

Distributed solar photovoltaic modules in the United States







Overview

What is a distributed solar system?

Berkeley Lab's annual Tracking the Sun report describes trends among gridconnected, distributed solar photovoltaic (PV) and paired PV+storage systems in the United States. For the purpose of this report, distributed solar includes residential systems, roof-mounted non-residential systems, and groundmounted systems up to 5 MW-AC.

How many PV systems are installed in 2023?

In 2023, the United States installed 893,000 PV systems, of which 880,000 were residential, 13,000 were C&I, and 399 were utility-scale. Since 2005 when Congress passed the investment tax credit, the number of annually installed residential PV systems has grown by approximately 36% per year, or over 250X.

How many solar modules are produced in 2023?

In 2023, the United States produced about 7.2 GW of PV modules. Since IRA's passage, over 70 GW of manufacturing capacity has been added across the solar supply chain (from facilities announced pre- and post-IRA), including more than 25 GW of new module capacity.

How many solar modules are there in the US?

The US added 8.6 GW of solar module manufacturing capacity in Q1, bringing the total to 51 GW. However, growth in upstream manufacturing capacity remains slow or non-existent. ES Foundry became just the second domestic cell manufacturer when it opened a 1 GW cell factory in South Carolina in January.

How much energy does a PV system cost in 2023?

The United States installed approximately 26.0 GWh / 8.8 GWac of energy storage onto the electric grid in 2023, up 34% y/y. list of acronyms and



abbreviations is available at the end of the presentation. The median system price of large-scale utility-owned PV systems in 2023 was \$1.27/Wac—relatively flat since 2018.

What is the US large-scale solar photovoltaic database?

The U.S. Large-Scale Solar Photovoltaic Database provides the locations and array boundaries of U.S. photovoltaic facilities, with capacity of 1 megawatt or more.



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The U.S. Large-Scale Solar Photovoltaic Database

The United States Large-Scale Solar Photovoltaic Database (USPVDB) provides the locations and array boundaries of U.S. photovoltaic (PV) facilities with capacity of 1 megawatt or more. It ...



Solar Market Insight Report - SEIA

4 days ago · Solar accounted for 69% of all new electricity-generating capacity added to the US grid in Q1 2025. The US added 8.6 GW of solar module ...

The rapid expansion of small-scale, distributed-generation solar - pv

Two of the biggest solar markets, the United States and China, expanded their distributed-generation capacity by more than 65% in 2021 and 2022, against a 4% fall and an ...



Achieving American Leadership in the Solar Photovoltaics ...

To fully realize the benefit of solar power to society, its costs and benefits must be distributed equitably, the entire supply chain must be operated in a safe and socially responsible manner, ...







US distributed solar installations exceed 800,000 in 2023

These systems installed in 2023 represent 71% of all distributed systems installed in the US last year, which totalled over 800,000 for the first time in history, as shown in the ...

Berkeley Lab releases latest edition of Tracking the ...

Berkeley Lab has released the latest edition of Tracking the Sun, the annual report describing trends for distributed solar photovoltaic (PV) ...



Grand Control of the North Con

<u>Tracking the Sun</u>, <u>Energy Markets & Policy</u>

Berkeley Lab's annual Tracking the Sun report describes trends among grid-connected, distributed solar photovoltaic (PV) and paired PV+storage systems in the United States.



Record U.S. small-scale solar capacity was added in ...

Small-scale solar--also called distributed solar or rooftop solar--refers to solar-power systems with 1 megawatt (MW) of capacity or ...



Distributed Solar Pricing

Updated Report & Data Illustrate

We are pleased to announce the release of the latest edition of Berkeley Lab's Tracking the Sun annual report, describing trends for distributed solar photovoltaic (PV) ...



U.S. developers report half of new electric generating capacity will

Developers added 12 gigawatts (GW) of new utility-scale solar electric generating capacity in the United States during the first half of 2025, and they plan to add another 21 GW ...



