

Heat pumps to build back better: HP Technology benefits for a decarbonised Europe
Thomas Nowak | Secretary General

The European Heat Pump Association aisbl / founded 2000



143

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.



Commercial Applications



Industrial Applications & District Heating

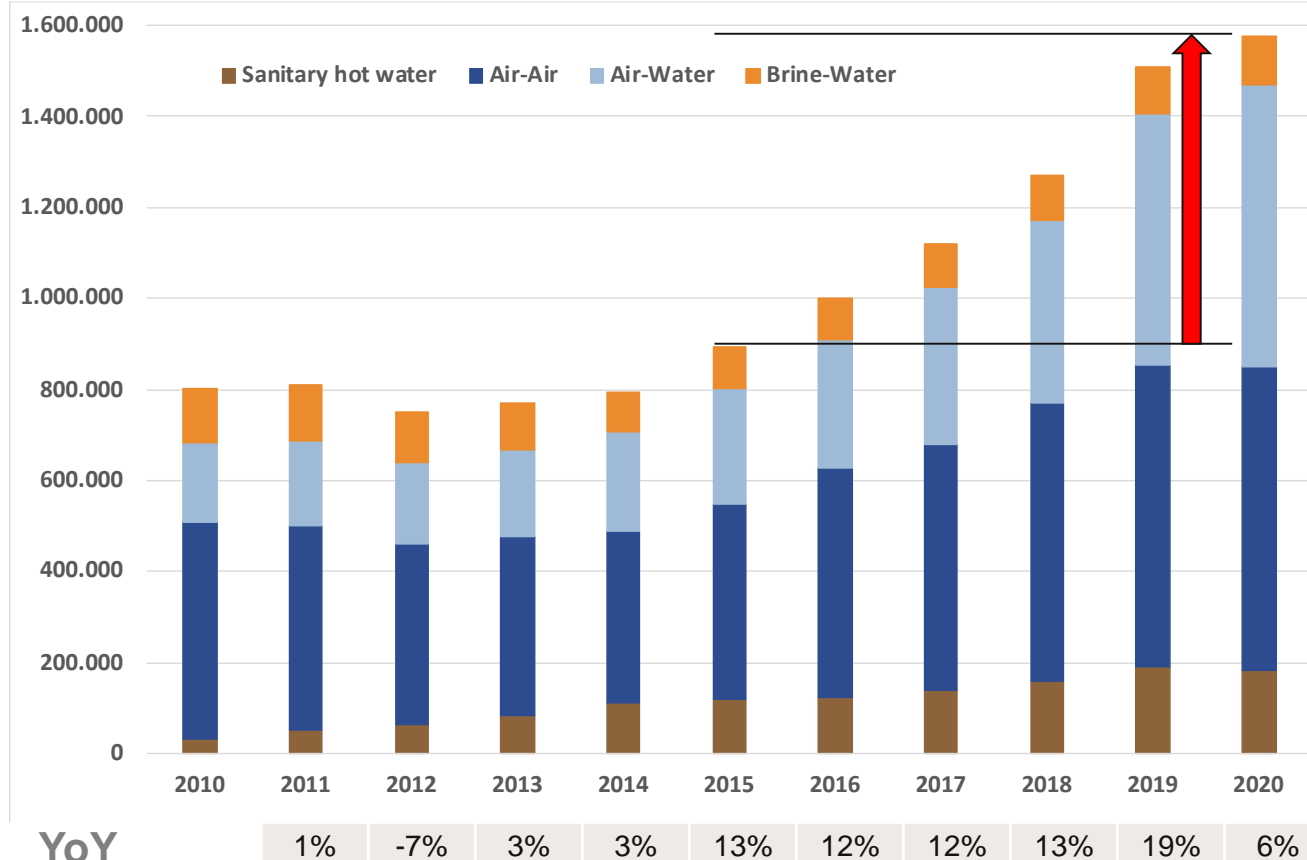
Big buildings



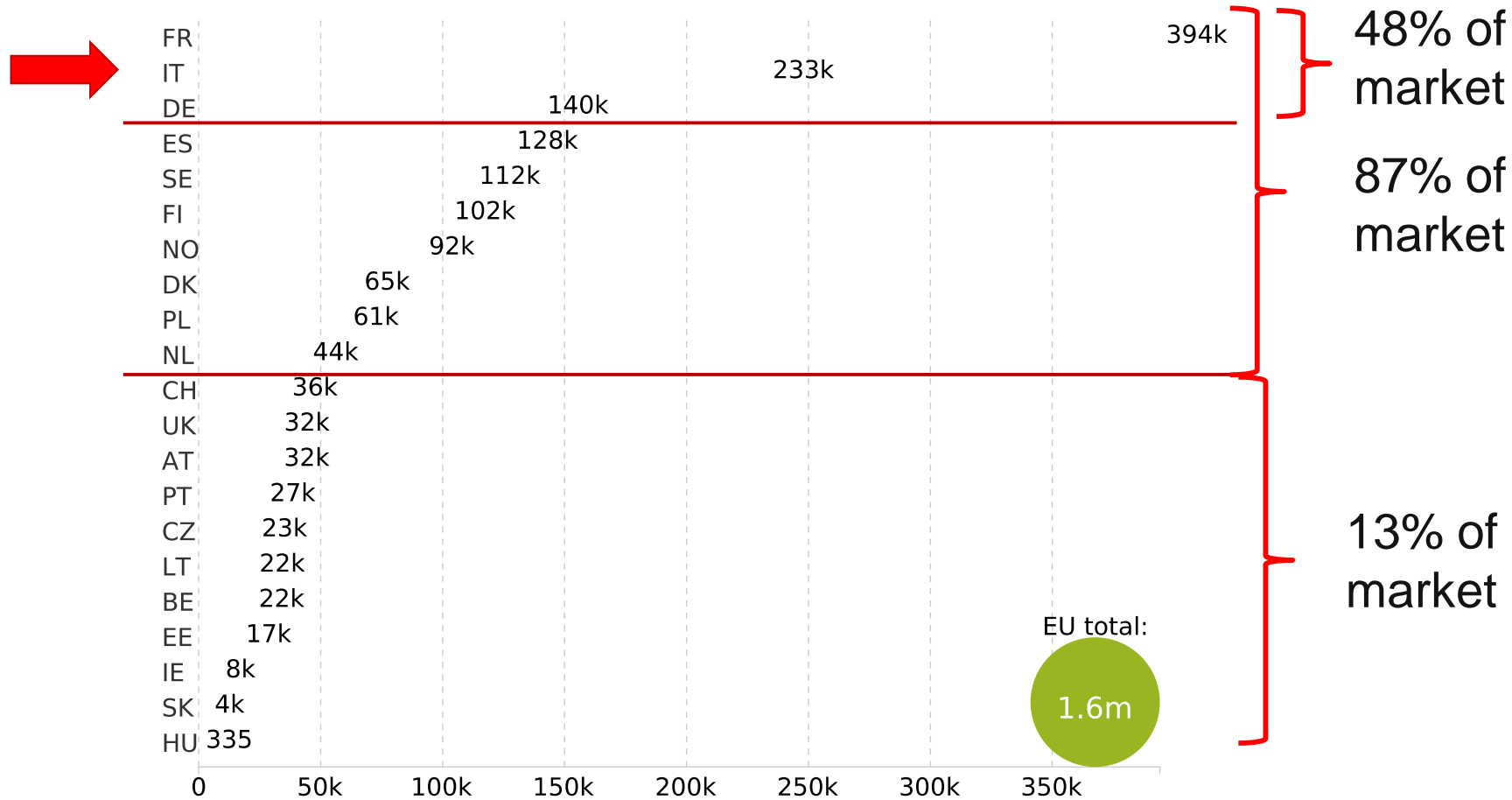
Residential Applications



Market growth '05 – '20 | HP stock²⁰²⁰: 14.8 mill. installed

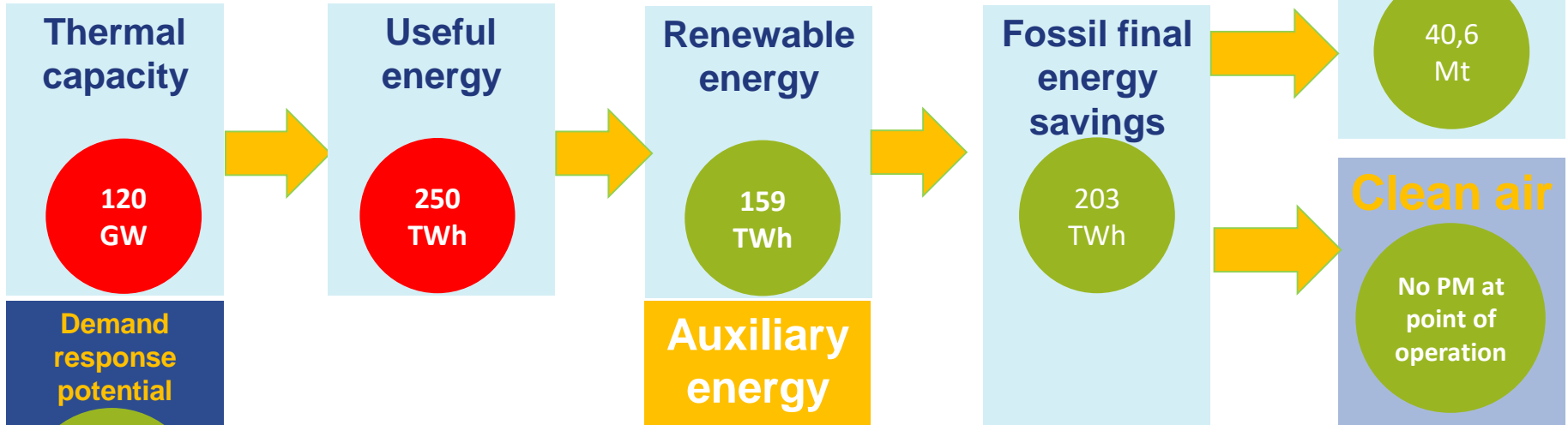


