

Clean and efficient process heat drives Europe's Greentech

Process heat is not much known, but it is large. 2/3 of industrial energy demand goes into generating heat which is at the basis of most manufacturing processes.

An astounding **50%** of that energy which is used for process heat **can be saved by deploying clean and efficient process heat technologies** –resulting in annual cost savings of up to EUR 21 billion in Germany alone as well as substantial reduction of emissions.

What is process heat?

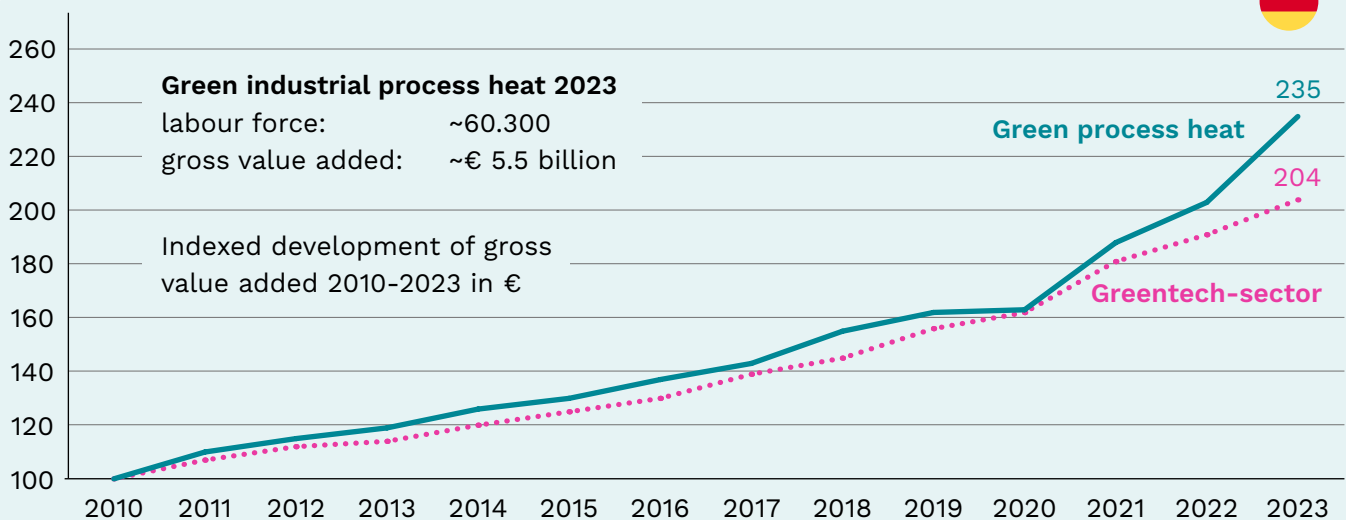
The energy used in the industrial production processes, ranging from pasteurising milk, steam to produce chemicals or a burner to melt glass.



A new study finds

→ **Process heat technologies are a key driver of Greentech growth in Germany.** Clean and efficient process heat technologies have grown by 6.8 percentage points per year which is 1.2 percentage points faster than the overall Greentech sector

in Germany between 2010 and 2023. The sector is growing not only in Germany but across Europe. Countries like Sweden and Italy have demonstrated even stronger growth dynamics in certain areas.

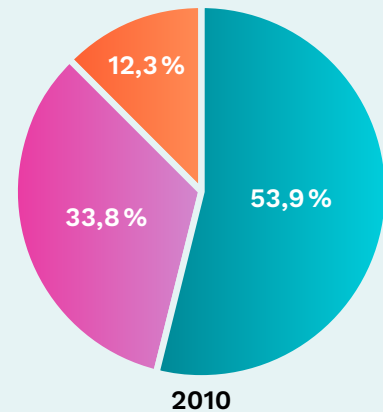


Assessed technologies include:

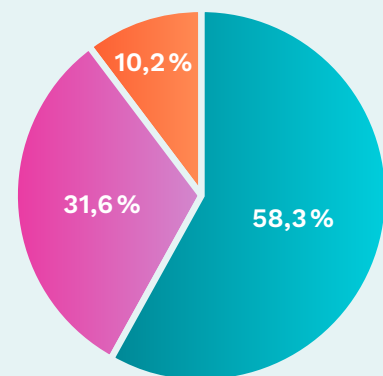
- Industrial heat pumps
- Installation and consulting services
- Measurement and control technology
- Electrical process heat supply
- Geothermal energy
- Solar
- Bioenergy
- Green hydrogen technologies

- **Rapid growth in industrial heat pumps.** Industrial heat pumps are at the heart of the clean heat transition and are currently experiencing double-digit annual growth rates, indicating rapid market expansion and increasing technological maturity.
- **Strong export performance with growing competition.** EU exports of clean process heat technologies more than doubled between 2010 and 2023. However, the EU's share of the global market is decreasing, highlighting the need for stronger policy support to stay competitive.

EU share of global market under pressure



2010



2022

- Other export countries (excluding EU)
- Share of EU exports (excluding DE)
- Share of German exports

Reference: Prognos 2025 – Study commissioned by DENEFF

The growth potential is significant

Tapping the energy savings potential and achieving full decarbonisation could drive up the market volume for the EU manufacturers of clean and efficient process heat technologies by a factor 22. Nearly one million new jobs could be created in Germany alone.

The EU needs to act if it wants to secure the potential

- 1 **Develop roadmaps** for the efficient decarbonisation pathways of low-, medium-, and high temperature heat and connect it with the Heating & Cooling Strategy and the Electrification Action Plan
- 2 **Allocate** Horizon Europe funds for R&D pilots in emerging heat technologies
- 3 **Ensure** a technology neutral state aid framework

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