switch on

to renewable energy

UNIVERSITY OF EXETER

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

southwesttourism

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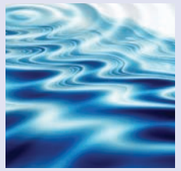


Thank you

Thank you for picking up a copy of 'Switch on to Renewable Energy'. This booklet has been produced by Regen SW as part of a partnership project with the University of Exeter and South West Tourism. The information in this booklet is designed to inspire you to learn more about renewable energy and how it could be used in your business.

With the introduction of new financial incentives for renewable electricity in April 2010 and for renewable heat in April 2011, the financial case for investing in renewables is stronger than ever. Now a renewable energy project can not only significantly reduce your energy bills, strengthen your commitment to tackling climate change and boost your green credentials, but also offers a real return on your financial investment.

The case studies tell the stories of five tourism businesses that have already installed renewable energy and are reaping the benefits, even if they installed before the introduction of the financial incentives. We hope that by reading these case studies you will feel both inspired and better-equipped to explore the opportunities for installing a renewable energy project in your business.

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How to go about a renewable energy project

Minimise your demand for energy

Before installing any renewable energy project, you should always consider whether it is possible to reduce your energy demand through energy efficiency measures, such as increased insulation, energy efficient appliances and light bulbs, or better heating controls. It is usually cheaper and greener to reduce your demand first because by doing so you reduce the size and the cost of the renewable energy installation that you need.

Consider your options

When considering whether to install renewable energy, the first step is to calculate your demand for electricity and heating as this will give you an indication of the size of project that would meet your internal needs. If you are connected to the grid, you can export surplus electricity to the grid and benefit from additional income from the Feed in Tariff (see page ...).

Try to consider the range of potential technologies by thinking broadly; the 'right' technology depends on the specific features of your site and how you use energy. You will need to consider the various factors set out on the technology pages of this booklet. Renewable energy installers will be able to give you in-depth advice about whether a technology is suitable for your business.

Identify an MCS certificated installer

Once you have identified which renewable energy technology or technologies to install you will need to get quotes from renewable energy installers. Regen SW recommends that you get quotes from at least three different installers.

In order to be eligible for the government's new financial incentives for renewable energy – the Feed-in Tariff (FIT) for renewable electricity generation and the Renewable Heat Incentive (RHI) for renewable heat generation – your renewable energy technology must be a product accredited by the Microgeneration Certification Scheme (MCS) and installed by an MCS registered company. The MCS is an independent scheme supported by the government and the renewable energy industry. It is designed to give protection to consumers by assessing renewable energy installers and products against a set of robust and consistent criteria and standards


Obtain relevant permissions

Getting planning permission (and licences for micro-hydro schemes) may be an important consideration. Some small-scale renewable energy technologies are permitted developments in certain situations (that is, planning permission is not required). However, there are specific rules that installations must comply with to be accepted as permitted development. Also, planning permission is still required in conservation areas, world heritage sites and for listed buildings. Your installer should be able to advise you on planning permission issues. Regen SW also recommends that you contact your local planning authority and discuss your project before any work begins.

For more information

The Home Energy Generation Selector from the Energy Saving Trust is a useful online tool for considering your options:

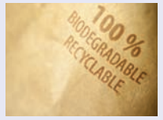
www.energysavingtrust.org.uk/renewableselector/start/

You can get details of MCS certificated installers from the MCS website, a list of south west based MCS installers from the Energy Saving Trust on 0800 512 012 or from Regen SW's online company directory.

www.microgenerationcertification.org

www.energysavingtrust.org.uk

www.regensw.co.uk



Financing

New incentives: the Feed in tariff and Renewable Heat Incentive

From April 2010, generating your own renewable electricity not only saves you money by reducing your electricity bill, but also offers you an income stream through the Feed in Tariff (FIT). The FIT is a significant new government financial incentive for renewable electricity projects up to 5MW in size (equivalent to two large wind turbines) installed after 15 July 2009.