EU-28 building stock:
115 – 120 mill. buildings



Heat pump benefits 2020

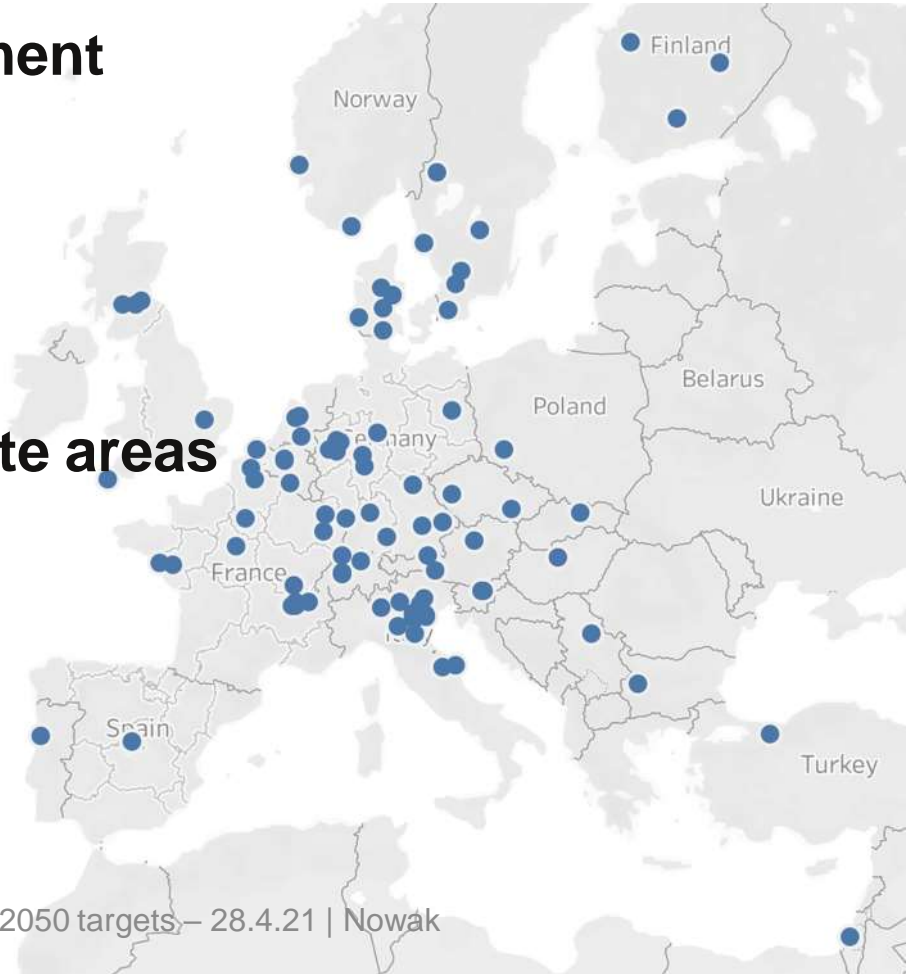
Based on 14.8 million heat pumps installed



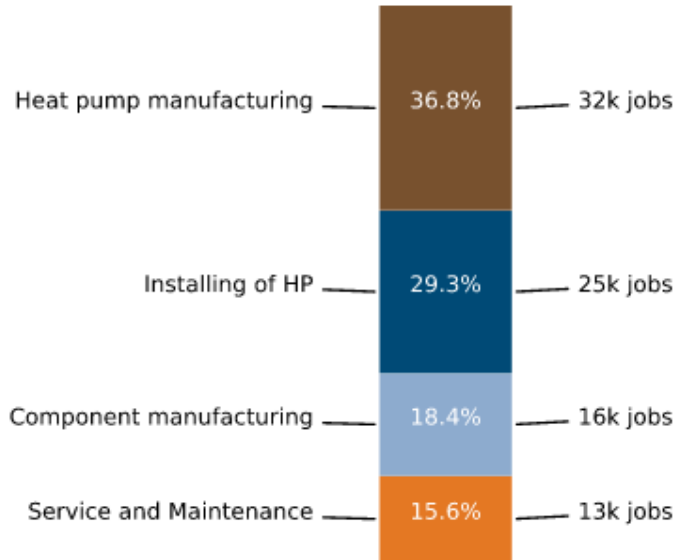
If auxiliary energy is **green**, heat pumps provide 100% **green heat**

