

Making progress in the decade of heatpumps

Thomas Nowak
Secretary General

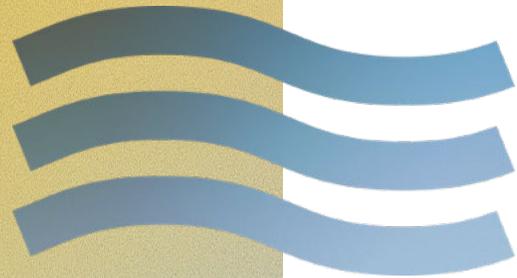
European Heat Pump Association

Making progress in the decade of heatpumps | 14th IEA HP conference Chicago | Thomas Nowak | 16.5.2023



2022 sales

3million



388%



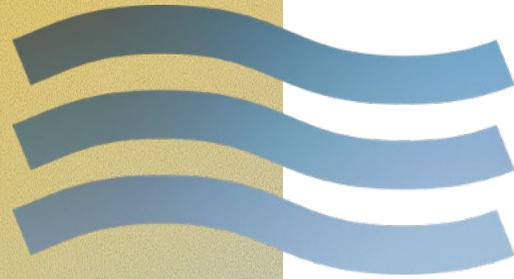
2022 stock

17 million

heating HP

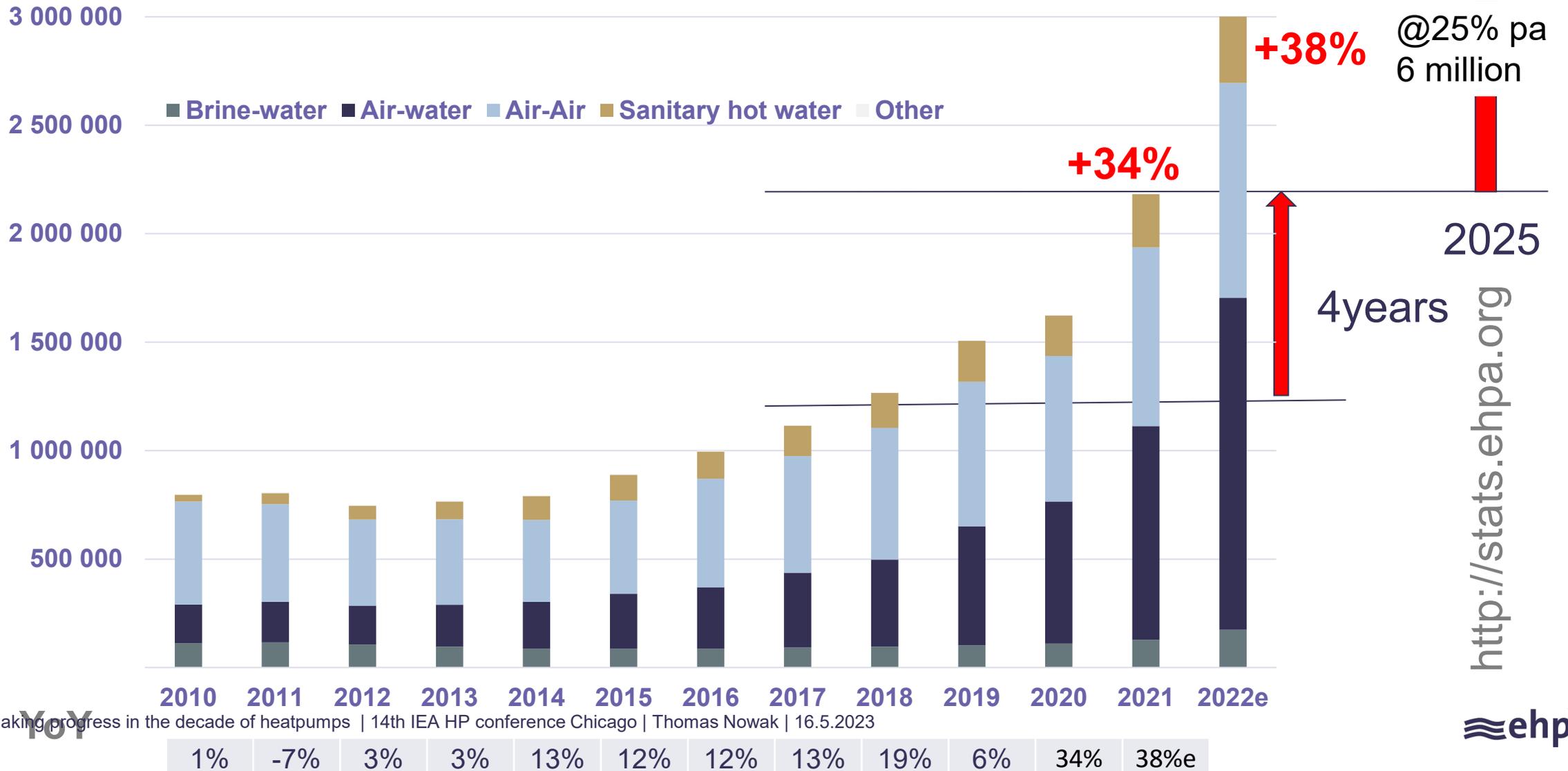
116 mill.

