Considerations

Do you have a suitable roof location to site the solar panel?

The panel will need to be positioned where it will gain maximum exposure to sun light throughout the day. A south facing roof which is free of shading is ideal and your OFTEC registered solar thermal installer will offer advice on the most suitable position for your home.

Is your existing system compatible with a solar water heating system?

Your OFTEC registered solar thermal installer will check whether your existing boiler and hot water cylinder is compatible for use with solar water heating. A larger hot water cylinder is likely to be needed and this will take up extra room.

Government incentive payments

Solar water heating is regarded as being a 'renewable heating technology' in that energy is harvested from the environment, thus reducing the reliance on fossil fuels to meet our home energy needs. The net result being a reduction in carbon dioxide emissions released to the environment – a contributing factor in global warming.

In some regions, government incentive payments are available to offset the high upfront cost of installing renewables technologies. Your OFTEC registered solar heating installer will be able to provide details of any payment scheme available in your region and any acceptance criteria that you will have to satisfy. There may also be a requirement for the installer and equipment used to be registered with the Microgeneration Certification Scheme (MCS).

Maintenance

Solar water heating systems generally require very little maintenance but should still be checked periodically and in accordance with manufacturer's instructions by an OFTEC registered solar thermal installer. You should expect to receive a written record of any maintenance work done and any observations made. He/she may also advise you if there are any steps you could take to ensure that everything is working properly.

Finding an OFTEC registered technician

The OFTEC website enables you to locate your nearest registered technicians by postcode entry. OFTEC registered technicians are appropriately qualified and insured to work in your home. They can also advise on energy efficiency.
For further information, please see www.oftec.org

About OFTEC

OFTEC plays a leading role in raising standards within the heating industries of the UK and Republic of Ireland.

Our trade association represents the interests of oil storage; appliance and supply equipment manufacturers and we develop course and assessment material for training providers. We also operate a UKAS accredited competent person registration scheme for over 8,000 technicians involved in the installation and maintenance of oil, solid fuel, and renewable heating equipment and Part P electrical work. Our online shop, OFTEC Direct, supplies a range of technical books, equipment and clothing products for heating technicians.

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Home guide to solar water heating

www.oftec.org

OFTEC home guide to solar water heating

This guide is intended to provide useful information for those considering the use of solar water heating to assist with domestic hot water production.

Building regulations

For reasons of safety and performance, the installation of a solar water heating system is work covered by building regulations and should only be undertaken by competent technicians that have undertaken appropriate training and assessment. In some locations planning permissions may also need to be granted.

Solar water heating systems

For a large part of the year, the climate in the UK and Ireland allows solar energy to be harvested from the sun for the production of domestic hot water. As the performance of solar water heating (sometimes called solar thermal) depends on the seasons throughout the year, it cannot be used to replace a traditional oil or gas central heating installation. However, a well-designed solar system can yield an equivalent amount of energy to satisfy up to 70% of a home's annual domestic hot water needs. In the summer months it may satisfy 100% of that need.

In winter, solar energy can still contribute to the production of hot water by 'pre-heating' the water within your hot water cylinder through the day. This permits you to save oil or gas by delaying the use of your boiler until late afternoon when the boiler only needs to raise the temperature of the water by a few degrees to its required level.

How does the system work?

Solar water heating systems use solar panels, called collectors, fitted to your roof. A heat conducting liquid, usually a mixture of water and glycol to protect the liquid from freezing, flows through tubes within the panel and absorbs solar radiation produced by the sun. A pump is then used to circulate the heated liquid through a coil in your hot water cylinder, warming the stored water that surrounds it.

There are two main types of solar collector that can be used:

Evacuated tubes

Flat plate collectors

It is common to position and fix collectors above roof tiles. Alternatively, some systems can be integrated into the roof for a less intrusive finish. Your OFTEC registered solar thermal installer will be able to discuss which type of collector and mounting option best suits your needs.

Integration and controls

Solar water heating systems can be combined with an oil or gas boiler via a compatible hot water cylinder having two heating coils (twin-coil cylinder).

Controllers fitted to the solar water heating system ensure the pump only runs when there is sufficient heat available at the panel, and a thermostat fitted to the cylinder regulates the temperature of the stored water from getting too hot. This is usually set at 55-60 degrees C.

By integrating solar water heating into your existing heating system, you can benefit from reducing your home's carbon footprint, reducing the cost of your fuel bills, receiving Government incentive payments, and ensuring you have hot water, whatever the weather.