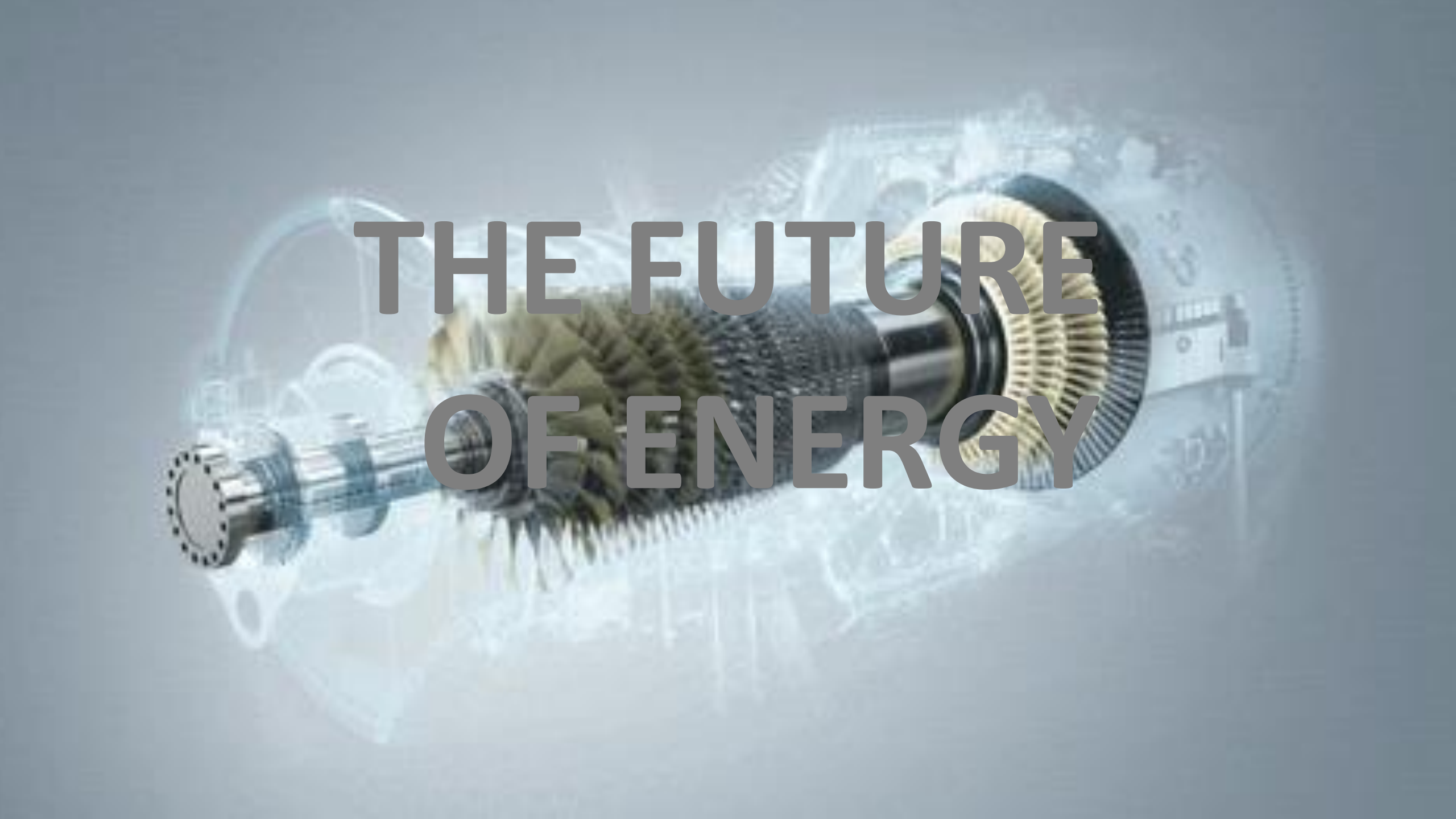
