



# US Solar Power Generation Target

Will solar and wind energy lead the growth in US power generation?

Solar and wind energy will lead the growth in U.S. power generation for at least the next two years, according to EIA estimates. This report uses data from the EIA to analyze solar and wind capacity and generation over the past decade (2014 to 2023) in all 50 states and the District of Columbia.

How much solar energy is installed in 2023?

The Solar Energy Industries Association, which has different definitions of "placed-in-service," reported 40.3 GW dc of PV installed in 2023, 186.5 GW dc cumulative. The United States installed approximately 26 GW-hours (GWh)/8.8 GW ac of energy storage onto the electric grid in 2023, up 34% y/y.

Does the US produce more solar power in 2023?

The U.S. produced more solar power in 2023 than ever before- part of a decade-long growth trend for renewable energy. Climate Central's new report, *A Decade of Growth in Solar and Wind Power*, analyzed U.S. solar and wind energy data from 2014 to 2023 for all 50 states and the District of Columbia.

How many GW of solar capacity will be deployed in 2020?

Compared with the approximately 15 GW of solar capacity deployed in 2020, annual solar deployment is 30 GW on average in the early 2020s and grows to 60 GW on average from 2025 to 2030. Similarly substantial solar deployment rates continue in the 2030s and beyond. Deployment rates accelerate for wind and energy storage as well.

Will solar power grow in 2025?

The Energy Information Administration expects solar generation to grow from 163 billion kWh in 2023 to 286 billion kWh in 2025. The U.S. Energy Information Administration (EIA) released projections for solar and wind energy growth in its recent Short Term Energy Outlook report, showing strong growth in solar and moderate growth for wind.

What percentage of US electricity is generated by solar?

U.S. PV Deployment In 2023, PV represented approximately 54% of new U.S. electric generation capacity, compared to 6% in 2010. Solar still represented only 11.2% of net summer capacity and 5.6% of annual generation in 2023. However, 22 states generated more than 5% of their electricity from solar, with California leading the way at 28.2%.

Storage, transmission expansion, and flexibility in load and generation are key to maintaining grid reliability and resilience. Storage capacity expands rapidly, to more than 1,600 GW in 2050. Small-scale solar, especially ...

What happened in the past year? China added almost twice as much utility-scale solar and wind power



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capacity in 2023 than in any other year. By the first quarter of 2024, China's total utility-scale solar and wind capacity ...

In the United States, utility-scale solar capacity additions outpaced additions from other generation sources between January and August 2023--reaching almost 9 gigawatts (GW), up 36% for the same period in 2022--while small-scale solar ...

As modeled, wind and solar energy provide 60%-80% of generation in the least-cost electricity mix in 2035, and the overall generation capacity grows to roughly three times the 2020 level by 2035--including a combined 2 terawatts of wind ...

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In Q2 2024, the US solar market installed 9.4 GW dc of capacity, a record second quarter for the industry. While installations declined 21% quarter-over-quarter, they increased 29% from a year earlier. Solar accounted for ...

**U.S. PV Deployment.** The International Energy Agency (IEA) reported that the United States installed 15.6 GW ac of solar capacity in the first quarter (Q1)/second quarter (Q2) of 2024 (the Solar Energy Industries Association ...

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