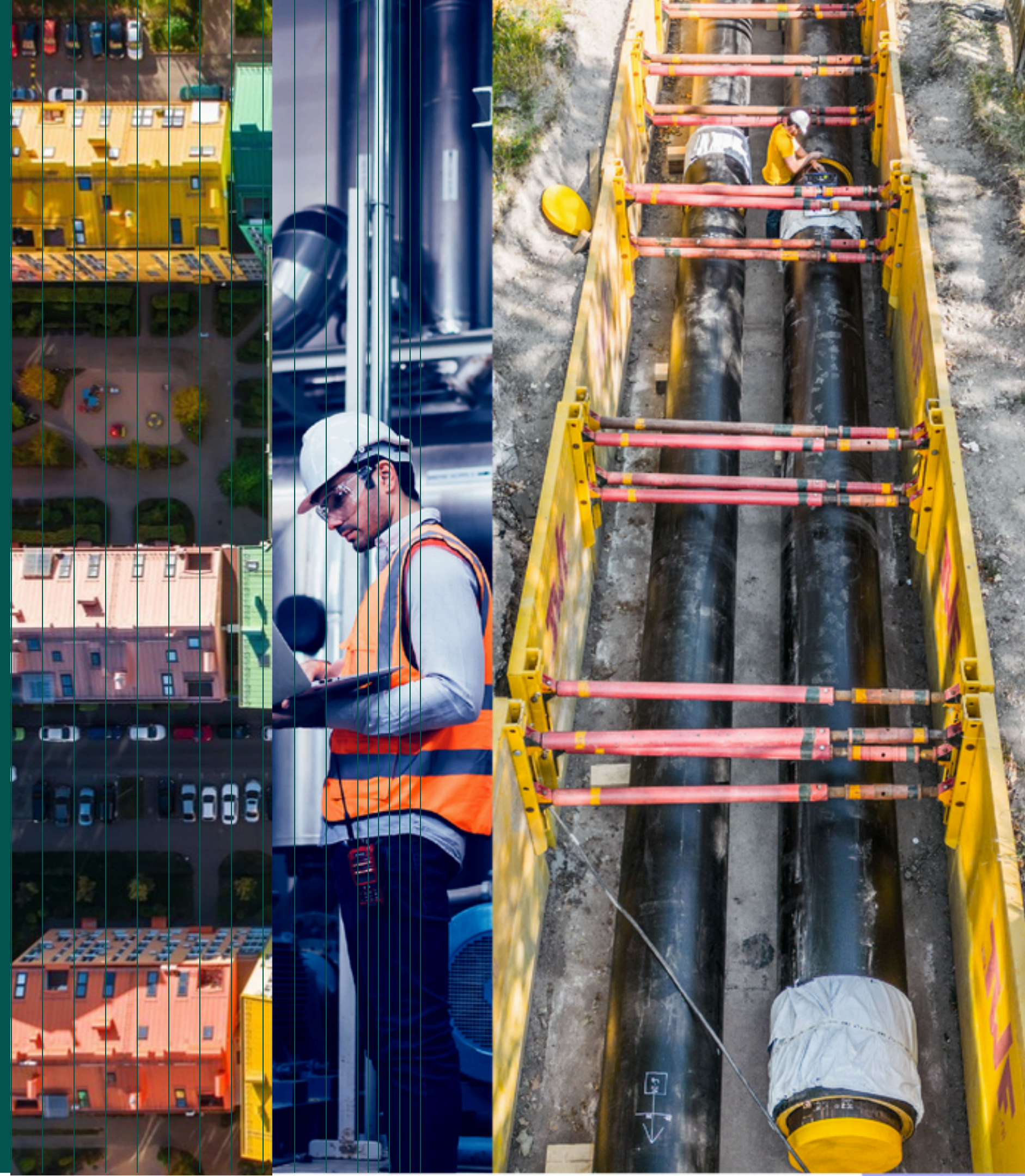




# EU perspectives on district heating and cooling and decarbonisation

6 May 2026  
REHEATEAST





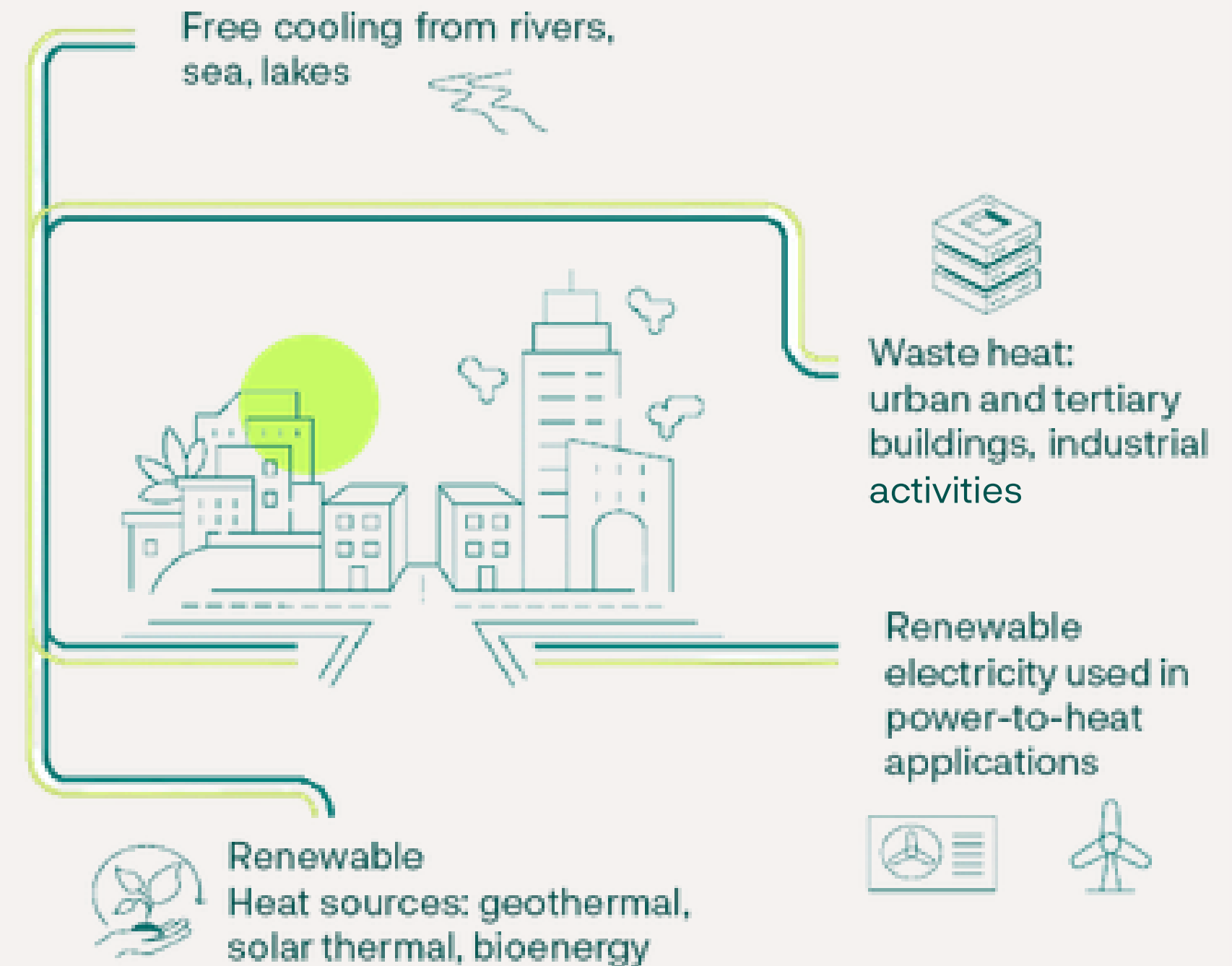
# District heating and cooling: a unique energy infrastructure

