Where can I find solar resource data?

Explore solar resource data via our online geospatial tools and downloadable maps and data sets. Access our tools to explore solar geospatial data for the contiguous United States and several international regions and countries.

What is a solar resource database?

It is provided by the World Bank Group as a free service to governments, developers and the general public, and allows users to quickly obtain data and carry out a simple electricity output calculation for any location covered by the solar resource database.

How many terawatts a year has solar capacity reached?

LONDON,Nov 7 (Reuters) - Global solar capacity has reached a record 2 terawatts(TW) of capacity,with more added in the last two years than the previous 68 combined,exclusive data from the sector's global industry group shared with Reuters showed.

What percentage of electricity is generated by solar?

Nationally,5.3%of electricity was generated from solar--up from 4.8% during 2022. The roles of utility and distributed solar vary by state. Southern and Western states rely more on utility-scale solar,while northern states and Hawaii rely more on distributed solar. Note: EIA monthly data for 2023 are not final.

How much solar power did the US install in Q1/Q2 2024?

U.S. PV Deployment The International Energy Agency (IEA) reported that the United States installed 15.6 GW acof solar capacity in in the first quarter (Q1)/second quarter (Q2) of 2024 (the Solar Energy Industries Association reported 21.4 GW dc)--a 55% increase from the record achieved in Q1/Q2 2023.

Why is energy output a function of solar capacity?

Energy output is a function of power (installed capacity) multiplied by the time of generation. Energy generation is therefore a function of how much solar capacity is installed. This interactive chart shows installed solar capacity across the world. Share of primary energy that comes from solar

SOLAR ENERGY DATA

Image: Our World in Data. 2. Solar Energy is Weather Dependent . An undoubted disadvantage of solar energy is that this technology is not equally efficient around the world. While solar power can be generated on a cloudy day, some level of daylight is still required in order to harness the sun's energy, and the amount of energy that can be

Key Facts. 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 ???

Open Data and Analytics for a sustainable energy future. Search over {{datasets}} datasets from 193 countries. 31 0. Partners. 12 0. Apps. 1010 0. Datasets. 193 0. Countries. Energy Access Rooftop Solar Tool. Renewable energy. Renewable Energy Zoning Tool. Clean Cooking. Access to Modern Energy Cooking Services: Players and Initiatives

SOLAR ENERGY DATA

Key updates from the Summer 2024 Quarterly Solar Industry Update presentation, released August 20, 2024:. Global Solar Deployment. About 560 gigawatts direct current (GW dc) of photovoltaic (PV) installations are projected for 2024, up about a third from 2023.; The five leading solar markets in 2023 kept pace or increased PV installation capacity in the first half of ???

Here are some open-source datasets related to solar energy along with their links: National Renewable Energy Laboratory (NREL) Solar Radiation Data: This dataset includes solar radiation and related climatic data for locations in the United States and its territories.

In 2023, 35% of Australia's total electricity generation was from renewable energy sources, including solar (16%), wind (12%) and hydro (6%). The share of renewables in total electricity generation in 2023 was the highest on record, a share of ???
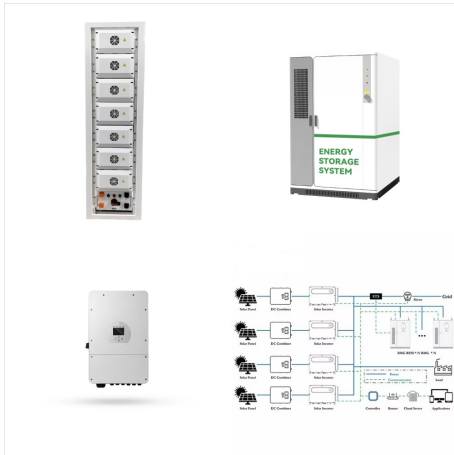
The Global Solar Power Tracker is a worldwide dataset of utility-scale solar photovoltaic (PV) and solar thermal facilities. It covers all operating solar farm phases with capacities of 1 megawatt (MW) or more and all announced, pre-construction, construction, and shelved projects with capacities greater than 20 MW. Some data are also included for plants that ??? Continued

Rapid development of renewable energy sources, particularly solar photovoltaics (PV), is critical to mitigate climate change. As a result, India has set ambitious goals to install 500 gigawatts of

View all of NREL's solar-related data and tools, including more PV-related resources, or a selected list of PV data and tools below. Best Research-Cell Efficiency Chart. Features data on the highest confirmed efficiencies for PV research cells of various technologies. Models the flow of mass and energy in the PV industry. PV Module Soiling Map.

SOLAR ENERGY DATA

Solar power is energy from the sun that is converted into thermal or electrical energy. Solar energy is the cleanest and most abundant renewable energy source available, and the U.S. has some of the richest solar resources in the world. Solar technologies can harness this energy for a variety of uses, including generating electricity, providing light or a comfortable interior ???

View the solar energy data dashboard. Minnesota Solar Statistics : In 2018, Minnesota solar capacity increased 47%, or 284 MWAC, for a total of 882 MWAC. Solar capacity increased from 1 MW in 2009 to 32 MW in 2015 to 598 MW in 2017. Minnesota is ???

Ember's analysis of the latest data on monthly capacity installations shows that the world is on track to reach 593 GW of solar installations by the end of this year. This would once again

SOLAR®

On June 13, 2018 the NASA's Surface meteorology and Solar Energy (SSE) Data Archive web site was replaced with the new data web portal at https://power.larc.nasa.gov which contains improved solar and meteorology data and greatly enhanced capabilities to facilitate access to NASA's solar insolation and meteorological data parameters.

