



European
Commission

Policy brief: Competitiveness of clean energy technology – Heat Pumps

October 2023

Headline findings

- The heat pump sector is well-positioned to benefit from increasing deployment and heat pumps are an important part of many decarbonisation scenarios.
- EU production capacity was estimated to have covered **75%** of EU demand for individual hydronic heat pumps in 2021.
- The EU market is projected to grow **2.5-fold** by 2030 and almost **10-fold** by 2050. Announced investments in new and extended EU factories, totalling about **EUR 5 billion** between 2023 and 2026. Long-term market predictability based on a stable policy framework will be key to maintaining this trend.

Key (competitiveness) challenge for Heat Pumps

Challenge 1

EU manufacturers are dependent on imports for components, and compressors, inverters and synthetic refrigerants.

Challenge 2

The EU heat pump sector is still somewhat fragmented, and national laws and requirements differ.

Challenge 3

Although heat pumps are a mature technology, further investment is needed in areas such as reduction of up-front costs, increased efficiency, new business models, and solid-state technologies.

Key policy recommendations

Recommendation 1

Consolidating the manufacturing base in the EU would help drive down the upfront costs of heat pumps and boost EU global competitiveness.



Recommendation 2

Public investment in heat pump research and development is currently at shallow levels relative to other technologies, and an urgent increase is required.

Recommendation 3

Deployment would be further enabled through greater international alignment of heat pump standards.



Scan QR code for more information on the Clean Energy Competitiveness Progress Report