**13** % of the heat market

**80** Million citizens connected  
in the EU

**19.000** DHC Networks in the EU

**44,1** % of renewable & waste heat  
in the mix



**Harnessing local recovered and  
renewables energy sources**

# A sector that grows and decarbonises: market trends

## DHC Market Outlook 2025

### Trends:

1. Defossilisation & Diversification
2. Electrification & System Integration
3. Expansion & Growth



**+9.7%**

Growth over the past 5 years on the largest markets

**+20%**

Waste heat supply growth in 2023 (4.1% of the mix)

**+44%**

Large heat pumps growth in 2023

**+80%**

Electric boilers growth in 2023

# A growing EU energy infrastructure

## 2019-2023

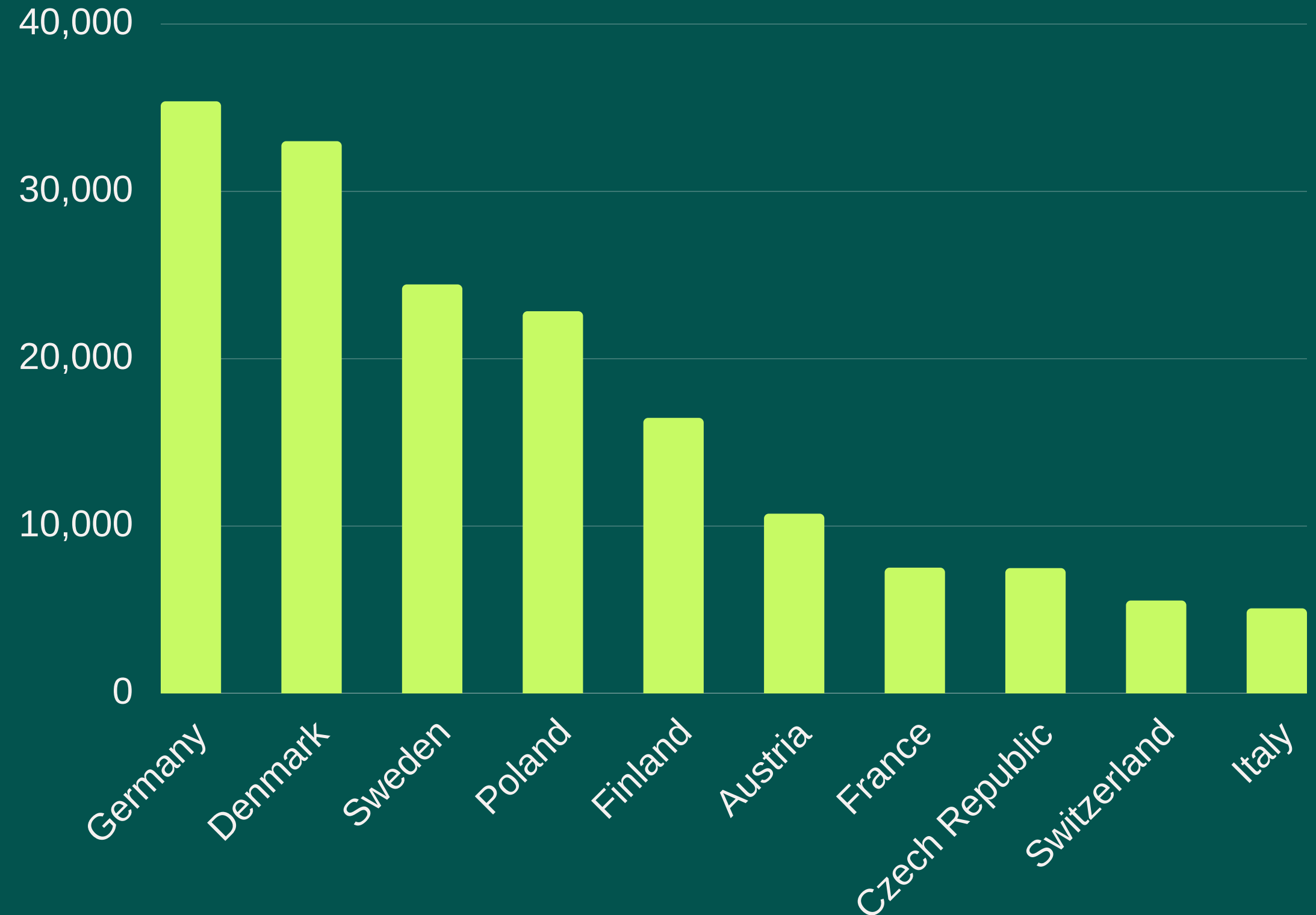
+ 9,7% on largest markets (+ 14,040 km)

- DE (+6,754 km)
- FR (+1,551 km) reporting  $\approx$  20% growth

## Growth also visible on mature markets

- DK + 10% (3,000 km)
- FIN: + 6.7% (1,006 km)

