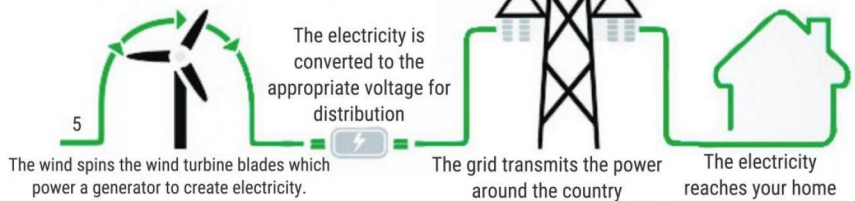
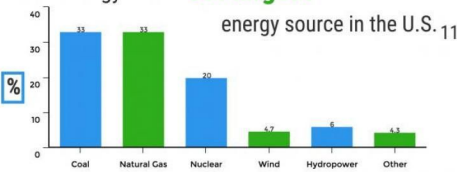


THE PROS, CONS, AND FUTURE OF WIND ENERGY

How Wind Energy is Harvested



Wind Energy is the 5th largest



Major energy sources and percent share of total U.S. electricity generation in 2015

PROS

Wind Energy costs **\$20/MWH**₂ VS Coal Fuel costs **\$109/MWH**₁₀
MWH=Megawatt hour

In the last 5 years, **Wind Energy costs have decreased 50%** while fossil fuel costs have increased₂

A **single** 1-megawatt wind turbine in one year can **offset 1,800 tons of CO2** produced from burning coal

= **Planting 1 square mile of forest**

CONS

Top 5 Wind Energy Producing States⁸

In 2012, there were **600,000 bat fatalities** due to sounds emitted from U.S. wind farms



Approximately **200,000 Birds** are lost per year due to blade collision in the U.S.

THE FUTURE

The Vortex Bladeless

A **BRAND NEW** bladeless wind turbine that utilizes the swirling motion of the wind to shake the structure back and forth. At the base of the cone are two rings of repelling magnets and when the structure sways one way the magnets go the other which creates kinetic energy that is turned into electricity.

No blades=No bird collisions

Is Bladeless



It emits little to no sound and **doesn't disturb bats**

Overall it costs **40%** less than the standard wind turbine and still yields similar environmental benefits on CO2 emissions

1) The U.S. Department of Energy 2) American Wind Energy Association (AWEA) 3) AWEA 4) Oxford Bioscience Journal 5) (Image and Information) Office of Energy Efficiency and Renewable Energy (EERE) 6) Wired 7) New Atlas 8) EERE 9) The Vortex Bladeless 10) Nuclear Energy Institute 11) U.S. Energy Information Administration