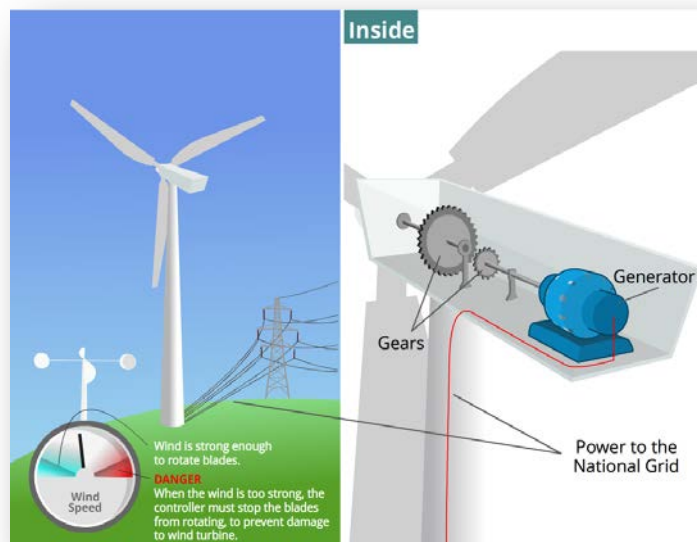


Wind Turbines

Wind turbines use the wind's lift forces to rotate blades that turn a rotor which then creates electricity (small wind turbines generate direct current (DC) electricity).

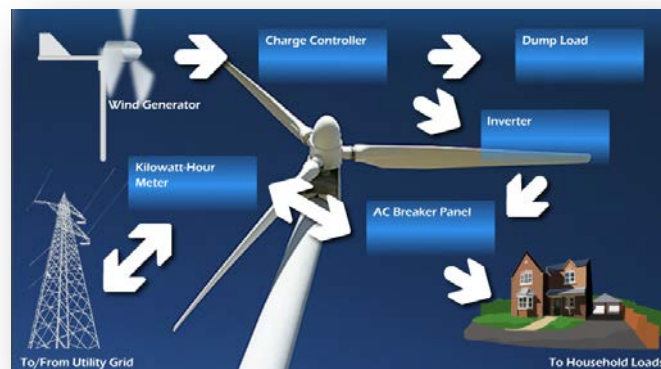
Domestic wind power is another renewable energy technology which is gaining popularity.

Electricity is generated by the wind turbine. The electricity from it smoothed out by a piece switch gear, and then sent to the main fuse board. The idea behind smaller (and most common) domestic wind turbines is that it will displace your "base load" electricity. That is to say the electricity it generates (75-250W) is less than the minimum amount of electricity your house is using. So at all times you will consume all of the electricity it is making, and so none will ever escape out onto the national grid.



The 3 blade wind turbine we see most commonly has been chosen due to physics showing that it takes the most energy out of the wind possible. Older turbines, which have more blades, have since been proven to be less effective over a range of wind speeds. The essence is that trying to block the wind is the wrong way to go about it; the best solution is to "catch" the wind, and be dragged along by it. Hence 3 blades, and also the particular pitch (angle) they are set at.

Because wind is an intermittent resource, you can't expect it to supply all your electricity needs. The idea with wind is that it will generate electricity when it is windy, and when it is calm, you'll need to use another energy source. So if you buy a wind turbine, and see that it is rated to generate 100W, then you can hope to get an average 33W from it. If it is rated to generate 750W, then you'll get an average of 250W. Average does mean average although it might be generating 0W, or might be generating 600W, or any variation.



Some areas within the UK are now beginning to use a mixture of Solar and Wind farms in order to meet the energy needs and targets for renewable energy production set by the country.

