

SHOCK

SUSTAINABLE HOCKERTON

a case study in community renewable energy

Sustainable Hockerton, or SHOCK, is a community project to make the village of Hockerton, Nottinghamshire, more sustainable.

This is the story of how this village of 55 houses, a pub, a restaurant, industrial units and several farms has sought to reduce its environmental impact by generating electricity from renewable sources.



Input from the local community from the start is vital

In 2006 a group of villagers started looking at ways of reducing the carbon footprint of the village. 46 people from the village attended a series of meetings and workshops coordinated by Hockerton Housing Project, a local exemplar of sustainable living. Together they identified a number of ways to make the village more economically, socially and environmentally sustainable:

- A reduction in energy demand.
- Renewable electricity generation.
- Renewable heating methods.
- Reduced impact from travel.
- Increase in the use of local skills and resources.
- Reduction in the amount of waste produced.
- Increased self sufficiency in waste and water treatment.
- Raise awareness of sustainability issues through education.

But the obstacle was finance so the villagers decided they wanted to install a wind turbine to generate energy equivalent to use by Hockerton's homes, to generate enthusiasm for the other goals and funds for additional projects.

This approach was then further tested through a questionnaire to all local homes, with only 4 of the 35 respondents in opposition to the initial plan. The concerns raised are common to most wind turbine installations: shadow flicker, noise, visual impact and the effect on wildlife.

These issues were all addressed through the planning process, using evidence from existing turbines and standard checks with the MOD, the BBC windfarm analysis tool, telecoms providers, and mockups of the visual impact.

local support & skills

- 27 shareholders from the village, plus 11 in the local area
- Landowner receives percentage of revenue
- Building work by NSM Hockerton
- Electrical work by KH Electrics of Southwell
- Project Management by Simon Tilley from Hockerton Housing Project
- Legal support from local solicitor Brian Smith of Browne Jacobson



The formal planning process took eight months, and once complete the search for a suitable turbine was on. No new wind turbines were available that met the planning restrictions so the search widened. In spring 2009, a 225kW Vestas turbine was found at an industrial site that could no longer install it, and secured with a deposit funded by an initial group of investors.

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With the site and the turbine lined up, financing for the project needed to be secured for the installation. This required a formal governance structure and the development of an invitation to invest.

Co-operatives UK provided advice on appropriate legal entities, together with model rules that met FSA standards. With further local legal advice, Sustainable Hockerton Ltd was set up as an Industrial and Provident Society, for the benefit of the community.

How much?

- £225,000 installation - raised from share offer
- Savings made through discounted fees from local suppliers, as the market value of installation is £300,000
- Estimated £12,000 running costs each year - to be paid from revenue
- Expected output 330 MWh per year, equivalent to 100 homes' electricity use each year
- Carbon dioxide equivalent saving of 178 tonnes CO₂ per year

The share offer took place over summer 2009, concurrent to the Government's consultation on the introduction of Feed-in Tariffs. This indicated that installations in the run-up to the tariffs' implementation would be able to switch to the new tariffs - a welcome indication to potential shareholders of the state's support for low carbon energy generation.

However, there was uncertainty, heightened by persistent rumours that the tariffs would be cut back; that the 'small print' would count against independent smallscale projects; and delays in announcing the level and process for the tariff. The decision to go ahead at each checkpoint had to be based on best available information, and driven by the deadlines for completing the turbine's purchase and installation prior to winter weather setting in. Thanks to the Feed-In tariffs, future projects will have a much clearer understanding of their prospective revenue, and will be based on a firmer footing.



The turbine tower arrives on site

As funding milestones were reached, work commenced on site: building the foundations for the tower, reinforcing the existing farm track, building a sedum-roofed plant room and burying the conduit for the grid connection. By October the site was ready, and sufficient funding was in place to complete the purchase of the turbine and install it on site. We turned to experts in the field to ensure a safe journey, with final checks on the condition of the turbine undertaken by Garrad Hussan, before it was transported by Colletts.

we couldn't have done it without...

...our project manager, Simon Tilley, and the risk he took in investing his time on a 'no wind, no fee' basis
...sourcing a wind turbine from a third party, as supply cannot currently meet demand
...moral and financial support from investors and the local community

The installation was then completed on a single day by Bettink, a leading wind turbine installation and maintenance service provider, using Mammoet cranes.



An audience gathers for the raising of the turbine

Final connection to the grid was delayed by a number of technical teething problems, and in response to the risks raised by delays in decisions on the Feed-In Tariff. However, having completed testing and acting in line with the best available guidance from DECC and Ofgem, export to the Grid began in January 2010 and the village can now plan their next steps in their search for sustainability.



want to learn more?

SHOCK's project managers, Hockerton Housing Project are running a one day course on small-scale renewables:

- technologies
- financing
- planning
- project management
- legal and tax issues
- community engagement

Find out more: call 01636 816902
www.hockertonhousingproject.org.uk