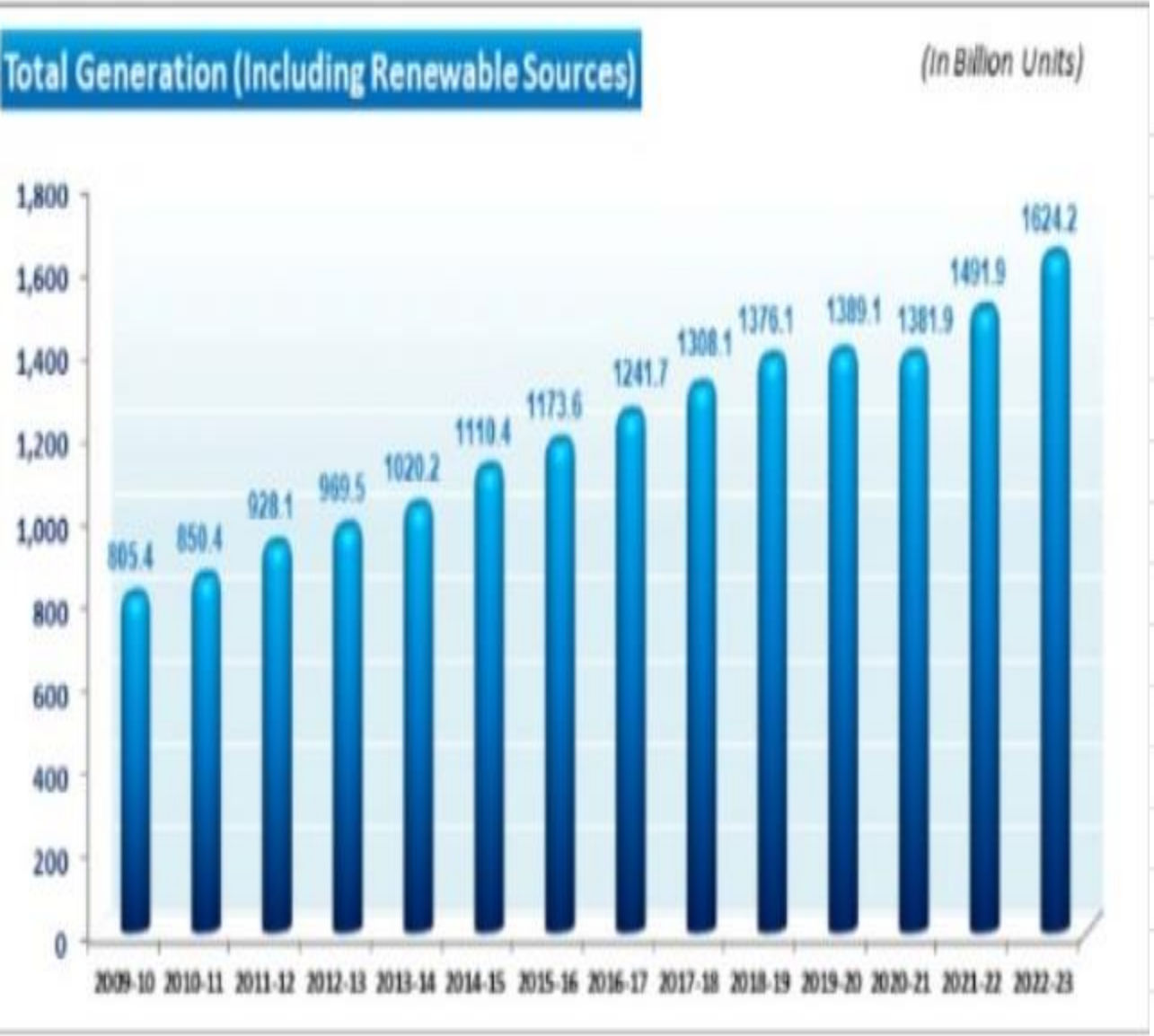

