

Solar Thermal

Sunlight can be used to help heat domestic hot water and, in some cases, can also be used to heat your home. The solar collector absorbs heat from the sun. Fluid (usually antifreeze but can be water) passing through the panel/tubes is heated and then fed (usually by a pump) to a hot water cylinder.

Annually, solar thermal panels can provide up to 60% of your domestic hot water needs, depending on your consumption. This will vary seasonally, with more sunshine available during the summer months, than during winter. Although much of the heat will be provided in summer, on sunny winter days the panels can still provide some heat. Typically, up to around 70% of your hot water need can be met in the summer and 30% in the winter.

Is your home suitable?

Solar thermal panels are most efficient when installed on a south facing roof, with a pitch or slope of around 38 degrees, although they can still work well on roofs with different orientations and slope angles. They can also be installed on outbuildings or ground-mounted on a frame.

Solar Thermal types

Panels are available in two different types: flat plate panels and evacuated glass tube panels.

Both perform equally as well, though flat plate panels may require a slightly larger surface area to achieve the same results.

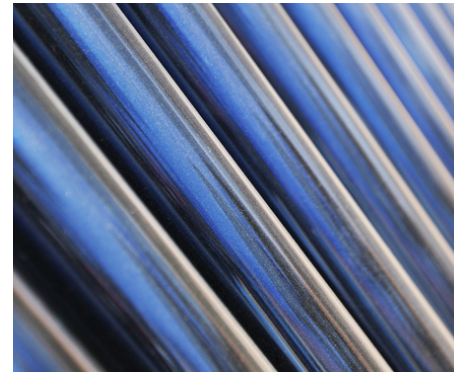
If the panels are to be attached to a roof, make sure that the structure is able to support the additional weight (a good installer will give you advice on this).

These systems require a hot water cylinder to be present and therefore cannot be installed if you only use a combination boiler providing instantaneous hot water. You will most likely need to replace your hot water storage cylinder with one which is larger and has an extra coil/heat exchanger to transfer heat into the cylinder.

Planning permission

This technology can fall into the permitted development aspect of the planning regulations, which means that provided the top surface of the panel(s) is no more than 200mm away from

the surface of the roof, it will not need planning permission. This can be overridden by local planning regulations however, for example if you live in a listed building, a conservation area or an Area of Outstanding Natural Beauty (AONB).



Savings and costs

Installing solar thermal typically costs between £3,500 and £7,000. Installers should carry the Microgeneration Certification Scheme (MCS) accreditation; they may also be members of the Renewable Energy Association.

Annual savings could be anywhere between £75 and £200 per year on average, with gas heated hot water offering the smallest savings, and LPG and electrically heated hot water offering the largest savings.