Wind power by country 2023

Wind power by country 2023

Wind power by country. Share of electricity production from wind, 2023 [1] Global map of wind speed at 100 m above surface level [2] 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 2022, it amounts to almost 900 GW.

More than ten countries now have a wind power share of more than 20%, led by Denmark, which generates an astonishing 56% of its electricity from wind. Germany, the Netherlands, Portugal, the UK and Uruguay are among the countries that generate around a third or more of their electricity from wind.

China once again plays an exceptional role in driving global wind power development - according to estimates, the country added 79,37 Gigawatt in 2023. The new record was only broken thanks to China, which accounts for 66% of the global market for new wind turbines - up from 58% in 2022.

Wind power refers to the electricity generated by turbines powered by the wind, usually in the form of windmills. Wind power is considered to be a clean and renewable source of energy, as it is created by natural elements, unlike oil which requires the burning of fossil fuels. The electricity is created by the wind turning a turbine that uses a series of mechanisms that change the speed of rotation as it leads to a generator. The amount of power generated by wind is usually expressed in gigawatts.

While there are no costs associated with using wind to create electricity, as opposed to coal or natural gas, it is difficult for countries to adopt wind power as a primary source of energy. First, it is expensive to buy or manufacture windmills and other infrastructure required. Moreover, there are logistical difficulties, such as changing wind directions and ample supply of wind, that can make it difficult-to-impossible to heavily rely on wind power.

Statista R identifies and awards industry leaders, top providers, and exceptional brands through exclusive rankings and top lists in collaboration with renowned media brands worldwide. For more details, visit our website.

China is by far the largest installer of wind power capacity in the world, more than doubling the second-ranked United States. As of end of 2023, China had cumulatively installed over 464 gigawatts of wind energy, in comparison to 150 gigawatts of wind energy installed in the United States. Worldwide, cumulative capacity of installed wind energy reached over one terawatt in 2023, a generous increase over the last decades. The potential of wind energy around the world is immense, and wind power can often be accessed from remote places, as seen in the rise of offshore wind energy.

Offshore wind power refers to wind farms that stand within bodies of water, often in the ocean. Offshore wind

speeds tend to be faster than on land and tend to be steadier, thus presenting a higher generation potential as well as more reliable energy source. However, offshore wind farms tend to be more expensive to build and maintain than onshore wind farms due to the difficulties of building robust turbines to withstand heavy winds and in deep ocean waters.