Solar thermal power generation in the EU

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Why do solar thermal systems need to be installed in Europe?
In brief,solar thermal systems installed in Europe have a combined energy storage capacity 20 times higher than the total power storage capacity available. Storage capacity is essential for the flexibility of the energy system. The heat demand in Europe is more than double of the power demand and on top of that as much more extreme peaks.

Is solar thermal a European based industrial sector?
Taking solar PV has a benchmark, we can identify that solar thermal already fulfils several important preconditions for growing further as a European based industrial sector. It has a well-established manufacturing capacity in Europe, holding technology sovereignty and being the technological leader worldwide.

What percentage of European electricity comes from solar energy?
In 2024,47.5% of the electricity consumed in the EU came from renewables and 23.4%of renewable electricity came from solar energy (Eurostat,January 2026). June 2025 was the first month in history where solar energy was the main source of electricity generated in the EU at 22%. Source: SolarPower Europe

Why is solar energy so important in Europe?
The heat demand in Europe is more than double of the power demandand on top of that as much more extreme peaks. The fact that every solar thermal system integrates,by default,storage capacity is a major added value to the energy system. There are millions of small thermal energy storage units in European households.

This is the 2025 update of the Clean Energy Technology Observatory report on trends in the development of solar thermal energy, including concentrated solar power (CSP) and solar heat ...

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Besides the technological difer-ences, Solar Heat distinguishes itself as THE European solar industry. Besides the advantages it has in comparison with other renewable technologies, such ...

Technical overview of how wind and solar overtaking fossil fuels affects the EU power system, grid design,

and industrial applications.

In 2025, Solar Heat Europe published the Solar Thermal Market Outlook in the same fresh format as the previous year, now available for free on the website. This report also includes ...

Source: SolarPower Europe The EU solar generation capacity keeps increasing and reached, according to SolarPower Europe, an estimated 406 GW in 2025. The EU has long been a front-runner in the ...

Learn how Europe"s solar thermal power sector is meeting 90% of the region"s demand with the help of small and medium-sized enterprises (SMEs). Discover the potential for growth, ...

For instance, on a rooftop, solar thermal can produce heat in excess of 3 MWh per year in an area below 6.5 m2, while a solar PV system would require more than 15 m2 for an equivalent ...

The EU cumulative PV capacity projections between 2024 and 2028 show double-digit growth rates year-on-year. In absolute terms, the EU is expected to add 401 GW new solar between 2024 and ...

On 21 November, the European Commission"s Joint Research Centre (JRC) published via its Clean Energy Technology Observatory its 2023 status report on solar thermal energy in the ...

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