Solar Manufacturing Map

This map provides information about all of the solar photovoltaic (PV) manufacturing facilities in the United States and how they contribute to the ...



<u>US distributed solar and storage</u> <u>competitive ...</u>

In Wood Mackenzie's quarterly US PV Leaderboard and US Distributed Solar-plusstorage Leaderboard, both available via the US ...



The rapid expansion of small-scale, distributed ...

Two of the biggest solar markets, the United States and China, expanded their distributed-generation capacity by more than 65% in 2021 and ...



Distributed Solar 2020 Data Update , Energy Markets & Policy

Berkeley Lab's Tracking the Sun report summarizes installed prices and other trends among grid-connected, distributed solar photovoltaic (PV) systems in the United States. This report is now ...



The U.S. Large-Scale Solar Photovoltaic Database

The U.S. Large-Scale Solar Photovoltaic Database The United States Large-Scale Solar Photovoltaic Database (USPVDB) provides the locations and array boundaries of U.S. ...



Solar Integration: Distributed Energy Resources and ...

of solar energy in the United States is produced by small-scale solar, such as rooftop installations. Household solar installations are called behind-the-meter ...



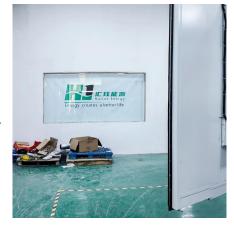
Record U.S. small-scale solar capacity was added in 2022

Small-scale solar--also called distributed solar or rooftop solar--refers to solar-power systems with 1 megawatt (MW) of capacity or less. Rooftop solar panels installed on ...



<u>The State (s) of Distributed Solar -- 2024</u> <u>Update</u>

Distributed solar, which can be owned by individuals, small businesses, and public entities, is turning the electricity industry upside down as individuals choose to generate their ...



Commercial PV , Electricity , 2021 , ATB , NREL

For commercial PV, this is modeled for only a host-owned business model with access to debt. For the 2021 ATB--and based on data (EIA, 2016) and the NREL Solar-PV Cost Model ...





Berkeley Lab releases latest edition of Tracking the Sun, data on

Berkeley Lab has released the latest edition of Tracking the Sun, the annual report describing trends for distributed solar photovoltaic (PV) systems in the United States -- ...



The State of the Solar Industry

At the end of 2023, SEIA estimates there were nearly 5 million residential PV systems in the United States. 3.3% of households own or lease a PV system (or 5.3% of households living in ...



US distributed solar and storage competitive landscapes shift in ...

In Wood Mackenzie's quarterly US PV Leaderboard and US Distributed Solar-plusstorage Leaderboard, both available via the US Distributed Solar Service, we rank the top ...





Annual Solar Photovoltaic Module Shipments Report

Overview This report includes summary data for the photovoltaic industry from annual and monthly respondents. Data include manufacturing, imports, and exports of ...



Shake-up on the US distributed solar leaderboard

In Wood Mackenzie's quarterly US PV Leaderboard, available via the US Distributed Solar Service, we rank the top solar installers and equipment suppliers. Read on ...



Regional distribution of solar module production , Statista

In addition to dominating the PV module production market, China is also the global leader in installed PV capacity. What's more, most of the leading solar ...



U.S. Government Unveils Database, Interactive Map of All U.S.

All large-scale solar energy facilities can now be found on a single map thanks to a collaboration between the U.S. Geological Survey and the U.S. Department of Energy's ...



Spring 2024 Solar Industry Update

At the end of 2023, there were 137.5 GWac of solar PV systems in the United States, of which 89.8 GWac were utility-scale PV, 32.9 GWac were residential PV, and 14.8 GWac were C& I PV.



EIA electricity data now include estimated small-scale ...

Small-scale distributed solar photovoltaic (PV) systems, such as those found on residential and commercial rooftops, have grown significantly ...





Solar Market Insight Report - SEIA

4 days ago· Solar accounted for 69% of all new electricity-generating capacity added to the US grid in Q1 2025. The US added 8.6 GW of solar module manufacturing capacity in Q1, bringing

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