

# European Heat Pump Market and Statistics Report 2014

## Executive Summary



The number of heat pump units sold in the European heat pump market increased by 3% in 2013. A total of 769 879 units were sold in the 21 European countries covered by this year's EHPA report.

During the last 20 years, the total amount of installed Heat Pump has exceeded 6,74 million (see Table 1-1).

	SUM EU-11	SUM EU-21	TOTAL STOCK
2005	446 037		1 015 607
2006	504 428		1 525 401
2007	568 131		2 114 519
2008	770 538		2 918 976
2009	686 076		3 644 998
2010	671 392	800 388	4 437 530
2011	666 873	808 591	5 237 003
2012	621 818	750 436	5 979 042
2013	636 639	769 879	6 741 251

Table 1-1: Heat pumps in Europe – sales and stock, 2005 – 2013

The heat pump market continues to be governed by three major trends:

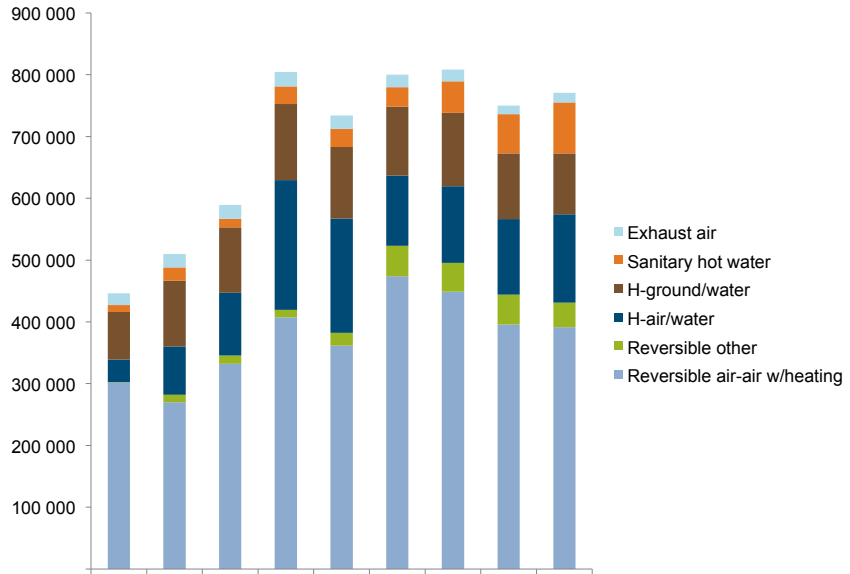
1. Air is and will remain the dominant energy source for heat pumps (note that cooling-only units are not counted in the report, see Annex I).
2. Sanitary hot water heat pumps are the fastest growing heat pump segment across Europe. This category is the only one showing double-digit growth. Sanitary hot water units combine a heat pump and a hot water storage tank. They are either sold as stand alone units with the heat pump and the tank in one casing or as systems combining a heat pump and a separate tank.
3. Larger heat pumps for commercial, industrial and district heating applications are increasingly popular. They quite often use geothermal or hydrothermal energy. However also here, air is an energy source used by a number of installations.

After a difficult year in 2012, many markets could find back the growth path.

On an individual country perspective, 15 out of the 21 markets saw a positive development (see Figure 1-2). Some countries even experienced double-digit growth for a second year in a row. A complete turnaround could be observed in Portugal, Spain, Sweden and Finland where the heat pump markets were decreasing in 2012. The biggest markets such as France and Sweden strongly influence the overall positive results of the market in Europe.

Early signs from 2014 sales confirm this positive trend. It is indeed expected that 2014 will see larger growth rates than 2013.

