

## FOCUS ON RENEWABLE ENERGY ROB AND EMMA HARRISON

Rob and Emma diversified part of their farm in early 2009 to allow school children and other groups to visit the farm and learn about the agricultural industry, and from March to September 2010, Emma had conducted 40 visits on farm. The educational unit needed electricity for lighting and to comply with health and safety procedures, toilets and hand washing facilities too. Rather than incurring a large expense to extend an electricity connection to the unit, the Harrison's applied for educational access under Higher Level Stewardship to pay for the installation, which is also highly sustainable, by using renewable energy.



### How much did the system cost to install?

The cost of the installation was approximately £2,000, which included two solar PV panels (£500), a small wind turbine (£500), a solar thermal unit (£500) and £500 for the toilet and hand washing unit construction. These costs were covered by an 80% grant through HLS educational access.

The PV panels and turbine charge up three tractor batteries in the classroom, which power the lighting and a fan in the toilets. Hot water for hand washing is provided by the solar thermals on the roof and waterless toilets mean liquids go out through a waste pipe and solids are disposed of separately.

The savings to the farm business is the cost of bringing electricity and hot water to the unit, which would have been thousands of pounds.

### What other benefits have you seen?

The main benefit is the reduced cost by not having to install mains electric, which I think could be a really

useful idea for other farmers which need electricity for somewhere which is a long way from the main farm.

The educational unit also allows us to engage with the public and young children, to educate them about the farming industry, as well as getting them interested in renewables.

### What challenges have you faced?

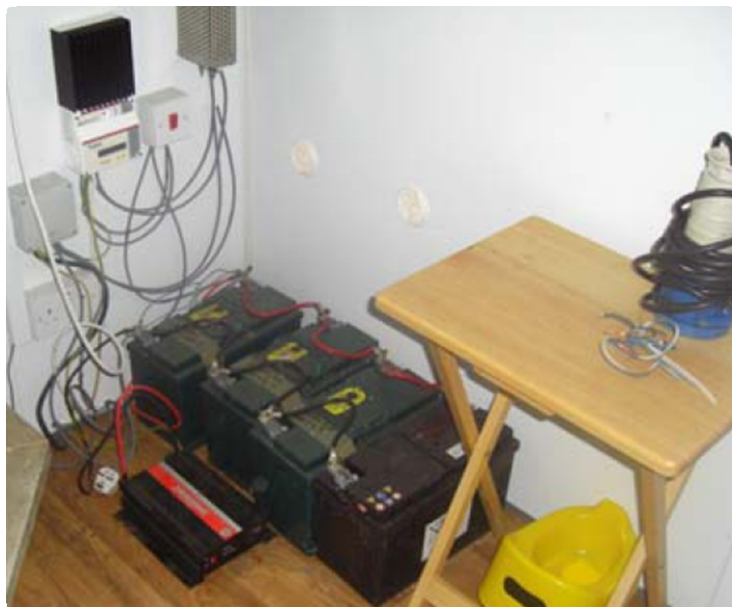
The thermal and PV panels work remarkably well, even on cloudy days and as the hot water is only used to wash hands, it was actually getting too hot! Therefore we had to get a regulator put on the thermals so that the water didn't get too warm in future.

### What do your fellow farmers think?

All the groups we have had round the farm are really interested in the technologies we have incorporated on the educational unit. The idea of generating electricity and hot water remotely has also got lots of farmers interested in ways they could utilise this on their farms and help reduce their carbon footprint at the same time.

- **170 acre** dairy in Gloucestershire
- **£2,000** investment including solar PV (**£500**), wind turbine (**£500**) and solar thermal technology (**£500**)
- **80%** of costs covered by **HLS Educational Access** grant
- Benefits include electricity, hot water and community education opportunities

THE DETAIL



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*'The figures and information expressed in this case study are specific to the farm involved. Farmers should take their own professional advice about the likely costs and benefits of using renewable energy, and take professional advice about the legal, tax, planning and SPS / agri-environment scheme issues that may be involved in renewable energy installations.'*

For advice and information on how to apply this approach to your own farm, take a look at **FACTSHEET 1: FOOD, ENERGY AND THE FUTURE OF FARMING**

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