BWE
German Wind Energy Association

Germany's federal government has set a target to generate 40 to 45 percent of Germany's electricity from renewable energy sources by 2025. Wind power is a driving force in this "energy transition". Using wind energy mitigates climate change. And the technology is widely accepted by the population; in a TNS emnid survey, 61 percent of German citizens said it is "good" or even "very good" to have wind turbines in the vicinity. A study by trend:research showed that citizens invested in more than half of all installed wind energy projects. This makes citizen investment in the energy transition nearly four times higher than that of the major energy utilities.

Bundesverband WindEnergie (BWE)
[German Wind Energy Association]
Neustädtische Kirchstrasse 6
DE-10117 Berlin
info@wind-energie.de
Phone +49 (0)30 212 341 -210
Fax +49 (0)30 212 341 -410

BWE
German Wind Energy Association

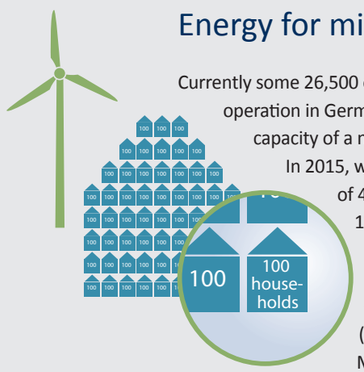
Wind Moves Germany

Information on the energy transition 2016

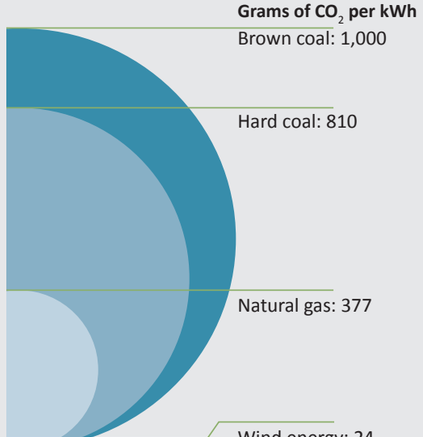
Wind has been moving people forward for centuries. It has been used to help people cross oceans, grind grain, and drain acreage. Today it plays a key role in the transition to renewable energies. The so-called Energiewende [energy transition] is one of the most important challenges of our times, and wind power is a pivotal part of the solution. About 12 percent of power consumption in Germany is covered by wind turbines. Today they already produce electricity more cheaply than new power plants that burn fossil fuels and accelerate climate change.

www.wind-energie.de/EN

Energy for millions



Currently some 26,500 onshore wind turbines are in operation in Germany. The average installed capacity of a new turbine is 2.8 megawatts. In 2015, wind turbines with a capacity of 42 gigawatts generated about 12 percent of the electricity consumed in Germany, supplying power to more than 22 million (three-person) households. (Source: WindGuard, Federal Ministry for Economic Affairs and Energy)



Wind slows down climate change

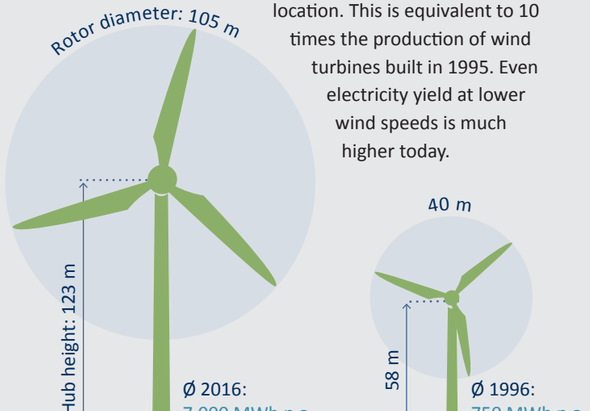
Wind power has the lowest CO_2 emissions of all forms of electricity. Greater use of wind energy helps to mitigate global warming.

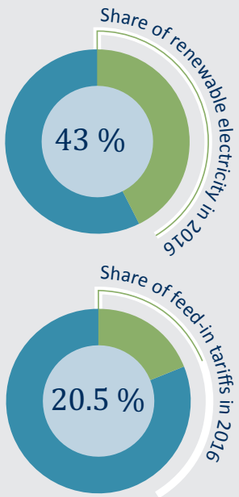
Lots of power, low costs

To stimulate the expansion of renewable energy, plant operators are guaranteed a rate of remuneration for feeding electricity into the power grid. From May 2017 public tender procedures (auctions) will determine the level of renumeration. Although wind turbines on land generate about 43 percent of Germany's green power, they only take up **20.5 percent of the total budget for feed-in tariffs** (Source: bdew).

Fewer turbines produce more electricity

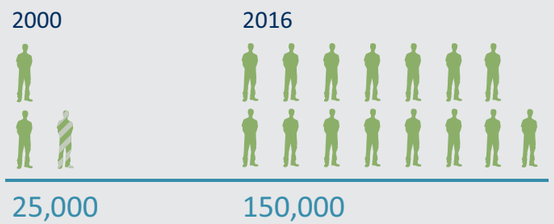
Due to extensive **research and development**, wind turbine technology has made an enormous leap forward in recent years. A single wind turbine in the newest performance class can supply between **2,000 and 3,500 three-person households** with clean power, depending on the location. This is equivalent to 10 times the production of wind turbines built in 1995. Even electricity yield at lower wind speeds is much higher today.





The cheapest source of power today

Thanks to the ongoing technological development of wind turbines, their power generation costs are now lower than those of new fossil-fuelled power plants. This makes **wind energy** on land the **cheapest available source of power** today. And unlike using fossil and nuclear energy sources, the exploitation of wind energy does not generate societal follow-up costs (nuclear waste storage, climate change, environmental degradation, health risks, and so forth).



Wind energy is an economic factor

The German wind energy industry, which exports 67 percent of its manufactured components and has a gross value of **14.5 billion** euros, makes an important contribution to the national economy. Numerous manufacturers, suppliers and service providers benefit from the planning, constructing and operating of wind turbines. Across Germany, about **150,000 employees** work in the industry (GWS Institute of Economic Structures Research 2015). Municipal tax revenues and income remain in the region and strengthen local purchasing power.

Lots of power, small spaces

A wind turbine uses comparatively **little space**. Once it has been constructed it generally takes up less than half the area of a football pitch, even taking access roads into account. The surroundings can continue to be used for agriculture or forestry.

Total land use

The 26,500 wind turbines in Germany take up an area only a tenth the size of Berlin. Wind energy technology also holds a lot of potential for upgrading, known as repowering. The replacement of older wind turbines with new, more powerful and more efficient designs can on average cut the number of turbines in half and triple the output of electricity. This facilitates an expansion of wind power that is able to save space.