Renewables Case Study 3: Solar hot water system

Owner
Darren Male

Location
Holyhead Road, Coundon

Installation date
May 2008

Installer / equipment supplier
Equipment supplied and installed by Smart Energy

Total cost
£7,660

System description
2 x 1.1m² evacuated tube panels, each containing 20 tubes, connected to a 160L hot water header tank. A SmartMaster central heating optimiser was also installed to control the system.

Project evaluation
As an environmental consultant, Darren Male is all too aware of the impact his home has on the environment. He not only purchases 'green' energy from his electricity supplier, but also harvests rainwater to use in his garden, and recycles waste wherever possible. Installing a solar hot water system therefore seemed like a natural next step on the road to making his home more sustainable.

When considering which specific equipment and installer to use, other lower quotes were obtained, but Smart Energy was chosen on the basis that the equipment was more technologically advanced than some of the alternatives. Although grant funding of £400 was available from the Low Carbon Buildings Programme, this was not applied for as it was felt that the benefit was not worth the considerable effort involved in making the application. Due to the changes in planning law that took effect in April 2008, planning permission was not required for the work.

Although there were a few minor problems with the initial installation - satisfactorily resolved by the installer – the equipment has worked well during its first 6 months or so of operation. Whilst it is early days to give accurate figures for savings made, it is anticipated that gas bills will be reduced by approximately £75 -150 per annum, based on a grid gas supply cost of 3.37p/kWh (price in December 2008). This is less than the savings claimed by the manufacturer.

Asked what advice he has for anyone considering installing a solar hot water system, Darren says: 'Get at least three quotes for the work, as prices can vary widely. According to the Centre for Alternative Technology, average installed prices of systems are around £3,800*, but my experiences indicate that they can be much higher.' And the overall verdict? Darren comments: 'Although the financial savings have not been as high as was forecast and we suffered some teething problems with the equipment, we are pleased we went ahead, and it has certainly helped us achieve our aim of reducing our carbon footprint'.

* Centre for Alternative Technology Members' E-Bulletin 10 December 2008