



How many watts of solar power are generated worldwide





Overview

Many countries and territories have installed significant capacity into their to supplement or provide an alternative to conventional energy sources. Solar power plants use one of two technologies: • (PV) systems use , either on or in ground-mounted , converting sunlight directly into electric power.

The world's current solar energy capacity is 850.2 GW (gigawatts). This is the maximum amount of energy that all global solar installations combined can produce at any one time.

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Ember (2025); Energy Institute - Statistical Review of World Energy (2025) – with major processing by Our World in Data This dataset contains yearly electricity generation, capacity, emissions, import and demand data for over European countries. You can find more about Ember's methodology in this.

By the end of 2023, photovoltaic solar arrays provided an estimated 6.5% to 7% of the world's electricity, marking a continued rise in its contribution to global energy generation. According to the 2022 edition of the annual report published by SolarPower Europe, “global solar capacity doubled in 3.

The world currently has a cumulative solar energy capacity of 850.2 GW (gigawatts). 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 energy, although this share is.

Many countries and territories have installed significant solar power capacity into their electrical grids to supplement or provide an alternative to conventional energy sources. Solar power plants use one of two technologies: Photovoltaic (PV) systems use solar panels, either on rooftops or in.

With global capacity surpassing 2,000 GW in 2024 and daily production reaching 2,075 GWh, solar energy is playing a crucial role in achieving climate goals. It provides affordable, sustainable, and reliable electricity, ensuring a greener and more resilient future for all. Sources: SEIA, Ember.



The global solar energy landscape is undergoing a significant transformation, as evidenced by the latest World Solar Report 2024 released by the International Solar Alliance (ISA). Since the year 2000, the installed solar capacity worldwide has surged from a mere 1.22 gigawatts (GW) to an.



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Solar Power by Country 2025

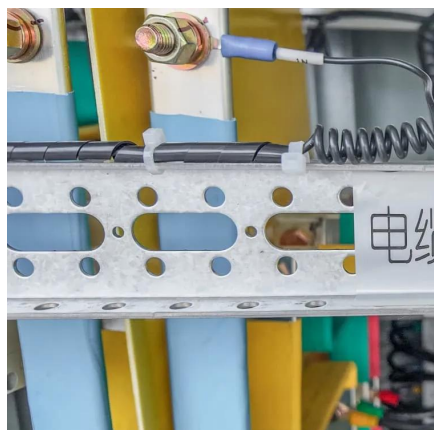
By the end of 2023, photovoltaic solar arrays provided an estimated 6.5% to 7% of the world's electricity, marking a continued rise in its contribution to global energy generation.

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How Much Energy Do Solar Panels Produce Worldwide? With global ...

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Solar power generation, 2024

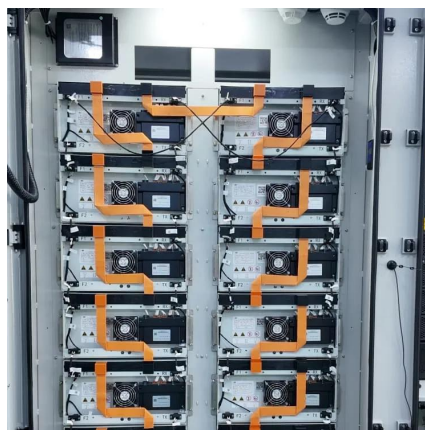
This dataset contains yearly electricity generation, capacity, emissions, import and demand data for over European countries. You can find more about Ember's methodology in ...

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Solar power generation, 2024

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Solar PV

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Solar power by country

The worldwide growth of photovoltaics is extremely dynamic and varies strongly by country. In April 2022, the total global solar power capacity reached 1 TW, increasing to 2 TW in 2024. ...

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What is the capacity of solar energy? The world's current solar energy capacity is 850.2 GW (gigawatts). This is the maximum amount of energy that all global solar installations ...

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[Global solar installations surge 64% in first half of 2025](#)

In 2024, global solar output rose by 28% (+469 TWh) compared to 2023, more than any other source. China remains the global leader of this surge. In the first half of 2025, its ...

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Many modern photovoltaic panels convert 15-22% of sunlight into electricity. As advancements in technology continue, the potential wattage that can be harnessed is likely to ...

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[Data \[2025\]](#)

Key Facts
Global Solar Energy Statistics
Solar Power Statistics by Country
Solar Energy vs Fossil Fuels
US Solar Panel Statistics
Solar Energy Industry & Job Statistics
Outlook: The Future of Solar Power
The Final Word
Data Sources

The world currently has a cumulative solar energy capacity of 850.2 GW (gigawatts). 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 energy, although this share is increasing rapidly every year. The world currently has a cumulative solar energy capacity of 850.2 GW (gigawatts). 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 energy, although this share is increasing rapidly every year. See more

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Solar power by country - Wikipedia

Overview
Global use figures
Africa
Asia
Europe
North America
Oceania
South America

Many countries and territories have installed significant solar power capacity into their electrical grids to supplement or provide an alternative to conventional energy sources. Solar power plants use one of two technologies: o Photovoltaic (PV) systems use solar panels, either on rooftops or in ground-mounted solar farms, converting sunlight directly into electric power.

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This interactive chart shows the amount of energy generated from solar power each year. Solar generation at scale - compared to hydropower, for example - is a relatively modern renewable ...

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