The government's aim is that the FIT will offer a 12 to 20 year payback period on the capital cost of the renewable energy technology. With FIT payments guaranteed for 20 years (25 years for PV), most projects will be generating a profit for the user before the end of their FIT payments. It is expected that over the lifetime of the project the FIT will repay the initial investment plus a 5 to 8% return.

A similar incentive called the Renewable Heat Incentive (RHI) is due to be introduced on 1 April 2011 for renewable-heat-generating technologies. All renewable heat projects installed after 15 July 2009 will be eligible for this incentive (provided they meet certain criteria).

In order to be eligible for the FIT or RHI your renewable energy technology must be installed by a company registered under the Microgeneration Certification Scheme (MCS). The MCS is an independent scheme supported by the government and the renewable energy industry. It is designed to give protection to consumers by assessing renewable energy installers and products against a set of robust and consistent criteria and standards.

To access the FIT, project owners need to contact an electricity supplier and agree a contract once their project has been installed. The arrangements for the RHI are yet to be confirmed.

Grants and loans

Grants for renewable technologies have largely been replaced by the FIT and the RHI. In general projects that have received a publicly-funded grant are not eligible for the FIT/RHI unless the grant is repaid. The Rural Development Programme for England (RDPE) offers grants for renewable projects in rural locations.

Commercial loans and financing packages may be available from banks and other lenders for the capital costs of renewable installations; the FIT/RHI revenue stream could be used to pay off the loan over time.

Some renewable technologies (as well as most energy saving technologies) are eligible for tax relief through the Carbon Trust's Enhanced Capital Allowance Scheme and/or for 0 per cent interest loans of between £3,000 and £100,000 from the Carbon Trust.

For more information

For the latest detail on the FIT and RHI schemes, contact the Energy Saving Trust on 0800 512 012 or go to **www.energysavingtrust.org.uk**

The Cashback Calculator from the Energy Saving Trust helps you to calculate the potential return on investment from the Feed in Tariff: **http://www.energysavingtrust.org.uk/Generate-your-own-energy/Cashback-Calculator**

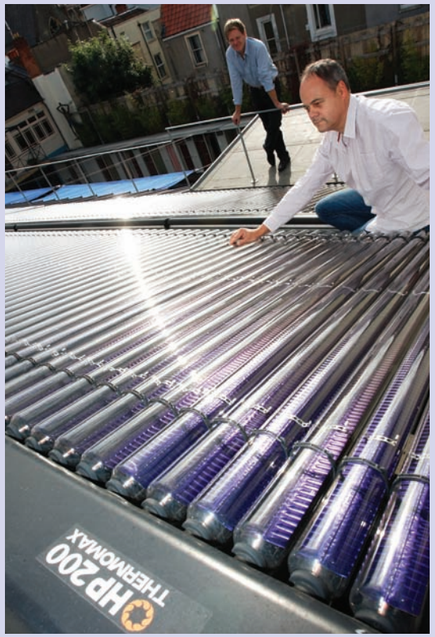
For information on zero interest loans and the Enhanced Capital Allowance visit **www.carbontrust.co.uk**

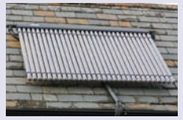
For information about RDPE funding in the south west visit **www.sw-ruralgateway.info/rdpe_in_the_south_west.aspx**

What are the key features of different types of renewable energy?

The following pages give more information about the types of renewable energy technologies that might be suitable for your business. This guide does not offer estimates of the costs of installing technologies, because these vary considerably depending on the size of project and specific features of the site.

The Dorset Energy Group has produced factsheets that are a useful source of more in-depth information on renewable energy technologies: **www.dorsetforyou.com/renewableenergyinfo**





Solar thermal

The technology:

Solar thermal collectors provide hot water from the sun. They are unlikely to meet all of a building's hot water demand all year round, so a supplementary heat source such as a boiler or an immersion heater may be needed to meet demand when the collector's output is low, e.g. in the winter.

Solar thermal collectors are often well suited to tourism businesses, which have high hot water demand in the summer when the collectors are producing their greatest output. Solar thermal systems can also be used to heat swimming pools.

