NEWSOM CALIFORNIA SOLAR PLAN TOTALLY SCREWED OVER CALIFORNIA

Over the past two decades, California has become a juggernaut of solar energy production. But that doesn't mean its residents are reaping huge benefits.

A new analysis by Los Angeles Times staff writer Melody Petersen found major problems in the state's current solar economy. Oversupply of solar power is causing California's operators to regularly halt production or even pay electricity traders to take power off their hands. Sometimes, other states snag the extra energy for cheap. Meanwhile, California residents, businesses and factories pay around two to three times as much for power as the national average.

There are a range of factors at play, but a key takeaway from the Times' analysis is that California's most-in-the-nation solar panel buildup isn't enough for an ideal alternative energy model. Millions of dollars of electricity go to waste because the infrastructure isn't in place to store or move all the solar power.

California boasts some of the biggest solar farms in North America, with three huge plants opened in the mid-2010s. The state was responsible for nearly a fourth of utility-scale American solar power generation in 2023. California has an even larger share of the nation's small-scale market, with many homes and businesses sporting their own panels. But as the Times pointed out, residential rates for customers of PG&E and Southern California Edison have risen by 51% over the past three years, far surpassing general inflation.

Despite the high prices, the Times found that California's solar farms have curtailed production — meaning slowed or stopped — of more than 3 million megawatt hours over the past 12 months. That's more than twice the amount from 2021, per the outlet, and is enough wasted energy to power 518,000 average Californian homes for a year. Meanwhile, the state is trying to build more solar plants to reach its renewable energy goals; a UC Berkeley researcher cited by the Times raised concerns that the intense curtailment will get in the way.

The curtailment has two causes, according to the United States Energy Information Administration. In some cases, power lines in the state don't have capacity to take on and deliver energy; in others, generation exceeds customer demand. Either way, California's grid operator tells solar producers to cut production using price drops or direct orders.

According to the Times, oversupply has occasionally gotten so bad in California that the prices go negative, forcing solar plants to pay energy traders to take it off their hands. "This is all being underwritten by California ratepayers," energy consultant Gary Ackerman told the outlet. That's because state residents pay fixed prices for the grid's operation and upkeep. Due to the waste, they aren't reaping the full rewards of those monthly charges or of the taxpayer-funded incentives for solar farms.

A solar farm is viewed on May 31, 2021, near Newman, Calif.
George Rose/Getty Images

Along with traders, other states benefit from California's inability to use all its solar power. The state's grid operator uses a regional market to dump cheap or even free energy — utility companies in Arizona, New Mexico, Oregon and Washington all see millions of dollars in savings.

Besides upgrading transmission lines, an obvious fix for keeping California-made solar energy in the state and giving it to ratepayers is to build more batteries. But the technology lags behind large-scale solar, as does the infrastructure buildup. In April, Gov. Gavin Newsom touted California's storage growth, up 1,250% since the beginning of his administration, but there's a long, long way to go. And in the meantime, the state's challenges with using its alternative energy may take the wind out of the solar buildup's sails — as California creeps toward its goal of 100% renewable energy by 2045.