

PEES Power Systems

Research on the development trend of solar power generation



Overview

Policymakers in some of the world's largest economies are reducing support for solar power generation. Even so, Goldman Sachs Research expects rapid growth in the sector, with global solar installations set to rise to 914 Gigawatts (Gw) in 2030, 57% above 2024 levels. Globally, renewable power capacity is projected to increase almost 4 600 GW between 2025 and 2030 - double the deployment of the previous five years (2019-2024). Compared to other sources of. The Future of Solar Energy considers only the two widely recognized classes of technologies for converting solar energy into electricity — photovoltaics (PV) and concentrated solar power (CSP), sometimes called solar thermal) — in their current and plausible future forms. Solar accounted for 81% of all new renewable energy capacity added worldwide. This study conducted a bibliometric analysis based on publication metrics. The US solar industry installed 7. 5 gigawatts direct current (GW dc) of capacity in Q2 2025, a 24% decline from Q2 2024 and a 28% decrease since Q1 2025.

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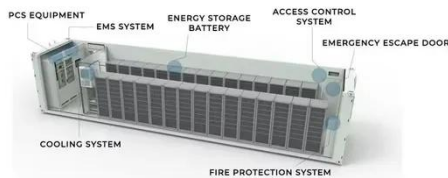


Solar Market Insight Report Q3 2025

Utility-scale solar installations decreased 28% year-over-year and 33% quarter-over-quarter with 5.7 GWdc installed. In Texas, the largest utility-scale solar market, average power prices ...

Global Market Outlook for Solar Power 2025-2029

Across all regions, developing a skilled workforce and setting ambitious solar and storage targets are essential tasks. In these times of political uncertainty, low-cost solar power could turn into ...



Solar energy status in the world: A comprehensive review

It examines the current state of solar power and related academic solar energy research in different countries, aiming to provide valuable guidance for researchers, designers, and policymakers ...

Spring 2025 Solar Industry Update

o In 2024, between 554 GW. dc. and 602 GW. dc. of PV were added globally, bringing the cumulative installed capacity to 2.2 TW. dc. o China continued to dominate the global market, ...

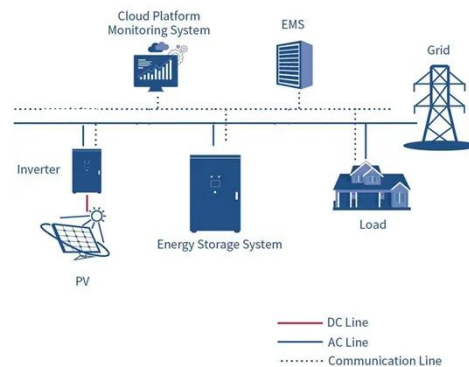


A bibliometric evaluation and visualization of global solar power

This study facilitates a comprehensive understanding of the status and trends in solar power research for researchers, stakeholders, and policy-makers.

Renewable electricity - Renewables 2025 - Analysis

Growth in utility-scale and distributed solar PV more than doubles, representing nearly 80% of worldwide renewable electricity capacity expansion. Low module costs, relatively efficient permitting processes ...



Solar energy technology and its roles in sustainable development

The article provides a global perspective on solar photovoltaic and concentrated thermal solar power in terms of current and future deployment and impacts



Recent Advances and Future Challenges of Solar Power Generation

This study not only deepens our understanding of existing methodologies but also provides valuable insights for future advancements in solar power generation forecasting.



The Outlook for Global Solar Energy Continues to Be Bright

Policymakers in some of the world's largest economies are reducing support for solar power generation. Even so, Goldman Sachs Research expects rapid growth in the sector, with global ...



The Future of Solar Energy , MIT Energy Initiative

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only the two widely recognized classes of technologies for converting solar energy into electricity -- photovoltaics (PV) and concentrated solar power (CSP),

...



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