

European Heat Pump Market and Statistics Report 2024





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Clivet

The **European Heat Pump Association** (EHPA) represents the European heat pump sector.

EHPA works to shape EU policy that allows heat pumps to become the number one heating and cooling choice by 2030 and a key part of a future decarbonised Europe.

EHPA advocates and communicates to policy-makers and to our members. EHPA organises high level events and is involved in multiple projects.

EHPA coordinates the Heat Pump KEYMARK - a European certification scheme.

More: ehpa.org

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Summary for policy makers

So near, and yet so far. That's the situation for the European heat pump sector in 2024.

On the one hand, heat pumps are fully part of EU legislation. They are front and centre of a number of laws. These range from the EU's plans for greater energy independence and for decarbonising industry to its revised climate and energy targets for 2030.

EU policy-makers have identified heat pumps as central to a competitive, sustainable Europe based on successful clean tech sectors. At least 60% of heat pumps sold in Europe are also produced here, and this is set to increase.

The heat pump market is growing. In 2023, a total of 3.02 million heat pumps were sold across 21 European countries, bringing the total stock to around 24 million altogether. There are now over 250 manufacturing sites in Europe, and the heat pump sector represents €7 billion in investment from 2022-2025 and employs around 168,000 people directly.

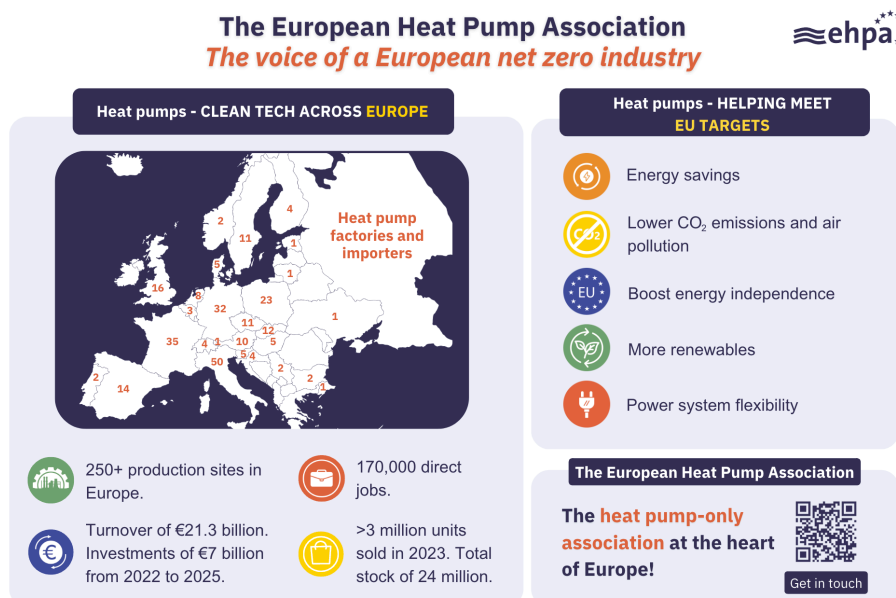
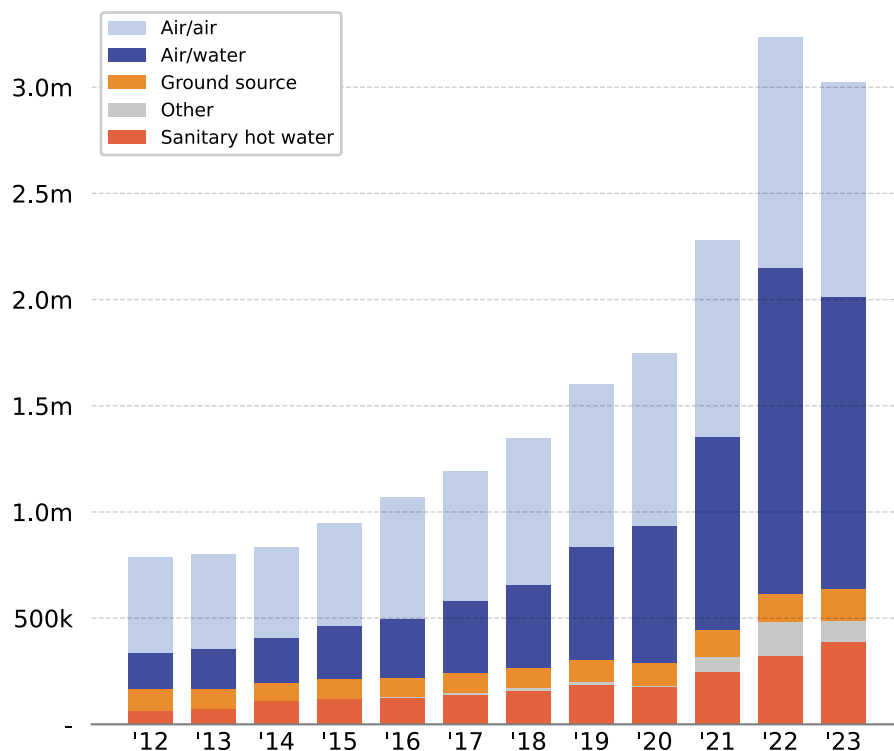