Residential / commercial
buildings



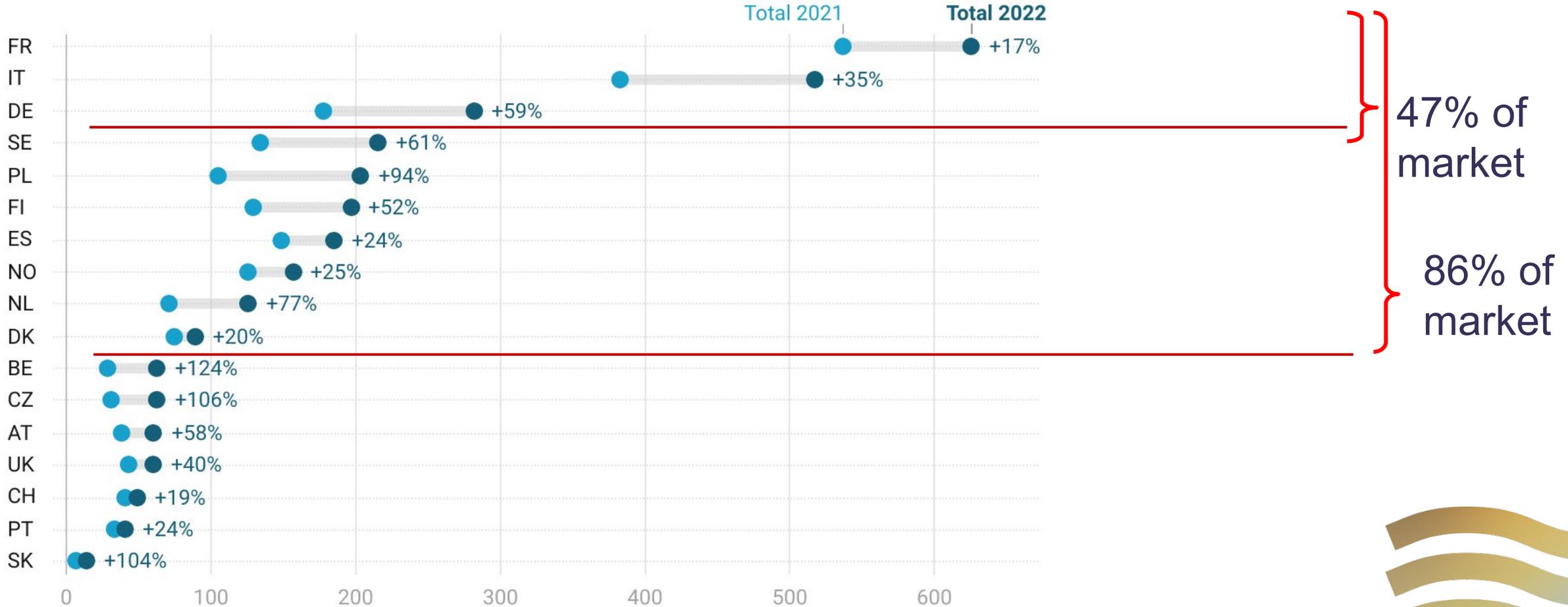
15%

Market growth '10 – '22 | HP stock^{2022 est.}: 19,9 mill. installed



European heat pump markets 2021 and 2022

by sales in 2022

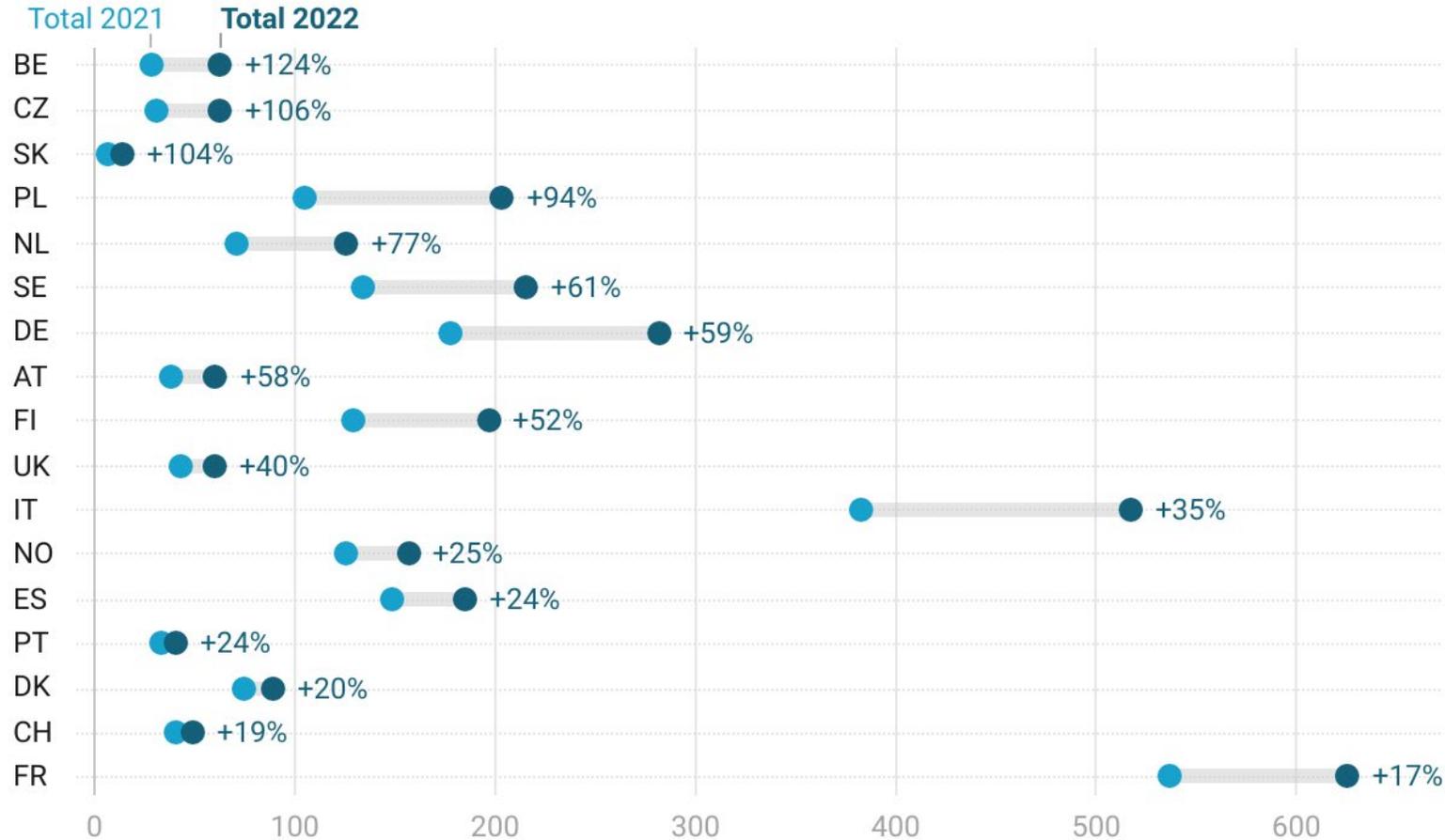


Source: stats.ehpa.org • Created with Datawrapper



