Build your own electricity-producing wind turbine

Among the sources of clean and renewable energy, wind energy is one of the most viable ones being that is is easily obtained anywhere. To produce energy from the wind, all that is needed is a generator, which will transform mechanical energy from the moving blades into electricity. Wind power is plentiful, renewable, widely distributed, clean, uses little land, and produces no greenhouse gas emissions during operation, reducing pollution of ecosystems and the irreparable damage that leads to exploitation of fossil fuels like coal, gas or oil.



Buying a wind turbine for your home can set you back a pretty penny, but if you've got a bit of time and energy, why not build your own? This project could not only be fun to do but it will definitely save you tons on your energy bill.
To build your own wind generator you'll need a car alternator, propellers and directional vane, mount and stand, and welding equipment. You can either purchase or create the propellers yourself, but if you choose to build them keep in mind that they should have a leading edge that is curved, so that passing air will force it away from the source. Then you must make sure they're balanced – the blades should have approximately the same weight and their center of gravity must be centered.



Mounting several propellers to a rotating surface, then mounting a directional vane to the rear of the rotating wheel's mount will turn wind energy into a mechanical force – the rear vane will point the propeller assembly at the wind

source. Then you have to build a mount and stand to hold the alternator – you can use a wooden board, for example.



Connect the alternator to the propeller assembly by welding the alternator directly to the rotating wheel, or by welding a suitable automotive pulley to the wheel’s surface then driving the alternator with a belt, which allows easier maintenance.

In the following video you will see how you can build the alternator yourself:

Sursa video: youtube.com

Finally, mount the alternator onto the frame of the stand, below the propeller assembly. Once you have all the generator components fastened together, mount it on your pole or tower. Now that you’ve erected the wind generator connect the wires to your battery with a charge controller in between to prevent over-under charging.

 *[Image source: www.windstuff.org]*

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