

# Solar capacity by country





## Overview

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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. The top installers of 2024 included China, the United States, and India.

Many countries and territories have installed significant capacity into their electrical grids to supplement or provide an alternative to conventional sources. Solar power plants use one of two technologies: .

Many African countries receive on average a very high number of days per year of bright sunlight, especially the dry areas, which include the arid.

European deployment of has slowed down considerably since the record year of 2011. This is mainly due to the strong decline of new.

Canada near , , was in September 2010 the with an .

Solar photovoltaics (PV)The following table lists these data for each country:• Total.

Armenia due its geographical and climate properties is well-suited for the solar energy utilization. According to the .

A number of Pacific island states have committed to high percentages of renewable energy use, both to serve as an example to other countries and to cut the high costs of imported.

As of 2023, China has the largest solar energy capacity in the world at 609,921 megawatts (MW), contributing approximately 3% to the country's total electricity production. It is followed by the United States at 139,205 MW and Japan at 89,077 MW.

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According to a 2024 report by the World Bank, off-grid solar has the potential to bring electricity to nearly 400 million people worldwide for the first time by 2030. Nearly every country in the world has the right combination of geographic conditions, weather, and sunlight to generate all the.

Total solar (on- and off-grid) electricity installed capacity, measured in gigawatts. This includes solar photovoltaic and concentrated solar power. IRENA (2025) – processed by Our World in Data The renewable power capacity data represents the maximum net generating capacity of power plants and.

This graphic showcases the state of global solar power installations, highlighting the top 15 countries by cumulative megawatts (MW) of installed photovoltaic (PV) and concentrated solar power (CSP) as of 2024 along with their annual growth rate of installations. The data comes from the Energy.

ESMAP's analytical and advisory services are fully integrated within the World Bank's country financing and policy dialogue in the energy sector. Through the World Bank Group (WBG), ESMAP works to accelerate the energy transition required to achieve Sustainable Development Goal 7 (SDG7) to ensure.

This dashboard ranks countries/areas to their renewable energy power capacity or electricity generation. The data can be further refined based on region, technology or year of interest. Which country has the most solar power in 2022?

In April 2022, the total global solar power capacity reached 1 TW. In 2022, the leading country for solar power was China, with about 390 GW, accounting for nearly two-fifths of the total global installed solar capacity.

Which country has the second-highest solar power capacity in the world?

Note: As of 2023, if it were a single country, the European Union (EU) would have the second-highest solar capacity in the world at 263 MW. With 139,205 MW of solar power online and more on the way, the U.S. currently has enough solar power capacity to power more than 21 million households.

What statistics describe the country solar power potential?



Other statistics (minima, maxima, percentiles) describe the country solar power potential in better detail. Distribution of a photovoltaic power output histogram communicates how much land in the country is available in practical potential Levels 0, 1, and 2, and various PVOUT ranges.

Which country has the most solar power in the world?

Spain deployed about 350 MW (+18%) of concentrated solar power (CSP) in 2013, and remains a worldwide leader of this technology. European countries still account for about 60 percent of worldwide deployed capacity of solar power in 2013. Austria had 421.7 MW of photovoltaics at the end of 2012, 234.5 MW of which was installed that year.

How much solar energy does each country produce?

It is followed by the United States at 139,205 MW and Japan at 89,077 MW. However, total capacity is only one way to view solar production. Another method is to examine solar penetration—that is, the percentage of each country's total energy consumption that comes from its solar installations.

How many countries have a solar power plant in 2022?

As of 2022, there are more than 40 countries around the world with a cumulative PV capacity of more than one gigawatt, including Canada, South Africa, Chile, the United Kingdom, South Korea, Austria, Argentina and the Philippines.



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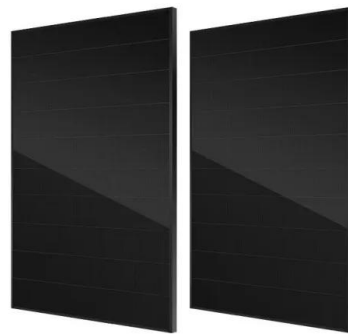


[Which countries use the most solar energy? \[Top 13, ...\]](#)

Many countries have made significant progress in integrating solar energy into their power generation, setting an example for others in terms of consumption and infrastructure development. In this article, we'll explore the ...

[Global Photovoltaic Power Potential by Country, ESMAP](#)

Solar radiation is essentially a free resource available anywhere on Earth, to a greater or lesser extent. Solar PV power plants convert solar radiation into electricity. In the current era of global ...



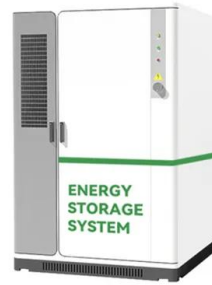
[Chart: Which countries get the most power from solar ...](#)

To be clear, China is still by far the largest producer of solar and wind energy in the world in terms of volume. The country generated 1, 836 terawatt-hours of wind and solar last year. All of Europe, for comparison, ...



### Solar electricity installed capacity. Data by Countries from 2000 to ...

Official statistics by year of solar electricity installed capacity (GW). The values are presented in tables and charts with calculations of changes and shares, and with extensive analytical ...



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**Product Model**  
HJ-ESS-215A(100KW/215KWH)  
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**Dimensions**  
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1600\*1200\*2000mm

**Rated Battery Capacity**  
215KWH/115KWH

**Battery Cooling Method**  
Air Cooled/Liquid Cooled



### Solar Photovoltaic Power Potential by Country

The potential for clean, carbon-free electricity generation from solar photovoltaic (PV) sources in most countries dwarfs their current electricity demand. Around 20% of the global population lives in 70 countries boasting excellent conditions ...

### Ranking of EU Countries by Installed Solar PV ...

The European Union (EU) is witnessing a significant expansion in solar photovoltaic (PV) energy as part of its renewable energy transition. By the end of 2024, the total installed PV capacity in the EU is expected to exceed ...



### Solar PV Significantly Grew Globally in 2024, ...

With the addition of 278.0 GW in 2024, China led the deployment of new solar PV capacity (Chart 3). The United States and India, followed with increases of 38.3 GW and 24.5 GW, respectively. Other dynamic countries ...



### [The Top 5 Solar Countries in the World \(2024\) \(2025\)](#)

4 ???· With 141.8 GW of solar power capacity, the USA stands second in the list of top solar countries. From a measly capacity of 0.34 GW in 2008, the nation has come a long way in the ...



### [Monthly Wind and Solar Capacity Data](#)

This dataset contains monthly capacity data for wind and solar, including both total installed capacity as well as month-on-month and year-to-date additions. It covers 25 countries and/or regions, which covers approximately ...

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