

# Sound pollution from wind turbines

*Wind turbines create noise from either the blades moving through the air or from the mechanical hub that produces the electricity. Sounds from wind turbines are a problem for some who live closest to the machines.*

## 2 Pulsing sounds

**Outdoors** Turbines may appear to move slowly, but the tips of their blades often reach speeds of more than 100 mph. This, coupled with wind conditions that may include faster-moving air at the top of the arc and slower winds at the bottom, can produce a pulsing or oscillating sound.

**Indoors** Low-frequency sounds can penetrate walls and windows and are sensed as vibrations and pressure changes.

## 1 Air-foil turbulence

Sound is generated by air moving over the surface of the blade or at the trailing edge of the blade called "vortex shedding."

## 3 High-pitched sounds

Some noise may come from the nacelle, or hub: a high-pitched whining similar to a jet engine, but not as loud.

## 5 Shadows

The flickering shadows of rotating turbine blades at certain times of the day can also disturb residents.

## 4 Distance differences

Standing beneath a turbine may not be as noisy as standing further away. Depending on wind conditions, some types of sound increase with distance before becoming quieter.