



## ***Free energy for your home?***

**The Footprint Trust is often asked for our guidance on solar and wind technology systems for the home or small businesses.**

Before even thinking about renewable energy investment look at energy conservation. This costs much less and brings more immediate results.

***Cavity and loft insulation costs around £300 and pays for itself within a couple of cold winters.***

***Turning off TV monitors etc currently left on standby could save you around £50 pa.***

***Replacing an old fridge with an A+ energy efficient one could reduce your running costs by £50 per year.***

***A new condensing boiler could reduce your heating bills by up to a third.***

***More tips can be found via our website; [www.footprint-trust.co.uk](http://www.footprint-trust.co.uk)***

**Having reduced your energy usage we would suggest that you look at the Energy Savings Trust website for more information on solar, wind and other renewable technologies; [www.est.org.uk](http://www.est.org.uk)**

***Check with the IW Council's Planning Services on 823552– as you may need permission to install renewable energy systems. <http://tinyurl.com/3akh6d>***

*It may be beneficial to have an energy audit carried out to ascertain the best technology for your circumstances. These cost around £300. [www.encraft.co.uk](http://www.encraft.co.uk) Tel 01926 312159*

**Grants are available for households, businesses, charities and churches. More details can be found at; [www.lowcarbonbuildings.org.uk](http://www.lowcarbonbuildings.org.uk)**

### **Solar: Photovoltaic**

Photovoltaic (PV) systems use cells to convert solar radiation into electricity. The average domestic system, costs can be around £5,000- £7,000 per kWp installed, with most domestic systems usually between 1.5 and 2 kWp. Solar tiles cost more than conventional panels, and panels that are integrated into a roof are more expensive than those that sit on top. You may be able to sell your surplus energy back into the National Grid.

### **Solar: Hot Water and Heating**

Solar water heating could provide up to 75% of your hot water pa. The typical installation cost for a domestic flat plate collector system is £2,000 - £3,000. Evacuated tube systems will cost £3,500 - £4,500. Thermal Store, which provides hot water and central heating, will cost around £5,000 to £7,000 supplied and fitted.

### **Wind energy**

Britain is the windiest country in Europe and thus the natural choice for wind power. A good source of information on local wind speeds is the NOABL database which can be accessed from the British Wind Energy Association [www.bwea.org](http://www.bwea.org). For any wind turbine to work at full capacity it must not be obstructed by buildings or trees. Any excess electricity can be exported to the grid and sold to an electricity supply company. Systems up to 1kW will cost around £3,000 to install.

### **Biomass**

This involves the burning of waste wood, available from tree surgeons, specialised pellets or crops to produce energy. The approx installation cost of the stove and other equipment is around £6,000. Grant details from [www.bioenergycapitalgrants.org.uk](http://www.bioenergycapitalgrants.org.uk)

### **Ground Source heat pumps**

These transfer heat from the ground to a building. Every unit of electricity used to pump produces up to 4 units of heat. Cost around £10,000.

*Always make sure that those undertaking work are properly qualified to do so and that Building Regulations are followed.*

These websites may assist; [www.iwbuywithconfidence.info](http://www.iwbuywithconfidence.info)  
[www.niceic.org.uk](http://www.niceic.org.uk) [www.corgi-gas-safety.com](http://www.corgi-gas-safety.com)

*For guidance purposes only. March 2008*