Heat pump providing employment

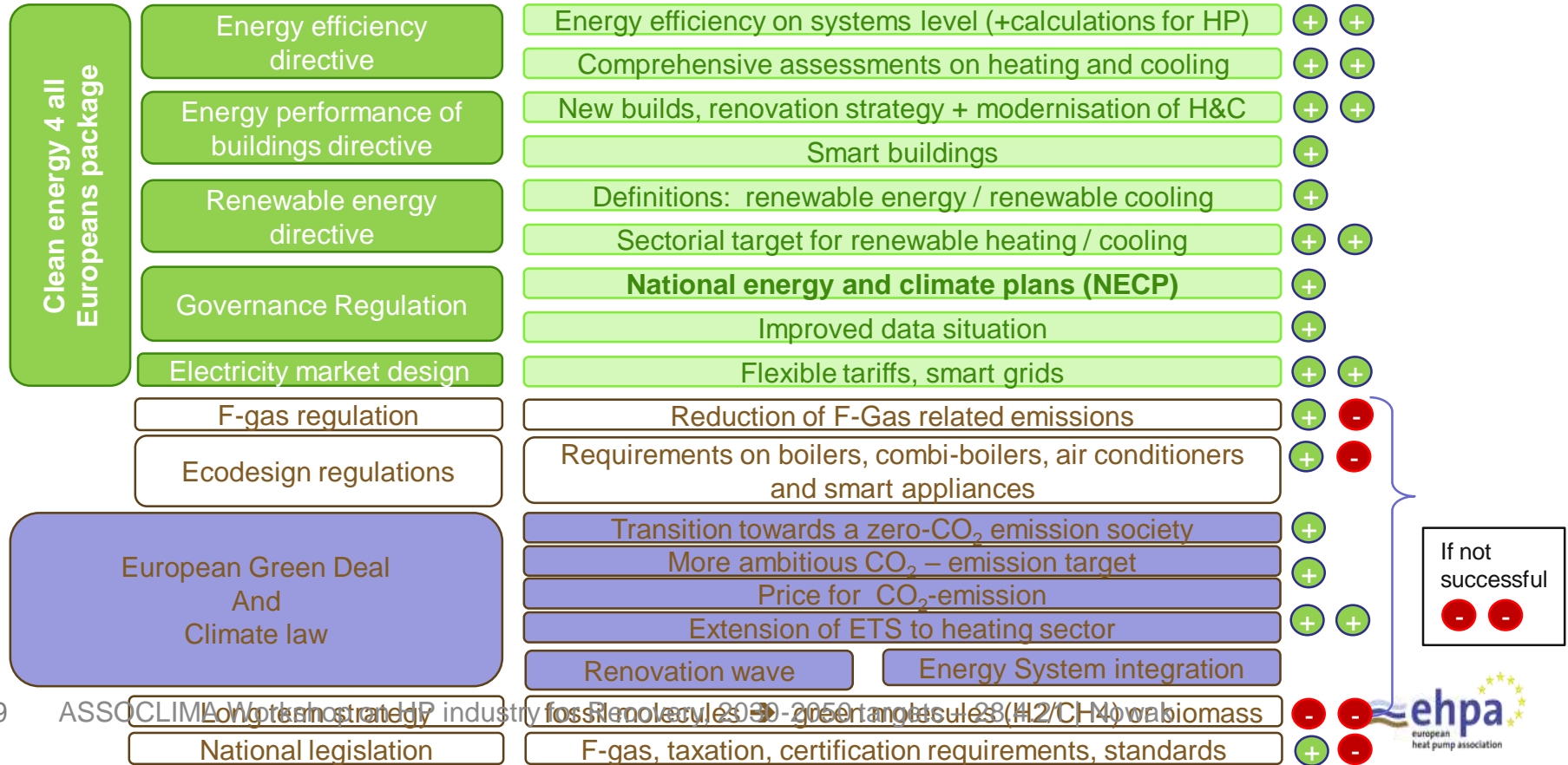
- **103+ manufacturing sites**
- **SME based**
- **Often located in rural/remote areas**



Employment impact of heat pumps (FTE)