THE FUTURE
OF ENERGY

eneration (Billion Units)



Total Generation and growth over previous year in the country during 2009-10 to 2023-

Year	Total Generation (Including Renewable Sources) (BU)	% of growth
2009-10	808.498	7.56
2010-11	850.387	5.59
2011-12	928.113	9.14
2012-13	969.506	4.46
2013-14	1,020.200	5.23
2014-15	1,110.392	8.84
2015-16	1,173.603	5.69
2016-17	1,241.689	5.80
2017-18	1,308.146	5.35
2018-19	1,376.095	5.19
2019-20	1,389.102	0.95
2020-21	1,381.855	-0.52
2021-22	1,491.859	7.96
2022-23	1,624.158	8.87
2023-24*	286.176	-0.72

SMALL SCALE WIND ENERGY DEVICE

PROBLEM STATEMENT

We aim to make a safe,portable means of producing wind powered energy for personal use.Our design will be capable of producing more than energy power and will also be able to self regulate its speed to prevent uncontrolled rotation.

SMALL SCALE WIND ENERGY

- The process by which the wind is used to generate mechanical power or electricity is known as small scale wind energy.

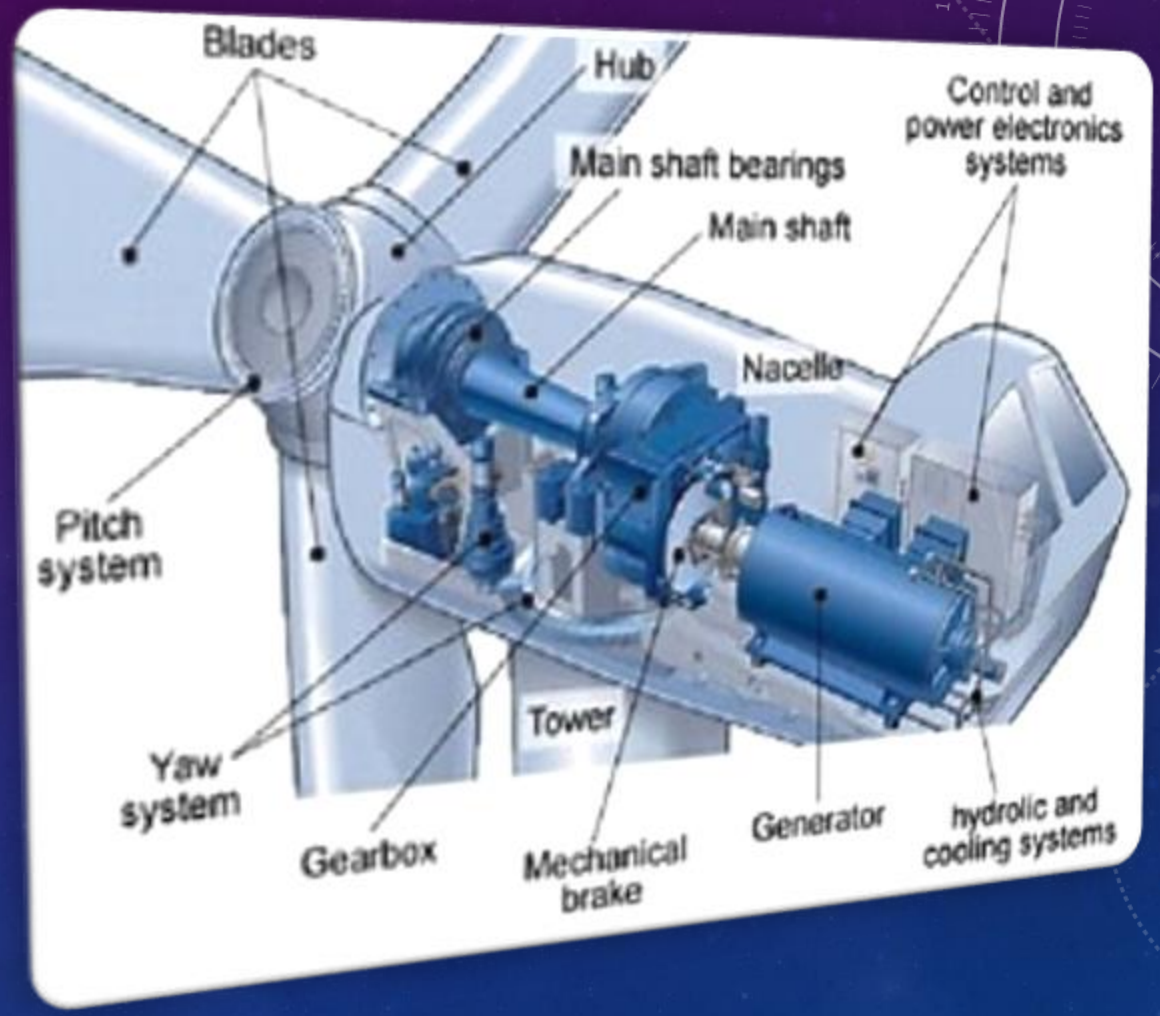
STRUCTURE OF WIND ENERGY

ROTOR BLADE:-

- It is made up of glass fiber.
- The speed of rotor blade is 100mph to 180mph.

