

## Wind turbine generator capacity and total installed capacity

How much power can a wind turbine produce?

Today's new wind power projects have a turbine capacity in the 3-4 MWrange onshore and 8-12 MW offshore. The amount of power that can be harvested from wind depends on the size of the turbine and the length of its blades. The output is proportional to the dimensions of the rotor and to the cube of the wind speed.

#### How big is a wind turbine?

Wind turbine capacity has increased over time. In 1985,typical turbines had a rated capacity of 0.05 MW and a rotor diameter of 15 metres. Today's new wind power projects have a turbine capacity in the 3-4 MW range onshore and 8-12 MW offshore.

### How much wind power is installed in 2022?

Globally,77.6 GW of new wind power capacity was connected to power grids in 2022,bringing total installed wind capacity to 906 GW1,a growth of 9% compared with 2021. The world's top five markets for new installations in 2022 were: Altogether, they made up 71% of global installations last year, collectively 3.7% lower than 2021.

### How big is a wind turbine in 2021?

The average capacity of newly installed wind turbines grew 7% from 2021 to 2022,to 3.2 MW,while the hub height--distance from the ground to the middle of the turbine's rotor--increased 4% from 2021 to 2022,to 98.1 meters, slightly taller than the Statue of Liberty.

What is the average capacity of wind turbines in 2023?

The average capacity of newly installed U.S. wind turbines in 2023 was 3.4 megawatts(MW),up 5% since 2022 and 375% since 1998-1999. In 2023,there was an increase in the proportion of turbines installed in the size category of 3.5 MW or larger.

How many gigawatts of wind power are there in 2023?

Industry-specific and extensively researched technical data (partially from exclusive partnerships). A paid subscription is required for full access. The cumulative capacity of installed wind power worldwide amounted to approximately 1,021 gigawattsin 2023.



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