

Investment in grid-connected solar power generation capacity



Overview

The American Clean Power Association estimates 10,116 MW of solar power capacity was added to the grid in Q4 2025, and utility-scale solar accounted for 50% of all new generation capacity added to the grid in 2025 overall - demonstrating solar's continuing role in the U.

Investment in grid-connected solar power generation capacity



[America's Electricity Generation Capacity, 2025 Update](#)

In 2024, over 30,000 MW of solar capacity came online, which is a 30% increase in operating solar capacity. An additional 34,000 MW are under preparation, testing, or construction and projected to

[Record-breaking rates of solar connected to the power](#)

New interconnection applications have slowed, but an estimated 93 GW of solar and 139 GW of storage capacity sought grid connection in 2024.



[Grid connection backlog grows by 30% in 2023, dominated by](#)

Active capacity in U.S. interconnection queues increased nearly eight-fold over the last decade, and is now more than twice the total installed capacity of the existing U.S. power plant fleet.

Solar Market Insight Report Q4 2025

Solar accounted for 58% of all new electricity-generating capacity added to the US grid through the third quarter of 2025, with more than 30 GW installed. Solar and storage, combined,





[Solar adds more new capacity to the grid in 2024 than any energy](#)

The United States installed a record-breaking 50 gigawatts (GW) of new solar capacity in 2024, the largest single year of new capacity added to the grid by any energy technology in over two

[Executive summary - Renewables 2024 - Analysis](#)

New solar capacity added between now and 2030 will account for 80% of the growth in renewable power globally by the end of this decade. Adoption accelerates due to declining costs, shorter permitting



[US added nearly 50 GW of new solar generating capacity in 2024](#)

New interconnection applications have slowed, but an estimated 93 GW of solar and 139 GW of storage capacity sought grid connection in 2024.

[Solar and battery storage to make up 81% of new U.S. electric](#)

We expect a record addition of utility-scale solar in 2024 if the scheduled 36.4 GW are added to the grid. This growth would almost double last year's 18.4 GW increase, which was itself a



Renewable Capacity Highlights 2025

In 2024, renewable power capacity expansion increased compared to 2023 and remained well above the long-term trend. As in previous years, most of this expansion occurred in China and, to

a lesser

[U.S. clean energy investments: 2025 Quarter 4 analysis](#)

The American Clean Power Association estimates 10,116 MW of solar power capacity was added to the grid in Q4 2025, and utility-scale solar accounted for 50% of all new generation capacity



Contact Us

For off-grid system quotes, technical support, or partnerships, please visit:
<https://kephamatraining.co.za>