



Grand Designs 10:10 Great British Refurbishment Competition Winning House, Bristol

Bristol couple Will Homoky and Catherine Beswick were chosen from 8,000 applicants to win energy improvements worth more than £20,000.

The competition was run by TV's *Grand Designs*, backed by presenter Kevin McCloud, and aims to improve energy use in the UK's houses, which cause 27% of total carbon emissions.

Solarsense UK of Bristol installed the 1.9kWp Sanyo HD Hybrid array, in one day of installation by two trained installers.

System Supplied to the Competition Winners by; Solarcentury Electricity Generation:
1,615 kWh per annum

Solar electricity as proportion of overall electricity consumption:

Tbc. depending on refurb. Assuming electricity use a 50% reduction from 3,300 kwh/yr.

System Size & type:

1.92kWp Sanyo HD240 Hybrid 'honeycomb' modules with Fronius IG Series inverter.

Income and savings:

- Annual generation income: £667
- Annual export income: £24
- Annual electricity bill savings (tbc): £105
- Annual CO2 savings: 913 kg
- Annual savings and income: £796
- Savings and income over 25 years: £18,727

Market price for this system:
£12,000

How does solar electricity work?

Solar electric systems and solar roof tiles generate electricity using the energy from the sun. Solar electric panels produce energy from daylight, so they still produce energy on cloudy or overcast days. The electrical energy produced is either used directly in the home, or sold back to your electricity supplier. In the night electricity from the grid is supplied in the normal way.

Continued over ⇒



KB2 Consulting Civil & Structural Engineers

Providing engineering certainty by delivering intelligent designs, minimising project risk and applying principles of sustainability.

www.kb-2.co.uk



Why does it generate an income?

The “Feed-in tariff” or “Clean Energy Cashback” will be introduced in the UK in April 2010. The scheme financially rewards owners of solar photovoltaic panels and roof tiles for the clean energy they produce. This has been in operation in many other countries to promote small scale renewable energy production for many years.

Will’s income figure is based on the system generating the number of units stated above and applying the Government’s generation tariff of 41.3p per unit generated, plus 3p per unit exported. On average, it is assumed he will consume 50% of the solar electricity in the property and export the remainder. The electricity savings are based on 13p per unit grid price. Will works at home, so he gets to use his solar electricity during the day, rather than draw from the grid - so he saves more than if he worked away from home.

Is solar power easy to install?

The technology was installed following a simple site survey to assess the suitability of the property. In this case, the roof condition was considered a little suspect, so we engaged the services of our regular structural engineers - KB2 of Bristol, who confirmed the roof was strong enough.



Consulting Civil and Structural Engineers

FOR ENGINEERING CERTAINTY

Millions of homes across the UK are suitable for solar power, but a site visit from a professional is always advised to determine the best technology for your property. Scaffolding was required to provide safe access; this is likely to be a day’s labour, with the solar installation and connection to the grid taking place on the following day.



KB2 Consulting Civil & Structural Engineers

Providing engineering certainty by delivering intelligent designs, minimising project risk and applying principles of sustainability.

www.kb-2.co.uk