Figure 1.0-1: Heat Pumps: A European net zero industry

The 24 million heat pumps now installed in Europe avoid greenhouse gas emissions equivalent to removing 7.5 million cars from the roads.

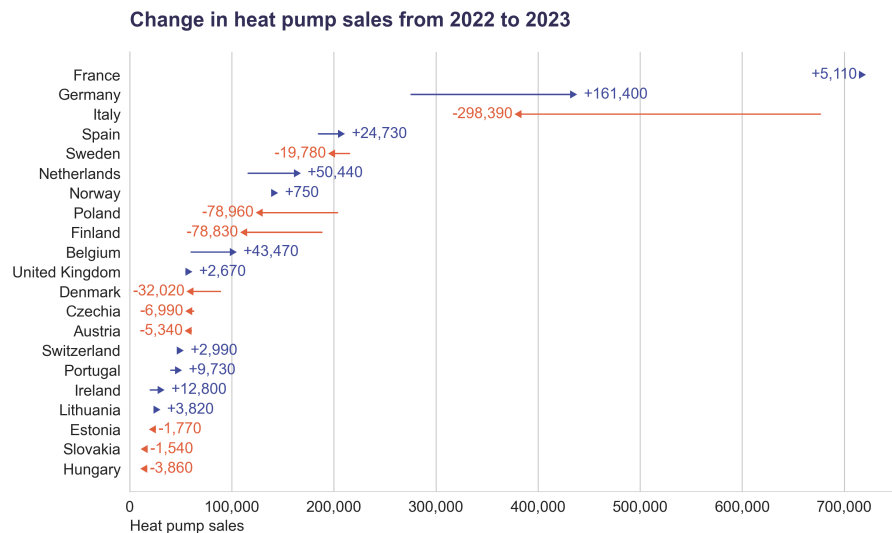
On the other hand, this report shows that the growth in the market is slowing, particularly in the final quarters of last year. For the first time in a decade, annual growth shrank in 2023.

Chart 1.0-1: Sales development by year and type of heat pump (primary heating function)



EHPA has updated its methodology for calculating sales of air to air heat pumps to make it more accurate. This means there is a slight change to the numbers compared to previous releases. For a full explanation see our website [correction factor explanation](#)

Figure 1.0-2: Changes in HP sales from 2022 to 2023, a relative slowdown in most countries



If this level of annual sales does not increase, the EU will not be on track to meet its ambitions: nearly 60 million heat pump units in place in 2030 (from the [European Commission's impact assessment for its 2040 climate target, PRIMES energy modelling](#)). It will be about 15 million heat pumps short in 2030.

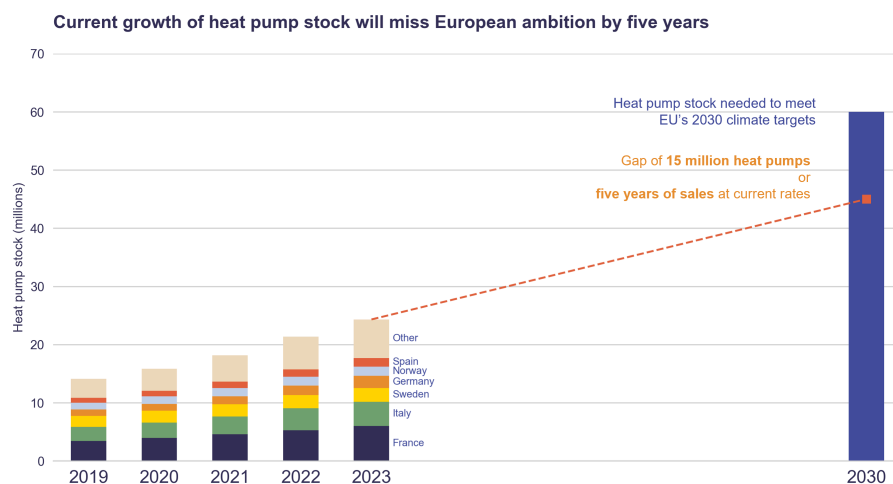


Figure 1.0-3: 2030 EU ambitions vs. current pace (heat pumps installed)

Falling short would impact everything from jobs in the sector to the billions of Euros in investment it currently attracts - €7 billion of investments are planned for 2022-2025.

