Is California generating more solar energy than it can handle?

It's a common sight across the state: rows of suburban homes topped with solar panels. But as California works toward its ambitious clean energy vision,an almost counterintuitive challenge has emerged: The state is,at times,generating more solar energy than it can handle. It's to the point where loads of clean energy are going to waste.

Is solar power going unused in California?

In recent years in California,the duck curve has become a massive,deep canyon -- and solar power is going unused. In 2022,the state wasted 2.4 million megawatt-hours of electricity,95 percent of which was solar. (That's roughly 1 percent of the state's overall power generation in a year,or 5 percent of its solar generation.)

Why did California slash solar rates in 2022?

Kennedy's neighbors and other consumers were reacting to a profound policy shift in California: The state Public Utilities Commission in late 2022 slashed by about 75% the rate that utilities pay homeowners with new solar panels when they sell surplus power to the grid. The rate structure went into effect for solar applicants beginning last April.

Why did California send solar power to other states?

On April 30 th,solar,wind and other renewables provided enough electricity to meet the needs within California's Independent System Operator,which supplies about 80% of the state. More power was being generated at the time than was needed,so some was sent to other states.

Is California ready for more solar?

Last year,the state did that in just the first eight months. Clyde Loutan,principal for renewable energy integration at CAISO,says that the state has long been prepared for more solaron the grid. But,he added,"We drastically underestimated the speed at which residential solar was going to come in."

Is California producing more energy than it can use?

The state is,at times,producing more energy than it can use. That has led it to explore storage options and trim financial incentives. This video file cannot be played. (Error Code: 232011) SACRAMENTO,Calif. -- It's a

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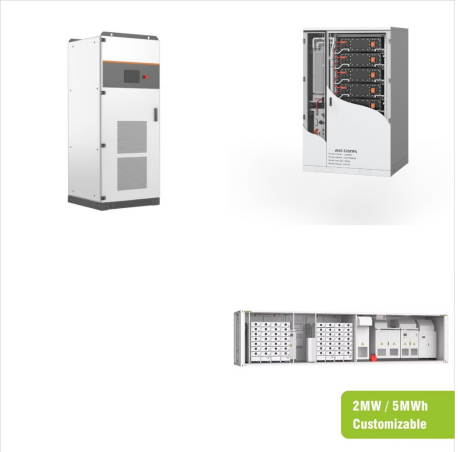
common sight across the state: rows of suburban homes topped with solar panels.



On 14 different days in March, California produced so much solar power that it needed to pay Arizona, Nevada and other states to take the excess electricity to avoid overloading its power lines. The phenomenon also occurred on eight days in January and nine days in February. Since too much power is destabilizing, as is too little power

Solar panels produce DC (direct current) voltage, it doesn''t have to pass through a load so you don''t run the risk of overloading your system with too many solar panels. DC power is run through an inverter to turn it into usable AC power, the inverter will regulate how much energy it converts.

It sinks into negative territory in the middle of the day because California has so much solar power that it's selling some to other states. Advertisement The 94.5% record may have been fleeting

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Kennedy's neighbors and other consumers were reacting to a profound policy shift in California: The state Public Utilities Commission in late 2022 slashed by about 75% the rate that utilities pay homeowners with new ???

California, which leads the nation in solar power energy, is among those states to have too much leftover energy that is now being wasted.. In 2022, 2.4 million megawatt-hours of electricity went

Solar power is providing huge amounts of energy during the day, creating a headache for grid operators. Apr 23, 2:13 PM EDT. by Frank Landymore / Earth & Energy. Too Much of a Good Thing

CALIFORNIA HAS TOO MUCH SOLAR POWER

An electricity market expert explains why states sometimes have too much wind or solar power Published: June 22, 2022 8:11am EDT ??? Updated: April 22, 2024 6:51pm EDT Theodore J. Kury

That is why other state officials want more rooftop solar. The California Energy Commission requires solar panels on new homes and last year voted to require solar panels and batteries in some new

Murray disputes that argument and says most of his clients have made annual salaries of $50,000 to $60,000, often financed through loans at a time when interest rates have also skyrocketed. Given

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It's the hottest time of the year in California, and the state's electricity grid is coming up short, with demand for electricity possibly exceeding supply by 10 percent. A forecast made last week suggested that as many as two million households were vulnerable to power outages over the Labor Day weekend. "It's pretty clear Mother Nature has outrun us," Governor Gavin ???

California has the third highest residential electricity prices in the country at almost 30 cents per kilowatt hour and they are rising, so one would not expect generation prices going negative when the sun is shining too much and that solar power must be thrown away.California has nearly 47 gigawatts of solar power installed that could supply a quarter of the state's ???

On the one hand, utilities have eyed such projects warily, fearing that if the solar panels or batteries inject too much power onto local circuits at moments when electricity demand is low, it might cause grid instability or safety problems. As a result, utilities have thrown up barriers that have delayed or halted grid connections.

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But the growth of solar and wind power has thrown a wild card in the mix. The sun and wind are much less predictable. "All of a sudden you have a major cloud that comes over a solar field," Traweek says, and that causes the solar power to drop off. "That [power] needs to come from somewhere else immediately," she says.

An anonymous reader quotes a report from the Washington Post: In sunny California, solar panels are everywhere. They sit in dry, desert landscapes in the Central Valley and are scattered over rooftops in Los Angeles's urban center. Too Much Solar" to a more honest title like "California has excess solar capacity in the spring but how will

There are new panels being added everyday, so it's hard to find up-to-date statistics, but the most recent data available indicates that the state churns out almost 47 gigawatts of solar power. That's enough to provide power to almost 14 million homes and it currently accounts for more than 25% of the state's electricity output.

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There's a caveat: California also has natural gas plants that keep running at low levels in case backup power is needed. Too much solar power can be a problem. California often produces so

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California broke its record for renewable energy when solar and wind provided enough to meet all consumer demand. At the time, natural gas power plants were still on, a necessity for the grid.

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The California Supreme Court has agreed to hear an appeal to a challenge of the new financial structure for people with solar panels on their homes known as "NEM 3," which went into effect in

The cost of solar power has plummeted in recent years, which has led to a renewable energy boom in California. But there's a big hang-up: solar energy doesn''t provide a 24-hour supply. When the sun sets, the power from solar farms drops off, just as California needs it most. That's sparked new interest in technology that stores electricity.

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California has installed a lot of distributed solar PV. And California legislators are not crazy to feel that way. Wyoming and Utah are fighting tooth and nail against Obama's Clean Power Plan. Wyoming is deeply invested in coal production. ???

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Rooftop solar could prevent the development of an area about half the size of Los Angeles (148,000 acres) versus a centralized utility-scale-only model, according to Environment California's estimate.

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Solar and wind curtailment is a problem in California. While some curtailment should be expected in the power grid with significant solar and wind generation, we see too much for our current solar and wind generation levels. We are also seeing the growth rate of curtailment increase much faster than our annual increase in solar and wind energy.

Sun Police. C alifornia, which gets over a quarter of its electricity from solar, is generating more power than it knows what to do with.On sunny days, there's now so much solar energy being