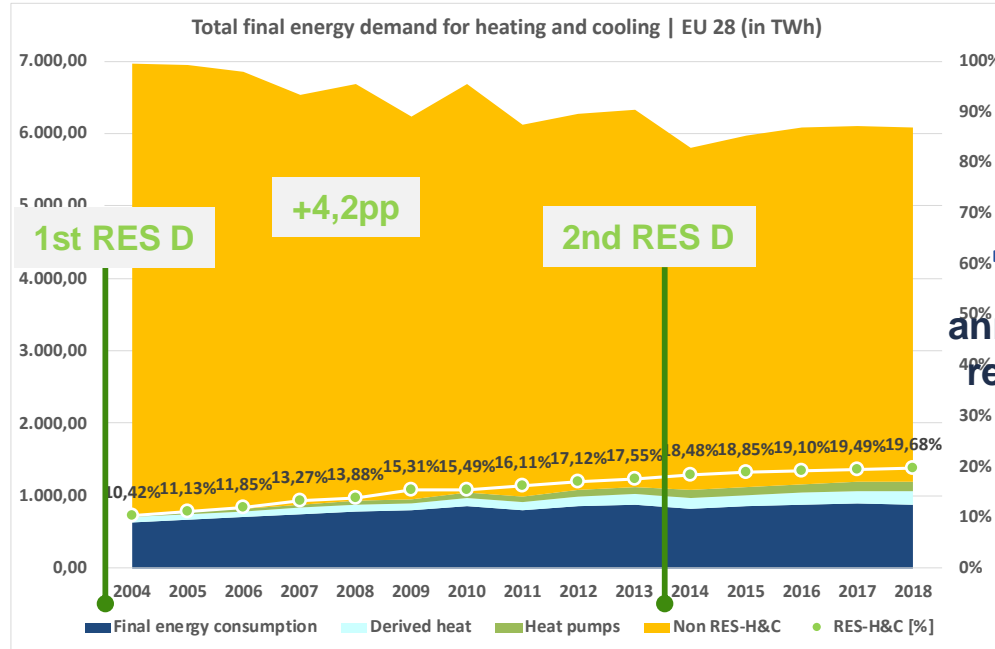


Legislation covering Heat Pumps



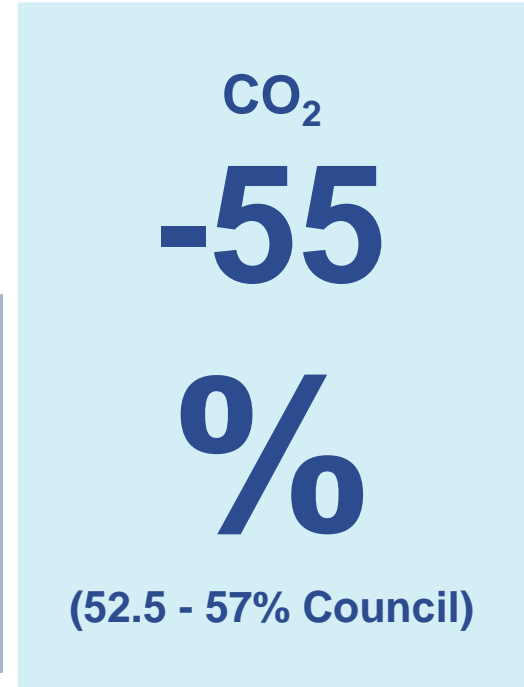
RES in heating and cooling (based on Eurostat Shares)