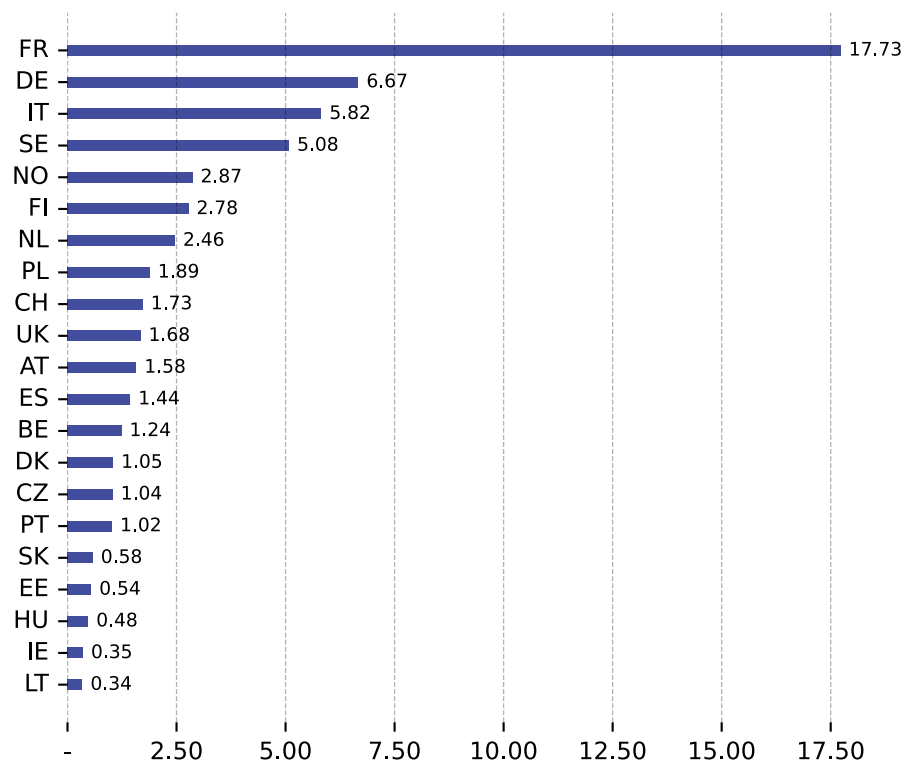


Chart 1.0-2: GHG (Greenhouse gas) Emission savings from stock of heat pumps, in Mt

Explaining the latest trends

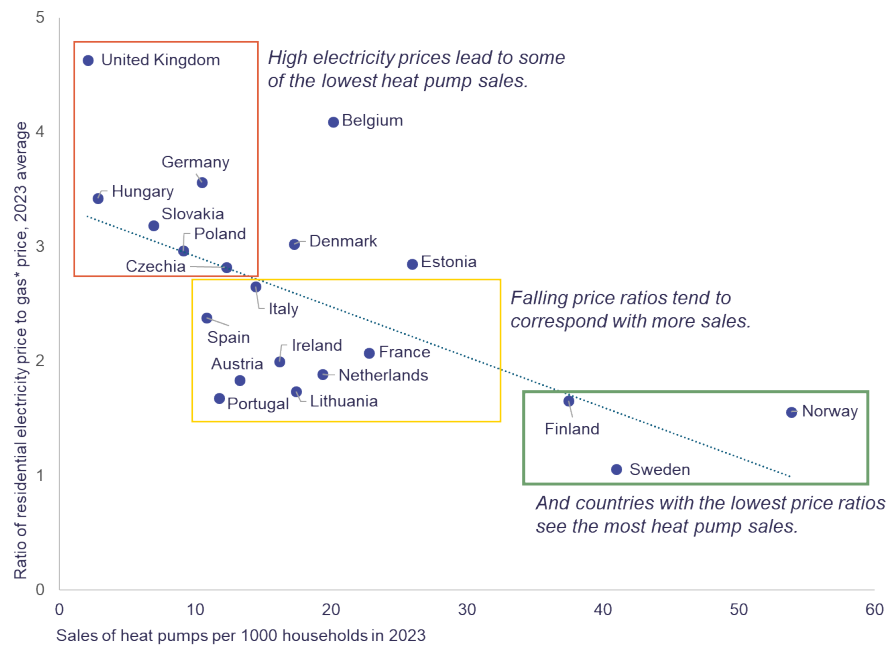
There are many shared reasons for this decline across the various European countries, as outlined in EHPA's report [here](#).

