

## Eco=Kids Explore Wind Power

Wind is a natural resource that is readily available and virtually everywhere. Find out how the large wind turbines are built using a simplistic design and modern technology. Viewers get a short history of how wind power was used by the Chinese and the Dutch, as well as the two main types of windmills: vertical and horizontal. Our Eco=Kids hosts, Katrina and Christian, explore the use of wind power and how it is growing and becoming widely used throughout the world. The program highlights how wind power is an efficient way to use a clean renewable resource. The program highlights the positives of using wind power, and the drawbacks with wind power as an alternative to fossil fuel energy. There is a description of the parts of the modern-day windmill and how it generates electricity. Katrina and Christian learn that there are several places in the U.S. are the best places to build wind farms.

### Vocabulary used in this program

fossil fuels

green power

turbine

electric generator

### Questions

1. Why does wind power rely on solar power? (it's the sun that heats the air, the uneven heating causes wind)
2. What is the difference between an 'eggbeater' style windmill and 'propeller' style? (one is a vertical windmill, while the other is the horizontal type)
3. What are the 4 main parts of a windmill used in a wind farm? (tower, nacelle, mechanical rotor, electrical generator)
4. How do windmills adjust to 'capture' the most wind? (they pitch—or move toward the best flow of air)
5. What are the positives of using wind power?
6. What are the negatives of using wind power?
7. Geographically, what types of places are better for wind farms? (flat, mountain passes, plateaus, plains)

For more information to help understand wind power:

From Windmills to Whirligigs

<http://www.smm.org/sln/vollis/index/frontvollis.html>

National Wind Technology Center

<http://www.nrel.gov/wind/>

Kid Wind Project

<http://www.kidwind.org/>