Source: EHP Market Outlook 2025



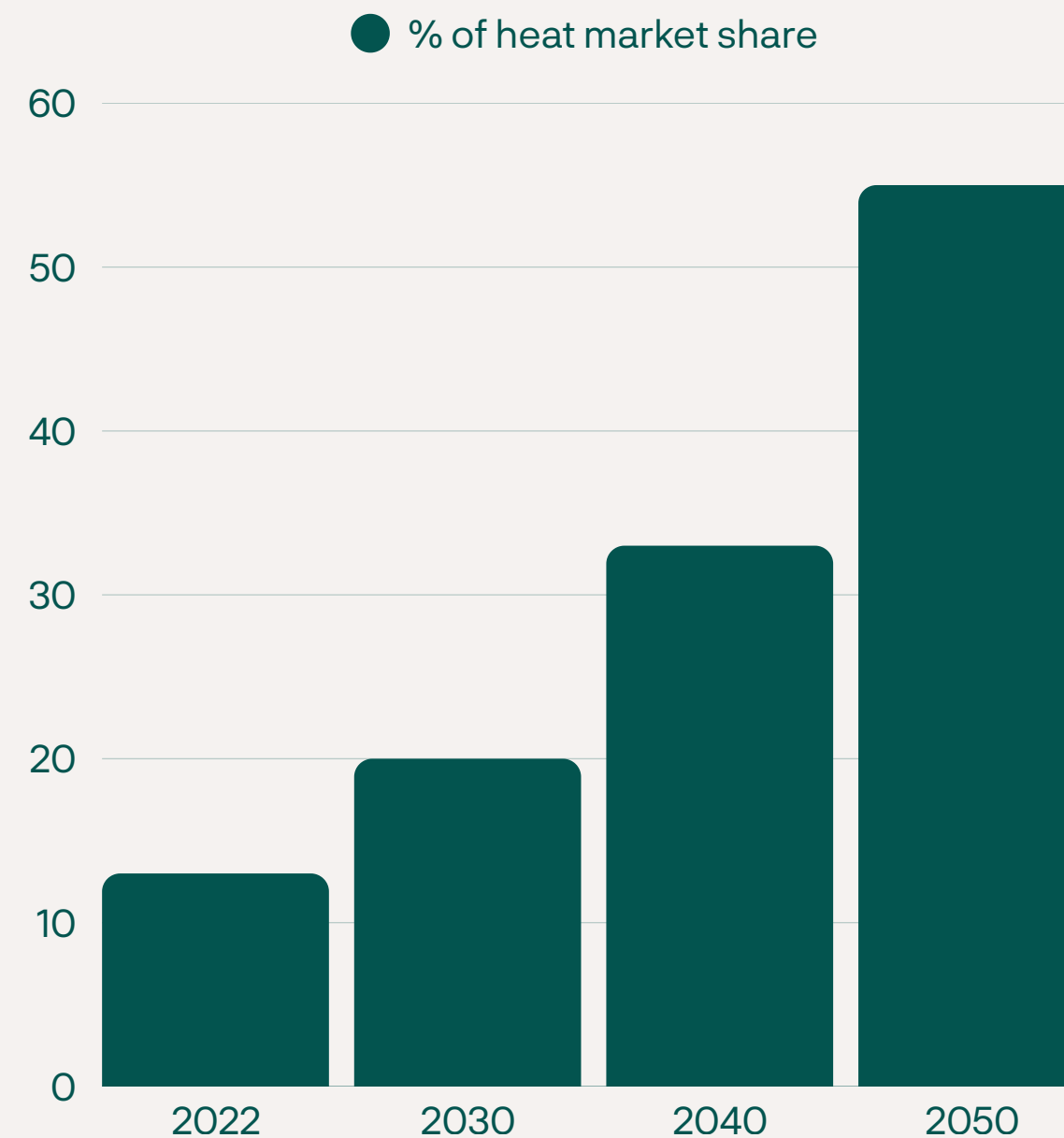




# Objective 2050: A fossil-free, efficient and integrated energy system



# x4 growth for the DHC sector to deliver flexibility and decarbonisation



Recommended levels (from today 13%)

- 20% in 2030
- 33% in 2040
- 55% in 2050

EU annual increase of 5,2%

2019-2023 growth:

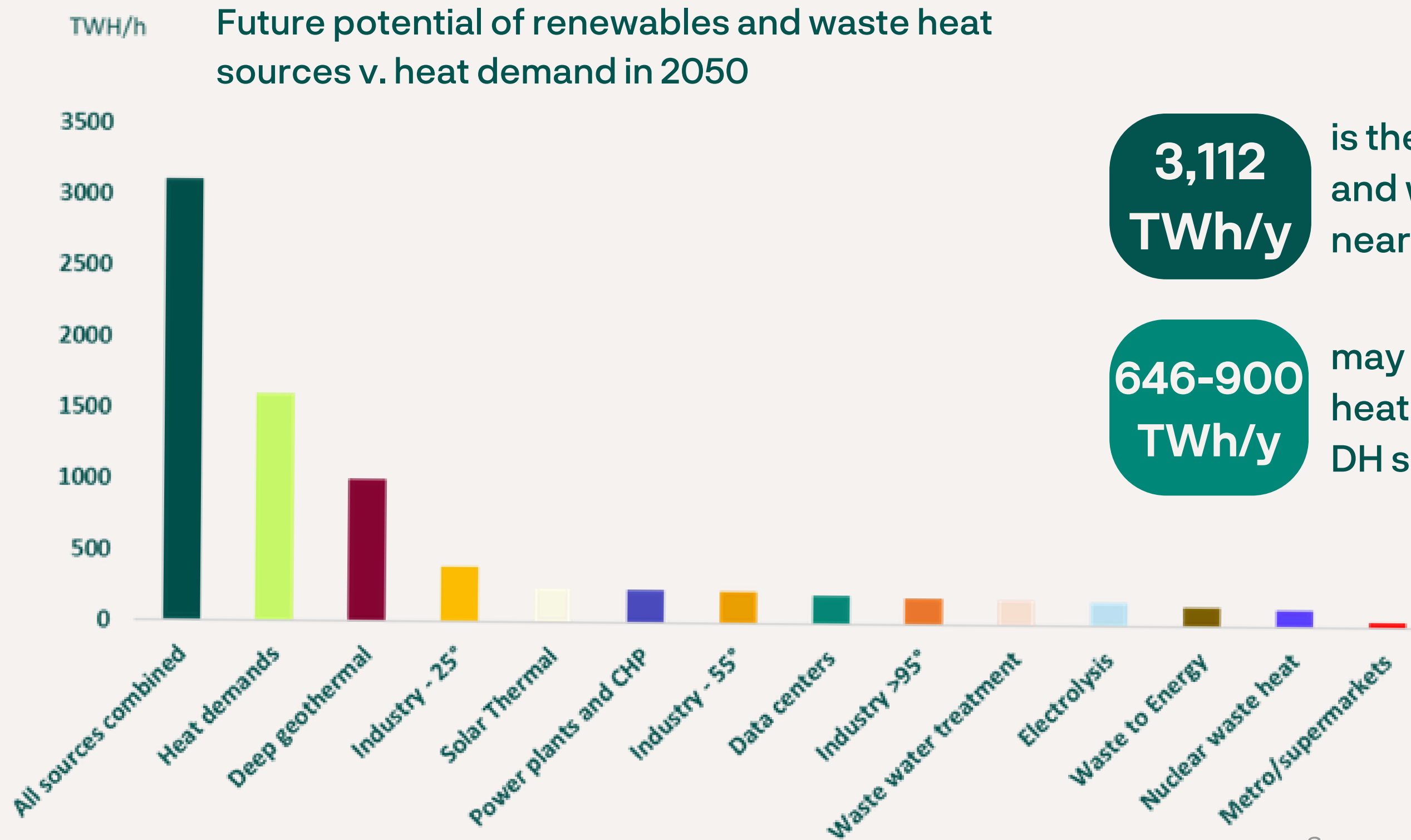
- 6% in Germany and in France

**Growth is within reach**

*Source: Heat Roadmap Europe 5, Aalborg University, 2025.*



# We have what it takes!



**3,112  
TWh/y**

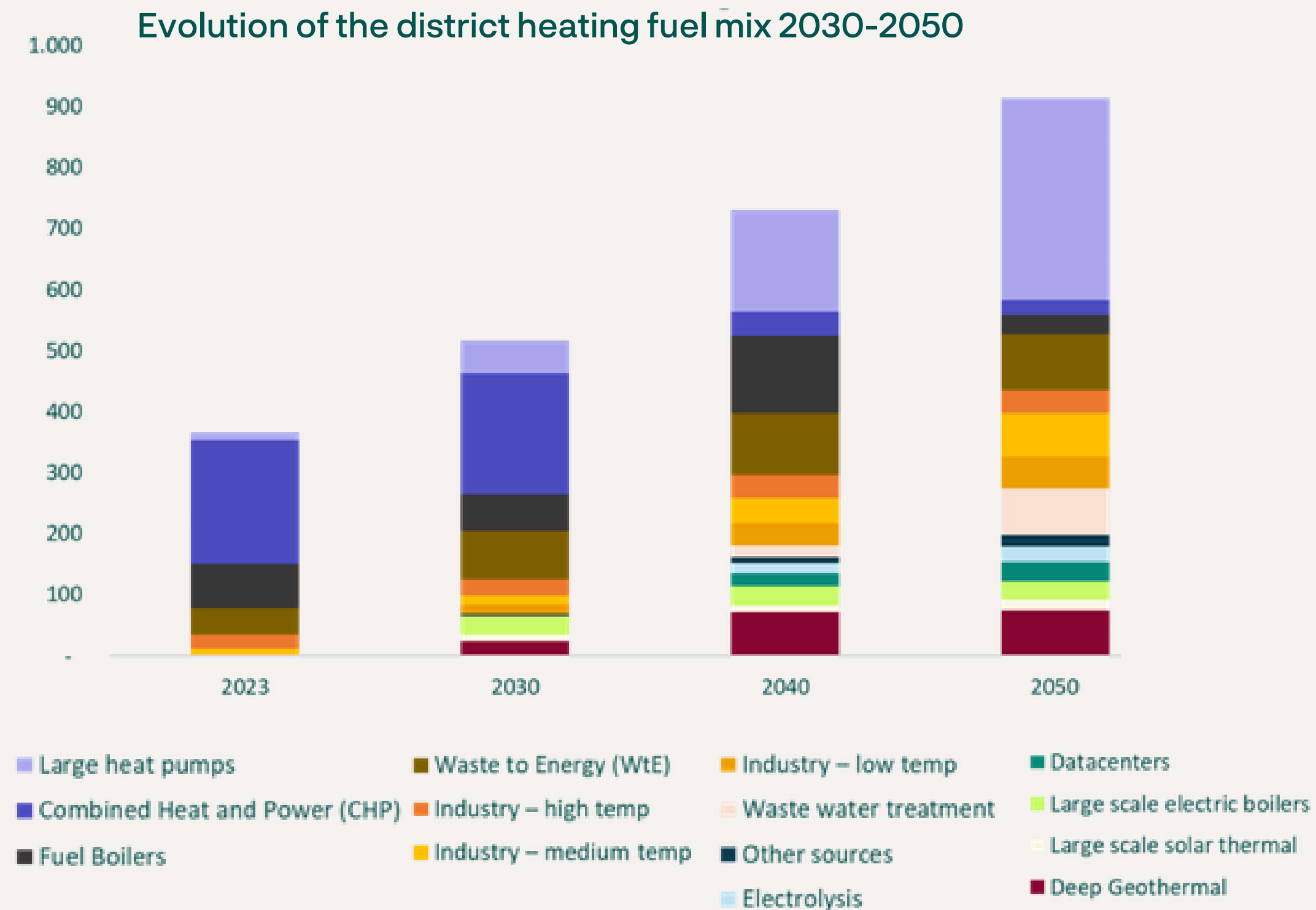
is the technical potential of renewable and waste heat sources in Europe, nearly twice heat demands in 2050

**646-900  
TWh/y**

may be cost-efficiently used in district heating, corresponding to 54-73% of DH supply by 2050

Source: Heat Roadmap Europe 5, Aalborg University, 2025.