Figure 1-1: Development of heat pump sales in Europe 2005–2013, by category



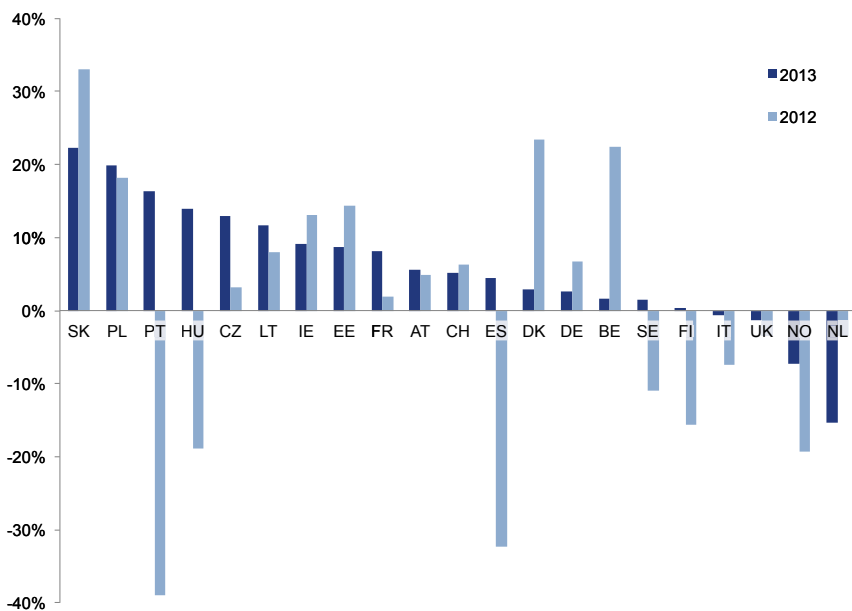
It is well known that growth in the heating segment is mainly influenced by the development in the construction sector. While the outlook for the building sector remains sluggish, heat pump sales are slightly growing. It is known that strict building requirements shape heat pumps markets. As a matter of fact, the result of those requirements is that, when a heater is installed or replaced, heat pump technology is increasingly often chosen.

Still (a) high initial investment cost and a short-term decision horizon and (b) high electricity cost influence the total cost of ownership of a heat pump system and limit market growth.

Despite the obvious benefits of heat pump installations towards the 2020 climate and energy targets, government support for the technology is still underdeveloped.

In 2013, a total heat pump capacity of over 24 GW was installed producing approx. 13 TWh of useful energy, integrating 8,26 TWh of renewables in heating and cooling

Figure 1-2: Development of heat pumps sales in 21 European countries – growth rates 2011–12 and 2012–13



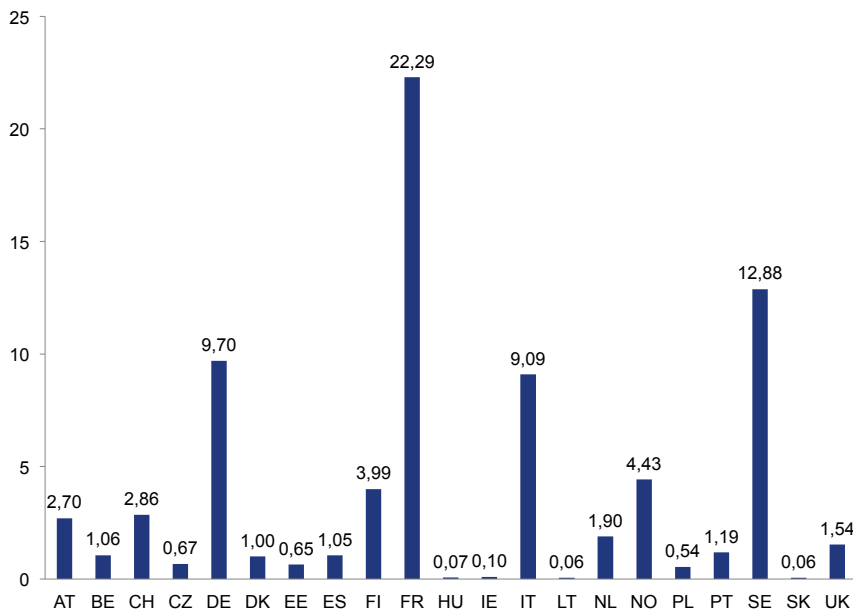


Figure 1-3: RES from 2013 heat pump stock, by country (in TWh)

and avoiding 2,12 Mt of CO<sub>2</sub>-equivalent emissions. An additional 4,83 TWh of primary energy was saved resulting in a reduced final energy demand of 10,56 TWh.

