The latest photovoltaic panel capacity expansion and transformation plan

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How long has solar PV been deployed?
The pace of solar PV deployment in recent years has been unprecedented. While it took nearly 70 years- from the first commercialisation of solar cells in 1954 - to reach the first 1,000 GW (1 TW) of capacity,the second TW was added in just two years.

How much solar capacity did the world add in 2025?
In the first six months of 2025,the world added 380 GWof new solar capacity -- 64% higher than during the same period in 2024,when 232 GW were installed. In 2024,it took until September for global solar capacity additions to surpass 350 GW,while in 2025,the milestone was reached in June.

How big is solar PV in 2024?
Global solar PV installations set another record in 2024,reaching 597 GW- a 33% increase over 2023,and 148 GW more the previous year (Fig. 1). Although the annual growth rate slowed compared to the exceptional 85% surge in 2023,it was still substantial enough to reinforce solar energy's leading dominance on global renewable energy expansion.

How much solar power will California generate in 2024?
In 2024,solar represented 13.7% of net summer capacity and 6.9% of annual generation. (36 GWac) will continue in 2025 (39 GWac) and remain at similar levels in 2026 (36 GWac). In 2024,24 states and territories generated more than 5% of their electricity from solar,with California leading the way at 32.4%.

The Photovoltaic Power Systems (PVPS) programme of the International Energy Agency (IEA) recently published its latest trends report.

The increase in solar PV capacity is set to more than double over the next five years, dominating the global growth of renewables. Low costs, faster permitting and broad social acceptance continue to ...

In 2024, it took until September for global solar capacity additions to surpass 350 GW, while in 2025, the milestone was reached in June. The rapid expansion of solar capacity in recent years has made it ...

The IEA report adds that global annual renewable capacity additions will continue to rise, reaching nearly 940

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GW per year by 2030. China is expected to remain the dominant player in the ...

Investment and production tax credits will give a significant boost to PV capacity and supply chain expansion. India installed 18 GW of solar PV in 2022, almost 40% more than in 2021.

Developers added 12 gigawatts (GW) of new utility-scale solar electric generating capacity in the United States during the first half of 2025, and they plan to add another 21 GW in the ...

Utility-scale PV (UPV) had its largest-ever market share of new capacity additions in 2024, but deployment of UPV is expected to slow down due to grid congestion, curtailment, and ...

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, ...

Cumulative solar PV capacity is expected to exceed most energy analysts" forecasts by 2030. If the solar market trajectory continues as projected, total global solar installations are set to ...

We expect 63 gigawatts (GW) of new utility-scale electric-generating capacity to be added to the U.S. power grid in 2025 in our latest Preliminary Monthly Electric Generator Inventory ...

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