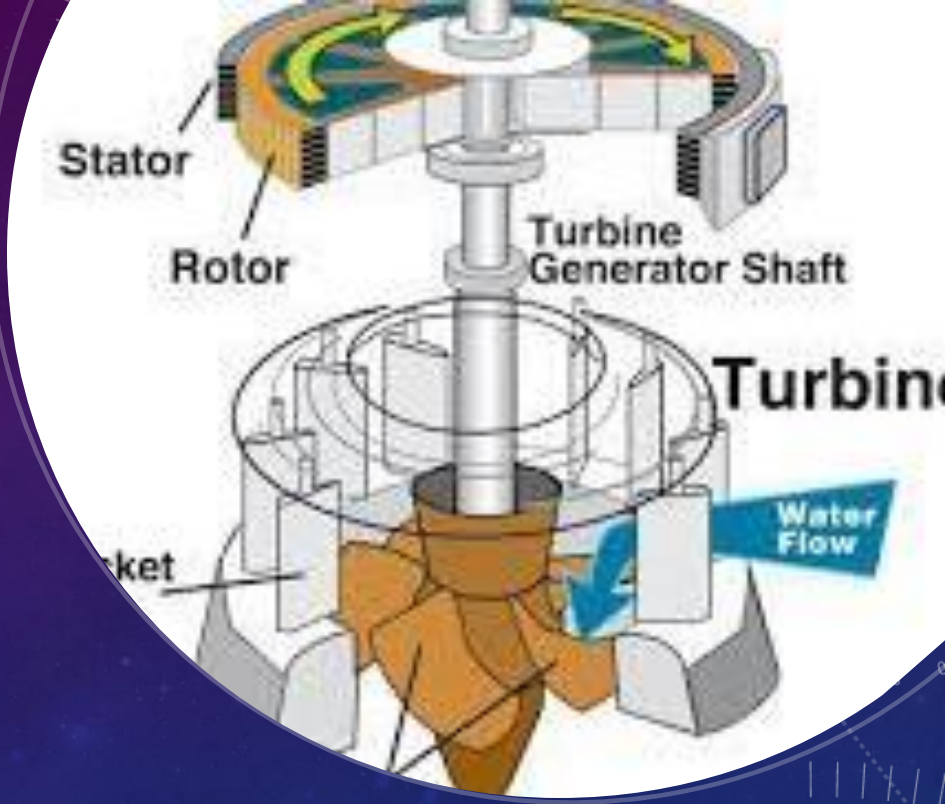
By using aerodynamic force from the rotor blades,which work like an airplane wing or helicopter rotor blade.

It helps a wind turbine turns wind energy into electrical energy.