In order to produce the 2013 sales volume and to maintain the installed stock, a total of 41 495 man years were necessary. Obviously real employment related to the heat pump market is larger.

In aggregated terms, a total of more than 6,7 million heat pump units were installed since 1994. This amounts to an installed capacity of nearly 224 GW.

All installed heat pumps produce 120,8 TWh of useful energy, 77,8 TWh of which being renewable. Their use saved 99,1 TWh of final and 47,1 TWh of primary energy.

Figure 1-3 shows the split of renewable energy production from heat pumps on a country level. France is the country that produces the most renewable energy, followed by Sweden. They belong to a group of only six countries (France, Sweden, Germany, Italy, Norway and Finland) that produce 62,38 TWh or more than 80% of the total renewable energy production from heat pump technology.

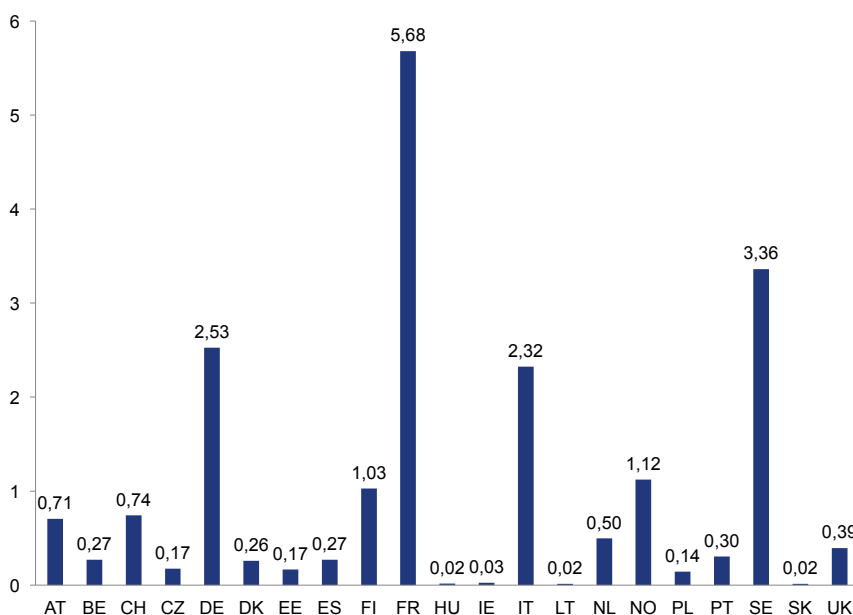


Figure 1-4: Greenhouse gas emissions saved by 2013 heat pump stock, by country (in Mt)

The heat pump stock in 2013 (heat pumps sold in the past twenty years) contributed to 20 Mt of greenhouse gas emission savings (see Figure 1-4). The distribution of emission savings per country is very similar to that of renewable energy production, since both calculations are directly linked to the number of units installed.

In summary, heat pumps are performing well but there is still a tremendous potential. This is underlined by a recent study by Ecofys. Looking at the 8 most important markets, the analysis concludes that an ambitious heat pump scenario would lead to a 47% decrease of greenhouse gas emissions in the building sector (compared to current levels) by 2030.

However this will require a heat pump-based strategy for heating and cooling with significant government interventions in all Member States of the European Union. Clearly, today's business as usual will not be enough to unearth the technology's potential.