# Actual solar power generation situation

## Overview

Solar generation rose by 636TWh in 2025, marking the largest increase of any power source on record. The International Renewable Energy Agency (IRENA) produces comprehensive, reliable datasets on renewable energy capacity and use worldwide. Renewable energy statistics 2025 provides datasets on power-generation. Ember (2026); Energy Institute - Statistical Review of World Energy (2025) – with major processing by Our World in Data This dataset contains yearly electricity generation, capacity, emissions, imports and demand data for European countries. You can find more about Ember's methodology in this. Solar PV accounted for 17. Image: American Public Power Association, Unsplash. 76TWh of electricity from solar PV in the first nine months of the year, more than the total solar generation reported. Electricity generation by the U. In our latest Short-Term Energy Outlook (STEO), we expect U. 6% in 2027, when it reaches an annual total of 4,423 BkWh. Global solar photovoltaic capacity has grown from around 40 gigawatts in 2010 to approximately 2. Only in that last year. In 2025, global annual renewable capacity additions increased by 16%, reaching 800 GW despite challenges linked to supply chain strains, grid connection delays, financial pressures and policy shifts.

## Article Content

Global solar generation up 31% year-on-year

The world generated 2,109.76TWh of electricity from solar PV in the first nine months of the year, more than the total solar generation reported in 2024. This is according to the Q3 Global...

Global overview – Renewables 2024 – Analysis

Other includes geothermal, concentrated solar power, and tidal for electricity generation and geothermal, solar thermal, district heating (primarily bioenergy) and ambient heat for Heat. IEA (2024) World

A Review Paper on Current State of the Worldwide Solar Energy Generation

A worldwide evaluation of the present status of renewable-energy generation, with a focus on photo-voltaic (PV) solar energy for the production of electricity. The most pertinent elements

Global Electricity Review 2025

Record renewables growth led by solar helped push clean power past 40% of global electricity in 2024, but heatwave-related demand spikes led to a small increase in fossil generation.

Solar energy status in the world: A comprehensive review

The present review study, through a detailed and systematic literature survey, summarizes the world solar energy status along with the published solar energy potential assessment articles for

Global Electricity Review 2026

About Ember''s seventh annual Global Electricity Review provides the first comprehensive overview of changes in global and country-level electricity generation in 2025, based on reported

Solar Market Insight Report 2024 Year in Review – SEIA

1. Key figures In 2024, the US solar industry installed nearly 50 gigawatts direct current (GWdc) of capacity, a 21% increase from 2023. This was the second consecutive year of record

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

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

World energy supply and consumption

Primary energy consumption by source (worldwide) from 1965 to 2020 World energy supply and consumption refers to the global supply of energy resources

Politics

Bloomberg delivers business and markets news, data, analysis, and video to the world, featuring stories from Businessweek and Bloomberg News on everything pertaining to politics

Technology: Solar PV and wind – Global Energy Review 2026 –

Solar PV accounted for more than three-quarters of new renewable capacity additions worldwide, followed by wind (20%). The remaining share was made up by hydropower, bioenergy, geothermal,

Renewable electricity – Renewables 2025 – Analysis

Globally, renewable power capacity is projected to increase almost 4 600 GW between 2025 and 2030 – double the deployment of the previous five years

U.S. Energy Information Administration

Includes hydropower, solar, wind, geothermal, biomass and ethanol. Uranium fuel, nuclear reactors, generation, spent fuel. Comprehensive data summaries, comparisons, analysis, and projections

Recent Advances and Future Challenges of Solar Power Generation ...

The unprecedented growth of Renewable Energy Sources (RES) positions solar power as a leading contender in the global energy mix. Solar energy offers a sustainable alternative to fossil fuels,

Solar Market Insight Report Q3 2025

1. Key Figures 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. Solar

Renewable energy statistics 2025

Renewable energy statistics 2025 provides datasets on power-generation capacity for 2015-2024, actual power generation for 2015-2023 and renewable energy balances for over 150 countries and areas for

Solar power generation, 2025

Solar power generation, 2025 Electricity generation from solar, measured in terawatt-hours.

Global solar generation met three-quarters of new power demand in

According to Ember''s Global Electricity Review 2026, renewables accounted for 33.8% of global power generation in 2025.

Global Solar Power Tracker

The Global Solar Power Tracker consists of worldwide facility-level data on utility-scale solar power facilities, as well as country-aggregated distributed solar data.

Solar power generation drives electricity generation growth over the ...

In our STEO forecast, utility-scale solar is the fastest-growing source of electricity generation in the United States, increasing from 290 BkWh in 2025 to 424 BkWh by 2027.

Supply: Renewables grow the most, followed by gas

Solar PV and wind generation are forecast to grow by 27% and 19%, respectively. Coal-fired generation is expected to remain broadly stable, while nuclear

Solar power generation, 2025

This dataset contains yearly electricity generation, capacity, emissions, imports and demand data for European countries. You can find more

35 Latest Solar Power Statistics, Charts & Data

4.4% of our global energy comes from solar power. China generates more solar energy than any other country, with a current capacity of 308.5 GW. The US relies on solar for 3.9% of its

## Contact Us

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