# Electrification, waste heat and renewables: a fossil-free mix for DHC



## DHC systems are largely electrified (39%)

- Large heat pumps and e-boilers: 36% and 3%
- Thermal storage grows by 2000% in 2050 to increase flexibility and robustness

## Waste heat plays a pivotal role (34%)

- Decarbonised industrial waste heat: 18%
- Medium-low temperature waste heat (data centers, sewage, supermarkets & metro): 16%

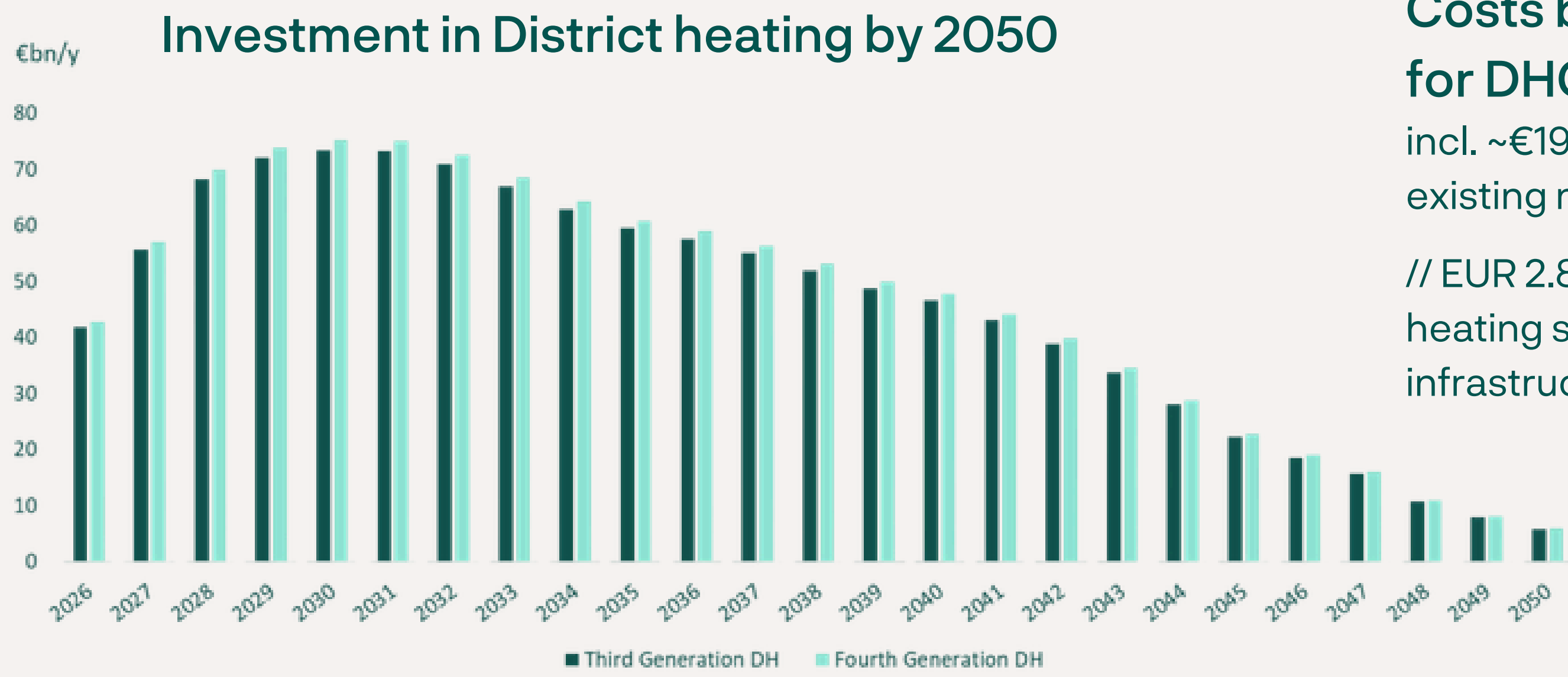
## Geothermal becomes the prime source for direct use of renewable heat:

- Geothermal: 8%
- CHP & boilers (sustainable bioenergy sources): 6%
- Solar thermal: 2%

Source: Heat Roadmap Europe 5, Aalborg University, 2025.



# We need massive investments to scale-up efficient district heating and cooling solutions!



**Costs by 2050: EUR 1.16 trillion for DHC infrastructure,**  
incl. ~€190bn refurbishment costs for existing networks

// EUR 2.8 trillion needed for the whole heating sector: generation, infrastructure, grids

CAPEX intensive  
but low OPEX

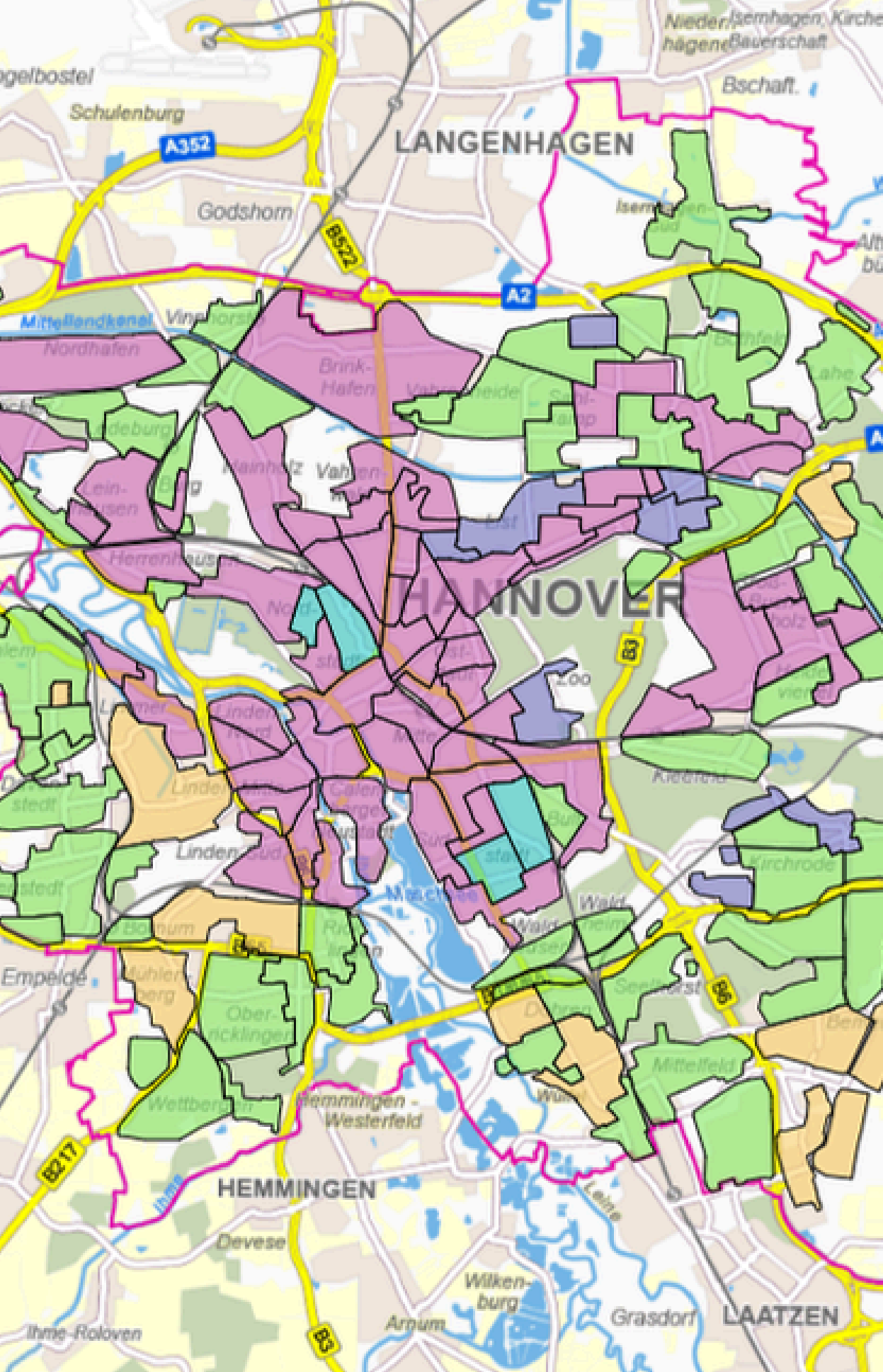
Source: Heat Roadmap Europe 5, Aalborg University, 2025.



