

Heat pumps in domestic heating

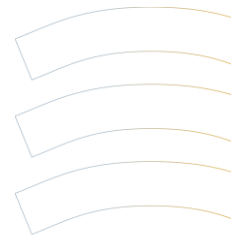
REPLACE Event.

Jozefien Vanbecelaere

Head of EU Affairs

European Heat Pump Association

Heat pumps are mature and used everywhere - today



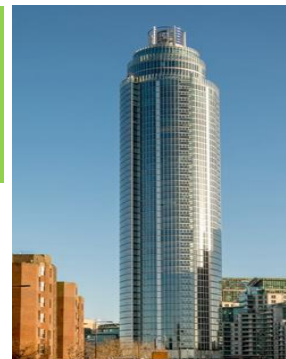
White goods &
cars

Commercial
Applications



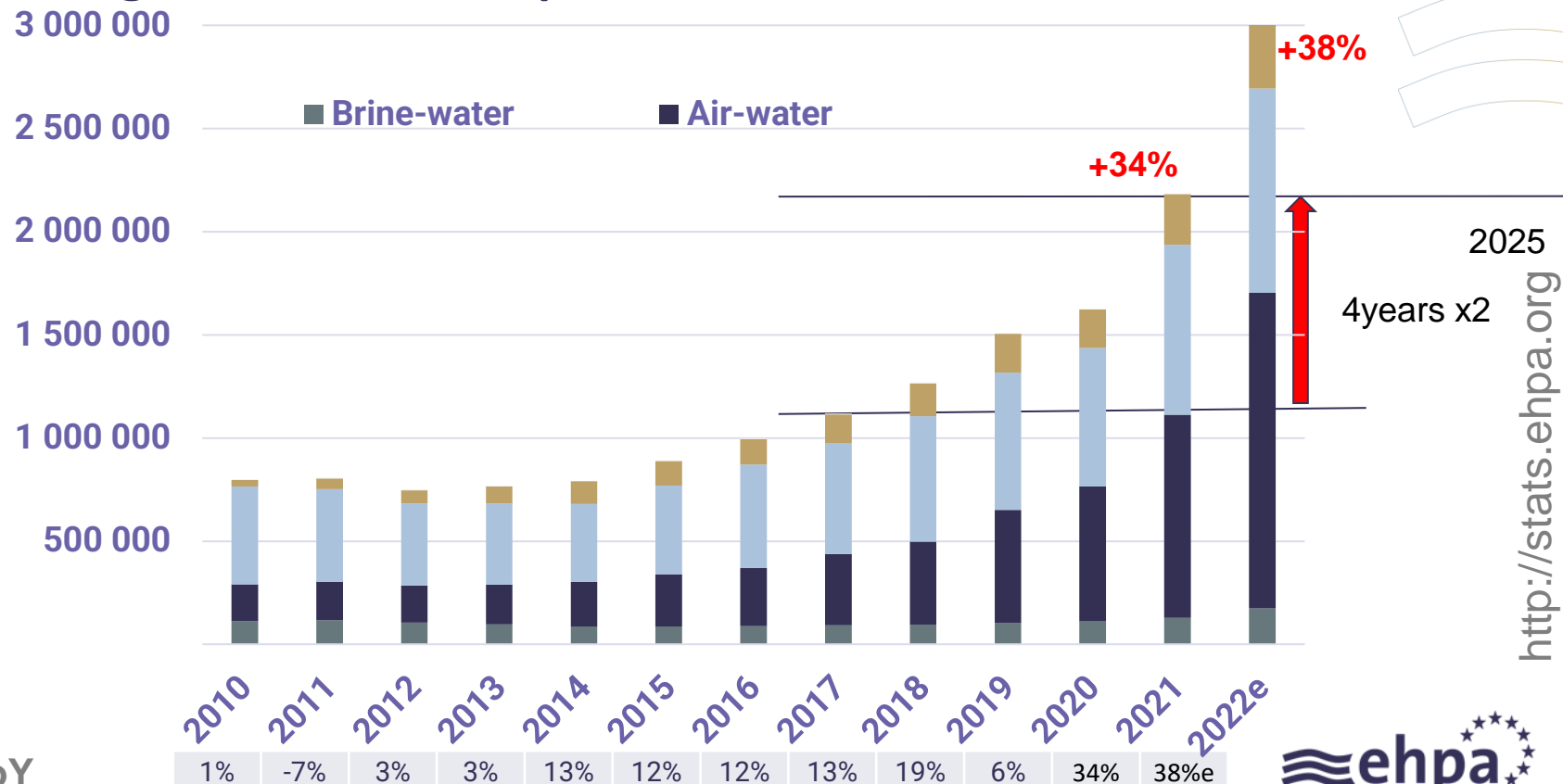
Residential
Applications

Industrial
Applications &
District Heating

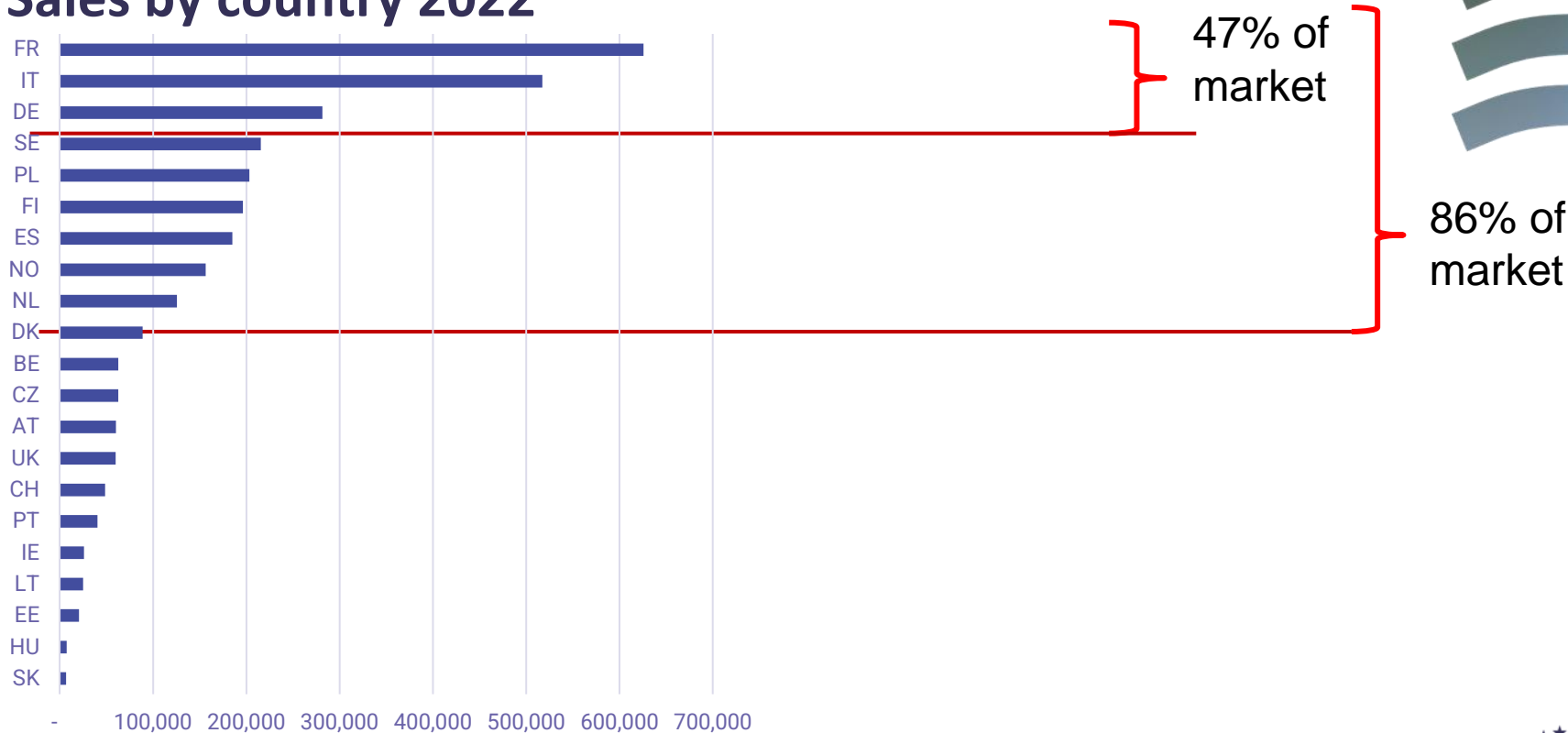


Big
buildings

