

Solar Heat system

Heat my home and prepare domestic water with solar thermal

If your heating system is older than 15 years, it might be inefficient and highly energy consuming. Replacing your heating system with a more efficient will help you reduce your energy bill and additionally keep your home more comfortable, improve air quality, increase your home's market value and contribute to reducing global CO₂ emissions.

60% of the heating appliances installed in the EU are old and inefficient (energy class C or lower)

60%

2.5 m² of solar water heater installed equals up to 1700kg of greenhouse gases not released into the atmosphere per year

1700 kg

The energy consumption for space and/or water heating can be reduced from 50% to 90%

90%

A package using solar thermal for water heating reach an efficiency on primary energy over 200%, meaning they produce more useful energy than they consume.

>200 %

✓ CHECKLIST

Solar thermal fits my home because

- ✓ I need a water and/or space heating system
- ✓ I want to reduce my energy bill by using renewable energy sources
- ✓ I am open to combine solar thermal with an additional energy source (electrical or thermal)
- ✓ I have available space (e.g. on the roof) for the installation
- ✓ Improving air quality is important to me
- ✓ I want to reduce my environmental footprint

HOW DOES SOLAR THERMAL WORK?

Solar thermal technology converts sunlight into heat, which is then used to produce hot water, heat or even to cool buildings. The solar collectors are usually installed on the house roof, though they can be also integrated into building elements (e.g. balconies, façades) or on other shadow-free areas. Most solar thermal systems work in combination with an energy storage unit and a back-up heater, for example a condensing boiler or a heat pump, which operates when the heat demand is too high for the solar system alone. These packages also present an energy label with an energy class above A on a G to A+++ scale. On average, in a single-family house, 50 to 90% of the heat required for space heating and or domestic hot water can be generated with solar thermal energy.



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DID YOU KNOW?



Thermosiphon systems can provide water heating and reduce up to 90% the domestic energy consumption and CO2 emissions significantly.

BENEFITS

- ✓ Solar thermal can be used combined with a solar compatible existing heating system
- ✓ Low maintenance and operations costs
- ✓ Solar energy is free and available to everyone
- ✓ Reduces CO2 emissions and saves energy and money
- ✓ Hot water can be stored because solar thermal systems comes with a storage

DISADVANTAGES

- ✗ The house should have available space up on the roof
- ✗ Hot water cannot be stored for a long time
- ✗ Solar thermal systems are particularly convenient in areas with high solar radiation

PHOTOVOLTAIC AND SOLAR HEAT, ARE WE TALKING ABOUT THE SAME THING?

Solar thermal must be distinguished from other technologies using the sun directly. Solar thermal provides heating (and cooling in some specific solutions) while solar photovoltaic (PV) provides electricity. For sure, both make a good use of solar radiation, being installed on the roof most of the times, though solar thermal produces up to three times more energy for the same roof space. Your choice will depend on your needs: electricity or heating. You can also opt to install both types of systems or even a hybrid PVT (PV + thermal) collector, and benefit from both green solar heating and electricity, reducing even further your energy bill and your carbon footprint!

...and if solar heating system is not the best option for me?

Check up on numerous efficient heating technologies options (such as biomass boilers, heat pump, hybrid heating, among others)!



Do not hesitate to consult a professional to find the most suitable heating option for your home.

Where can I find more information about the functioning, installation, national situation, financial help, and other heating systems? Visit:

[EN](#)

[ES](#)

[DE](#)

[FR](#)

[IT](#)

[PT](#)

HARP (Heating Appliances Retrofit Planning) project gathers 18 partners from six European countries. The goal is to motivate consumer to plan the replacement of their old and inefficient heating system, with more efficient and renewable heating solutions. The HARP online tool will help you check the energy efficiency of your current heating system and find a suitable replacement solution based on the most efficient alternatives available on the market. Furthermore, the HARP will straiten your contact with professionals that can support you on the replacement process, as well as provide more information on available incentives. Learn more about energy efficient heating in [our website](#).



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www.heating-retrofit.eu



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