual waste in tanks if it shows NRC and affected states it has removed waste “to the maximum extent technologically and economically practical.” At SRS, DOE has closed multiple tanks with residual waste after pumping in cement-like grout to immobilize contaminants in residual wastes.

However, the waste reclassification law approved by Congress does not cover Hanford, in large part because Washington officials feared giving DOE too much discretion to leave waste in the tanks.

Still, the department has issued regulations under which it can pursue waste reclassification, and Washington officials have agreed to allow reclassification at Hanford if the department meets the same safety criteria it has met at the other department sites.

But the Washington officials say DOE’s proposed reinterpretation of the reclassification process would drop the requirement set at other DOE sites that the department remove the maximum amount of waste from the tanks that is technologically and economically practical before closing tanks in place with residual waste.

Further, DOE’s proposal also allows it to leave residual wastes in Hanford tanks if DOE conducts a “performance assessment” of each closed tank that shows it will confine residual wastes to the same degree that a shallow landfill or similar disposal facility would.

Specifically, DOE’s proposed reinterpretation of the definition of high-level waste says that reprocessing-related waste left in tanks would not be classified as high-level waste if it “does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.”

Washington officials said that language would open a huge loophole in the reclassification process under which DOE would have unilateral authority to leave as much waste in a Hanford tank as it believed was safe, without consulting with NRC, states or affected communities.

In comments to DOE, Maia Bellon, director of the Washington Department of Ecology, said DOE officials already have

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New methane leak detection system deployed

Peoples Gas made a commitment Tuesday to reduce methane leaks from its gas distribution system in Pittsburgh by 50 percent through a modernization program and use of a new mobile leak detection system that can quantify leaks and identify where repairs will provide the greatest economic and safety benefits.

Peoples and the Environmental Defense Fund (EDF), which developed the leak detection system with Google Earth Outreach and researchers at Colorado State University, said the 50 percent methane reduction pledge is the first of its kind to be made by any gas utility.

The initiative will use a laser-based

methane detection system mounted on a Peoples vehicle to find leaks throughout 2019. That data will be run through algorithms developed by the Colorado researchers to quantify the volume of methane emissions and prioritize where repairs should be made to maximize benefits, according to Peoples and EDF.

Power prices broadly up in 2018, Texas most of all...[\(Continued from p. 1\)](#)

snap. In California and Texas, prices soared in July when air conditioning demand peaked, with Texans seeing prices briefly head above \$2,000 per megawatt-hour (MWh), said EIA, the statistical arm of the Energy Department.

Beyond showing bigger price swings, prices were generally higher in many regions of the country, offering welcome relief for merchant power producers who have struggled for several years under weak demand and low power prices caused by a flood of subsidized renewables coming on-line and the effects of surging supplies of cheap domestic shale gas.

Because gas-fired generation typically sets the price in U.S. competitive wholesale markets, low gas prices have been particularly rough for coal-fired and nuclear generators, which have faced the double punishment of low power prices without the relief in fuel costs that gas-fired generators have enjoyed.

Still, even gas generators have suffered in regions where wind and solar have come on-line in huge volume, namely in Texas and California, where some gas plants have been idled or placed in bankruptcy.

But in California in July, high electricity demand in the grid operated by the California Independent System Operator (CAISO), combined with a sharp jump in natural gas costs, produced monthly CAISO wholesale prices averaging \$101 per megawatt-hour (MWh), the highest monthly average price since 2009.

The increase was even more notable in the market run by the Electric Reliability Council of Texas (ERCOT) market, where monthly prices in July averaged \$112/MWh compared with \$36/MWh in July 2017.

That type of increase is less surprising in ERCOT's deregulated energy market, which has been structured to let prices spike in times of scarcity to encourage generators to build new plants and keep marginal units on-line. Most other U.S. wholesale markets offer generators additional incentives to maintain or build power plants through capacity markets, in which utilities pay generators for the promise of power supplies years or months in advance.

Texas regulators have explicitly rejected that approach because capacity markets are opposed by many power buyers and consumer advocates who contend they have shown little success in other regions in assuring adequate generation capacity. Instead, Texas policymakers and ERCOT have repeatedly tweaked the market to let "scarcity prices" go higher to support generators.

Notably, however, EIA said the price jumped in ERCOT in part because of several recent coal plant retirements, squeezing supply. At the same time, record-high demand caused by hot weather and strong economic activity sent demand soaring. On July 18, ERCOT saw demand climb to 73,259 megawatts, eclipsing a previous record of 71,110 MW set in August of 2016. During that day, prices briefly spiked

at an astonishing \$2,160 per MWh.

Moreover, the trend was not confined to the summer months. EIA said prices overall were 60 percent higher in ERCOT compared to 2017.

Prices were moderately higher in the 15 Gulf Coast and Upper Midwest states served by the Midcontinent Independent System Operator (MISO), where peak prices averaged \$36/MWh in 2018 compared with \$31/MWh in 2017.

Although MISO over the summer reported a very healthy power reserve margin of 28 percent, MISO Market Monitor David Patton has said the grid operator uses unrealistic assumptions about available generating capacity. He says a more accurate reserve margin is close to 18 percent, which would be more supportive of higher prices. Overall, wholesale prices in MISO were 14 percent higher last year than in 2017, EIA said.

New England saw a significant price increase in January caused by a spike in cold weather and constraints on the region's gas pipeline system. New England has long relied on gas for space heating, and in recent years has become more dependent on gas for electricity generation, too, producing price spikes in cold weather. Prices in the region averaged \$144 per MWh in January 2018, but when weather moderated over February and March, the average price plummeted to \$44 per MWh.

