

Farmers Guardian

Is investing in on-farm solar power worthwhile?

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PRODUCING green electricity from solar photovoltaic panels has generated a hotbed of interest in the farming community this year. But is this really the future for British agriculture? Jane Brown reports.

Glastonbury festival's Michael Eavis has become the UK's first farmer to install a large solar array on the roof of a cow shed. Many others are queuing up to follow his lead, but how beneficial is this technology, and is the large capital outlay it requires really worthwhile?

With the advent of Feed-in Tariffs, Mr Eavis believes the era of solar power has well and truly arrived. "The world's energy is running out, particularly oil, and that is a real problem. How long have we got - perhaps 30 or 40 years? We have to start moving fast to sort things out."

Mr Eavis keeps 320 Holstein Friesian cows at Worthy Farm, Pilton, Somerset, and about 10 years ago built a substantial new cow shed, nicknamed the Mootel, to house the cows over winter and during the world famous Glastonbury festival.

"I knew solar panels would come one day, so I built it facing and sloping south, ready to take the panels in the future," he says. "When the Feed-in Tariff of 29.3p/unit came in in April, it made sense to do it."

With a £500,000 loan over 10 years from Triodos Bank, and £70,000 of his own capital, Mr Eavis visited a solar panel factory in Durham to learn about the technology and negotiate on price.

"I wanted them to be made in England - I try to buy British whenever I can," he says.

The 1,116 panels, weighing about 25 tonnes, were fitted to the roof of the 1,500sq.m barn, and are capable of producing 200kW per hour - enough to power 40 homes annually.

Payback

"We should be generating £50,000 of electricity a year - it will pay back within 10 or 12 years."

About 40 per cent of the electricity would be used on the farm, with the remainder exported to the National Grid.

“There is a lot of form-filling to export to the grid - they treat it like a nuclear power station,” says Mr Eavis. He also had to upgrade the farm’s transformer to cope with the extra load, at a cost of £50,000.

“Western Power are the first people to get on board, because the wires and the board may need to be upgraded.”

As well as reducing the carbon footprint of his milk, the solar panels are likely to be a big hit with the festival crowd.

“The 200,000 people who come to the Festival are very green and concerned about the future. I have to be seen to be doing something. It will be all profit after 10 years - there’s very little wear and tear, no smell, no noise, no moving parts or labour requirement - it’s a fantastic operation.”

With the introduction of Feed-in Tariffs, which provide a guaranteed payment for every unit of electricity produced over 25 years, solar PV is at last financially attractive in the UK.



Natural energy

“With 75 per cent of our land in agriculture, farmers are well placed to capture renewable natural energy, while maintaining their traditional role in food production,” says Paul Cottingham, environment adviser at the NFU.

“We have been using solar forever - it’s what makes our crops grow - this is just a different way of using it.”

However, as with any immature industry, there are pitfalls, so prospective investors should take professional advice to set everything up correctly.

Kerry Burns, general manager of Solarsense UK, which installed the array at Worthy Farm, says there are a number of physical considerations. Site and orientation are critical, as well as roof pitch and strength, shading from trees or buildings, and the electricity network.



“Due south is ideal, with a 30 degree pitch, but it can vary around that.”

Old roofs could be replaced with an integrated solar roof, as the panels may last 50 years.

Anyone considering installing solar PV should get an independent performance appraisal for the site to get an accurate forecast of productivity.

A grid survey by the electricity supplier, at a cost of about £1,000, would reveal whether upgrades to the network - costing £100,000s - may be required.

In-field solar arrays may also need extra security, and could change the land use away from agriculture, says Dan Davies from SolarCentury. Large installations up to 5mW would probably require backing from an investor. A variety of agreements are available.

“Make sure the developer and installer have sufficient experience in your type of project,” he says. With the value of Feed-in Tariffs dropping from April 2012, there would be considerable demand to beat the deadline, he warned.

Legal considerations

Most small installations will not require planning permission, but in-field arrays may do.

Take advice from your local planning authority, and consult with neighbours and local stakeholders to ensure you have their support before you start.

Feed-in Tariff Income could be tax-free for individuals, but business rates are likely to be payable on any installation, while in-field arrays could reduce the Single Farm Payment and eligibility for agricultural tax reliefs, warns Sonya Bedford, head of renewable energy at solicitors Stephens and Scown.

“It is absolutely crucial to seek advice from your accountant, solicitor and land agent at the start.”

Rents, options and exclusivity agreements vary widely, and could restrict development on any retained land. “It is very important to check all of these details, and consider the disruption to your farming activities,” she says.

“Check whether funding is set aside to remove the equipment and mountings at the end of the 25 years - that is a real indication of how serious your developer is.”