European heat pump markets 2021 and 2022

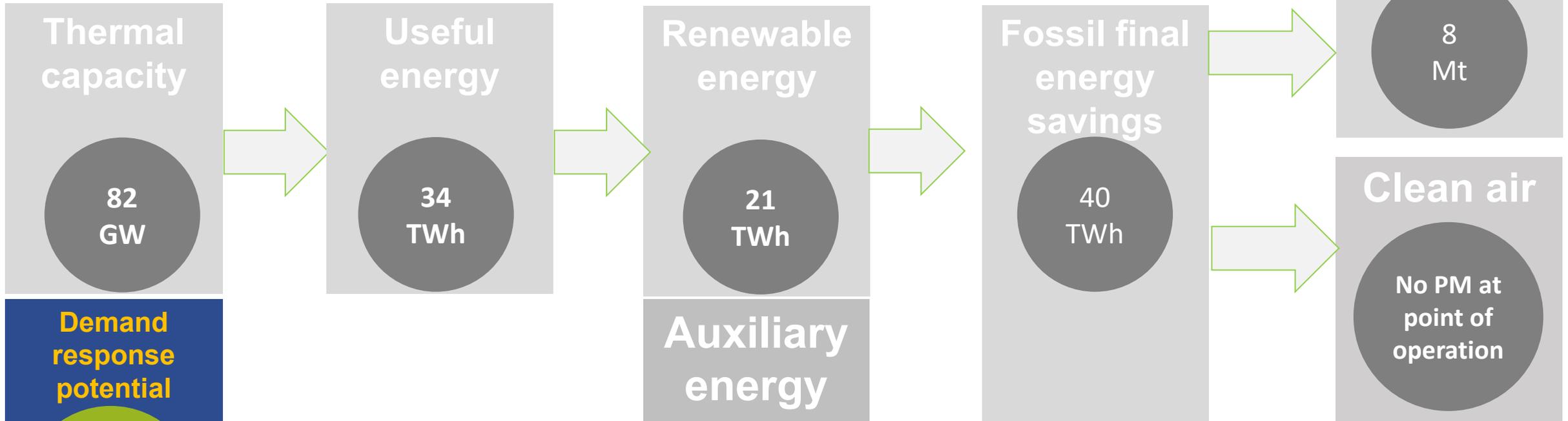
by annual growth in 2022



Source: stats.ehpa.org • Created with Datawrapper



Heat pump benefits of 3 mill. units installed in 2022



If auxiliary energy is **green**, heat pumps provide 100% **green heat**

Energy and climate targets in the European Union