Wholesale prices in PJM's Mid-Atlantic and Midwest markets also were elevated in January 2018, averaging \$73/MWh, EIA said.

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"explained the intent behind the...new interpretation [is] to 'open the door' to disposing of greater than Class C wastes at locations other than a deep geologic repository.

"Based on public comments by DOE officials, Washington is concerned that a primary motivation behind the proposed new interpretation is to reduce DOE's cleanup costs...by changing the way high-level waste

is currently treated and managed," she added.

"DOE has thus far declined to engage in meaningful dialogue on how its new interpretation of high-level waste would apply at any given site. This is disturbing. At Hanford, it is obvious this new interpretation would allow DOE to propose...that reprocessing wastes not be retrieved from the 177 tanks

on site, in favor of simply grouting the waste in place in the tanks."

Further, she added: "This proposal would allow DOE, the party primarily liable for the cleanup of nuclear reprocessing wastes, to make the decision about how dangerous the waste is, and, therefore, how (or whether) it should be cleaned up. This creates a clear conflict of interest..."

GOP committee chair denies rushing Wheeler nomination

Staff of the Republican leader of the Senate Environment and Public Works Committee Thursday denied he is moving to push through the confirmation of Andrew Wheeler to lead the Environmental Protection Agency at an accelerated pace, saying that scheduling the confirmation hearing for one week after President Donald Trump announced the nomination is simply following “normal order.”

However, the ranking Democrat on the panel said Committee Chairman John Barrasso (R-Wyo.) was rushing consideration of the nomination by scheduling a confirmation hearing for Wednesday—only days after the acting EPA administrator was nominated by President Trump to fill the post permanently.

Mike Danylak, spokesman for Barrasso, said the scheduling of the confirmation hearing was appropriate given that Trump said in November that he planned to nominate Wheeler as permanent EPA administrator. He also noted that the Senate already had confirmed Wheeler as deputy administrator before he rose to acting administrator in July after former Administrator Scott Pruitt resigned.

Trump nominated Wheeler to permanently lead EPA Wednesday, and later in the day Barrasso scheduled the confirmation hearing for January 16.

Sen. Tom Carper (Del.), the ranking Democrat on the Environment and Public Works Committee, suggested the confirmation hearing was being rushed, and should not

have been scheduled while EPA was closed due to the partial government shutdown.

“Rushing this nomination process while the agency is shut down is unnecessary and irresponsible,” Carper said in a statement.

The quick turnaround comes as Wheeler, a former energy industry lobbyist, is facing intense scrutiny from House Democrats, with the House Energy and Commerce Committee planning to hold oversight hearings on EPA very soon.

On Wednesday, House Energy and Commerce Chairman Frank Pallone (D-N.J.) said he has “serious concerns with how Trump’s EPA has consistently sided with the special interests ..., and the Energy and Commerce Committee will be looking to restore the environmental protections that have been gutted.”

Barrasso and other Republicans have rejected those allegations and praised Wheeler for advancing the Trump administration’s deregulation agenda.

California sets physical security rules for distribution...[\(Continued from p. 1\)](#)

While the CPUC acknowledged that failure of transmission assets could pose greater risks of widespread outages, the rules adopted by a 4-0 vote Thursday extend the physical security requirements to critical distribution assets, which are lower voltage and serve smaller areas.

Notably, the CPUC requirements to identify the critical facilities and develop plans to protect them extend beyond the investor-owned utilities (IOU) and include dozens of publicly owned utilities, including the Los Angeles Department of Water and Power (LADWP) and municipal utilities serving Sacramento, San Francisco and dozens of other cities, counties and irrigation districts across the state.

Many of those publicly owned utilities (POU) argued that the CPUC does not have authority under state law to extend the rules to them.

But the CPUC asserted its jurisdiction over them, saying “the commission has consistently affirmed its jurisdiction to regulate safety issues concerning POU.”

“Threats to the electrical grid and public safety do not discriminate based on the utility’s ownership,” the agency added.

In response to the Metcalf attack, FERC in 2014 directed NERC to lay out a three-step process for ensuring that critical bulk power transmission facilities are adequately protected against physical attack. It called for utilities and other users of the bulk power system to identify their critical facilities; assess physical threat to those identified facilities and their vulnerabilities; and develop and implement a security plan to address those threats and vulnerabilities.

The CPUC order Thursday said the new rules are required under new California law, SB 699, that was passed following the attack on the Metcalf substation. Using the NERC physical security rules as guidance, California utilities jointly developed and submitted for review to the CPUC “a first-of-its-kind effort to establish new critical asset protections at the distribution level,” the commission said.

The CPUC largely adopted that joint framework and gave the IOUs 18 months to identify their critical facilities and 30 months to submit a plan reviewed by an independent third party for how they propose to protect them.

The POUs also will have 30 months to

confirm that they have a physical security protection plan that has been reviewed by an independent third party, according to the order.

“Distribution utilities will not be able to eliminate the risk of a physical attack occurring, but certain actions can be taken to reduce the risk or consequences, or both, of a significant attack,” the CPUC wrote. “Minimizing the risks to distribution systems throughout the state promotes public safety and helps to establish industry standards.”

Specifically, the physical security plans must contain detailed narratives about how utilities will control access to the facilities; implement security control centers track and ensure availability of spare parts; and implement training and retention programs to employ technicians capable of making fast repairs.

The CPUC acknowledged challenges related to sharing confidential information, but said it expected utilities “to coordinate with one another to the fullest extent practicable, and to relay information about critical loads within a service territory to any other utility in the state whose distribution facilities also are used to supply electricity.”

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