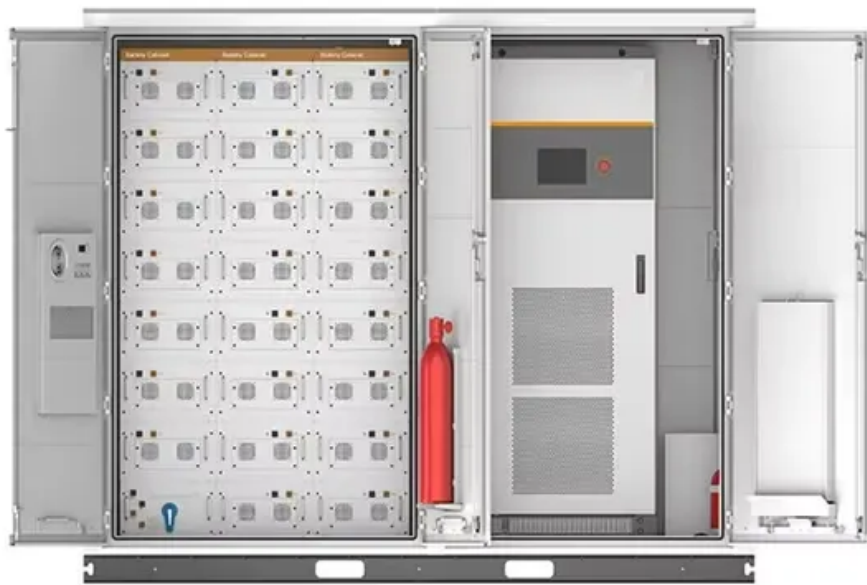


Total global solar power capacity 2025





Overview

The IEA-PVPS 2025 Snapshot of Global PV Markets reveals a pivotal moment for solar power: global PV capacity surpassed 2.2 TW, with more than 600 GW installed in 2024 alone.

The IEA-PVPS 2025 Snapshot of Global PV Markets reveals a pivotal moment for solar power: global PV capacity surpassed 2.2 TW, with more than 600 GW installed in 2024 alone.

At the end of 2024, global renewable power capacity amounted to 4 448 GW. Solar, in line with the previous year, accounted for the largest share of the global total, with a capacity of 1 865 GW. Renewable hydropower¹ and wind energy accounted for most of the remainder, with total capacities of 1.

Cumulative installed solar capacity, measured in gigawatts (GW). Data source: IRENA (2025) – Learn more about this data Total solar (on- and off-grid) electricity installed capacity, measured in gigawatts. This includes solar photovoltaic and concentrated solar power. IRENA (2025) – processed by.

In 2024, global photovoltaic capacity rose to more than 2.2 TW, up from 1.6 TW in 2023, with over 600 GW of new PV systems commissioned. This marks another record year for PV deployment, despite continued overcapacity in manufacturing and falling module prices that placed pressure on the entire.

The 2025 edition reports a record 597 GW of solar capacity installed in 2024, bringing total global capacity to 2.2 TW. With forecasts up to 2029 and a spotlight on India — now the world's third-largest solar market — the report outlines critical challenges and solutions for sustaining growth, from.

The IEA-PVPS 2025 Snapshot of Global PV Markets reveals a pivotal moment for solar power: global PV capacity surpassed 2.2 TW, with more than 600 GW installed in 2024 alone. As module prices fell due to oversupply, installation volumes continued to grow, highlighting both the strength and.

Global solar power capacity is expected to grow by more than 30% in 2025, while wind power will see an increase of over 10%, according to a new report



jointly released on April 21 by the Global Energy Interconnection Development and Cooperation Organization (GEIDCO) and China's National Climate. What is the global market outlook for solar power 2025–2029?

The Global Market Outlook for Solar Power 2025–2029 is SolarPower Europe's flagship annual publication, delivering the most authoritative analysis of solar market trends worldwide. The 2025 edition reports a record 597 GW of solar capacity installed in 2024, bringing total global capacity to 2.2 TW.

What happened to solar power in 2025?