<http://ec.europa.eu/eurostat/de/web/energy/data/shares>



< 1pp
annual increase of
renewable share

EU Green Deal & Climate Law



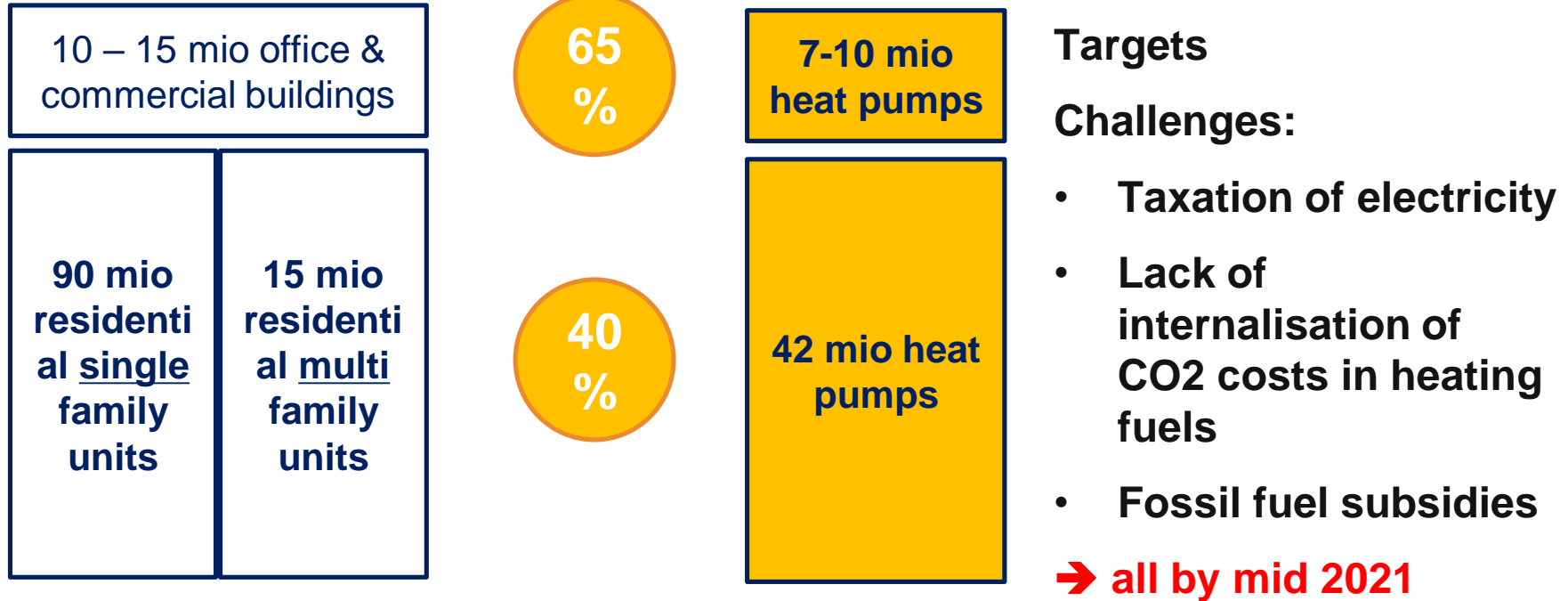
EU Green Deal & Climate Law

- **EU Strategy for Energy System Integration**
- **EU Renovation Wave Communication**
- **Fit for 55% package (Revision of 15 initiatives)**
 - More renewable energy
 - More energy efficiency

**Build on
heat pumps**

**Internalisation of the external
effects of fossil energy use**

EU Energy systems integration strategy



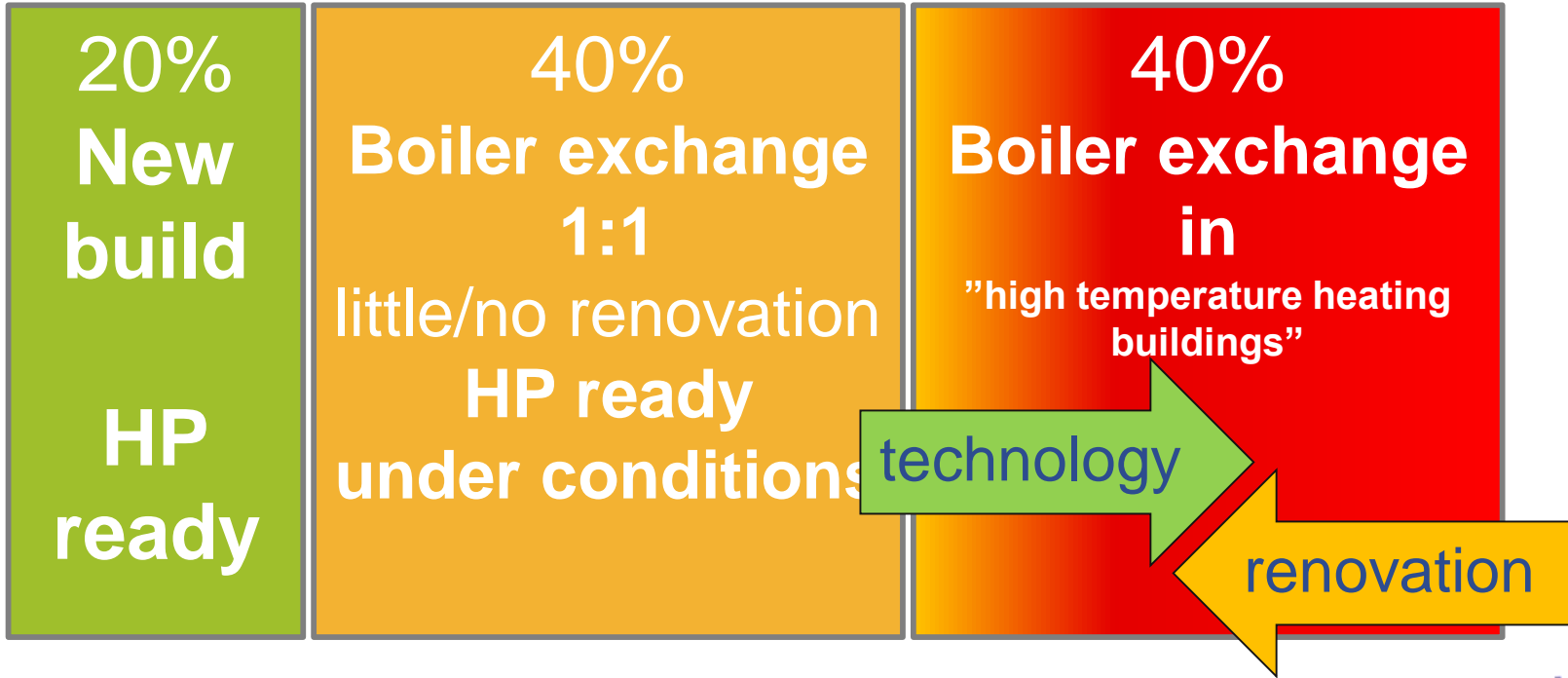
+ industry approx. 200 TWh = 0,1 mio

Renovation wave:

- Decarbonisation of heating and cooling
- Double the renovation rate
- Foster deep energy renovation: schools, public buildings
- **Renovate the 35 million least performing buildings by 2030**
- Allow for affordable and sustainable design via New European Bauhaus



