



RENEWABLE ENERGY IN AUSTRALIA

Wind energy

A wind turbine is needed to capture the energy of the wind and convert it to electricity. The force of the wind causes the outer blades of the turbine to turn. This motion is transferred through a gearbox into a generator. The generator produces electricity which is fed through a transformer to a substation. See page 2 for a diagram showing this process.

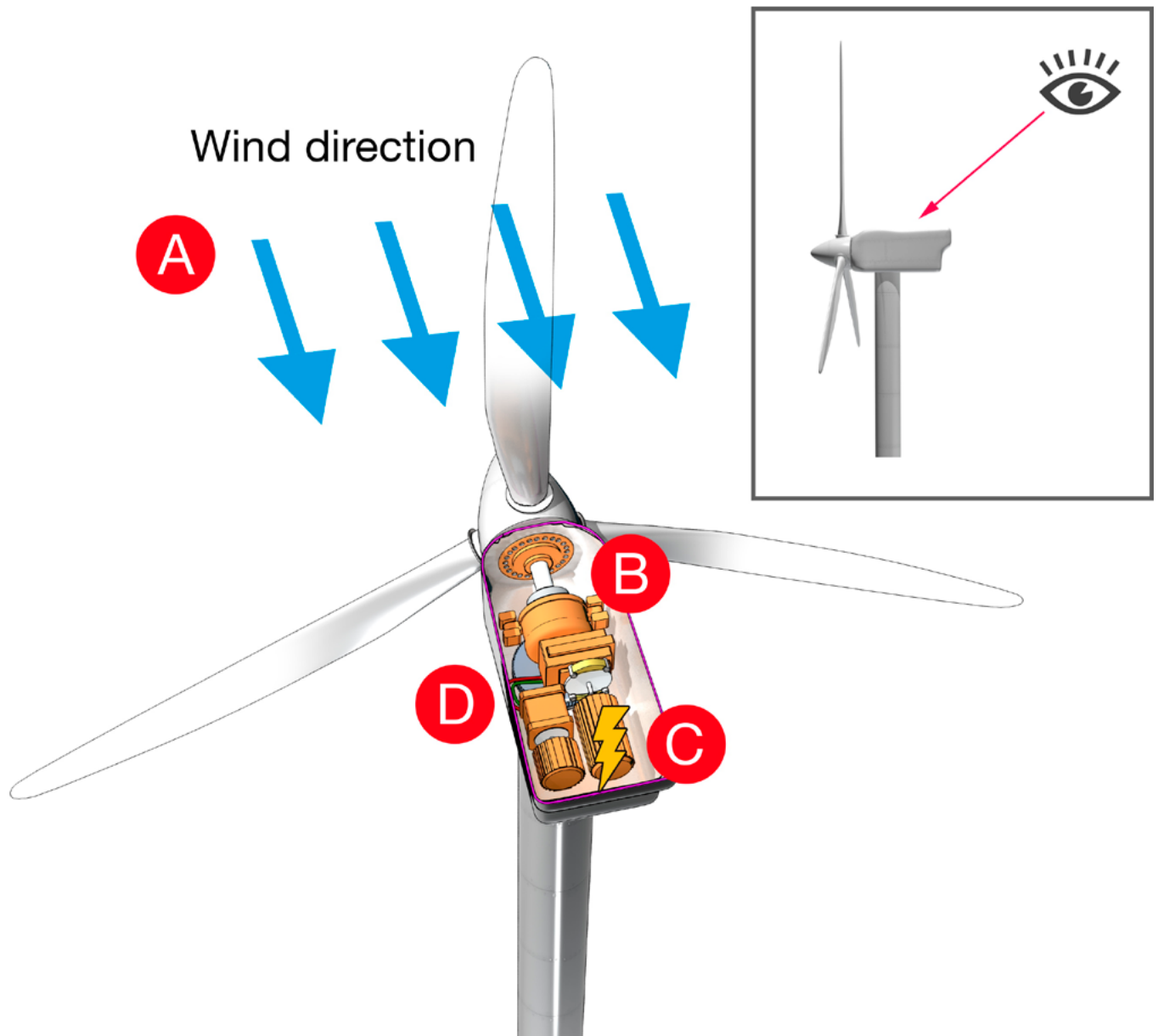


Facts about wind energy

- Wind energy is currently the fastest growing renewable energy source in Australia and is responsible for about 30% of the country's renewable energy. It is also the cheapest source of large-scale renewable energy.
- Wind energy is not a new source of energy. In fact, the first wind turbines began working over 50 years ago and now thousands of them are used around the world.
- A group of wind turbines located together is called a wind farm. Australia currently has 79 wind farms with approximately 2100 turbines. Locations of wind farms include Coober Pedy (SA), Ararat (Vic), Mt Emerald (Qld) and Kiata (Vic).
- Areas that have strong, consistent winds are the most appropriate locations for wind farms. South Australia has some of the best locations for wind farms in the country.



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Wind power in action

- A. The force of the wind causes the turbine's blades to rotate.
- B. This motion is transferred through a gearbox, making the rotations faster.
- C. The faster spinning motion causes a generator to produce electricity.
- D. The electricity is fed into the grid via a substation.