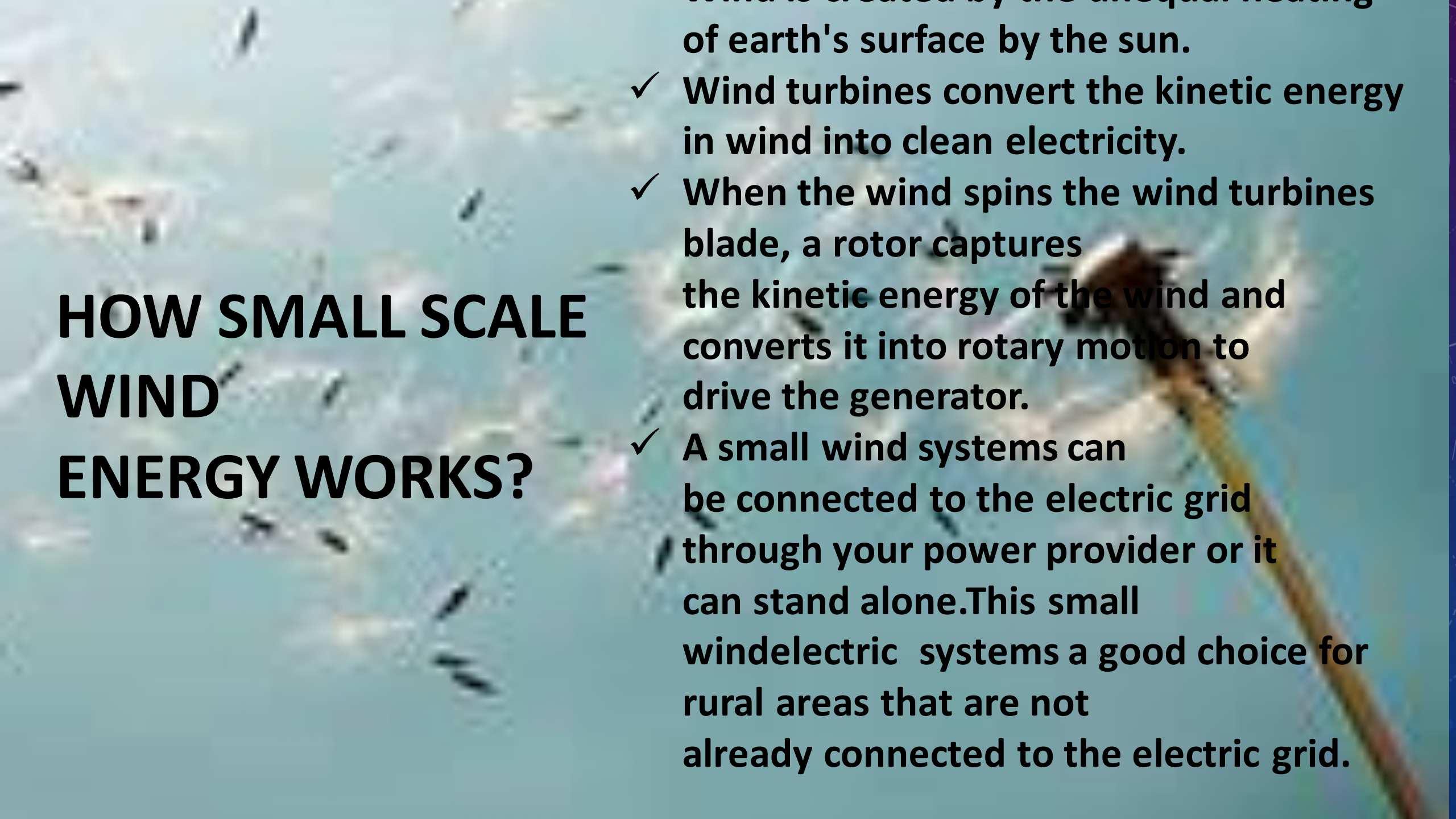
GENERATOR:-

- The wind turbine generator converts mechanical energy to electrical energy



ROTOR BRAKE:-

A rotor brake prevents the motion of the bladder in the event of power transmission maintenance and stops the wind turbine if there is a failure of the bladder pitch system.



HOW SMALL SCALE WIND ENERGY WORKS?

of earth's surface by the sun.

- ✓ Wind turbines convert the kinetic energy in wind into clean electricity.
- ✓ When the wind spins the wind turbines blade, a rotor captures the kinetic energy of the wind and converts it into rotary motion to drive the generator.
- ✓ A small wind systems can be connected to the electric grid through your power provider or it can stand alone.This small windelectric systems a good choice for rural areas that are not already connected to the electric grid.

MAINTANENCE OF WIND ENERGY DEVICE

- With proper installation and maintanence a small scale wind electric system should last up for twenty years.
- Checking and tightening bolts and electrically connections as necessary
- Checking machines for corrosion and the guy wires for proper tension.
- Checking for and replace any worn leading edge tape on the turbine bladder if appropriate.
- Replacing components such as turbine bladder and bearings has needed

USES OF SMALL SCALE WIND ENERGY

- Small wind electric systems are one of the most effective home based renewable energy system with zero emission and pollution.
- It lowers your electricity bills by 50%-90%.
- It helps you avoid the high costs of having utility power lines extended to a remote location.
- Help uninterruptible power supplies ride through extended utility outages.
- These can also be used for a variety of other application,including water pumping on farms and ranches.


THANK YOU