Overall, policy change is the number one factor which comes back time and again, with variations depending on the country. For example, an announced future higher subsidy scheme in Austria may have caused interested consumers to delay buying a heat pump. On the other hand, the removal of government support in Italy dented consumer interest. In the Netherlands, the

prolonged lack of a government generated caution.

Another crucial impact was caused by energy prices. These continue to be distorted in favour of gas and fossil fuels, with electricity prices often heavily taxed. The energy crisis of 2022 had temporarily sent gas prices up, favouring electric heat pumps, but this is no longer the case. In Poland, for example, electricity is four times the price of gas now, and there is no clarity on future electricity price levels, while gas prices are 'frozen' by the government. Slovakia, where electricity prices are three times that of gas, is living a similar experience.

Figure 1.0-4: Heat pump sales per 1000 households in 2023 vs. electricity-to-gas price ratio. Source: European Heat Pump Association and Eurostat. Price ratios alone do not explain the difference in heat pump sales between countries. Finland and Norway show price ratio with heating oil.



In Finland and France a slowdown in new housing projects caused by high interest rates is partly to blame for the drop in sales. In Spain, the renovation rate has slowed, meaning gas boilers do not get replaced by heat pumps. In Portugal, inflation is hitting consumers hard and slowing spending.

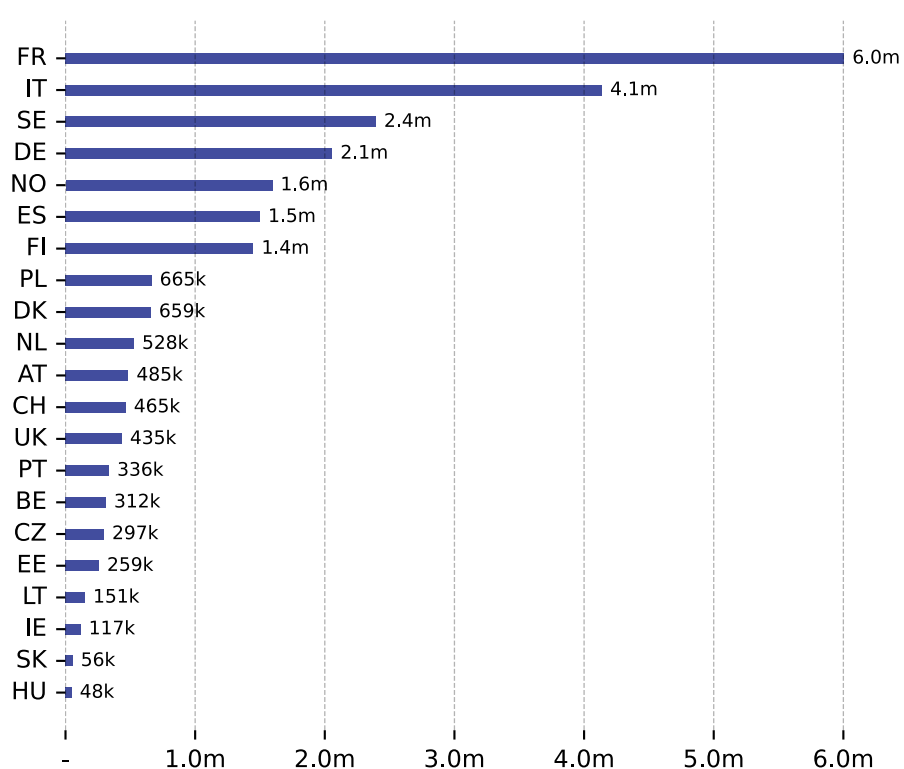
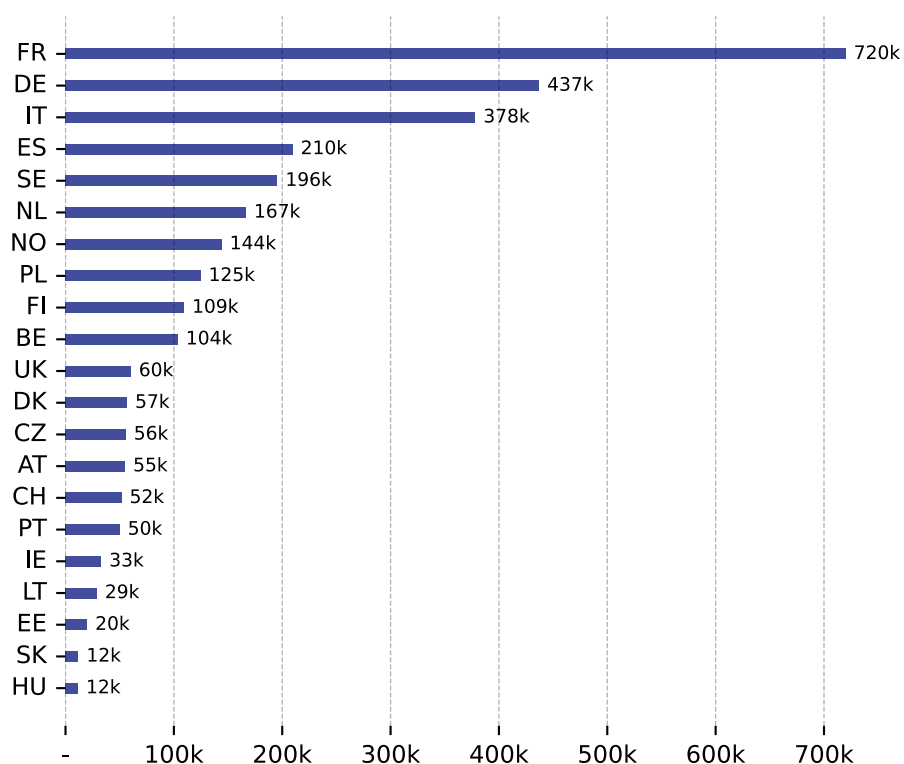