There are two main types of solar thermal collectors: flat plate and evacuated tubes. Evacuated tubes are more efficient, but also more expensive. Some evacuated tube collectors allow greater flexibility in their positioning because the individual tubes can be placed at an angle so the solar absorber inside the tube is facing south

Solar thermal collectors can be built into the fabric of a building or bolted on afterwards. Some systems use a small pump to distribute the hot water, which requires electricity; these systems sometimes come with a small PV panel to provide this electricity.

Considerations:

Solar thermal collectors must be correctly angled and orientated for the best performance, and can face between southeast and southwest at an angle of between 30 to 50 degrees. Shading reduces performance and should be avoided.

The building's roof must be able to take the weight of the collectors, which is a particularly important consideration when adding panels to an existing building. The heating system, particularly the hot water tank, needs to be compatible with solar thermal panels.

Operation and maintenance:

Solar water heating systems should last for around 25 years. They generally come with a ten-year warranty and require very little maintenance. A yearly check by the owner, preferably with a cleaning of the collector surface, and a more detailed check by a professional installer every three to five years should be sufficient maintenance.

Solar photovoltaics (PV)

The technology:

Solar photovoltaic (PV) panels generate electricity from daylight, although they produce most in direct sunlight. The south west receives the highest levels of solar radiation in the UK, and so is well suited to solar PV panels.

Solar PV can be supplied as panels or tiles and can be built into the fabric of a building, bolted on afterwards or built on a frame on the ground. There are three main types of PV panel:

∑ mono-crystalline, which are the most expensive and the most efficient

∑ polycrystalline, which are medium cost and efficiency

∑ and amorphous or thin film. These are the cheapest and the least efficient, but are light weight flexible sheets that can be bonded onto other materials.

An inverter is needed to convert the direct current (DC) electricity output of the PV panels to alternating current (AC) for immediate use, export to the grid or to charge batteries.

Considerations:

PV panels must be correctly angled and orientated for the best performance, with the ideal position facing south at an angle of 30 degrees. Variation from this will result in reduced performance, but facing between southeast and southwest and at an angle of between 30 to 40 degrees is generally ok. Shading reduces PV performance and should be avoided.

For roof-mounted panels, the building's roof must be able to take the weight of the PV, a particularly important consideration when adding solar PV to an existing building. For ground panels, sufficient unshaded space is required.

Operation and maintenance:

PV panels have very low regular maintenance requirements; a visual check for debris by the owner on an annual basis is usually sufficient.

Biomass

The technology:

Biomass technologies use wood or other plant materials as fuel. Biomass stoves can provide space heating for individual rooms and water heating if they have a back boiler connected to them, while biomass boilers provide space and water heating for whole buildings or a group of buildings. Biomass heating is suitable for 'new build' or existing buildings.

The main fuels for biomass stoves and boilers are woodchips, pellets, or logs, with most stoves and boilers only being able to take one of these fuel types. Biomass is almost CO_2 neutral as the CO_2 released by burning wood is approximately equal to the CO_2 absorbed by the tree when it was growing. The CO_2 and cost savings from installing biomass will depend on the fuel being replaced.

Considerations:

In general, biomass technologies work best with fairly constant heating demand. Biomass boilers in particular are most efficient when operating close to full load. There are several things that can be done to ensure this is achieved:

- Install a hot water accumulator tank as part of the system to store excess heat until needed, which allows a smaller and therefore cheaper boiler to be used
- Design the biomass system to cover the main heating demand e.g. during the winter, and use another heat source, such as a small fossil fuel boiler, to meet the much lower heating demand in the summer
- For larger heat demands have several smaller boilers instead of one large one so that all can run when heat demand is at its highest, but not all need to run when heat demand is lower

Woodchips are cheaper than pellets, but have a lower energy density so need more storage space and/or more frequent deliveries. It is preferable to source a local biomass fuel supply for cost and sustainability reasons. Sufficient space for the stove or boiler and for storing the fuel is needed, as well as good access to the fuelstore for fuel deliveries.