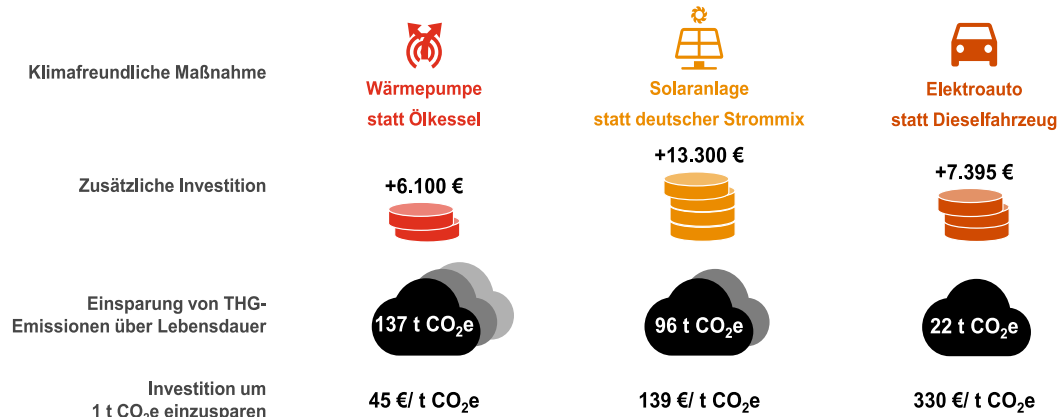
Heat pumps work in all buildings and in energy grids



Compared to other climate protection measures, it is cheapest to invest in heat pumps

Im Vergleich zu anderen Klimaschutzmaßnahmen kann mit der Wärmepumpe günstiger CO₂e eingespart werden

Dies zeigt sich anhand der Investitionen und THG-Einsparung klimafreundlicher Investitionen



Quellen: BDEW (2018a), BDEW (2018b), IINAS (2019), VW (2019)

17. Forum Wärmepumpe
PwC

November 2019
12

EU Taxonomy Regulation

According to EC delegated acts, heat pumps are “sustainable” if:

- **They are very efficient** (i.e. HP in the 2 highest populated classes on the Energy label)

OR

- **They are renewable** (i.e. HP which contribute to the renewable targets for heating and cooling in the RED)

OR

- **They have a low GWP refrigerant and emit less sound** (i.e. All other electric HP with a GWP not exceeding 675 and meeting the max. sound power levels for small A-A HP with rated capacity of 12kW or below)

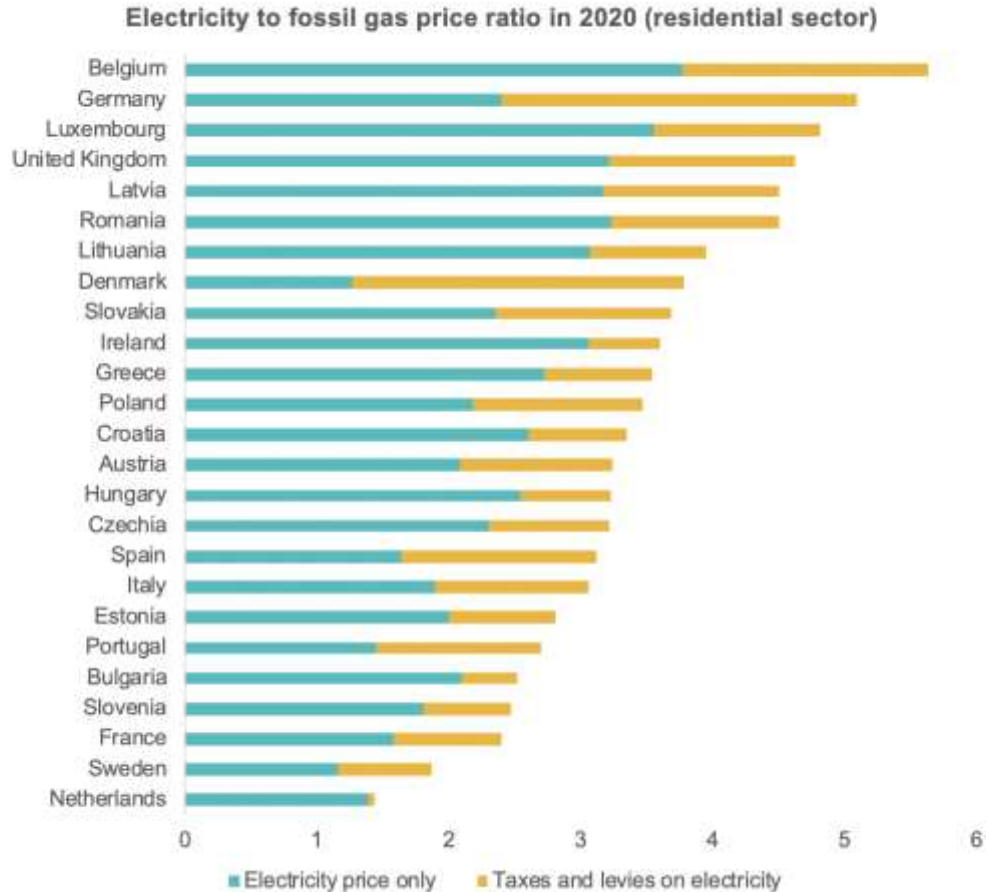
→ ALMOST ALL HEAT PUMPS ARE SUSTAINABLE!