The IEA-PVPS 2025 Snapshot of Global PV Markets reveals a pivotal moment for solar power: global PV capacity surpassed 2.2 TW, with more than 600 GW installed in 2024 alone. As module prices fell due to oversupply, installation volumes continued to grow, highlighting both the strength and volatility of the global PV industry.

What is the global power capacity of 2024?

At the end of 2024, global renewable power capacity amounted to 4 448 GW. Solar, in line with the previous year, accounted for the largest share of the global total, with a capacity of 1 865 GW. Renewable hydropower¹ and wind energy accounted for most of the remainder, with total capacities of 1 283 GW and 1 133 GW, respectively.

How big is renewable power capacity in 2025?

Renewable Capacity Statistics 2025, released by the International Renewable Energy Agency (IRENA), shows a massive increase in renewable power capacity during 2024, reaching 4,448 gigawatts (GW). The 585 GW addition last year indicates a 92.5% share of the total capacity expansion and a record rate of annual growth (15.1%).

How many GW of solar power are there in 2024?

PV supplied more than 10% of global electricity consumption for the first time, cementing its position as a central pillar of the global energy transition. In 2024, global cumulative PV capacity reached over 2.2 TW, with China alone surpassing 1 TW. At least 554 GW of new PV systems were commissioned in 2024, possibly reaching 601.9 GW.

Which countries installed the most solar power in 2024?



Pakistan emerged as a key market with an estimated 17 GW, while Brazil installed 14.3 GW. 34 countries installed more than 1 GW of new capacity in 2024; 23 countries now exceed 10 GW in total installed capacity. Utility-scale PV led global installations, but distributed PV remained strong in key markets including Germany, Türkiye, and Brazil.



Total global solar power capacity 2025



[Electricity - Global Energy Review 2025 - Analysis](#)

Global electricity demand increased by 4.3% in 2024, a step change from the 2.5% growth seen in 2023. The average pace of electricity demand growth from 2010 to 2023 was 2.7%, double the rate of total energy demand growth over ...

[Global solar power installation crosses 2TW in 2024: ...](#)

Global solar power capacity installation surged by 33% in 2024, marking its 20th consecutive year as the fastest-growing renewable energy source, based on SolarPower Europe's annual Global Market Outlook for Solar ...



[IRENA Reports Record-Breaking Annual Growth in ...](#)

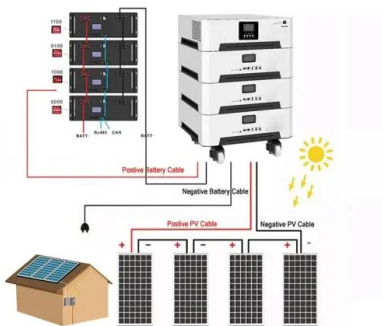
The International Renewable Energy Agency's (IRENA) Renewable Capacity Statistics 2025 reveals a record-breaking 4,448 GW of renewable power in 2024, with solar and wind accounting for 96.6% of net ...

[Supply - Electricity 2025 - Analysis](#)

Clean energy sources in global power generation are on track to break new records over the 2025-2027 forecast period. Low-emission sources - renewables and nuclear - are expected to meet



all global demand growth out to 2027. ...



[2024: Global Solar Capacity Tops 2.2 TW, With Over ...](#)

Global cumulative solar photovoltaic (PV) capacity rose to more than 2.2 terawatts (TW) by the end of 2024, up from 1.6 TW in 2023, with over 600 GW of new systems commissioned, the International Energy Agency's ...

Renewable Capacity Statistics 2025

Solar, in line with the previous year, accounted for the largest share of the global total, with a capacity of 1 865 GW. Renewable hydropower and wind energy accounted for most of the remainder, with total capacities of 1 ...



Global solar power capacity hits 2.2 TW in 2024, with ...

The world added 597 GW of photovoltaic capacity last year, achieving an astounding 36% rate of growth, SolarPower Europe found. China accounted for 55.1% of all new installations. Turkey is in the global top ten with ...





Solar power surges to a record 597 GW in 2024, pushing global capacity

China added 329 GW of solar capacity in 2024, accounting for 55% of global installations that year, according to SolarPower Europe. The Mengxi Blue Ocean solar project, pictured here, ...



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