Also, if the project is located within a smoke control zone only certain types of stove or boiler can be installed. In the south west, a limited number of urban areas are smoke control zones.

Operation and maintenance:

Pellet stoves and pellet or woodchip boilers are usually automatic, while stoves are usually manual. All systems require the ash removing, although in general very small amounts of ash are produced and ash bins only need emptying once or twice a week. Fuel stocks need to be monitored.

For more information

The South West Woodshed provides a 'one-stop shop' for information on biomass in the south west, including installer and wood fuel supplier details and in-depth guidance on project design and feasibility. **www.southwestwoodshed.co.uk**

Heat Pumps

The technology:

Heat pumps use similar technology to fridges to extract heat from the air, ground or water to provide space and water heating. They can also provide cooling by running in reverse to extract heat from the building when it is hot.

Heat pumps require electricity to run and the CO2 and financial cost of this electricity needs to be taken into account. A heat pump's coefficient of performance (CoP) is the measure of how many units of heat you get out for each unit of electricity you put in. The higher the CoP, the more efficient the heat pump is running and the higher the CO2 savings and the lower the running costs.

Heat pumps provide a low temperature heat output and are therefore best suited to meeting a low heat demand e.g. well insulated properties with underfloor heating, rather than a conventional central heating system which requires a much higher temperature output. If the heat pump is providing water heating, it is best to use the heat pump to pre-heat the water and then use another heat source to get the water to the necessary temperature, rather than run the heat pump inefficiently.

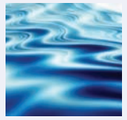
Considerations:

Ground source heat pumps (GSHPs) require either horizontal trenches or vertical boreholes to be dug. Boreholes need to be between 50 metres and 100 metres in depth and are more expensive, sometimes requiring a drilling licence. Sufficient space is needed for horizontal trenches, which need to be around 1.5 metres to 2 metres deep and 40 metres to 100 metres long.

Air source heat pumps (ASHPs) and water source heat pumps (WSHPs) require less space than GSHPs but have lower CoPs. Noise may be an issue for ASHPs. WSHPs may require approval from the Environment Agency and need to be sunk in a body of water that doesn't freeze in the winter.

Operation and maintenance:

There is virtually no maintenance required for heat pumps. Pressure in the pipes may need to be monitored.



Micro-Hydro

The technology:

Micro-hydro systems generate electricity from running water. Whether it is a technology worth considering is highly site specific. The systems come in a wide range of designs depending on the water course and the generation capacity. Former water mills offer some of the best sites for micro-hydro systems as the existing infrastructure can be adapted.

All micro-hydro systems require a good year round flow of water (above 100 litres per second) and preferably a good height difference, known as 'the head', between the top of the scheme and the turbine (above 1.5 metres).

Considerations:

Micro-hydro schemes may require some civil works (e.g. digging deeper channels), and the capital cost of the civil works required can be prohibitive. Civil works may be needed on parts of the watercourse that do not belong to the micro-hydro scheme owner; access and work on these needs to be agreed with the owner.

As well as planning permission from the council, licences and approval from the Environment Agency are required. The Environment Agency is particularly concerned about the impact of schemes on ecology, mainly on any migratory fish. Mitigating measures such as a mesh screen and a fish ladder may need to be installed.

The turbine and generator can be noisy, but good design can reduce the impact.

Micro-hydro projects are often not economically viable without grant funding. Local grants and RDPE funding for micro-hydro may be available. It is important to explore from the outset whether you can claim the Feed in Tariff as well as receiving a grant.

Operation and maintenance:

Small turbines should be inspected once a year, annual service costs should be no more than 1-2 per cent of the capital cost of the scheme. Most run of river schemes will have a 'trash rack' that prevents debris from reaching the turbine – this rack will need to be inspected and cleaned on a regular basis unless some form of automated cleaning system is included. After 10 to 15 years the generator may need replacing but the turbine is likely to have a life of well over 25 years.

Small-scale wind

The technology:

Wind turbines generate electricity from the wind and are available in a range of different sizes from very small 100-watt micro turbines to 2.5MW commercial-scale turbines. Small-scale wind usually refers to turbines up to 20kW (around 15 metres in height) and can be stand-alone or building mounted.