Chart 1.0-5: Heat pump sales
2023 per 1 000 households

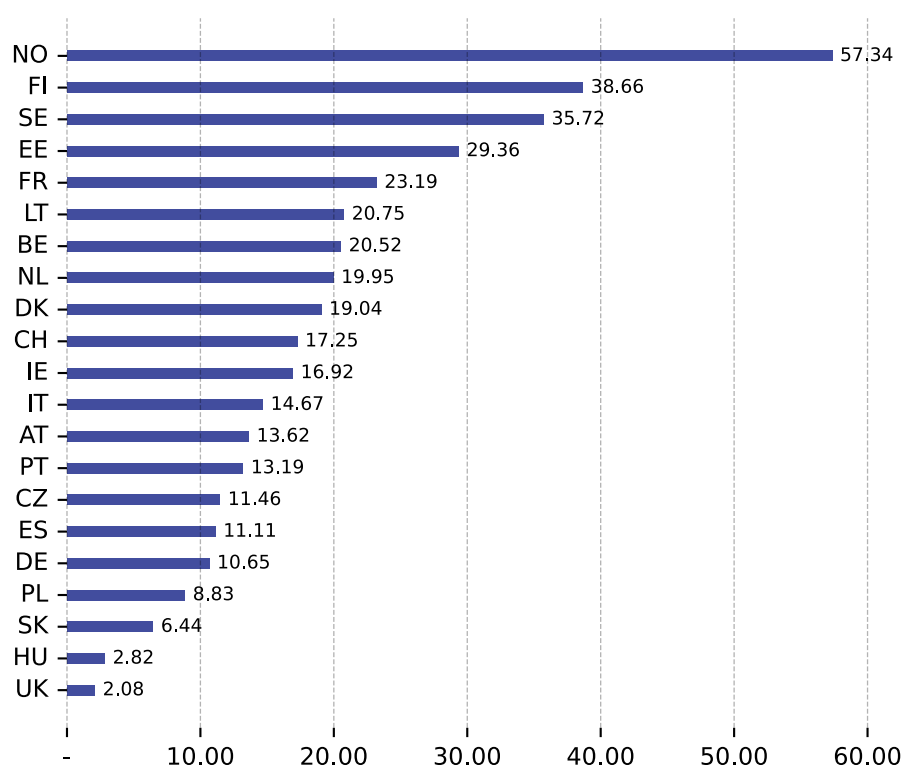
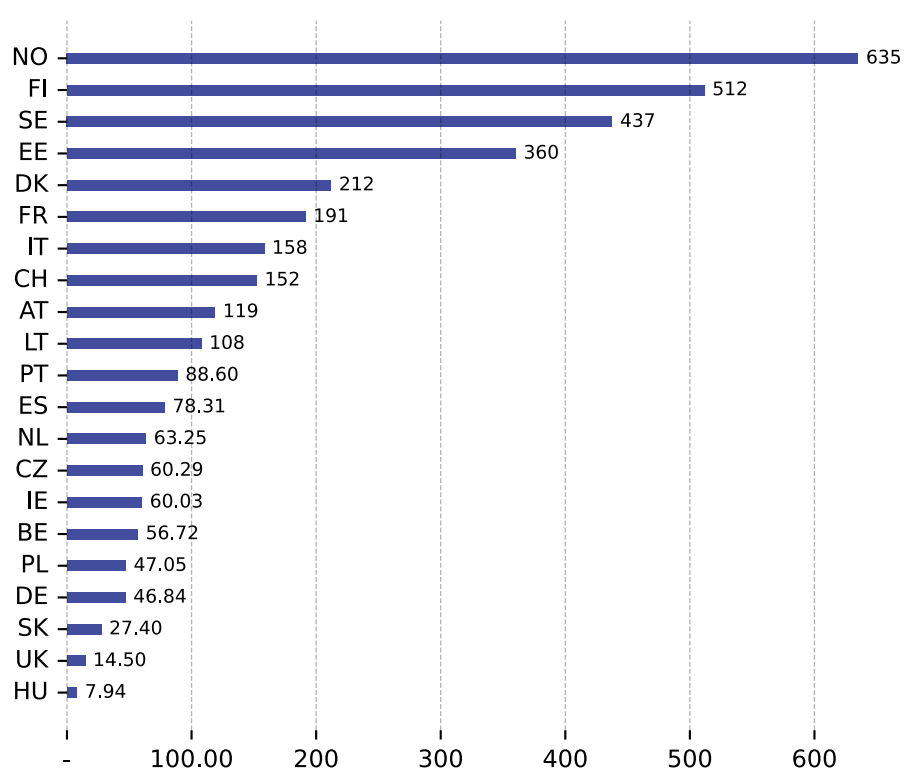