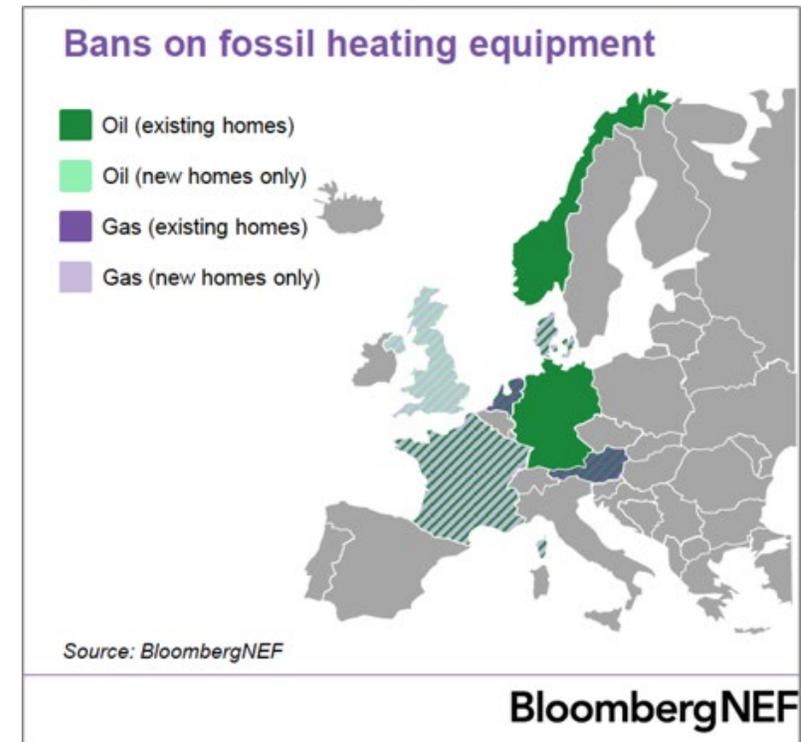


	Renewable energy	Renewable energy in buildings	Energy efficiency	Reduction in CO₂ emissions
Targets for 2020 [xiv]	20%		20%	20%
Targets for 2030 [xv]	30%	49%	32.5% (9%)	40%
New targets for 2030	45% (EC), 40% (EP) [xvi]	49% (unchanged)	11.7% [xvii]	55% [xviii]
2050				Net zero [xix]