Wind turbines require a good average wind speed. A small difference in wind speed will make a large difference to the amount of electricity generated, so it is advisable to monitor wind speeds at the site before deciding whether to install or not.

Local topography can significantly affect the wind speed and features such as trees and buildings can dramatically reduce windspeed and increase turbulence if too close to the turbine. Generally speaking the higher the turbine is off the ground, the higher the windspeed and so the greater the amount of electricity it will produce.

Considerations:

Ground source heat pumps (GSHPs) require either horizontal It is crucial that wind turbines should be carefully sited, especially in built-up areas, to be effective. Small turbines should face the prevailing wind, be at least 50 metres away from the nearest property and be as close as possible to the grid connection or the point of use to avoid transmission losses from long cable runs. Installers will advise on the best possible location.

While noise and visual impact may need to be considered in positioning a small-scale turbine, the impact on ecology (e.g. birds and bats) is minimal and an Environmental Impact Assessment for turbines below 15 metres in height is not normally required. However, information required for planning applications will vary depending on your local authority and it is advisable to check directly with your local authority before starting a project.

Small-scale wind turbines can be building mounted; however, building mounted turbines have considerably lower outputs than standalone turbines, due to turbulence from the building. If a turbine is mounted to a building, the building structure should be checked to see if it can cope with the additional stresses and vibration generated by the turbine

Operation and maintenance:

Small wind turbines need an annual service, including visual and noise checks. When deciding on an installer, it is advisable to check the cost of maintenance.

For more information:

Regen SW is launching a project to support community-led wind projects of all scales in summer 2010. Visit **www.regensw.co.uk** from June 2010 for more information.

"Decades of forward-thinking generate savings"

Harton Farm, B&B, nr Exmoor, Devon

www.hartonfarm.co.uk

Renewable Energy Technology:
Solar thermal hot water panels and photovoltaic panels (the PV panels were installed after this interview took place)

The vision of Lindy and Robin Head has resulted in two decades of lower electricity bills thanks to the installation of solar thermal panels. The panels have significantly reduced Harton Farm's previous reliance on its immersion heater for hot water. Greater than expected savings and continued green thinking mean Harton Farm is now also supplying its own electricity, having installed photovoltaic (PV) panels in spring 2010.

As well as benefitting the environment, PV panels will generate income for Robin and Lindy. The Feed in Tariff (FIT), which started in April 2010, means energy suppliers pay householders and businesses generating renewable energy for every unit of electricity that they produce. An additional payment will be made for excess power exported to the national grid. As well as making savings on electricity bills, the government estimates that the FIT will offer around a 5-8 per cent return on the initial investment.

Installation and maintenance:

"Maintenance is not a problem"

Planning permission wasn't required for either installation. The solar thermal installation was very quick: an extra tank, the monitoring indicators and user panel were installed in less than two days. The existing immersion heater was retained to provide a boost if necessary.

The hot water system is low maintenance with little effort needed on Lindy and Robin's part – just the removal of algae every few years.

Costs and benefits:

"In the summer, the system heats water for us and up to six guests. We rarely need the immersion heater on"

Savings are difficult to quantify, given the length of time the solar thermal panels have been installed. Robin and Lindy estimate that the time taken to generate enough savings to pay for the solar hot water system was around five years – two years shorter than the period estimated at the time of installation.

Client Comments:

"Go for it! Solar thermal panels are fairly cheap and they will save you money. It's a good way of using your resources if you have the roof space. Solar thermal energy is a good investment in the long run – every home should use it!"

"Low Effort, Maximum Comfort"

Mazzard Farm Holiday Cottages, Ottery St Mary, Devon

www.mazzardfarm.com

Renewable Energy Technology: Biomass boiler

Ruud Jansen Venneboer and Jacqueline Parker welcome guests to their luxury accommodation in East Devon knowing they will enjoy constant hot water with low energy use and low effort. The cottages have achieved a low energy consumption rating and, along with other measures such as sheep wool insulation, this has earned Mazzard Farm a Gold rating in the Green Tourism Business Scheme.