Chart 1.0-6: HP Units stock
per 1000 households - by
country



In terms of individual countries, the biggest markets are now France and Germany, with France and Italy having the biggest total number installed. In terms of heat pumps per capita, the leaders are now Norway and Finland.

From slowdown to seizing the opportunity

If growth in the heat pump market continues to shrink, it will endanger Europe's competitiveness and its path to energy independence and climate neutrality. Europe's heat pump industry is a world-beating clean tech sector which is gradually gaining market share on gas boilers. It is vital to support the sector so it builds on its excellent base in order to reap its potential, ensuring Europe leads the global shift to clean heating and cooling.

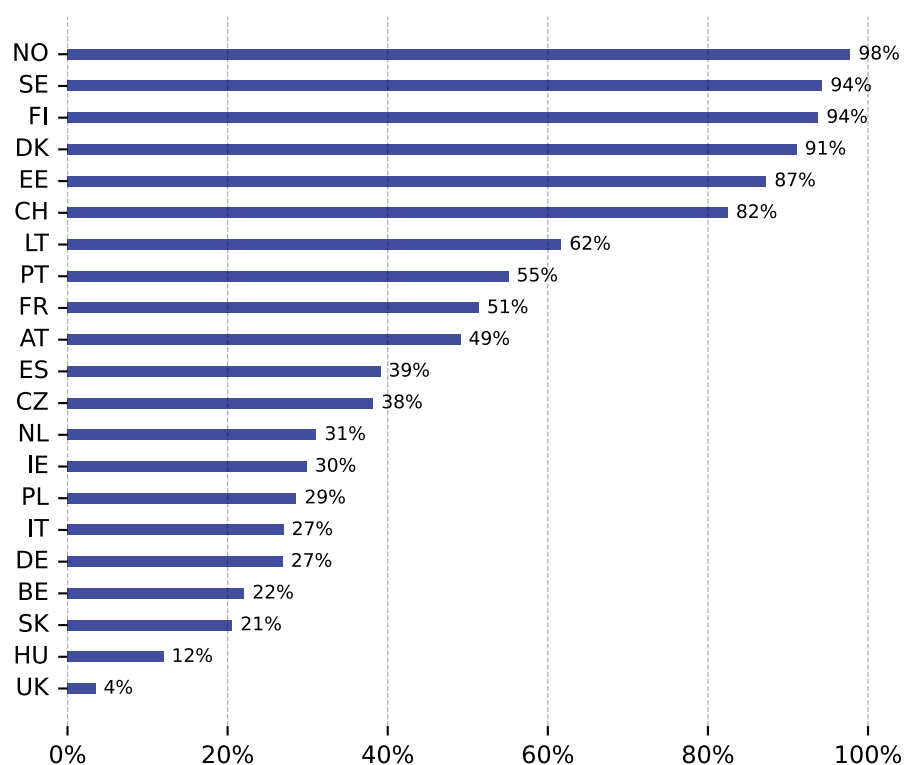


Chart 1.0-7: Heat pump market shares, in % of combined sales of boilers (BRG) and heat pumps (EHPA), by country, 2023