National policies to phase out fossil energy boilers

- **Austria: 1.1.2023 no gas in new buildings**
- **Flanders: 1.1.2025 no gas in new buildings., 1.1.2022 oil boiler ban in all buildings**
- **France: 1.7.2022 ban oil boilers in all buildings; 1.1.2023 ban gas boilers in new buildings; 1.1.2025 ban gas boilers multi family buildings**
- **Germany: 1.1.2024 - share of 65% RE in heating**
- **Netherlands: 1.1.2026 – min. hybrid heat pump**
- **Denmark: 400 000 boilers → DHC and HP by 2028/2030**
- **Italy: 1.6.2022 – share of 60% RE in new buildings (heating, hot water, cooling)**
- **European Union - tbc: 2029 via Ecodesign**

source: https://www.ehpa.org/2022/11/04/ehpa_news/which-countries-are-ending-fossil-fuel-heaters/



What about end-user demand?

The impact of the all-electric building

**Heat pump
Thermal storage**

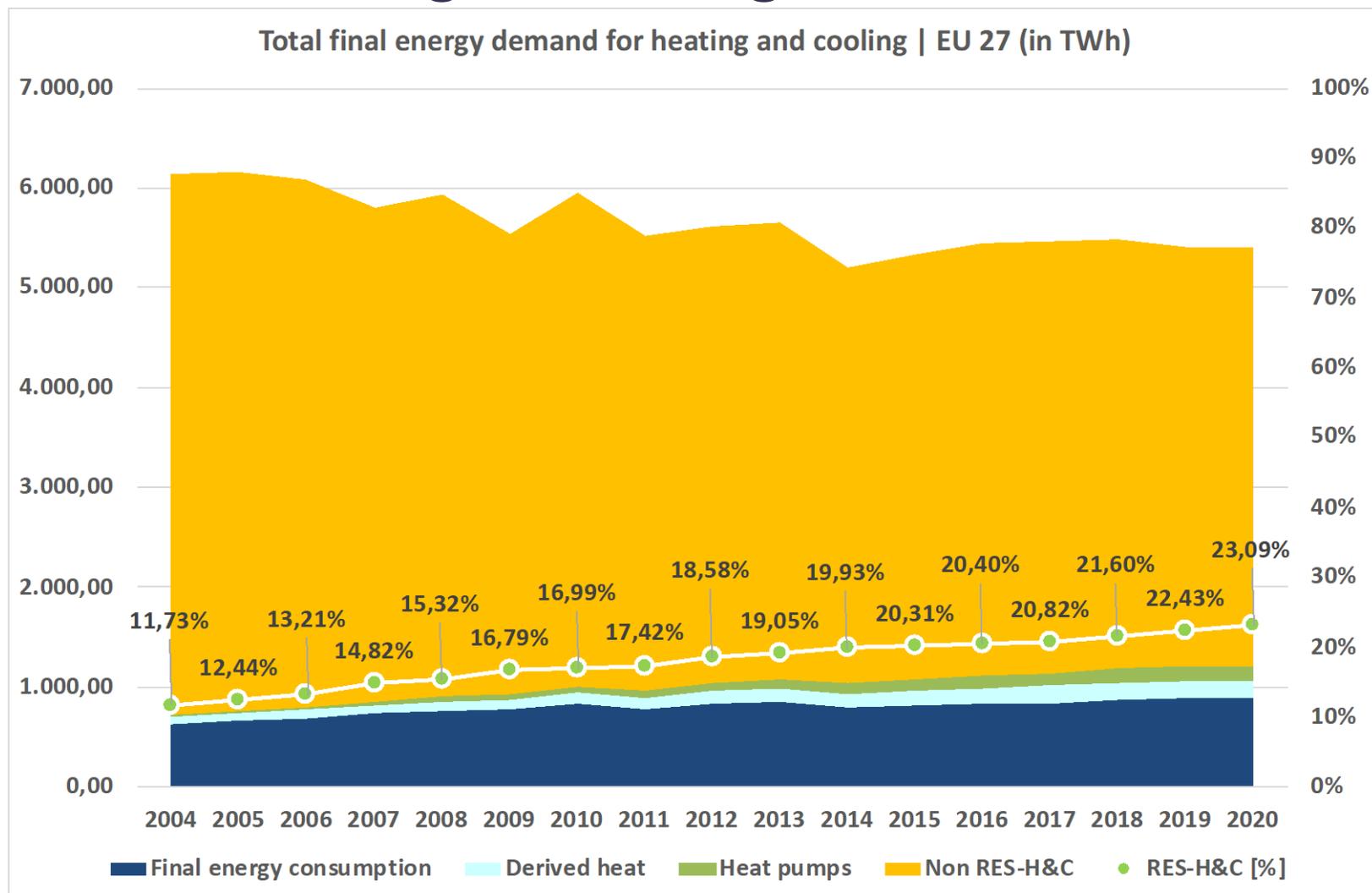


**Photovoltaik
Battery storage**

**Electric vehicles
Vehicle-to-building/grid**



Are we moving fast enough?

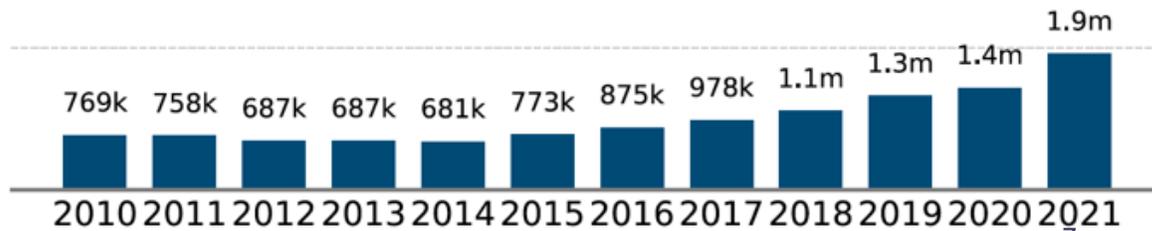


Source: Eurostat

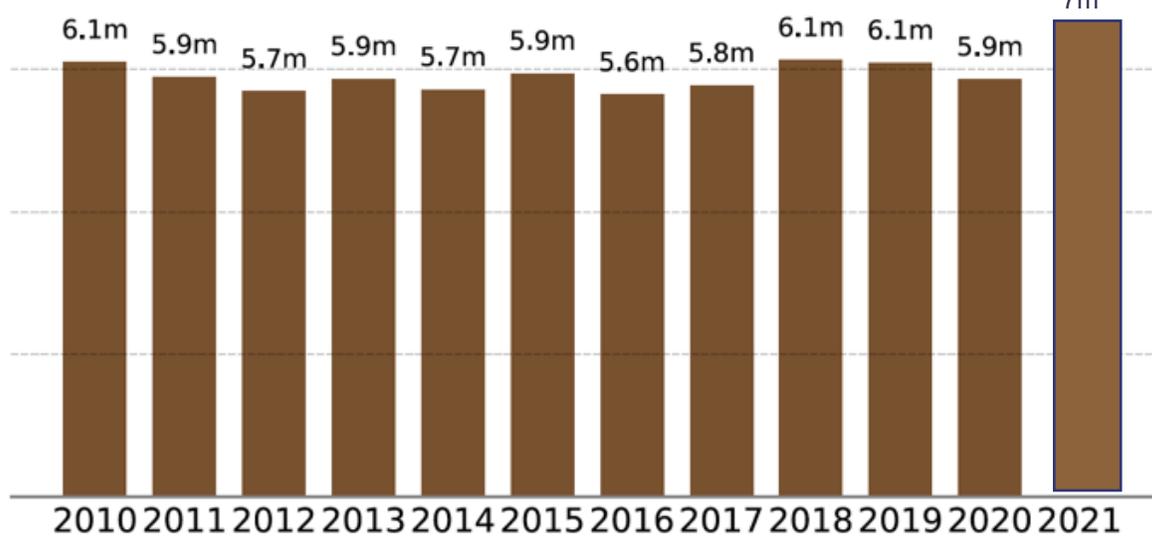
Market share development heating HP in total heater sales