? Global solar capacity has reached a record 2 terawatts (TW) of capacity, with more added in the last two years than the previous 68 combined, exclusive data from the sector's ???


Solar energy has taken a central place in India's National Action Plan on Climate Change with National Solar Mission (NSM) as one of the key Missions. NSM was launched on 11 th January, 2010. NSM is a major initiative of the Government of India with active participation from States to promote ecological sustainable growth while addressing

SOLAR ENERGY DATA

Global solar installations are estimated using available national data where possible, as well as an analysis of Chinese solar PV export data to the remaining countries. Monthly solar capacity data is collected from 15 countries or regions, representing an estimated 80% of capacity additions in 2023.

The National Renewable Energy Laboratory (NREL) has developed an interactive mapping tool, called the National Solar Radiation Database (NSRDB) Viewer, that allows users to examine, distribute, and analyze solar resource data for the United States and northern Mexico. It assists in making decisions about optimal locations for CSP plants.
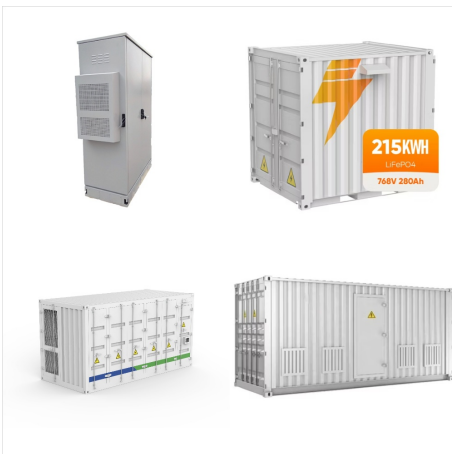
The Global Solar Atlas provides a summary of solar power potential and solar resources globally. It is provided by the World Bank Group as a free service to governments, developers and the general public, and allows users to quickly obtain data and carry out a simple electricity output calculation for any location covered by the solar resource database.

SOLAR ENERGY DATA

Solar energy is the conversion of sunlight into usable energy forms. Solar photovoltaics (PV), solar thermal electricity and solar heating and cooling are well established solar technologies. Energy Statistics Data Browser. The most extensive selection of IEA statistics with charts and tables on 16 energy topics for over 170 countries and
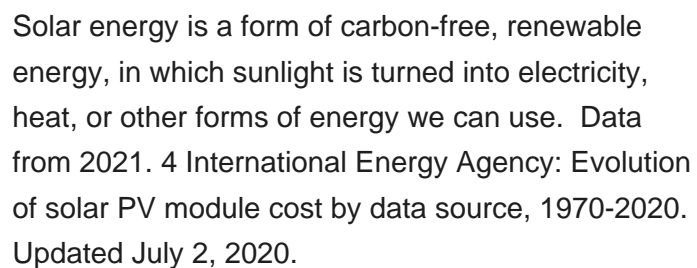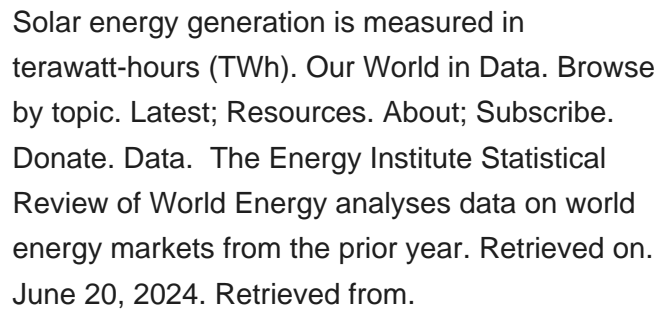
The data are intended for use by energy professionals???such as transmission planners, utility planners, project developers, and university researchers???who perform solar integration studies and need to estimate power production from hypothetical solar plants. The Solar Power Data for Integration Studies consist of 1 year (2006) of 5

The global installed solar capacity over the past ten years and the contributions of the top fourteen countries are depicted in Table 1, Table 2 (IRENA, 2023). Table 1 shows a tremendous increase of approximately 22% in solar energy installed capacity between 2021 and 2022. While China, the US, and Japan are the top three installers, China's relative contribution ???

SOLAR ENERGY DATA

The U.S. Department of Energy (DOE) Solar Energy Technologies Office (SETO) is funding the American-Made Solar Data Bounty Prize, a two-stage, $1.4 million prize designed to increase the accessibility of high-quality time series datasets for photovoltaic (PV) systems.These types of datasets can be used to build, train, and optimize models designed for PV system ???

Solar energy generation is measured in terawatt-hours (TWh). Our World in Data. Browse by topic. Latest; Resources. About; Subscribe. Donate. Data. The Energy Institute Statistical Review of World Energy analyses data on world energy markets from the prior year. Retrieved on. June 20, 2024. Retrieved from.

Solar energy is a form of carbon-free, renewable energy, in which sunlight is turned into electricity, heat, or other forms of energy we can use. Data from 2021. 4 International Energy Agency: Evolution of solar PV module cost by data source, 1970-2020. Updated July 2, 2020.

SOLAR ENERGY DATA

Empower your solar projects with accurate data insights and precision. PVGIS PVGIS. en. PHOTOVOLTAIC GEOGRAPHICAL INFORMATION SYSTEM. en. Yearly PV energy production (kWh): 1066.36 Annual Irradiation, the potential production of kWhs per m2: Yearly in-plane irradiation (kWh/m2): 1341.06

Solar energy data analysis examines a wide range of issues such as solar adoption trends and the performance and reliability of solar energy generation facilities. Data analysis helps increase situational awareness for diverse audiences including the solar industry, electric utilities, regulators, local and state governments, public interest