

# Planet Energy Solutions

*Technology for a Sustainable Future*

## Some of our completed installations in 2010

The introduction of the Feed-in-Tariff (FIT) scheme on February 1<sup>st</sup> triggered a burst of renewed interest in Solar Photovoltaic installations which kept us busy throughout 2010. Whilst this was by far the major technology of interest we also arrange other low carbon installations. Confirmation in October's spending review that the Renewable Heat Incentive (RHI) scheme will be launched next Spring has seen a rise in enquiries for low carbon heating system for next year.

### **Private Dwelling, Potters Bar, Hertfordshire**

Between the announcement of the FIT scheme in February and the eventual closure of the LCBP Phase 1 grant scheme, there existed, for only a few weeks, a double bonus opportunity for anyone ready to install a zero carbon electricity generating system. During this short time window we were able to arrange for a modest 1.85kWp Monocrystalline Solar PV system to be installed, commissioned and registered as one of the first MCS certified PV systems of the new FIT scheme.

It had generated 1000kWh in the first 6 months and is estimated to recover capital outlay in under 9 years



### **Private Dwelling, Bragbury End, Stevenage, Hertfordshire.**

This project for a detached house to the south of Stevenage came as a referral from an earlier project in 2009. The south facing lower roof slope of the house measured 7.6m x 3m and was only just large enough to accommodate a 2.88kWp array using 16 x 180W Schuco



panels connected to a Fronius inverter. The installation including erection and removal of scaffolding had to be done inside a tight time window so as not to clash with a family wedding, only days later.

### **Private Dwelling, The Ryde, Hatfield, Hertfordshire.**



This client had been grossly over quoted for a 1.35kWp Solar PV system and had already handed over a deposit cheque before realising their mistake and contacting us.

We were able to advise speedy action to extract them from the contract and then obtained alternative quotes from accredited installers that resulted in a 2.88kWp solar PV system to a SMA inverter, over twice the initial size, being installed for a fraction more than the original quoted system. Had this situation had not been arrested the client would have not been able to claim payments under the FIT scheme which would have cost them dearly.

### **Private Dwelling, Ashden Essex.**



This Danish Kit house from the 80's was already a model of how homes should be built, with high levels of insulation and a ventilation heat recovery system. However, high electricity bills lead to an enquiry that we propose a range of solutions, one of which was to install a 3.78kWp Solar PV system mounted on the South East facing roof slope and is part of a staged programme of installations that will help this house achieve a very low carbon foot-print.

**Private Dwelling, Welwyn, Hertfordshire.**



Our Open House event in June attracted a lot of local interest. Having seen our systems go up, a neighbour made contact and we were pleased to arrange for this a 2.59kWp Solar PV system comprising 14 x 185W Monocrystalline panels to a Fronius inverter to be installed on the SSW facing roof slope during September.

**Private Dwelling, Danesbury, Hertfordshire.**



This double installation project involved both a Solar PV and a Solar DHW system. The alignment of the house meant we could use the South East facing hipped slope for a 3.96kWp Solar PV array and a four collector east-west split solar thermal system mounted above the main bedroom, for hot water generation. A large and very expensive model railway set built into the main loft space made this a complicated installation. The installations went in without a hitch in just 5 days at the end of November. The PV system has been registered to receive the feed in tariff payments and the Solar DHW system will be one of the first to be registered to receive RHI payments next Spring.

**Private Dwelling, Brookmans Park, Hatfield, Herts.**



Although the initial enquiry was for a solar thermal and solar PV installation, in the end these proved difficult to accommodate on the project. But the 3300 litre rainwater harvesting system survived and was installed by the builder at the start of this extension project to serve the garden irrigation system.

**Private Dwelling, Mardley Wood, Hertfordshire.**



Set on a heavily wooded hill the double garage of this house faces south east. Close proximity to neighbours however meant that a shallow pitch installation was required. We considered various panel layout arrangements for best use of this roof space and eventually settled on a mono-pitch array of 18 x 185W panels to create a 3.33kWp system. Linked via a Platinum inverter to a new MCB distribution board, the installation involved a substantial sub-frame to mount the panels and due to short day length and inclement weather working into the weekend was required.

