

Harnessing the power of the sun

Climate change and escalating energy bills are just two of the reasons why investing in solar technology is helping homeowners to reduce water bills and their carbon footprint. Solar water heating systems use free heat from the sun to warm domestic hot water. Unlike conventional domestic heating equipment, solar systems don't create greenhouse gases, last at least 25 years and require little maintenance.

The problem

Looking for a way to introduce green, renewable technologies into the home is often desirable but financially unobtainable. With the increasing rate of climate change and rising energy bills, it is important to look at how the technologies of tomorrow can help today. For Kevin and Sara O'Reilly from Horley in Surrey, installing solar panels would be the first step in helping them achieve not just a greener home, but also a ready supply of hot water all year round, reduced bills and even an increase in the value of their property.

Striving for an affordable future

Without the knowledge of how easy solar panels have become to install and use, many people still see solar panels as an expensive technology that requires dramatic changes to the roof of their home. However, Kevin and

Client:	Mr Kevin and Mrs. Sara O'Reilly
Area:	Horley, Surrey
Description of work undertaken:	Installation of solar panels
Services supplied:	Consultation and installation
Date & time of work:	September 2009
Faults identified:	Existing bathroom totally refurbished due to ageing
Outcome:	New solar panels installed

Sara had long been considering the installation of solar panels prior to their recent installation.

Speaking about the initial decision, Sara, comments, "About three years ago, we discussed the possibility of installing solar panels on the house. At that point, the technology was still considered fairly unsuitable for the UK and the associated cost of solar panels reflected this.

We knew it was something we wanted to go ahead with, but we wanted to wait until we'd found the right supplier offering the right package at the right price."

Sara continues, "It wasn't until we recently received a leaflet from Sutton and East Surrey Water Services that we began to re-consider.



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In fact, had we known about the availability of solar panels through our water and services provider, we would have done it sooner, especially given how cost-effective it turned out to be. We both recycle and ensure that we are as 'green' as possible and solar panels seemed like the next step. With solar panels we can support the environment but also reduce our domestic energy bills and increase the value of our property. Overall it's a win, win, situation."

When Kevin and Sara approached Sutton and East Surrey Water Services they were surprised by the speed with which the panels could be installed. Speaking about the consultation,

Kevin explains, "We approached the services arm of the water board and scheduled a consultation to find out if the property was suitable for the solar panels used. The engineers provided an invaluable service, monitoring the property throughout the visit and by using aerial photos of the house to see if it was suitable for a solar installation."

Kevin continues, "Following the consultation, we were told that the house was suitable and were provided with a quote to install the solar panels. We were delighted with what had been offered and wanted to go ahead immediately to ensure we could start reaping the benefits as soon as possible."

The installation

Installing solar panels is much less invasive than many homeowners think. As solar panels can be mounted vertically or horizontally, flat and even wall mounted, they can even solve many of the problems for properties that do not face south. During the consultation, engineers determined the best position for the solar panels. For Mr and Mrs O'Reilly, the panels were positioned on the side of the house, as this is where the most sunlight would be collected.

Installation times for solar panels average at just two days. Kevin explains, "We expected the installation to take a few days, but were surprised when,

by the end of the second day, the scaffolding had been removed and we were told the solar panels were ready. Engineers arrived on the first morning and prepared the scaffolding and frames for the solar panels, along with all additional components required for connecting the solar panels to the hot water system. Before we knew it the solar panels were mounted, the scaffolding had been removed and our new installation was complete."

Unleashing the power of solar

Following the completed installation, the O'Reilly's have been delighted with the final result. Speaking about the newly installed panels, Sara comments, "We are very pleased with the solar panels and how they work. Within the first few days after installation, we had already noticed a difference in our hot water usage, as we now only need to boost the hot water for an hour in the evening."

Financial savings will depend on the amount of hot water used, the boiler efficiency and the type of fuel used to heat the water normally (as gas tends to be cheaper than electricity). Savings could therefore range between £20 - £120 per year. By installing a solar system you will also be helping to protect the environment by reducing emissions of carbon dioxide at an average of 440kgs per year.



Kevin continues, "We were delighted with the attitude and professional service delivered by Sutton and East Surrey Water Services. We didn't even notice the engineers were here during the installation. Even afterwards there was no sign they'd been here installing the solar panels, apart from the panels themselves! All of the staff we have encountered during this installation have been friendly, helpful and a delight to work with. We are delighted with the result."

Cost of installation:	£3,000	A typical solar water heating system ranges from £3,000 - £5,000.
Expected savings over 5 years:	£1,190	With solar panels you can enjoy a reduced hot water bill of up to 50-70% each year. However, this very much depends on the type of fuel used to heat the water. Based on an average annual hot water bill of £340.00.
Typical % increase in value of home:	9%	The Energy Saving Trust research shows that 85% of buyers will pay up to £10,000 more for the same property if it was more energy efficient.
Amount of CO ₂ saved over 5 years:	2900 kg / 3.19 tonnes	On average, a 3-bed semi detached home with one 3.5m squared panel, will save up to 580kg each year of CO ₂ emissions.
Equivalent to:	10,000 car miles	

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