Nigel Dodman's

solar and wind powered system

Nigel Dodman bought his house in Wales in 1998, knowing that its only source of power was an old generator.

"It put other potential buyers off the property," explains Mr Dodman, "and for the first four and a half years we lived here we relied upon it entirely. It was reasonably reliable, but needed maintaining, and eventually would have to be replaced." When they found out that extending the electricity grid from the neighbouring farm was going to cost in the region of £30,000, the Dodmans visited the Centre for Alternative Technology (www.cat.org.uk) and started looking for alternative sources of power.

CAT carried out a survey for the Dodmans and recommended a number of solutions to meet their energy needs, including micro-hydro, wind power and solar photovoltaics (PV). The Dodmans decided to go for solar and wind power and, with the grants available, their personal contribution was similar to what they would have paid to be wired up to the grid.

The PV panels were installed by Wind and Sun on a small building behind the main house, with the batteries stored in a converted potting-shed. The Sunny Island system installed uses relatively narrow cabling, reducing transmission losses to just 1%. Power generated by the wind turbine and solar panels is used in the house first, with any excess going to the two 24 volt batteries.

"Having the PV and wind turbine has totally changed our lives – we can even read in bed!" enthuses Mr Dodman. "We're using the generator about 90% less than we were – so infrequently that we have to exercise it to make sure it doesn't seize up!" Last year, the Dodmans produced more electricity than they used, although most of this was generated by the 2.5kW Proven wind turbine. Mr Dodman is also very impressed with the inverter that was installed with the system, which lets the batteries run down to force the generator to kick in if it has not been used for a long time.

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Please note the following information relates only to the solar PV array.

Technical information

Installed kWp	1.28kWp
Module	BP Solar BP3160S
Module type	Poly-crystalline
Inverter	SWR 1100E
Bolt-on or integrated	Free-standing

Financial information

Overall cost	£8,339
Grant value	£3,840
Cost to customer	£4,499
Estimated kWh per year	960kWh
Estimated £ saved per year[1]	£57.60
Estimated kg CO_2 saved per year[2]	412.80

[1] assumes 6p/kWh [2] assumes 0.43kg/kWh

All pictures are credited to **Wind & Sun**.

For further information call our helpline on **0800 298 3978**
or visit **www.est.org.uk/myhome**

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