SMALL SCALE WIND TURBINES IN THE BRECON BEACONS

OVERVIEW

This information sheet is for individuals who are considering the installation of small scale wind turbines on their property.

The NPA acknowledge the significant environmental benefits of energy efficiency and renewable energy and believe that their potential is vast and under utilised. Energy efficiency improvements should always be considered before fitting renewable energy.

Small-scale renewable energy schemes, for private or community use, will generally be acceptable by the NPA, but must satisfy stringent environmental and design factors. This document will describe many of the relevant issues you need to consider before consulting one of the NPA's Planning Officers.

WHAT TYPE OF SYSTEM SHOULD I CHOOSE?

The issue of stand-alone or grid-connection is only relevant to RE systems which generate electricity, such as wind.

Stand-alone systems are often used as a source of power in remote locations where conventional methods of supply are expensive or impractical, for example where new power lines would be required. The wind turbines are generally connected to batteries, which are charged when spare energy is produced and provide power when needed, for instance during periods of low wind speeds. It is common to combine this with a diesel generator for use when additional power is required (for your nearest Biodiesel supplier please contact the National Park Authority).

Grid-connected: A wind turbine can be connected to the local electricity grid and export any excess electricity produced to the grid, with the agreement of the network operator and an electricity supplier. In periods of high wind, turbines may produce more power than is needed which allows excess electricity to be exported back to the grid. Conversely, when domestic demand is high extra electricity can be purchased from the grid through an electricity supply company. For information regarding connection to the grid please contact the National Park Authority on the number at the bottom of the sheet.

Above: Typical Small Scale Turbine

Below: A Building Mounted Turbine

COST AND MAINTENANCE

Wind turbines have proved to be very reliable and can have a design life of 25 years or more. Costs vary due to a range of factors such as size of turbine, the height of tower, length of cabling required and geographic location. A system to provide all the electricity for a medium sized detached house might cost in the region of £10,000-£20,000.

Grants and Payback

At present the typical financial payback period on micro-wind is 7-12 years. A domestic micro-wind turbine could save an average household (with an average wind regime) approximately a third of its typical energy requirements. The larger micro-wind systems can provide nearly all the energy required in a home. A number of grants are available for wind turbines. Please contact the NPA for current information.

Which installer do I choose:

The NPA has a list of certified local installers on their website. Alternatively please contact the NPA on the number below for further information.

For further information contact:

Brecon Beacons National Park

Plas y Ffynnon, Cambrian Way,

Brecon, LD3 7HP

Tel: (01874) 624437

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www.beacons-npa.gov.uk