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The state's grid manager on Monday urged Texans to turn down thermostats and cut back electricity use as the combination of record demand and an unusually high number of plant outages shrank the reserve of available generation to near critical levels.

The Electric Reliability Council of Texas issued at least two conservation alerts as temperatures climbed into the mid-90s and demand headed toward a record 73,000 megawatts — well above the previous record for June of 69,123 megawatts in 2018. Meanwhile, more than 12,000 megawatts of generation went offline, about 15 percent of the system's capacity of about 86,000 megawatts and far above 3,600 megawatts of outages that ERCOT had forecast.

One megawatt can power around 200 homes on a hot summer day.

"That's the major deviation at this time," said Warren Lasher, a senior director of system planning for ERCOT. "Clearly today, outages were much higher than expected."

With the official start of summer still about a week away, the conservation alerts — issued when available power generation shrinks below 2,500 megawatts — come shortly after the Legislature passed reforms to the state electricity market following the February power crisis that contributed to some 200 deaths and billions of dollars in damage.

Earlier this month, Gov. Greg Abbott signed Senate Bill 3 into law, which mandates the weatherization of power plants; creates a statewide emergency alert system; improves communication among those in the industry; and designates some natural gas facilities as "critical" so their power can't be turned off during crises.

Abbott said the bill, along with a handful of others, ensured "that everything that needed to be done was done to fix the power grid in Texas."

Experts, however, said the early season conservation alerts by ERCOT show that a fundamental problem remains unaddressed: The state needs more power generation to keep up with its population and handle emergency situations.

The new law "was destined to fail because no one would invest in new capacity or at least not invest fast enough to keep pace with demand," said Ed Hirs, an energy fellow with the University of Houston. "There's really no incentive to reinvest or maintain the grid for weatherization."

ERCOT has warned that residents should expect tight power supply conditions this summer, and that demand could break more records. In May, it said peak power demand could reach 77,144 megawatts, comfortably above the previous summer record of 74,820 megawatts on August 12, 2019.

ERCOT officials said they were unsure why so much generation went offline Monday and would investigate. About 75 percent of the outages — more than 9,000 megawatts — were thermal generators such as natural gas. Lasher said ERCOT would know more about what caused the forced outages and when the plants would be back online on Tuesday.

The National Weather Service is forecasting temperatures in the mid-90s for Houston for most of the week.

Lasher said the conservation alert was ERCOT's first step in managing the tight conditions. If the situation deteriorates, he said ERCOT could leverage other resources such as importing power from neighboring grids, before reaching a point of "last resort," which would result in forced outages.

ERCOT has already brought some smaller gas turbines online to pump additional power into the grid.

CenterPoint, which manages electricity for power providers in Houston, said in a statement if it must cut power to maintain reliability of the grid, it will be "done with the intent to rotate outages."

During the February freeze, the amount of power that Center-Point was required to cut made it nearly impossible to rotate outages, plunging tens of thousands of homes into a darkness for as many as four days. CenterPoint declined to comment on its ability to rotate outages if it would be necessary this summer.

Monday was not the first time since February's freeze and statewide power outages that ERCOT has issued a conservation order. The grid manager did so on April 14, when temperatures were hotter than usual and power generators went offline to do routine maintenance ahead of skyrocketing demand that happens annually during Texas' hot summers. That conservation alert lasted only one day.

ERCOT said residents can conserve power by setting thermostats to 78 degrees or higher, turning off lights and pool pumps, avoiding use of large appliances such as electric ovens, washing machines and dryers, and unplugging as many appliances as possible.

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