

Installed capacity and power generation of wind turbines



Overview

In 2024, global installed wind power capacity reached 1,133. 49%, underscoring the scale of the structural transformation in the energy sector over the past. Bonn (WWEA) – 2025 marked a watershed moment for the global wind power sector. According to preliminary statistics released by the World Wind Energy Association (WWEA), the world added 169'014 Megawatts (MW) of new wind capacity – a 35% increase over 2024 – bringing total global installations to. Cumulative installed wind energy capacity including both onshore and offshore wind sources, measured in gigawatts (GW). This includes onshore and offshore wind. IRENA (2025) – processed by Our World in Data This is. Although wind power continues to face supply chain issues, rising costs and permitting delays today, global capacity is still expected to nearly double to over 2 000 gigawatts (GW) by 2030 as both advanced and developing economies tackle these barriers. 3%) expressed as a fraction of 1 (e. Over the. China installed around 75 Gigawatt, two thirds of new capacity Wind power generates 10% of global electricity Download Full WWEA Annual Report as PDF | #WWEAwebinar Wind Power Around the World | #WWEApodcast: Where Wind Power Stands Globally Bonn (WWEA) – The year 2023 ended with a new record for.



Article Content

WWEA Annual Report 2023: Record Year for

The world's installed wind power capacity now meets around 10% of global electricity demand – another important milestone. More than ten countries

Installed wind energy capacity

Cumulative installed wind energy capacity including both onshore and offshore wind sources, measured in gigawatts (GW).

Wind energy generation vs. installed capacity, 2024

Wind energy generation, measured in gigawatt-hours (GWh) versus cumulative installed wind energy capacity, measured in gigawatts (GW). Data includes energy from both onshore and offshore wind

Offshore Wind Turbines in 2025: China Continues

Wind turbine generator (WTG) technology did not stop progressing in 2025, with Chinese OEMs still leading capacity-wise, while in Europe, first

Wind energy in Europe: 2024 Statistics and the outlook

The EU-27 accounts for 231 GW of the total installed capacity, 210 GW onshore and 21 GW offshore. We expect Europe to install 187 GW of new

Global cumulative installed capacity of wind power

As of the end of 2025, China had cumulatively installed over 691 gigawatts of wind energy, in comparison to 160 gigawatts of wind energy

Renewable Energy

Energy output is a function of power (installed capacity) multiplied by the time of generation. Energy generation is therefore a function of how much wind capacity

Wind electricity installed capacity | 2024

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

Wind power in Canada

Wind power installed capacity and generation in Canada Wind power has a history in Canada dating back many decades, particularly on prairie farms. As of

China Does In Fact Have Wind Turbines, A Lot Of

China's total wind generation capacity is 561 GW, which is more than three times more than the United States who comes in second behind China,

IRENA Report: onshore and offshore wind

The International Renewable Energy Agency (IRENA) has just released its pivotal "Renewable Power Generation Costs in 2024" report,

Leading offshore wind in Europe and beyond | Ørsted

In Europe, Asia, and North America, Ørsted powers millions of homes and businesses – realising the vast potential of homegrown, gigawatt-scale offshore

Small wind turbine

Small wind turbine Diagram of a small wind turbine and repeller A 1 kW micro-windmill installed in the suburbs of Lahore, Pakistan Small wind turbines, also

China Energy Transition Review 2025

China's wind and solar generation capacity more than doubled in the three years to 2024, from 635 GW to 1,408 GW. In early 2025, the capacity of wind and solar combined overtook that of coal.

Latest Power Generation News and Insights

Power generation industry updates, news, and insights including gas, renewables, coal, nuclear, energy storage, hydrogen, and more.

Wind Turbine Cost: Is It Worth The Price In 2026?

Remember that a wind turbine has a maximum rated capacity (such as 4 megawatts), but it produces electricity at a “capacity factor” or “load factor”

Wind Turbines: the Bigger, the Better

In addition to getting taller and bigger, wind turbines have also increased in maximum power rating, or capacity, since the early 2000s. The

WINDEXchange | Department of Energy

Site Selection There are many factors to consider when choosing a location for a wind turbine or wind farm, such as (but not limited to) the wind resource potential

Latest wind energy data for Europe: Autumn 2025 – WindEurope

This autumn update outlines the latest data for wind energy in Europe and our expectations for the rest of the decade. Europe now has 291 GW of wind power capacity, with 254

Unlocking India's Small Wind Turbine Future | WRI India

From milling grains and pumping water to generating electricity, wind turbines have come a long way. India is currently the world's fourth-largest wind

UK Wind Energy Database (UKWED) | RenewableUK

Calculated by multiplying the installed capacity in MW by the number of hours in a year (8760) and then multiplying this by DESNZ's long-term average load factor for (onshore + offshore) wind (31.3%)

Offshore Wind Turbines Power: Complete 2025 Guide To Generation

Comprehensive guide to offshore wind turbines power generation. Learn about capacity, performance, technology, and global development in 2025.

Wind turbine

Thorntonbank Wind Farm, using REpower 5M 5 MW turbines in the North Sea off the coast of Belgium A wind turbine is a device that converts the kinetic energy

Wind energy in Europe: 2025 Statistics and the outlook for 2026-2030 ...

The EU-27 accounts for 246 GW of the total installed capacity, 224.5 GW onshore and 21.5 GW offshore. We expect Europe to install 151 GW of new wind power capacity over 2026-2030.

New U.S. electric generating capacity expected to reach a record high ...

U.S. power plant developers and operators plan to add 86 gigawatts (GW) of new utility-scale electric generating capacity to the U.S. power grid in 2026 in our latest Preliminary Monthly

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