«4x as many heat pumps ... »

**Industry can deliver,
but**

«We need framework conditions, that trigger
end-user demand»

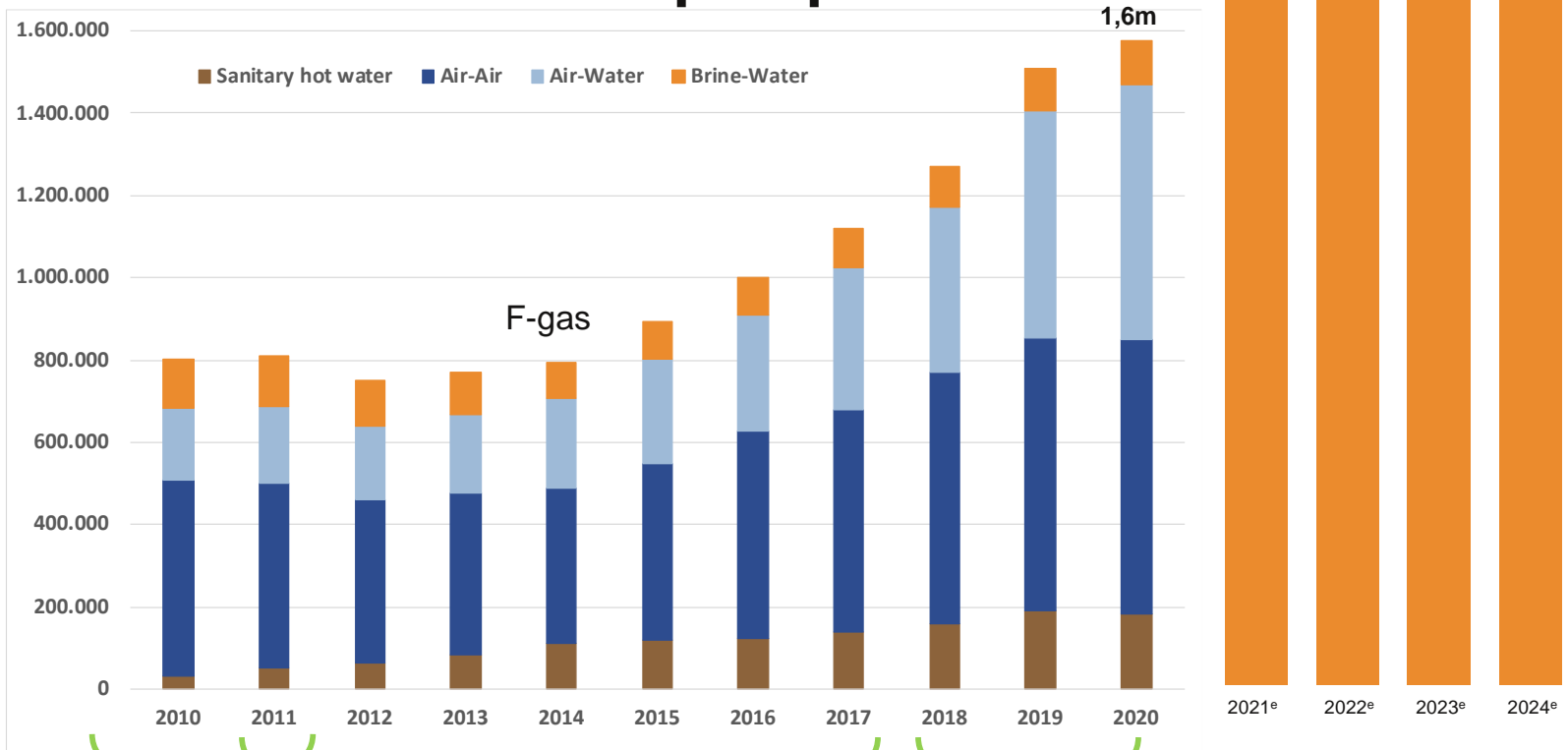
Taxation of electricity: need for level playing field



EHPA Recommendations for the Recovery Plans

- Implement the *EU Strategy for Energy System Integration* (quadrupling of installed HP)
- Implement the *EU Renovation Wave Communication* (decarbonised building stock in 2050)
- Promote Heat-pump friendly subsidy schemes (in line with *Taxonomy Regulation*)
- Build on Comprehensive assessments on heating & cooling (*ANNEX VIII EED*)
- Make electricity cheaper than fossil fuels

2020 – 2030: The heat pump decade



RED I

EED, EPBD

Ecodesign

CE4all

EU Green Deal
EU Green Recovery