Power sector warns of blackouts as demand clashes with traditional plant retirements

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Officials and <u>grid operators</u> across the country are warning of high prices and possible <u>blackouts</u> throughout the summer when peak <u>electricity</u> demand runs up against generating capacity constraints.

The alarms reveal a number of problems facing power grids across the country, including, in some regions, the trouble utilities are facing with capacity while moving away from fossil fuels and toward renewable sources, a process that Democrats and environmentalists want to see hastened but which many Republicans and fossil fuel industry interests are trying to slow.

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Power grids face different problems depending on the region, but multiple operators have been warning that tight capacity margins could lead to shortages in the event of extreme heat or weather events that damage transmission. California regulators <u>warned last week</u> that the state may again face rolling blackouts in coming months when high temperatures cause a surge in demand, or if wildfires require utilities to take transmission offline, <u>as in years past</u>.

"We know reliability is going to be difficult," said California Public Utilities Commission President Alice Reynolds. The state already announced plans last year to build five natural gas-fired plants to help augment strained capacity and prevent outages.

The Electric Reliability Council of Texas, which oversees grid operations in most of the state, <u>warned</u> of possible deficient reserve capacity earlier this month. ERCOT pointed to planned outages at generating stations as it predicted a surge in demand because of high temperatures.

Some areas subsequently saw exceedingly high wholesale electricity prices on Monday, including Houston, where prices <u>jumped</u> as high as \$5,500 per megawatt-hour.

In Austin, public utility Austin Energy <u>cut power</u> to about 3,600 customers on Saturday due to a surge in demand. The utility said the actions "were necessary to safely operate Austin Energy's distribution system" and deal with the overload.

The grid operator for neighboring Louisiana and all or parts of 14 other states, Midcontinent Independent System Operator, announced renewed expectations of capacity shortfalls in mid-April and later forecast peak summer demand to exceed regularly available generation by five gigawatts.

MISO said capacity shortfalls in its north region and central regions, spanning from Manitoba, Canada, down to Illinois and Indiana, are particularly acute. It said it will rely more heavily on imports from outside grids such as neighboring PJM, as well as "emergency procedures," to maintain reliability when shortages occur.

"The reality for the zones that do not have sufficient generation to cover their load plus their required reserves is that they will have increased risk of temporary, controlled outages to maintain system reliability," Clair Moeller, MISO's president and chief operating officer, said in a statement last month. Moeller said further customers in those zones "may also face higher costs to procure power when it is scarce."

A report MISO released in January credited the transformation of its generating resources, including the retirements of "always-on" generating units such as coal-fired plants, with responsibility for the reliability shortcomings.

MISO also listed older, outage-prone coal plants and wind and solar resources that "are not always available to provide energy during times of need" as factors.

The problems MISO and others are seeing reflect the knock-on effects of a large-scale transformation of the power grid of the United States, as power generators seek out greener alternatives to legacy fuel sources.

MISO, which now has some 55,000 megawatts of coal-fired generating capacity, has retired around 18,300 megawatts since 2015, according to coal-fired power trade group America's Power.

Michelle Bloodworth, the president of America's Power, said that some of the consequences of MISO's coal retirements should have been foreseen and could have been avoided.

"This [blackout threat] is primarily an issue because of the retirement of coal, because natural gas, even though some of those units have retired — there's been new natural gas built," Bloodworth told the *Washington Examiner*.

Bloodworth emphasized that it's not her position that all coal retirements should be avoided but said utilities have undervalued coal's reliability characteristics. She pointed to a Federal Energy Regulatory Commission review of Winter Storm Uri in 2021, which caused a major power crisis in Texas and killed hundreds of people, that found that while natural gas-fired generation and wind generation accounted for 58% and 27% of unplanned outages respectively, coal made up just 6%.

"We're <u>encouraging</u> state utility commissioners to be cautious of retirement of dispatchable resources. We think there's got to be change to better, explicitly value the attributes [of coal] that we don't think are being valued now," Bloodworth said.

Mark Dyson, a managing director of the carbon-free electricity program at RMI, said on the other hand that the changing grid dynamics reflect the economic advantages of displacing coal and other thermal sources with renewables.

"It's economics right? These old plants cost a lot to keep operating," Dyson said. "So, there we are seeing an economically driven set of decisions here."

Dyson acknowledged the retirements are taking more capacity off the grid in favor of renewable sources and that it's leaving MISO short, but he said it demonstrates MISO's need to build renewables out more quickly.

The power situation in California, which has virtually no coal in-state and more solar than any other, is often cited by Republicans as an example of a state disfavoring dispatchable fossil fuel-fired and nuclear power plants in favor of solar and leaving customers short.

PG&E plans to shut down its Diablo Canyon nuclear plant by 2025, which, according to the California utility, accounts for nearly 10% of the state's energy portfolio.

Facing the risk of shortages, though, Democratic Gov. Gavin Newsom <u>recently said</u> the state is considering trying for an extension by applying for a new federal program that funds financially challenged nuclear power plants. Newsom said California would be "remiss not to put that on the table as an option."

But even in nonemergency circumstances, the state's supply is particularly strained during the evening hours when the sun goes down, with demand peaking around 8 p.m., California ISO's demand tracker shows.

Dyson disputed that the supply strain reflects poorly on solar energy, saying solar's limits are well established and can be managed with battery storage.

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"California has got an evening peak issue is inherently solvable with the technologies that we have today," he said.

The imperative, he said, is for states to deploy more of that technology to button up capacity, a lesson he said applies to California and MISO alike.