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



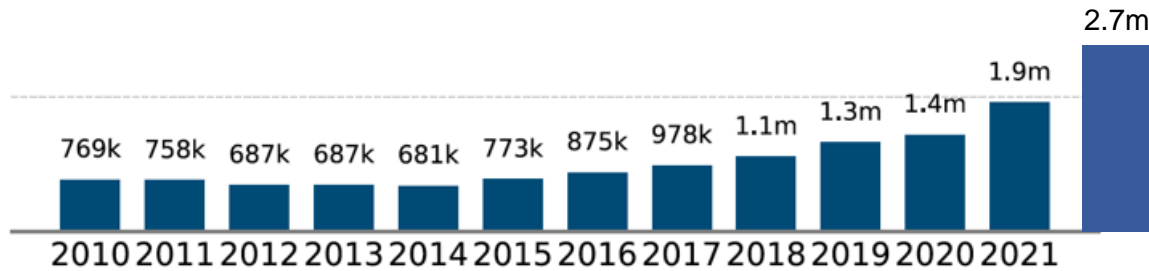
Sales by country 2022



Growth in sales 2021 to 2022

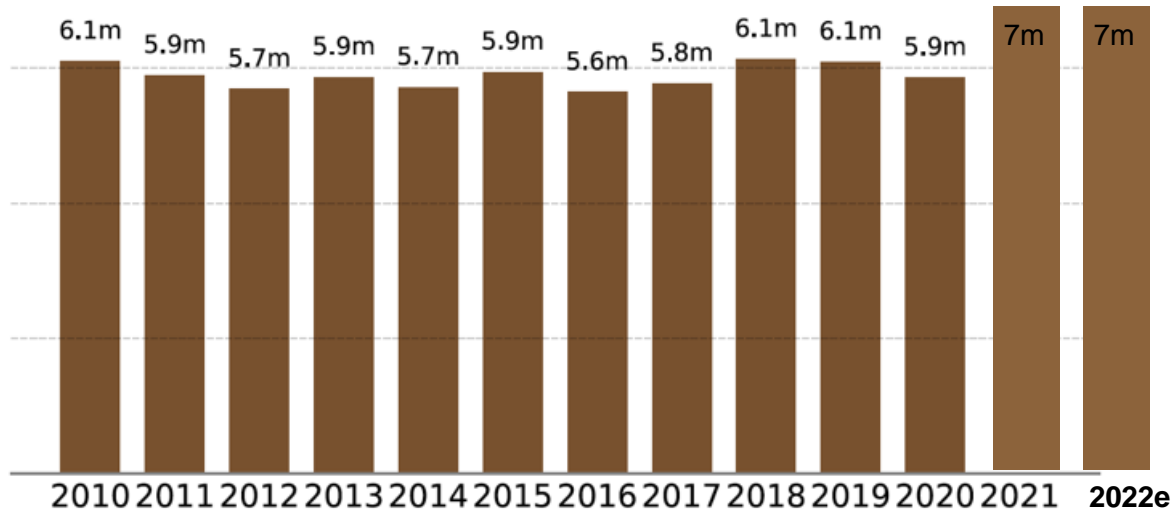


Heating HP



HP share
38% → 50% in 2030?

Boilers



17.800.000

2022e: 17.8 million heating heat pumps supply approx. 15% of all buildings

2022

the tipping point for heat pumps

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

7. Speed up the replacement of gas boilers with heat pumps
8. Accelerate energy efficiency improvements in buildings and industry

Heat pumps ~~dominate~~ are recognized in policy

RePowerEU
and cut our
dependence on
Russian gas



#EUGreenDeal

Photovoltaic
Wind
Heat pumps
Storage

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



Air-air HP are also
replacing
Fossil gas






Heat pumps “Critical Technologies Necessary to Lower Energy Costs, Support the Clean Energy Economy, and Strengthen National Security»



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.

