

Home Wind Turbine - Electricity From The Wind

By Andy O'Sullivan

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Facts and features of a home wind turbine. Find out how you can build your very own wind turbines and generate electricity from the wind.

Home Wind Turbine - If you are into conserving energy, there's good news for you as it is now possible to have your own small-scale wind turbine at home to generate free supply of electricity! Even better is the opportunity for us to make our own, without having to rely on the professionals.

A home wind turbine makes power by spinning a generator. The generator is attached to the rotor, made up of three aerodynamic blades, that is then attached to a tower. To keep the turbine facing the wind, the rotor has a tail, which acts as weather vane.

The generator is basically an electric motor. As the coils in the motor spin past the magnets, an electric current is produced. The power produced is stored in batteries, which are connected to an inverter to change the direct current to alternating current, which can then be used to power your home. The advancement of motor efficiency is the reason wind turbines have become so popular for home use.

Depending on your area's wind conditions, the tower can vary in length. If you live near the sea where it is windy, the tower can be shorter, but in low-wind areas the tower needs to be taller to catch as much wind possible.

Over time the blades have improved drastically as researchers developed lighter, stronger, more efficient blades, with the capability of turning even in the lightest breeze. Back in the day, wind turbines had five blades, and looked similar to windmill water pumps, but recently they have moved to three blades, taking the form of over-sized airplane rotors. Like the tower, the blades vary in size, according to your wind conditions and energy requirements.

Things To Take Note:

The Size – Home wind turbines generally operate better in large areas that cover an acre. This is because wind flow is not deflected by any nearby buildings.

Wind Speed - The recommended wind speed should be at least eleven miles per hour, but if that isn't the case then you may have to use a taller tower and larger blades to catch higher altitude winds.

The Uses - If you could use the turbine for other purposes, such as pumping in water from outside, then it may be useful than you think. This is the reason you see so many windmills scattered over farms - they help pump water from reservoirs to the farmhouse.

Power Supply - This is why so many people want to get a small wind turbine in the first place - to keep the house powered during blackouts, and prevent economic losses. Although the wind turbine may not power the house all the time, its stored power can be used in emergencies, when the utilities are just not enough.

The great thing about technology is that it is always improving. So much so that motors have become smaller, efficient and cheap enough for us to attach a few small turbines right on the roof, and produce the same power as a larger turbine on a tall tower.

Although professional home wind turbines can run into several thousands of dollars, it is possible to make your own for a tenth of the price, with components found at home and your local hardware store. Furthermore, the U.S. offers both state and federal tax credits that you can use to offset the installation cost. So not only will you reduce your electricity bill, but also your tax at the same time.

If you are interested to learn how to build a home wind turbine, check out our website at:
<http://www.greeneearth4energy.com>

You may want to get your home wind turbine installation guide here:
<http://www.earthenergyguide.com>

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Andy O Silliven is an engineer and author in the fields of electrical engineering. He enjoys writing about the topic and keeping up with current events and research in the area of renewable energy sources.

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