

Climate Change

Climate Change is one of the most serious environmental threats facing the world today. For the UK, climate change means hotter, drier summers (more heat waves), milder, wetter winters, higher sea levels and increased flood risk to coastal areas. It is now widely recognised that human activity is the primary driver of the observed changes in climate.

Under the Kyoto Protocol the UK is obligated to reducing its greenhouse gas emissions to 12.5% below 1990 levels by the year 2012.

Introduction

The UK has, in the form of wind power, the largest renewable energy source in Europe. *

Wind is an abundant source of energy and theoretically will never run out. Wind is a sustainable fuel source that doesn't produce pollutants of any kind and its energy can be harnessed without causing any damage to the environment.

How it works

Wind turbines harness the wind to produce energy. When the wind blows, the rotor blade stops a percentage of the wind. That percentage is converted into energy.

Wind turbines use the wind's lift forces to turn aerodynamic blades that turn a rotor which creates electricity.

Open, high, flat areas are best suited to wind turbines, but they can also be used to provide domestic wind power on a smaller scale than those you see dotting the landscape.

* *British Wind Energy Association*

Performance and costs

The performance of domestic wind systems depend upon the size and type of turbine and location. The optimum size of the average household is typically between 1.5–3 kW. However smaller and larger sized turbines can be installed depending upon application systems. Turbines up to 1kW will cost around £3,000 and larger systems between 1.5kW and 6kW will cost between £4,000 and £18,000 and save between 3,390 and 11,300 tonnes of CO2 each year.

Roof mounted turbines are usually rated at 1kW, cost approx £1,500 and may reduce an average annual electricity bill by approximately one third.

A Building Notice is required for roof mounted turbines, the fee is currently £109.

Grants

Braintree District Council offer £100 per rated kW installed by the wind turbine.

Funding is also available from the Low Carbon Buildings Programme – 0800 915 0990, administered by the Energy Saving Trust.

They offer £1,000 per kW installed for a small wind turbine, up to a maximum of £2,500 per household, or 30% of the total installed cost.

There are certain energy saving measures you must already have installed before applying for funding.

You are advised to check on grant availability before undertaking any works.

NB No works must commence prior to receiving written confirmation of grant approval.

Additional funding is also available through Renewable Obligation Certificates (ROCs) these are payments from the UK Government, thus further reducing energy costs for users.

Installers

Please refer to the British Wind Energy Association and also the Low Carbon Buildings Programme.

Maintenance

Wind turbines do require service checks every year or so, in order to ensure they are running efficiently.

Planning Permission

You are advised to discuss your plans with our Planning Department before committing to the project.

Did you know?

Wind power in the United Kingdom passed the milestone of 2GW installed capacity on 9 February 2007 with the opening of the Braes O'Doune wind farm, near Stirling. The UK became the 7th country in the world to reach this capacity. The world leader in wind power is Germany with 20.6 GW installed.

Green Electricity

You can choose who supplies your electricity and even where that electricity comes from. 'Green' electricity generated from renewable resources is available from all electricity suppliers, in line with Government obligation on electricity companies to source 20% of their supply from renewable energy.



Energy saving measures you can do now:

1. Turning down your thermostat by 1°C could cut your heating bills by up to 10% and save around £30 per year.
2. Close your curtains at dusk to stop heat escaping through the windows.
3. Do not leave appliances on stand-by or on charge unnecessarily.
4. Only boil the amount of water you need in your kettle.
5. Always turn lights off when you leave a room.
6. Replace ordinary light bulbs for compact fluorescent lamps (energy saving bulbs). They use around one quarter of the electricity compared to ordinary bulbs.
7. When buying new appliances, look for the energy efficient logo, try to buy the most energy efficient model you can afford.
8. Only use your dishwasher and washing machine when you have a full load, you'll save money and water.
9. Whenever and wherever possible hang your clothes out to dry.
10. Avoid short journeys, a cold engine uses almost twice as much fuel.

Further sources of information are available from:

Energy Saving Trust
0800 512 012 www.est.org

British Wind Energy Association - 0207 689 1960
www.bwea.com

The local annual average windspeed is 6m/s. An approximate figure for your location can be checked on:

www.dti.gov.uk/energy/sources/renewables-explained.wind-energy

If you would like to calculate your carbon footprint and find simple ways of reducing it visit:
actonco2.direct.gov.uk

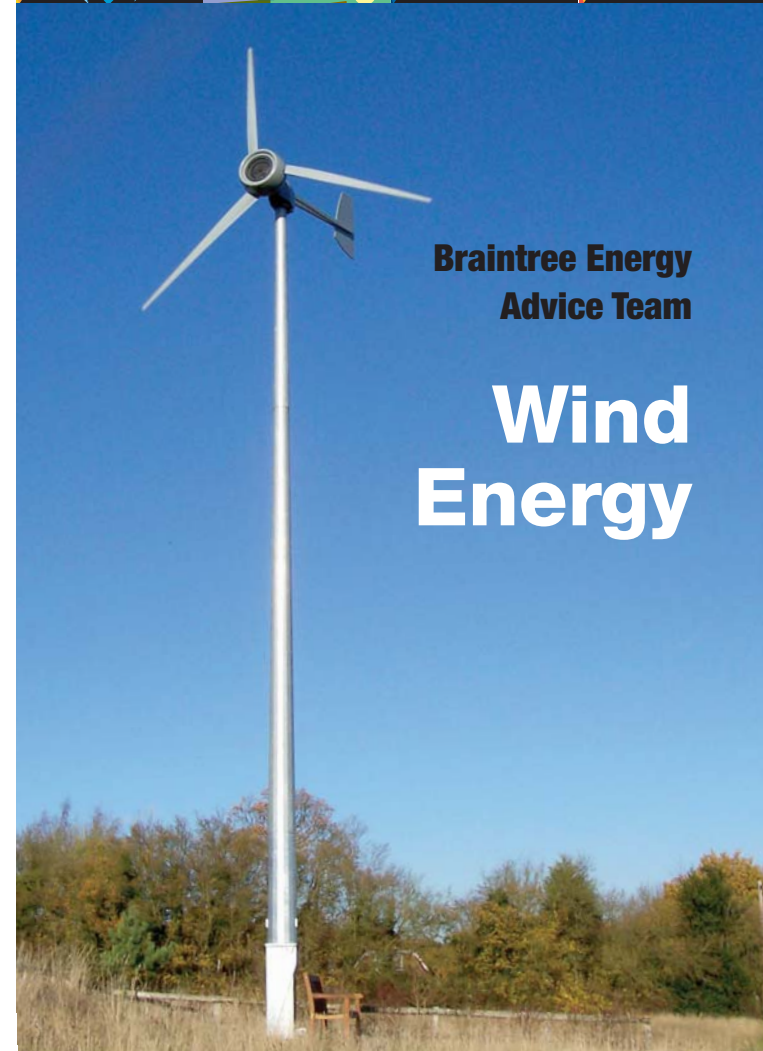
Braintree District Council has produced a planning guide on installing wind turbines and solar panels.

Please call 01376 552525 or e-mail

planning@braintree.gov.uk or visit our website
www.braintree.gov.uk

**For further information or advice,
please contact Anna Billings or Wanda Smith on
01376 552525 extension 2778/2255
or email beat@braintree.gov.uk**

Alternative leaflets are available on other types of renewable technologies from Braintree District Council.



**Braintree Energy
Advice Team**

Wind Energy