What needs to happen to put the sector back on track? Consistent, streamlined and ambitious long-term policies on heat pumps are vital for attracting demand for them and ensuring investments in the EU's manufacturing and workforce.

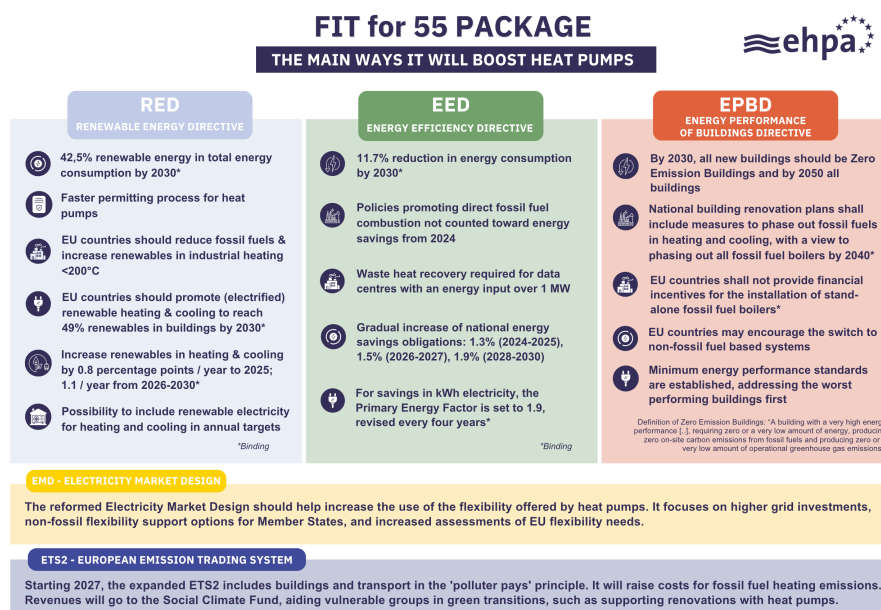
Yet the publication of the EU Heat Pump Action Plan, which would have given a clear long term policy signal, has been postponed from first quarter 2024 to - potentially - after the EU elections in June 2024.

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.

What's more, the EU needs to implement agreed legislation such as the Fit for 55 package and provide guidance for EU governments as they put it into their own laws. All legislation should be harmonised and streamlined – in-

cluding building codes, energy performance certificates and planning regulations touching upon heat pumps. Clear heat pump targets should be included 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.*

Figure 1.0-5: How the EU Fit for 55 package will impact heat pumps



On a national level, countries now have to implement their energy and climate plans (NECPs). This should be monitored by the European Commission, and could be complemented by national heat pump targets and action plans.

Another essential area to put heat pump sales back on track is cost. 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.

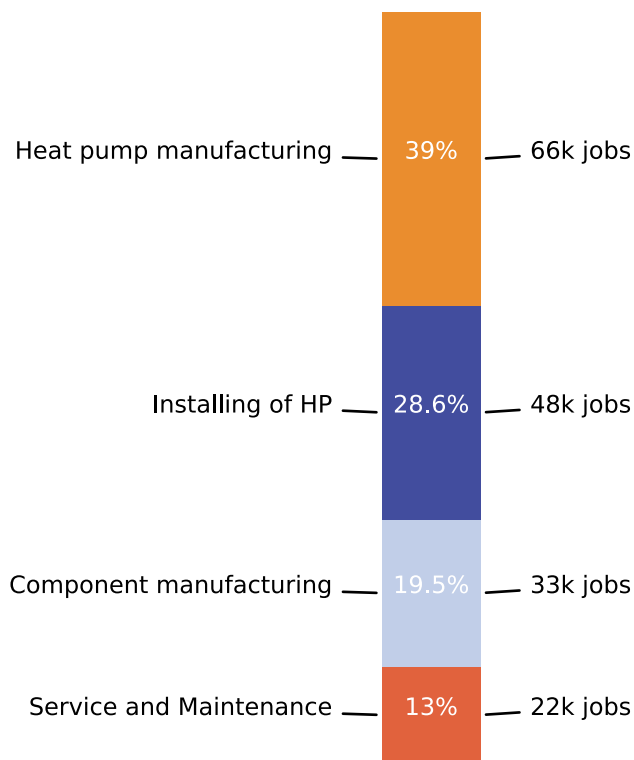
In many countries, the operating costs of heat pumps are still higher than those of fossil fuel boilers, despite heat pumps being three to five times more energy efficient.

