

Wind power generation area



Overview

The Global Wind Atlas is a free, web-based application developed to help policymakers, planners, and investors identify high-wind areas for wind power generation virtually anywhere in the world, and then perform preliminary calculations. Wind is air movement in the Earth's atmosphere. If the air density is, the flow rate of this volume of air is, and the power transfer, or energy transfer per second is. Wind power is thus proportional to the third. The worldwide total cumulative installed electricity generation capacity from wind power has increased rapidly since the start of the third millennium, and as of the end of 2023, it amounts to over 1000 GW. GWPT provides information integral to a just energy transition by monitoring utility-scale on and offshore wind projects worldwide. It includes over. Wind power in Germany is leading the way in the field of renewable electricity generation.



Article Content

interactive data & maps

Displaying data from Wind Power Capacity Explore the Installations tool to find out more Main wind farms Explore the Wind Farms tool to find out more Financing Explore the Financing tool to find out

Global Statistics

The choices made today – whether to embrace or obstruct wind power – will determine not only the climate trajectory but also the energy security and economic prosperity of future generations.

Where wind power is harnessed

Wind power plants require careful planning Operating a wind power plant is more complex than simply erecting wind turbines in a windy area. Wind power plant owners carefully plan

Wind Energy in Australia | Aneroid

Map and graphs of wind power data in the Australian electricity grid, provided by the Australian Energy Market Operator (AEMO).

Wind energy database

The Wind Power is a comprehensive database of detailed raw statistics on the rapidly growing sphere of wind energy and its supporting markets.

Global overview – Renewables 2024 – Analysis

Global overview Renewable energy consumption Renewable energy consumption in the power, heat and transport sectors increases near 60% over 2024-2030 in our

Wind Turbine Generators and Designated Areas (German Spatial

Various data on wind turbine generators (WTG) and designated areas for wind energy (“Windeignungsgebiete”) aggregated to German spatial planning regions (“Raumordnungsregionen”).

How is Electricity Generated

Electricity is generated by converting energy from sources like solar, wind, water, heat, or motion into electrical power using generators, solar panels,

Wind Power by Country 2026

Also includes information on each country's actual yearly production of wind-generated electricity, as well as the amount of electricity generated in offshore

Wind Turbines: the Bigger, the Better

Since the early 2000s, wind turbines have grown in size—in both height and blade lengths—and generate more energy. What's driving this

Global Statistics

The disparity underscores a critical trend: the wind power boom is concentrated in a handful of countries, with China, India, Vietnam, Chile, and Turkey leading the charge, alongside

Wind power

OverviewWind power capacity and productionWind energy resourcesWind farmsEconomicsSmall-scale wind powerImpact on environment and landscapePolitics

In 2024, wind supplied over 2,494 TWh of electricity, which was 8.1% of world electricity. To help meet the Paris Agreement's goals to limit climate change, analysts say it should expand much faster than it currently is – by over 1% of electricity generation per year. Expansion of wind power is being hindered by fossil fuel subsidies.

Wind power

Wind power is the use of wind energy to generate useful work. Historically, wind power was used by sails, windmills and windpumps, but today it is mostly used

Offshore wind energy for Rhode Island and Connecticut

Revolution Wind is the first commercial-scale offshore wind project in Rhode Island and Connecticut, supporting thousands of jobs and delivering affordable, reliable

Global Wind Power Tracker

The Global Wind Power Tracker is composed of worldwide facility-level data for utility-scale onshore and offshore wind power facilities (10 MW+).

Wind energy generation by region

Wind energy generation by region Measured in terawatt-hours. Includes both onshore and offshore wind sources.

Wind power

Wind power in Germany is leading the way in the field of renewable electricity generation. In 2025, around 39 TWh of wind power were supplied across the 50Hertz grid area, with 34 TWh and 5 TWh

This spring, clean energy in the US set record after record

With the milder weather and longer daylight hours, total demand stays relatively low while wind and solar ramp up, covering greater shares of grid consumption. Here are four ways clean

Global Energy Perspective 2025 | McKinsey

This year marks the tenth anniversary of McKinsey's Global Energy Perspective, offering a chance to reflect on the lessons learned over the past

Power and Energy

Explore our power and energy services, from renewable energy to low-carbon solutions. Drive sustainability, reduce emissions and secure reliable energy supply.

German onshore wind power – output, business and perspectives

With more than 28,000 turbines and a cumulative capacity of 63 gigawatts (GW) in operation across the country, Germany boasted the largest installed onshore wind fleet in Europe

Wind power in China

In 2020, China added 71.6 GW of wind power generation capacity to reach a total capacity of 281GW. Both China's installed capacity and new capacity in 2020

SunZia Wind and Transmission

SunZia Wind and Transmission together will create the largest clean energy infrastructure project in United States history. The project will harness and

Determination of Suitable Areas for the Generation of Wind Energy in ...

In our approach, the current potential area is determined by excluding areas unsuitable for this kind of electricity generation. For the determination of potential areas of the future, assumptions

Wind power by country

Wind power in Asia is an important component in the Asian energy industry and one of the key sources of renewable energy in the region. As of April 2016, the installed capacity of wind power in Asia (excluding the Middle East) totalled 175,831 MW. Asia is the fastest growing region in terms of wind energy, having increased its installed capacity by 33,858 MW in 2005 (a 24% increase over 2014). China, with 145,362 MW of installed capacity, is the world's largest generator of electricity from wind energy. India is the sec

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