**Commercial Barn Conversion, Caswell House, Brize Norton, Oxfordshire.**



This dairy barn at a farm on the outskirts of Witney has been transformed into a beautiful venue for weddings and functions. The original proposal was to install a large ground source heat pump system, which would have involved major ground works and commitments to heating this 'occasional use' building by electricity. During a Pre-Design meeting in 2009 alternative solutions and lifetime costs were considered. A 48kW automatically fed wood pellet boiler system with timber framed fabric pellet hopper is located in the old 'pig-shed' with hot water piped underground in a one-piece pre insulated pipe to the main building. Here it is connected to a multi-zoned underfloor heat distribution network and to two large DHW cylinders, one for the kitchen and bar, the other for the toilet block and was installed with our MCS accredited installer partner during the Spring of 2010.

### Private Dwelling, Burnham Green, Hertfordshire.



This grade listed cottage, in a conservation area, dates back to the 17<sup>th</sup> century. Keen to have a Solar Photovoltaic system on the house, the clients had contacted a number of installers previously who had expressed little or no interest. Although we too felt things could result in a drawn out effort for a negative result, we worked with the clients through the process and were delighted when they got approval to install a 2.59kW array on to the 20<sup>th</sup> century rear facing kitchen extension roof. In order to maximise generation Sanyo Hybrid PV panels were selected, which generate power from a wide range of light levels.

### Holiday Cottage, Helston, Cornwall



Another enquiry resulting from the Open House events this summer was for the installation of a Solar PV system to the client's holiday cottage located in Cornwall. Cables were already in place and the roof proved large enough to accommodate a 3.96kWp array, the largest we felt we could recommend under the current FIT rules.

For this project we selected 18 x 220W Romag panels, to serve a Fronius inverter and partnered with an installer we have worked with before, who have installation teams based in the West Country.

### Industrial Unit, Wembley, Middlesex



Confirmation in Octobers spending review that the RHI scheme will be launched next Spring saw a rise in enquiries for low carbon heating systems. One of these was from a photographic studio in Wembley requiring warm air heater for their 'warehouse' style work space.

Preferring a low carbon energy solution the client ordered the installation of an automatically fed BioAIR wood pellet space heater in late November with the specific requirement that it was to be operational for a New Years Eve party booking. The equipment arrived from Sweden the second week of December and despite a busy work schedule and heavy snow conditions, it was installed and operational before the start of the Christmas break.

### Private Dwelling, Planet Energy Solutions, Welwyn, Herts.



Keen to practice what we preach, we had both Solar DHW and Solar PV systems installed on our house in Welwyn. The south facing roof now has 3 x DH vacuum tube collectors along the ridge line that heat a 200 litre thermal store in the loft, alongside a new modulating gas boiler. During the summer it regularly reached the 80°C max shutdown temp. A 3.08kWp Solar PV array of 14 x 220W Sharp panels is connected to the houses distribution board via a Fronius inverter under the stairwell. After 10 months the PV system had generated 2850kWh and the Solar DHW 1750kWh, well above SAP 2005 estimates.

We offer pre-design advice and a wide range of sustainable energy options to home owners, authorities and businesses of every size. We offer to support our clients with regard to renewable energy systems from initial conception through to installation and beyond with well engineered and integrated, multi-technology solutions for both existing and new build, residential and commercial projects.

Please contact us if we can be of assistance.

***Planet Energy Solutions***

16 Carleton Rise, Welwyn, Hertfordshire, AL6 9RF

**Renewable Energy Systems**

Solar Heating, Photovoltaic, Wind Turbines, Biomass boilers, Heat Pumps, Sedum/Living roofs, Rainwater Harvesting, CHP Systems, Consultancy.

Email ~ [planetenergy@btinternet.com](mailto:planetenergy@btinternet.com)

Tel. 01438 712398

Web. [www.planetenergy.co.uk](http://www.planetenergy.co.uk)