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 cost are essential to help consumers 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.

Increasing manufacturing and installation capacity is a prerequisite for a faster heat pump rollout. The sector now provides close to 170k direct jobs and this is increasing over time.

Chart 1.0-8: Employment in the heat pump sector 2023 (Full time equivalents)



In order to boost this capacity, and strengthen the heat pump sector's competitiveness, the European Commission could set up a clean transition dialogue with the sector. These dialogues are meetings between the European Commission and industries to support the implementation of the European Green Deal. The heat pump sector would also welcome an EU industrial strategy for heat pumps and their components, and a heat pump skills partnership both at EU and national level, to ensure enough workers are trained and reskilled.

The potential of large heat pumps should also be broadcast more widely – and their grid connections prioritised. EHPA is now gathering for the first time data on the large heat pump market in Europe and will use this to flag the huge value they can provide for the electrification of industry and energy system integration. Already today heat pumps can reach temperatures of up to 200°C – which is sufficient for sectors such as food and paper, for example. Large heat pumps 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.

Another important aspect of heat pumps is that in terms of the electricity grid, they are extremely flexible. This means 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, incentives are needed to encourage consumers to make the most of this flexibility, which should also be taken into account by grid operators in their grid planning.

In terms of EU policy on products, EHPA works to ensure these are complementary to each other and to the EU targets for heat pumps. For example, the EU's rules on the energy efficient design of products including heat

pumps – 'Ecodesign' – need to be as ambitious as possible, and bring about an end to stand-alone fossil fuel boilers.

[See EHPA's manifesto on priorities for EU policy 2024-2029](#)

Which EU laws have an impact on heat pumps?

EHPA works on the following policies, due to their importance for the heat pump sector.

The EU 'Fit for 55%' package

The Fit for 55% package includes the EU's revised energy and climate targets for 2030. These include a higher renewable energy target of 42.5% and to increasing energy efficiency goals (-11.7%). Higher targets like these are helpful for heat pumps, which can help achieve them in all settings: residential, commercial and industrial.

[See EHPA's summary infographic](#)

The Energy Performance of Buildings Directive (EPBD)

The EPBD sets a phase-out deadline for boilers burning fossil fuels by 2040. It also sets a target for zero emission new buildings for 2030, and for all buildings to be zero emissions by 2050. These measures are extremely important for speeding up the switch from fossil fuel boilers to heat pumps.

The Net Zero Industry Act

The Net Zero Industry Act is supposed to boost clean technologies, including heat pumps. To complement the Act, former European Central Bank chief Mario Draghi is to publish a report on EU competitiveness later this year.

[See EHPA's summary infographic](#)

F-Gas Regulation

The F-Gas regulation sets deadlines for the phase-out of fluorinated gases due to their potential for worsening global warming. Some of these can be found in heat pumps and other appliances. The regulation was revised at the end of 2023 with a tighter timeline. The heat pump sector is committed to switching to non-fluorinated refrigerants wherever technically feasible, now further guided by the clear timeline provided by the F-gas Regulation. Furthermore, it is important to allow time to ensure widespread technician training and certification to work with all types of refrigerants. The sector is also committed to this.

Ecodesign and Energy labelling

The Ecodesign rules – supported by the consumer focused energy labels – aim to make products like heat pumps more efficient. EHPA advocates for an ambitious ecodesign deal with a clear pathway to heat pumps away from stand-alone fossil fuel boilers. We also stress the importance of consistent legislation, aligning the needs for product re-design from the F-gas regulation to those resulting from the Ecodesign revisions.

Digitalisation and flexibility

Ensuring heat pumps are digitally 'smart' and can talk to other devices is key. So is making the most of the fact that they can be used when consumers choose to do so - for example when energy demand is lower. Consumers should be rewarded for doing this, for example via variable tariffs. The European Commission recently published a code of conduct for energy-smart appliances (heat pumps, but also washing machines, tumble driers), whose signatories have committed to developing interoperable connected products within a year. The future European Commission is also due to work on the flexibility of the power system.