Heating HP

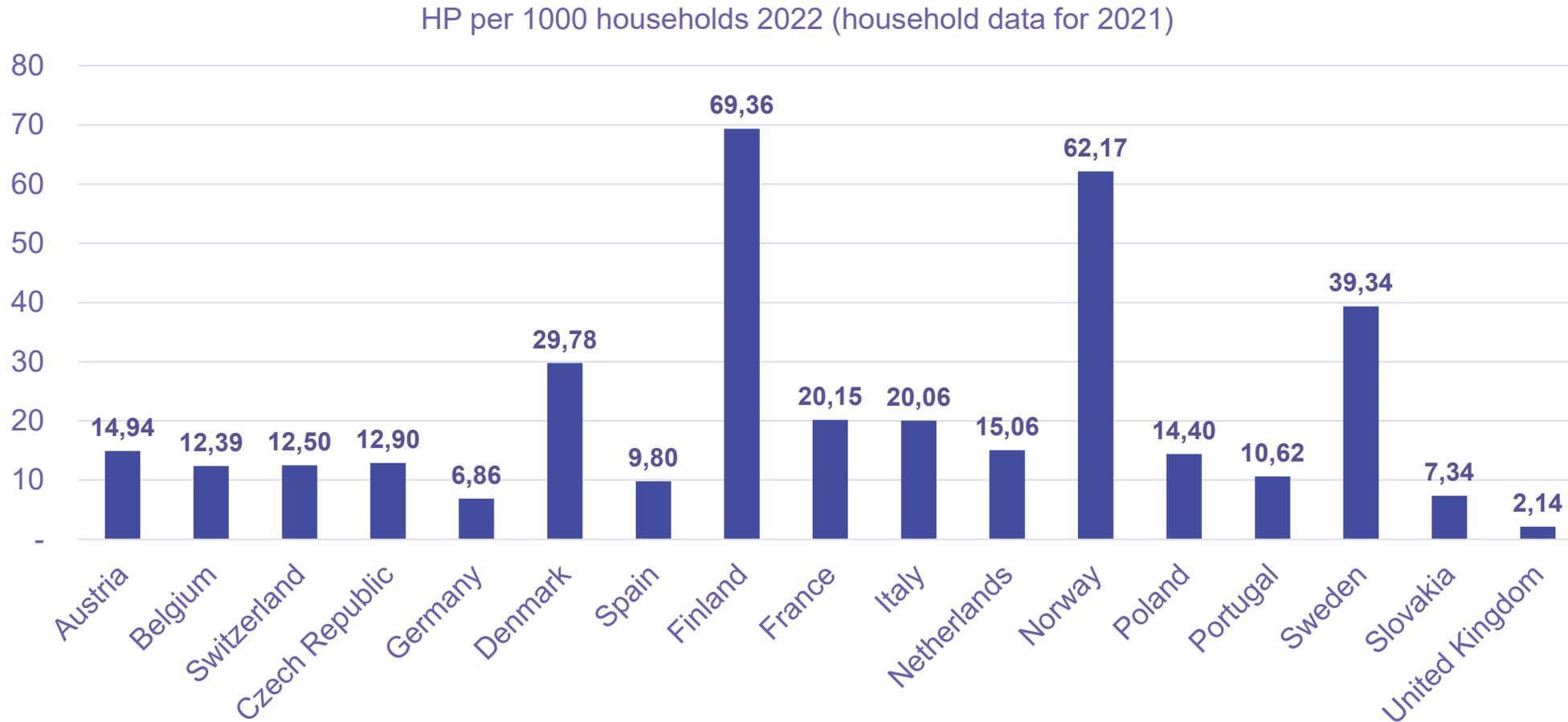


Boilers



HP share → 50% in 2030?

Could we move faster?



Source: EHPA

2022

the tipping point for heat pumps



Green Deal Industrial Plan

Batteries
windmills
heat pumps
Solar
Electrolysers

Commission européenne
European Commission

ehpa



The Inflation Reduction Act lowers energy costs for consumers and small businesses while creating good-paying jobs as America's clean energy economy and manufacturing sectors grow. Learn more below on how you or your family can save on utility bills, get support to purchase electric vehicles and energy-saving appliances, and access the economic opportunities of the clean energy future.

