

HEAT PUMPS: THE HEART OF EUROPE'S ENERGY FUTURE



EHPA priorities for EU policy 2024-2029

Almost 50% of all energy consumed in the EU is used for heating and cooling. More than 70% still comes from fossil fuels, which are mostly imported.

Heat pumps offer a cost-efficient, clean way of heating, cooling, producing hot water and vapour, while helping the climate and the European economy. Around three to five times more energy efficient than gas boilers, they can slash Europe's fossil fuel imports, energy use and emissions. Along with building renovations, heat pumps can also provide a shield for consumers against unpredictable energy bills.

The EU has put heat pumps at the heart of its plan to achieve energy security – REPowerEU. But encouraging a faster uptake of heat pumps is more than a strategic choice; it lays the foundations for a greener, more resilient and competitive European Union.

To reap the climate and socio-economic benefits of all types of heat pumps, EU legislators and decision-makers must take the lead in developing the necessary policy and financial conditions for the acceleration of the clean energy transition. The first key step should be the immediate publication of the European Commission's Heat Pump Action Plan.

This manifesto sets out the key priorities and challenges for unlocking the full potential of heat pumps in 2024-2029 and beyond. It calls on policymakers to put clean heating and cooling at the heart of Europe's energy system today for a brighter tomorrow.

1 SET CLEAR POLICY DIRECTION AND TARGETS

Ensuring consistent, streamlined and ambitious long-term policies on heat pumps is vital for attracting both demand for them and investments in the EU's manufacturing and workforce.

Yet the publication of the EU Heat Pump Action Plan, which would have given a clear long term policy signal, has been postponed from first quarter 2024 to after the EU elections in June 2024.

Heat pump manufacturers have planned €7 billion of investments in European factories, production, R&D and training from 2022-2025. But the most recent figures show sales dropped in 2023. Demand for heat pumps, and these billions in investments, could be at risk. It is crucial to boost the heat pump market by continued commitment to the technology, stable policies, strong consistent and forward-looking measures and a market environment shaped towards making clean technologies the ones that are economically most attractive.

To help demand pick up, lock in this investment and European leadership and jobs in this key net zero sector, clarity from political leaders on the direction of travel, including via the Heat Pump Action Plan, is key. Similar initiatives for sectors like wind and solar power have helped those industries to flourish.

We ask policy-makers to:

- Publish the Heat Pump Action Plan without delay, ensuring it reflects the barriers and solutions to heat pump roll-out identified in [EHPA's accelerator document](#).
- Implement agreed legislation such as the Fit for 55 package and provide guidance for EU governments as they put it into their own laws.
- Streamline and harmonise legislation at EU and national level, ensuring that all legislation, building codes, energy performance certificates and planning regulations touching upon heat pumps matches the REPowerEU targets for a large-scale heat pump roll-out.
- Include clear heat pump targets in upcoming legislation as reflected in the European Commission's 2040 climate modelling dataset: nearly 60 million heat pump units in 2030 and 90 million in 2050.*
- Monitor the implementation of national energy and climate plans (NECPs).
- Develop national heat pump targets and action plans to include specific chapters on heating and cooling in the NECPs.
- Set an ambitious Ecodesign deal with a clear pathway to heat pumps.

2

MAKE HEAT PUMPS AFFORDABLE FOR ALL

Reducing heat pump costs makes them more attractive to consumers and industry. In most countries, the upfront cost of a heat pump is much higher than that of a fossil fuel boiler. In many countries, the operating costs of heat pumps are still higher than those of fossil fuel boilers, despite heat pumps being three to five times more energy efficient.

To incentivise people to buy a heat pump, they need to see a rapid return on investment. To achieve this, electricity should be no more than double the price of gas. Electricity costs can be reduced by shifting taxes and levies away from electricity bills, introducing carbon pricing and by giving consumers the option to move to a lower or variable electricity tariff if they switch to flexible, renewable heat pumps.

In addition, financial tools, government support, private sector financing and different business concepts to reduce the cost, are essential to help consumers bear these costs and tap into the energy savings heat pumps provide.

There is a particularly urgent need to shield low-income households from high energy prices and support their access to cleaner and, ultimately, cheaper to run heating and cooling solutions like heat pumps.