# How do we get there?







# Planning: aligning local decisions with system integration

- **Municipal planning, a key driver to transform urban areas**
  - Heat Planning Act in Germany: catalyst to identify areas suitable for DH, waste heat and geothermal potential
  - Support for municipalities is essential to deliver: DENA's unique capacity building platform (KWW)
- **Smart incentives to foster implementation**
  - Direct subsidies only to solutions identified by municipal heat plans
  - Zoning ("Decret Classement") in France, connect to virtuous DHC (>60% RES/WH)
  - Support pre feasibility financing - not huge sums but risk for smaller companies
- **Commission's guidance on municipal heat planning**
  - Help cities adopt a integrated approach of planning combined with building renovation for a more cost efficient transition

# Financing, de-risking and taxation: making projects bankable



## Stable public investment schemes for clean district heating offering 5-year visibility

- The German BEW scheme has attracted over 3000 applications from DHC companies
- Demand for funding is two to three times higher than the current budget, with more than 1 GW of large heat pumps under construction or in late planning
- Similar schemes exist in the Netherlands (SD++) and France (Fond Chaleur)



## Deploy targeted insurance and guarantee schemes to attract private investors

- France's guarantee schemes for geothermal drilling and industrial waste heat reduce exploration and counterparty risk



## Give price signals through tax and VAT rates

- Finland cut taxation of electricity used in district heating to the EU minimum, triggering more than a five-fold increase in e-boilers and large heat pumps
- France reduced vat for efficient district heating systems, improving affordability and competitiveness versus fossil alternatives





Are we up to the  
challenge?



# **AccelerateEU**

## for cleaner and affordable energy







# Heating & Cooling Strategy?



# Thank you!



# Back Up

# The Heating & Cooling Network

## Who we are:



International association for sustainable district heating and cooling



Voice and forum of the sector



Research & Innovation platform (DHC+) involved in 20 active European projects

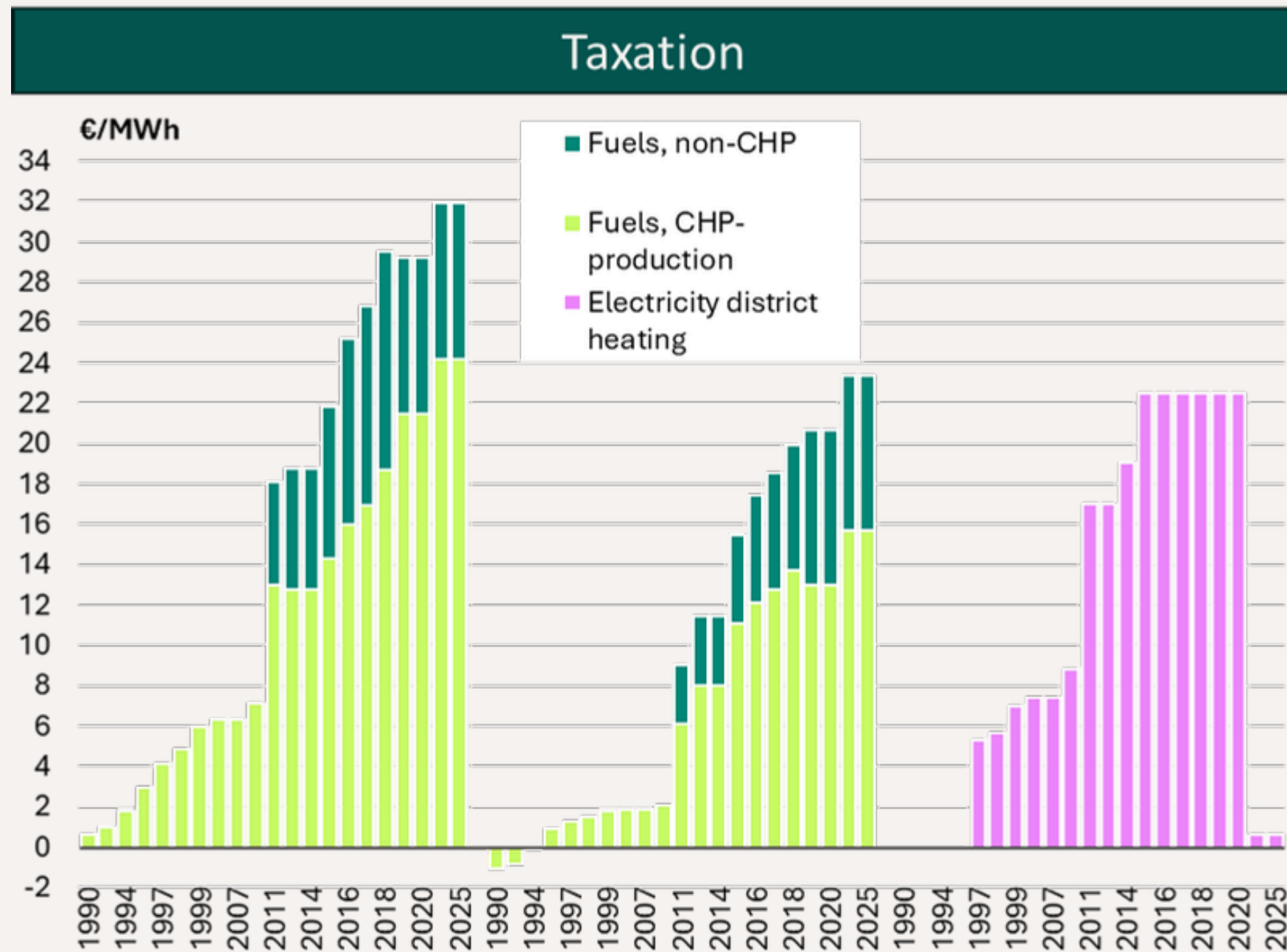


160+ members from more than 30 countries  
National DHC associations, utilities, manufacturers, equipment suppliers, start-ups, universities, research institutes and consultancies