Find out which programs are available to you so that you can benefit from American made clean energy as soon as today, and sign up below to be the first to receive updates and take advantage of these opportunities.

Department of Energy

President Biden Invokes Defense Production Act to Accelerate Domestic Manufacturing of Clean Energy

JUNE 6, 2022

Energy.gov • President Biden Invokes Defense Production Act to Accelerate Domestic Manufacturing of Clean Energy

DPA Invocation Will Boost American Production of the Critical Technologies Necessary to Lower Energy Costs, Support the Clean Energy Economy, and Strengthen National Security.

WASHINGTON, D.C.— President Biden today issued presidential determinations providing the U.S. Department of Energy (DOE) with the authority to utilize the Defense Production Act (DPA) to accelerate domestic production of five key energy technologies: (1) solar; (2) transformers and electric grid components; (3) **heat pumps**; (4) insulation; and (5) electrolysers, fuel cells, and platinum group metals. The DPA determinations are part of the Biden-Harris Administration's plan to lower energy costs for families, strengthen national security, and achieve lasting American

RePowerEU and cut our dependence on Russian gas

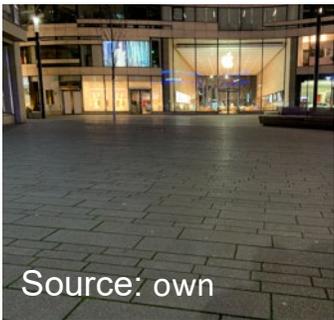


European Commission

#EUGreenDeal



Source: Leonid Faerberg in kyivindependant.com



Source: own

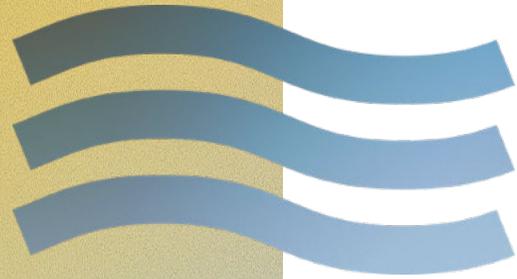
IEA

Countries Fuels & technologies Analysis Data Policies About

A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas

The simple metrics

1 million
Heat
pumps



2 bcm
of gas

REPowerEU: new targets

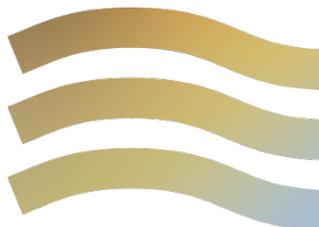
- Solar strategy: install 600 GW by 2030
- Solar rooftop initiative
- **10 million additional hydronic heat pumps until 2026**
- **total of 30 million additional hydronic units by 2030.**
- **renewable energy infrastructure as being of “overriding public interest”**
- **decarbonise heat demand in industry, including through high capacity/high temperature heat pumps.**



EC suggests to increase the renewable energy target to

45%

Additional investment of
210 bln €
until 2027



REPowerEU: High ambition for heat pumps double-digit growth necessary throughout this decade



Time horizon of REPowerEU

Air-air HP are also replacing Fossil gas

Slight advantage for air-water HP



And the value chain?

People factories labs infra IT know-how electrons

Industry is preparing for growth

**As of today, more than 5 billion €
of investment announced until 2025**

Based on press releases by Daikin, Viessmann, Stiebel-Eltron, Bosch, Panasonic, Vaillant, Hoval, Ziehl-Abegg, Alfa-Laval, Grundfoss, Wilo, Kensa, Ariston, Clivet/Midea, Rheinmetall etc.

Full support for heat pumps by governments

A heat pump action plan



01

Create trust in long term ambition

02

Make clean heating economically most attractive

03

Avoid disruption through legislation

04

Focus on skills for the energy transition

05

Better heat pumps and systems through more R&D and better data

... and recognize the need to upgrade electric grids

The energy transition is a huge challenge
Now we need to act!



The European Heat Pump Association aisbl / founded 2000



191

Members

- Heat pump manufacturers
- Component manufacturers
- National associations
- Consultants
- Research & test institutes

22

countries represented

International cooperation
CECA, IEA, IEA HPC, IRENA, HPCJ

Vision

In a fully decarbonised Europe, **heat-pump technologies are the number one heating and cooling solution**, being a core enabler for a renewable, sustainable and smart energy system.