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Half of California's Biggest Power Plants Using Fresh Water

by Lynn Doan June 29, 2015

Half of California's largest power plants are using flows from fresh-water resources such as rivers, lakes and wells to cool equipment as the state wrestles with an unprecedented drought.

Thirty of California's 100 biggest thermal power plants, such as natural-gas fired units, use surface water from rivers and streams for operations, based on a California Energy Commission map released on Monday. Twenty more use groundwater, and the rest cool down with recycled supplies, the agency said by e-mail.

The energy commission's map underscores the potential impact of the water shortage on power-plant operations. It was released as the state battles a fourth consecutive year of drought that shrank snowpack levels to the lowest on record. The 50 plants using fresh water consume more than 41,000 acre-feet a year, enough to supply households with about 160,000 people.

"California has made significant progress toward reducing water consumption and increasing recycled water usage at the state's largest power plants," Energy Commission Chairman Robert Weisenmiller said in an e-mailed statement. "This map shows that 50 of the state's 100 largest plants use recycled water."

Two power plants, the 400-megawatt Panoche Energy Center LLC complex in Fresno and GWF Energy LLC's 92-megawatt Hanford Peaker site in Kings, are in basins where "significant" overdrafts of water have caused the ground to sink, the commission said. Both plants use groundwater.

In April, Governor Jerry Brown ordered cities and towns to cut water use by 25 percent. The energy commission has since established a process to expedite requests from power-plant operators seeking to secure alternative water supplies, the agency said.

One acre-foot equals about 325,850 gallons of water.