



Hancock County Wind Energy Center

Overview

- Located in Hancock County, Iowa
- Owned and operated by a subsidiary of FPL Energy
- A 98-megawatt wind generation plant
- Operates 148 660-kilowatt Vestas turbines that generate enough electricity to power 33,000 homes
- Each turbine is 213 feet tall from the ground to the hub in the center of the blades
- Began commercial operation in December 2002

Benefits

- Employs a staff of eight
- Adds tax base to Hancock County
- Provides economic stimulus of landowner lease payments
- Creates no air or water pollution
- Uses no water in the generation of electricity
- Allows land to remain in agricultural use



About FPL Energy

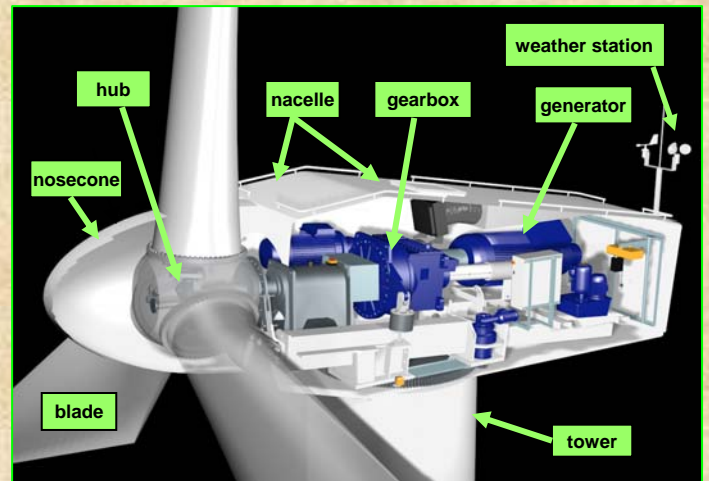
- A leading clean energy provider operating wind, natural gas, solar, hydroelectric and nuclear power across the nation
- More than 16,000 megawatts of generating capacity in 25 states and Canada
- The largest wind generator in the country with nearly 60 facilities in 16 states and Canada
- A subsidiary of FPL Group, Inc., with headquarters in Juno Beach, Florida

How It Works

Wind turbines work on the same principle as a child's pinwheel. When you blow on a pinwheel, the blades spin around. Same with a wind turbine.

When the wind blows against the blades of the wind turbine, the blades slowly rotate. The blades are connected to a drive shaft inside the large box (called a nacelle) that sits on top of the tower. The drive shaft turns the generator, which makes the electricity. Each wind turbine operates independently of the others. Each is, essentially, an individual power plant.

The turbine has a weather station on the top that tells it the wind speed and wind direction. That information is sent to the turbine's computer so that the computer can move the top of the turbine (the nacelle and blades) so that the blades are always facing into the wind. The nacelle can turn 360 degrees.



The electricity is carried in cables from the generator down the inside of the tower, then underground to the site's substation. The electricity then goes into the offsite transmission lines and is used by the local utility to serve its customers in the region.