Installation and maintenance:

"You feel a little bit like a pioneer"

The technology was installed as part of the conversion of barns into comfortable holiday cottages. The boiler arrived on site a month before the business opened and was up and running in plenty of time for the first guests.

The use of a large hopper for storage of the wood fuel pellets means that deliveries are only needed every four to five months. Fuel is automatically drawn from the hopper by a vacuum system triggered by sensors and is burned to meet the demand for hot water.

On-going maintenance requires Ruud and Jacqueline to monitor the vacuum system and remove blockages. A pump also had to be replaced – a job carried out by a local plumber.

Costs and benefits:

"Most guests feel good knowing their accommodation is environmentally friendly"

Initial estimates suggest that the £30,000 cost of installation will be paid back in 10 to 15 years or sooner if oil prices rise. The supply of hot water is constant and efficient: the properties have achieved a 'B' energy performance rating, resulting in low fuel bills and low environmental impact. The technology runs automatically with minimal intervention required of the owners.

Client Comments:

"The biomass boiler is very efficient, generating fantastically hot water and heating. We are able to provide guests with luxury accommodation while reducing our fuel bills and our impact on the environment. Finding information was the most difficult part – especially as were under pressure to open for our first season. We are looking to install more sustainable energy technology as we develop the business"

A grounded approach to low energy costs

Mill Meadow Eco Lodges, Kingston St Mary, Taunton, Somerset

www.hartonfarm.co.uk

Renewable Energy Technology: Ground source heat pump

At Mill Meadow, guests are provided with luxurious comfort and warmth with the heating conveniently generated by technology buried in the gardens. Use of renewable energy, high levels of thermal insulation and rain water harvesting have earned Mill Meadow an 'excellent' rating in the BRE Eco-Homes certificate – an environmental assessment method for buildings around the world – and a Green Tourism Gold award.

Installation and maintenance:

"It's easy, life's simple! The pumps just sit there quietly ticking away"

Ground source heat pumps were chosen over other technologies as they provided a simple system for guests to operate. The under floor heating system also worked well with the hard-wearing materials used for the holiday rentals market.

Pipes collect heat from the ground surrounding the properties and feed it into the houses' heating systems. The pumps require energy, but they produce four units of energy for every unit consumed. Pipes were buried in trenches approximately 2 metres in depth. Installation was carried out during the landscaping phase of the construction of Mill Meadow, but ground source heat pumps can be installed where a suitable land area exists or a borehole can be dug.

Minimal maintenance is required. Pressure in the pipes needs to be monitored and the system self-pasteurises once a week to remove risk of disease.

Costs and benefits:

"We could have a zero electricity bill"

The 6 kW ground source heat pumps cost £8-10,000 per holiday unit. The payback period at Mill Meadow is still being appraised, but Chris feels the units will easily return their costs in the long term as their energy costs have been very low.

The aim is to install photo-voltaic solar panels to further reduce energy bills and to take advantage of the Feed in Tariff: zero energy bills could be achieved depending on occupancy and usage.

Client Comments:

"Whatever steps you take towards making your business more sustainable, the outcome will be a reduction in use of resources or a smaller carbon impact. You've got a little bit of licence to mix luxury with whatever technology you choose"

"A History of Forward Thinking"

The Scarlet Hotel, Mawgan Porth, Cornwall

www.scarlethotel.co.uk

Renewable Energy Technology: Evacuated tube solar water heating and biomass boiler

The Scarlet provides luxurious comfort, while at the same time demonstrating that this can go hand-in-hand with environmentally and socially sound practices. While designing The Scarlet, the owners took the opportunity to build in the latest renewable energy technologies: learning from their legacy of sustainable tourism at Bedruthan Steps hotel, where solar panels and grass roofs were installed over 30 years ago.

Installation and maintenance:

""People see how easy it is. You don't sit here thinking 'I'm in some green special hotel"

Evacuated tube solar panels heat The Scarlet's indoor pool while a biomass boiler heats water for the bathrooms, kitchen and under floor heating system.