We ask policy-makers to:

- Complete the energy taxation directive so that electricity is taxed less than fossil fuels.
- Implement the Emissions Trading System 2, which puts a carbon price on heating in buildings, and the social climate fund, which will help poorer households decarbonise.
- Implement national measures to reduce the difference between the price of electricity and gas, e.g with carbon pricing and moving taxes and levies off electricity bills.
- Enable innovative business concepts and financial tools that reduce upfront costs and provide suitable and affordable heat pump offers to every type of consumer.
- Bring high fossil fuel subsidies to an end, and instead subsidise heat pumps specifically for low-income households.
- Encourage Member States to reduce taxes and levies on heat pumps and heat pump installation.

3

STRENGTHEN INDUSTRIAL LEADERSHIP AND SKILLS

Europe's heat pump sector is a world leader. It provides more than 161.000 direct jobs already today, with the potential for many more.

Increasing manufacturing and installation capacity is a prerequisite for success of REPowerEU and the Green Industrial Plan.

The heat pump sector is ramping up production in order to meet and surpass the EU's targets, but it needs the right support.

At the same time demand should be boosted to ensure the long term competitiveness of the heat pump sector in Europe, for example through the stable policies mentioned above.

We ask policy-makers to:

- Set up a clean transition dialogue between the European Commission and the heat pump sector to further strengthen its competitiveness.
- Implement the heat pump skills partnership that is foreseen in the Heat Pump Action Plan both at EU and national level, to ensure enough workers are trained and reskilled.
- Consolidate the heat pump sector as a key net zero industry by developing an EU industrial strategy for heat pumps and their components to support production capacity and European competitiveness.

4

UNLOCK THE FULL POTENTIAL OF LARGE HEAT PUMPS

Heat pumps are not only for homes! Large heat pumps have a major role to play in the electrification of industry and energy system integration. Already today they can reach temperatures of up to 200°C – which is sufficient for sectors such as food and paper, for example.

Large heat pumps are immensely efficient and can bring circularity by using waste from industrial processes and other sources including wastewater, data centres and metro tunnels for district heating and cooling systems or heating in industrial processes on site. This potential should be unlocked.

We ask policy-makers to:

- Increase awareness about large-scale heat pump applications, for example by putting them as a key area to develop for the system integration strategy evaluation.
- Prioritise grid connection for industrial heat pumps to avoid delaying projects.
- Make large heat pumps default for industrial heat up to 200°C.
- Regulate the use of on-site waste heat recovery by requiring all types of waste heat to be recovered. This could be done by incentivising the extension of existing cooling equipment with additional heat exchangers to make use of the waste heat, for example.

5

USE HEAT PUMPS' FLEXIBILITY TO SUPPORT THE ENERGY SYSTEM

Heat pumps are extremely flexible. They can be turned on to heat when electricity costs are lower and off at peak times.

This balances out the grid and reduces costs for the EU's energy system and for consumers.

However, it requires incentives for reducing and/or moving the electricity demand of heat pumps away from grid load peaks (for example through dynamic electricity tariffs or direct flexibility offers). Grid operators need to be aware of the flexibility potential offered by heat pumps and take this into account in their grid planning.

We ask policy-makers to:

- Put a value on flexibility, for example by offering consumer tariffs that go down in times of lower electricity demand or when using their heat pumps flexibly.
- Integrate heating with electric cars, PV and building energy management systems by putting in place a future proof standardised communication protocol.
- Take the flexibility that heat pumps offer into account in electricity grid planning, which should allow fewer and more targeted investments.

QUICK FACTS ON HEAT PUMP TECHNOLOGIES IN EUROPE

- ➔ Heat pumps offer a variety of solutions for **heating, cooling and domestic hot water production**. Heat pumps use **renewable thermal energy from air, water, ground or sewage water**. They apply circular economy principles when recovering energy and waste heat.
- ➔ Heat pumps are mature technologies and ready-to-use for the large majority of the residential and commercial building stock in Europe, as well as for industrial processes. Heat pumps are fit for the renovation sector and a broad range of buildings from passive houses to cultural heritage buildings.
- ➔ Industrial and commercial heat pumps improve the energy efficiency and contribute to the **decarbonisation of district heating, cooling systems and industrial processes**.
- ➔ Heat pumps are the most efficient way to provide heating and cooling, even in parallel, while **reducing total CO2 emissions**. They also contribute to **indoor and outdoor air quality**.
- ➔ Heat pumps also embed the **“efficiency first” principle**. They expand the benefits of growing shares of decarbonised electricity in the European energy mix and can contribute to the stabilisation of electrical grids.
- ➔ Heat pumps are part of **new business models and digital systems** that boost the use of **electric vehicles, renewable electricity and smart home appliances**. They facilitate **sector integration** and **thermal storage**.