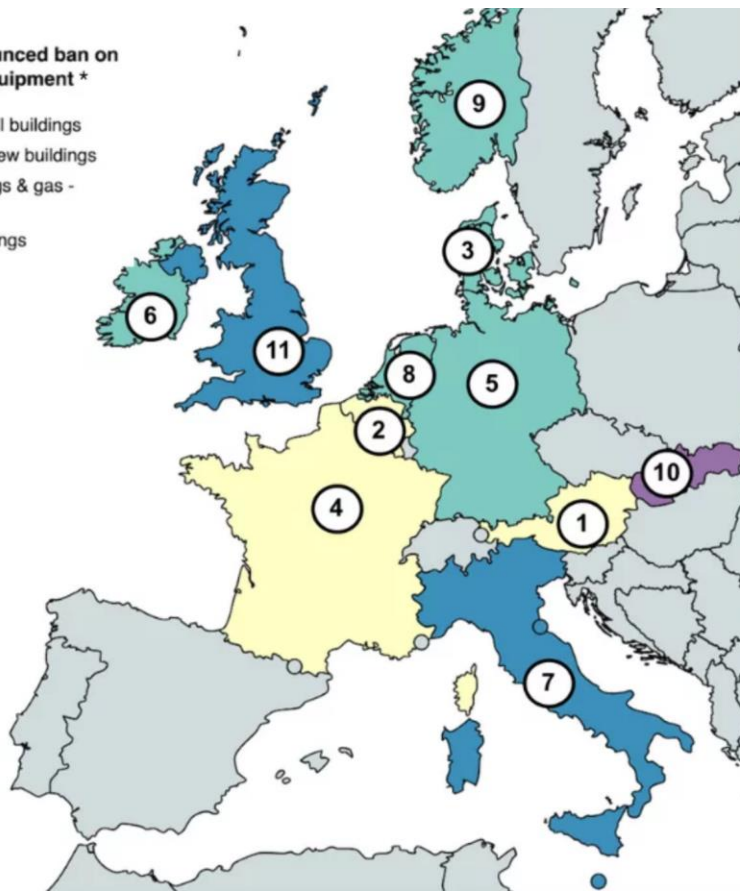
WASHINGTON, D.C.— President Biden today issued presidential determinations providing the U.S. Department of Energy (DOE) with the authority to utilize the Defense Production Act (DPA) to accelerate domestic production of five key energy technologies: (1) solar; (2) transformers and electric grid components; (3) **heat pumps**; (4) insulation; and (5) electrolyzers, 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

National policies to phase out fossil energy boilers

Current or announced ban on fossil heating equipment *

- Oil and gas - all buildings
- Oil and gas - new buildings
- Oil - all buildings & gas - new buildings
- Oil - new buildings

*December 2022



1. AUSTRIA
Ban of oil/coal boilers installation from 2020 in new homes. Plans on banning oil and gas heaters from 2023 in new buildings and on banning oil/coal boilers in existing buildings.
2. BELGIUM
Regional ban in Flanders on the installation of oil boilers in new buildings and renovated ones from 2022. Gas connection ban for large new building projects in Flanders from 2021 and gas connection ban for all new buildings in Flanders from 2025. For Wallonia, no bans have been announced.
3. DENMARK
Use obligation for renewable heating and different zones with exemption regulations.
4. FRANCE
From 1/7/2022 oil boilers banned in all buildings. From 2023 ban on gas boilers in new buildings.
5. GERMANY
Ban on installations of mono-fuel oil/coal boilers from 2026 (new and existing buildings) and regional use obligations for renewable heating. From 2024, a share of 65% RE in heating in new and existing buildings - which means a real ban on stand-alone fossil fuel boilers.
6. IRELAND
Oil and gas boilers are to be banned from being installed in both new and existing homes. The ban would apply to newly built homes from 2023 and to installations in existing houses possibly from as early as 2025
7. ITALY
Share of 60% renewable energies in new buildings from 1/06/2022.
8. NETHERLANDS
Ban of connection to the gas grid for new buildings from 2018. From 2026, hybrid heat pumps will be the mandatory minimum standard.
9. NORWAY
Ban on the use of oil and gas for heating in new and existing homes.
10. SLOVAKIA
Plans on banning sales and installation of new fuel and oil boilers by 2023.
11. U.K.
Ban on gas and oil boilers in new buildings from 2025. In Scotland, the new buildings ban will take place in 2024, and existing commitment to legislation prohibiting fossil fuel heating systems in existing buildings at various trigger points from 2025 onwards.