The solar panels heat the water to 50 degrees, even during the winter, thanks to vacuum technology. The solar panels were carefully placed to achieve optimal energy production and minimal impact for neighbours and the sea view. Maintenance of the panels involves visual checks and cleaning. The biomass boiler burns sustainable wood chips which are a waste product of a local company. The height of the chimney and distance of the boiler room from guests' bedrooms had to be considered as part of the planning process. The maintenance team do need to pay more attention to the biomass boiler than a more conventional system: it needs regular maintenance and wood chip fuel needs to be ordered on a weekly basis.

Costs and benefits:

"Some utility and running costs will be lower than for a conventional building, but we don't do it to save financially, we do it because we genuinely cherish our world"

As a new hotel, designed and built to be as sustainable as possible from the outset, benefits and savings will be difficult to measure. However, the carbon dioxide emissions are estimated to be around 73 per cent lower than a conventional building of a similar size and geometry.

As a relatively expensive design and build project, the payback periods are long – this is not so much because of The Scarlet's sustainable technologies, but more to do with the quality of the finish and experiences created.

Client Comments:

"We mention that we have a lower carbon footprint or use less water than a 'conventional building'; however, we really believe that any business could employ similar technologies and practices- and look forward to a day when our renewable technologies are considered the norm, and not the exception"

Sunshine and Hot Showers in Boscastle

Orchard Lodge B&B, Boscastle, Cornwall

www.orchardlodgeboscastle.co.uk

Renewable Energy Technology: Solar Thermal Hot Water Panels

Since having solar thermal energy panels installed on the roof of Orchard Lodge, Geoff and Shelley Barratt have greatly reduced their oil consumption. Although they were keen to reduce the impact of their business on the environment, it was the rising costs of oil that encouraged the Barratts to install solar thermal hot water panels ahead of their original plan.

Installation and maintenance:

"They're pretty maintenance free"

The solar panels use heat from the sun to heat up water which can be stored in a hot water tank. A flexible heating and hot water system was installed by the Barratts' forward-thinking plumber during the refurbishment of the property. The system had been fitted to allow changes to be made easily in the future. Therefore, when the Barratts decided it was time to add the solar panels, the installation was straight forward.

As Orchard Lodge is in a conservation area, it was necessary to gain full planning permission and act on the requirements of the planning authorities: this involved removing roof tiles to reduce the visual impact of the panels. Planning requirements will vary from location to location.

The self-cleaning panels require little maintenance: the monitoring of the water tank pressure, an annual service and ad hoc visual checks.

Although the system is easy to operate, it does need to be managed carefully in order to optimise the savings: Shelley makes adjustments according to the number of guests and their routines to avoid the over use of oil or wasting of solar energy.

Costs and benefits:

"It is worth doing because it will save you money, there's no doubt about that. What's not to like about them?!"

A grant from the EU through the "Honey to Cornwall" scheme helped fund the installation of the solar panels as well as double glazing and insulation. The payback period is expected to be around three to four years – shorter than the predicted five to six years thanks to the rising price of oil.

The panels save money throughout the year, though they do work better in summer. Oil consumption for the hot water supply in the peak season has nearly halved thanks to the solar panels.

Client Comments:

"We're great converts. We think the panels are fantastic and would have had them years ago if we'd realised just how good they are. Find a good installer – one who knows what they're doing. The payback time has become so much shorter. Anybody who's planning any kind of changes to their heating or energy systems should look at renewables - you'd be pretty bonkers not to!"

Funding through this scheme is no longer available. From April 2011, the Renewable Heat Incentive will offer a revenue stream to solar thermal energy projects (and other renewable heat projects). Projects installed from 15 July 2009 will be eligible for the RHI, provided you use an MCS accredited installer. In the meantime, householders are eligible for grants through the Low Carbon Buildings Programme for renewable heat projects.
See **http://www.lowcarbonbuildings.org.uk/** for details

switch on
to renewable energy

Useful contacts:

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