

# Solar Electric and Thermal System

## Brightwalton, North Wessex Downs AONB



In December 2009/ January 2010, a grid connected 2.6 kWp roof mounted, solar electric array and a 3 collector solar thermal system was installed and commissioned by Ardenham Energy Ltd on a new build cottage in Brightwalton, in West Berkshire. The installation was undertaken following the award of a Low Carbon Building Programme Grant.

The electricity generated is synchronised with the grid supply via an inverter and will be used to supply clean energy to the property. Energy not used by the property can be exported to the grid and used elsewhere. The 2.5kWp array is almost silent in operation and will generate around 3600 kWh of greenhouse gas free electricity each year. The in roof solar hot water system will supplement the biomass boiler to provide hot water for the property.

The installation comprises:

- 3 x Velux solar Collector system
- 16 no 170 Wp crystalline Modules
- Fronius IG20 and Mastervolt G83/1 compliant inverter
- 1 phase pulsed kWh Meters
- DC and AC switchgear

**Ardenham Energy Ltd** is an engineering contractor certified under the UKMCS Low Carbon Buildings Scheme for grant aided projects ([www.lowcarbonbuildings.org.uk](http://www.lowcarbonbuildings.org.uk)). The company has extensive renewable energy engineering project experience and can provide a full service for wind systems, solar PV (electric), solar hot water systems, ground and air source heat pumps and backup power systems. These can be for domestic, governmental and commercial and non commercial buildings in the Home Counties and London region.

**For more information contact:**

Ardenham Energy Ltd  
Ardenham Court  
Oxford road  
Aylesbury, Bucks, HP19 8HT

Tel 01296 –331362  
Fax 01296 375747  
[www.ardenhamenergy.co.uk](http://www.ardenhamenergy.co.uk)  
[info@ardenhamenergy.co.uk](mailto:info@ardenhamenergy.co.uk)



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