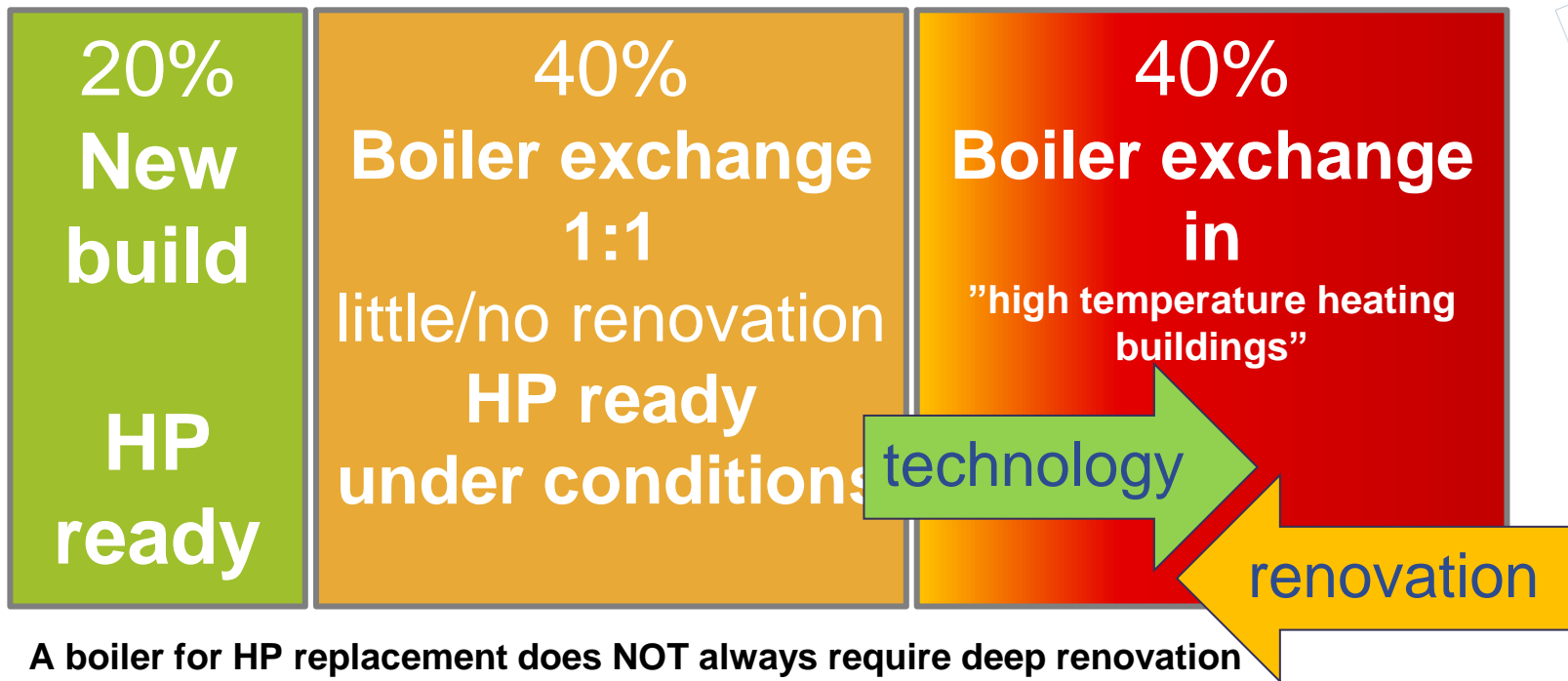
Source:

<https://www.ehpa.org/wp-content/uploads/2022/12/Fossil-fuel-phase-out-map-for-website-1000-%C3%97-700-px.png>

Can heat pumps deliver?

Heat pumps work in all buildings and in energy grids

Check „fit for 55°C"



A boiler for HP replacement does NOT always require deep renovation

(hybrid) Heat pumps work in all buildings



145 Apartments | in highrises | “under occupancy” Togetherhousing – Blackburn, UK



And also in district heating River Clyde, Glasgow, UK



A heat pump in every home?

Latest legislative changes

Heat pumps in domestic heating: ongoing legislation



- EU ETS
 - ETS for buildings and road transport as of 2027
 - Social Climate Fund will to support vulnerable households, micro-enterprises and transport worth €86.7 billion from 2026 to 2032.
- Energy Performance of Buildings Directive
 - Zero Emission Buildings
 - Phase out of fossil fuel boilers
 - End fossil fuel subsidies
- Ecodesign
 - Proposal to end stand-alone fossil fuel boilers in 2029
- Heat Pump Action Plan
 - To be published Q4 2023
- Renewable Energy Directive
 - RE Target
 - Renewables in heating and cooling
- Energy Efficiency Directive
 - Energy efficiency first
 - Energy efficiency target

Supply Chain

+ Green Deal Industrial Plan
+ Net Zero Industry Act

A heat pump accelerator

01

Create trust in long term ambition

02

Make clean heating economically most attractive

03

Avoid disruption through legislation

04

Support value chain: **skills** & investment support

05

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

06

Recognize the need to upgrade electric grids

Net Zero Industry Act
Heat Pump Action Plan

Net Zero Industry Act



All hands on deck

About EHPA

Founded in **2000**

186 Members

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

22 Countries

International cooperation

with the International Energy Agency,
International Renewable Energy Agency
and more

