

Catching the Wind

Can companies turn fast-moving winds into a source of electricity?

Wind can blow off your hat. It can carry a kite skyward. It can push a sailing ship across the ocean. And increasingly, companies are harnessing wind power to make electricity.

Why wind? Most of the United States's electricity comes from burning **fossil fuels**, such as coal, oil, and natural gas. But there are some problems with these fuels. Burning them can cause air pollution and contribute to

climate change. The supply of fossil fuels is also limited. They're mined from the ground, and eventually they'll run out.

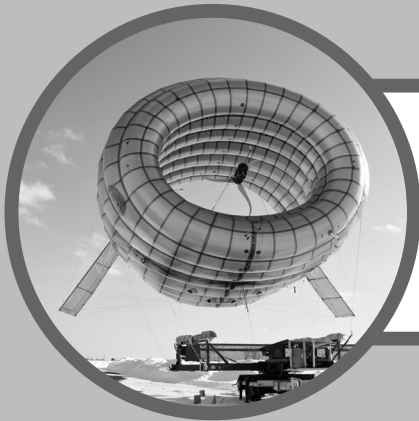
Wind, on the other hand, is a **renewable resource**. It will never be used up. That makes it an appealing source of power.

Going for a Spin

To turn wind into electricity, engineers build **wind turbines**. These machines look like

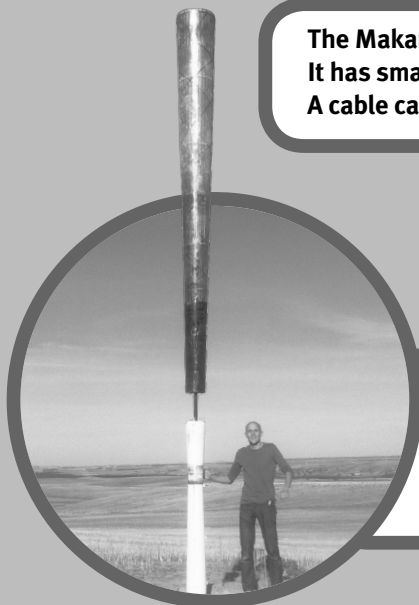
giant fans with three blades. As wind pushes the blades, the turning motion powers a generator that makes electricity.

Engineers aren't done improving wind-power machines. Below are three new designs being developed by different companies. Each company hopes its invention will be the one to make wind power as familiar and plentiful as wind itself.



The BAT (Buoyant Airborne Turbine) is a wind turbine set inside a giant tube-shaped balloon. The balloon carries the turbine up to 610 meters (2,000 ft) high, where the wind is stronger and steadier than winds near the ground. It can be set up in less than 24 hours. That would make it good for bringing energy to disaster areas where regular power has shut down.

The Makani is designed like a kite that flies in circles. It has small spinning blades that capture wind power. A cable carries the electricity down to the ground.



The Vortex doesn't spin at all. Instead, it sways like a tree branch in the wind. It doesn't capture as much wind power as a turbine. But its inventor says that because the Vortex has fewer moving parts, it would be cheaper to build and maintain than a turbine.