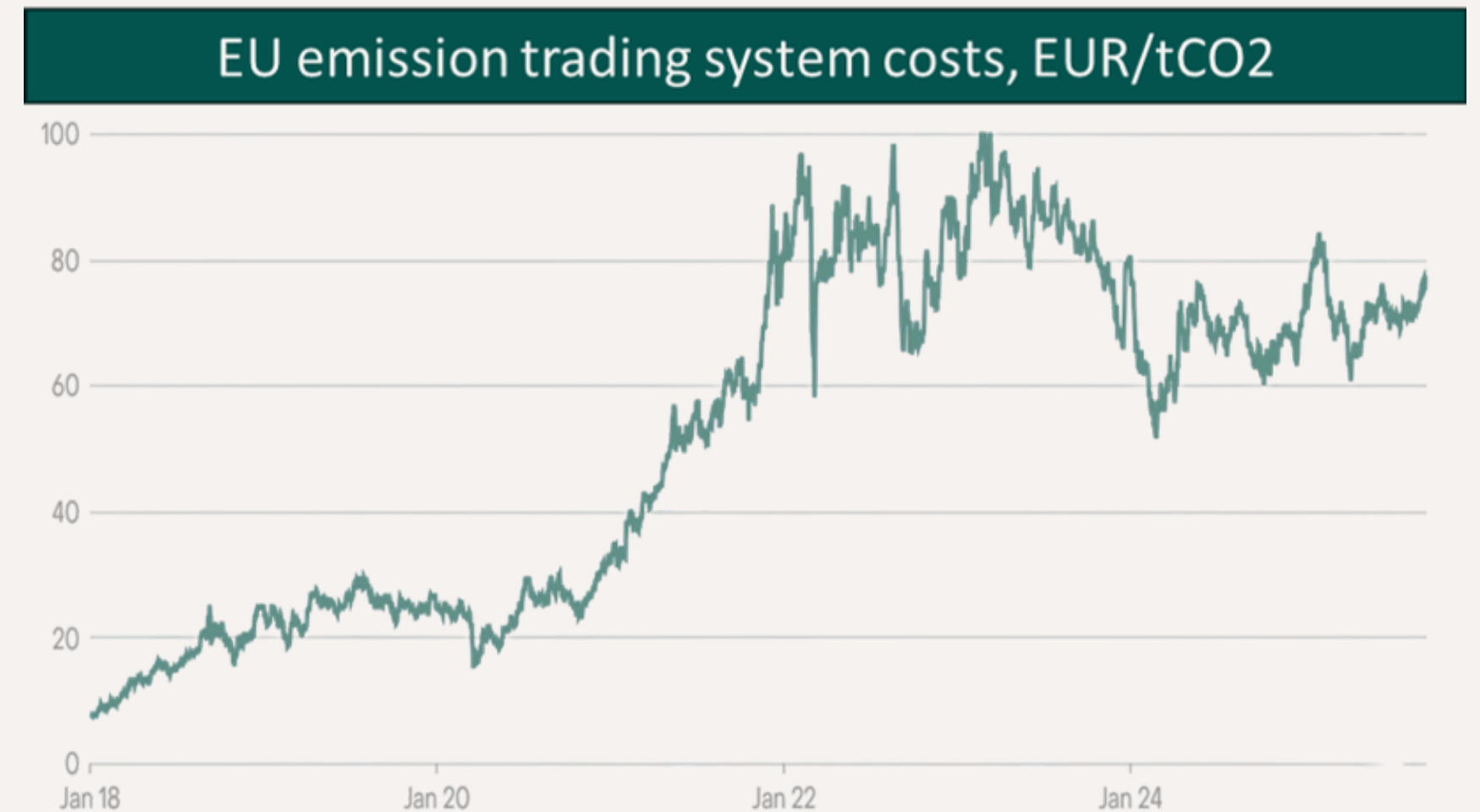




# Taxation and ETS rose fuel costs driving decarbonisation and electrification

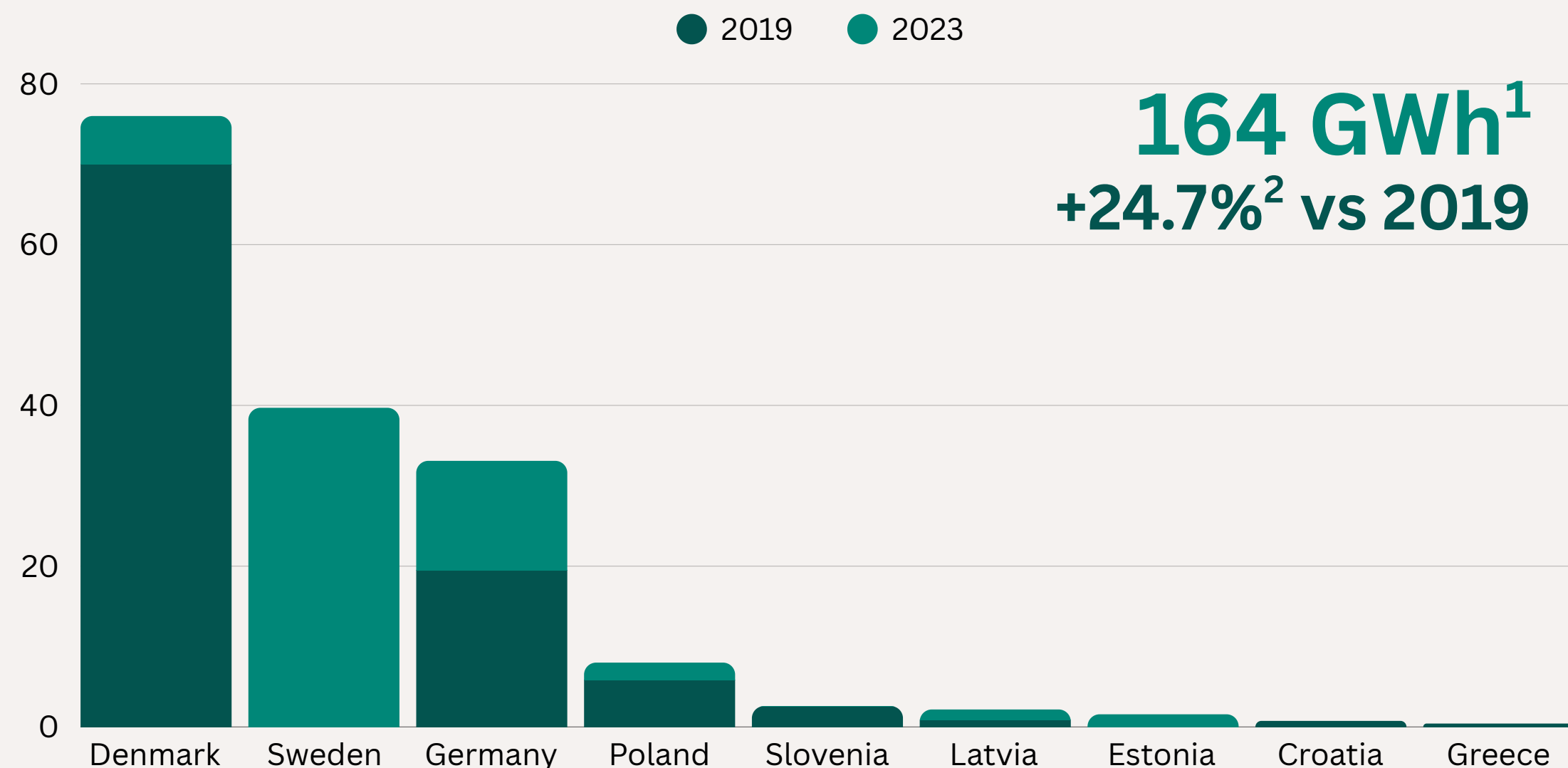


Source: Energiategollisuus, 2025





# Current Thermal Energy Storage Capacity in EU



Thermal storage grew rapidly between 2019 and 2023.

**+70%** in Germany vs 2019

**+38%** in Poland vs 2019

**+10%** in Denmark vs 2019

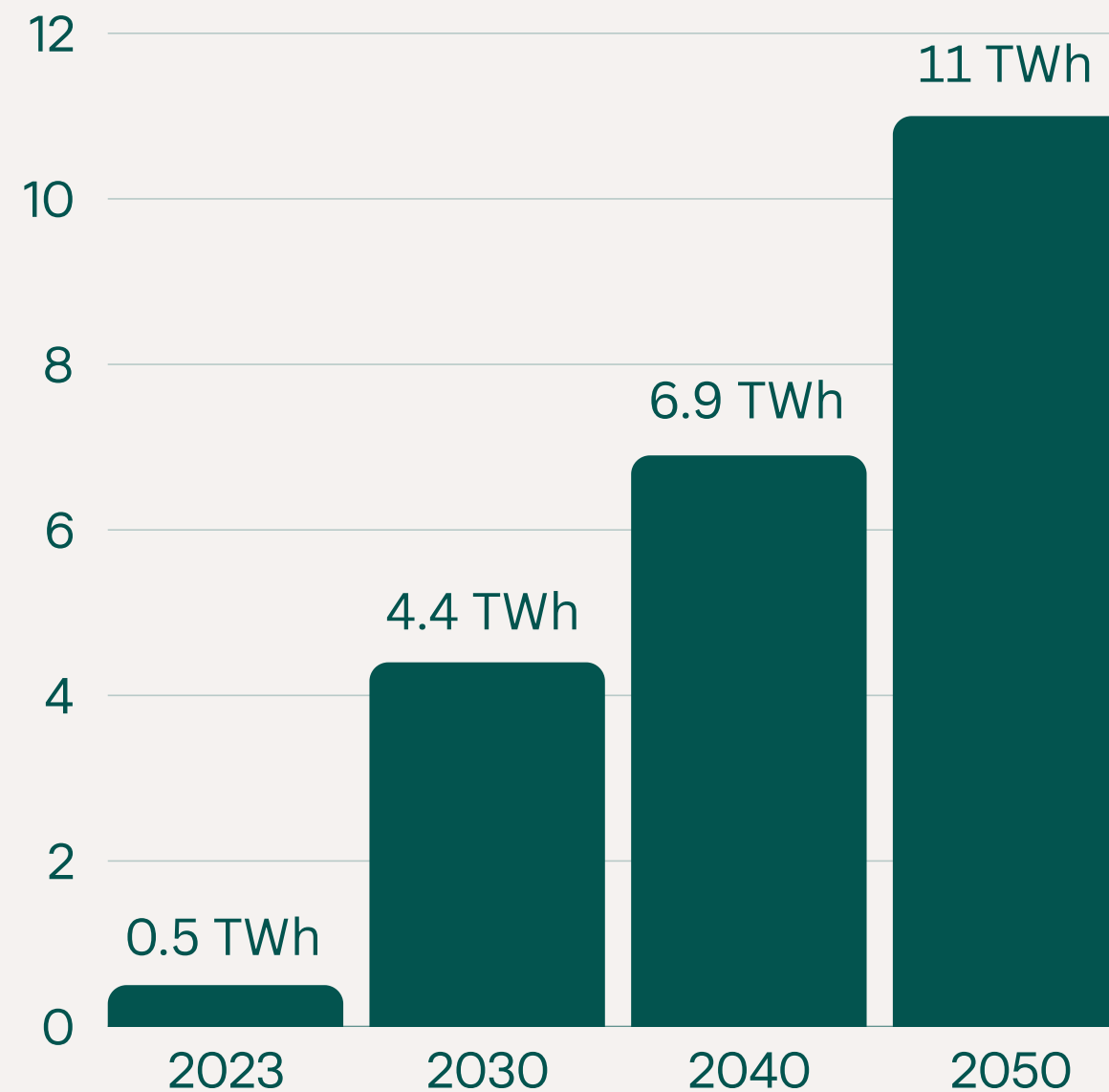
<sup>1</sup> Value for Denmark, Sweden, Germany, Poland, Slovenia, Latvia, Estonia, Croatia and Greece.

<sup>2</sup> No data available for Sweden in 2019, this country was excluded from the growth calculation to prevent overestimation.

Source: EHP Market Outlook 2025



# Necessary Thermal Storage growth and investment needs



**x 22** installed Thermal Storage capacity by 2050 to reach resilient and climate neutral energy system

## Investments target:

- 13 billion EUR by 2030 (+780% vs 2023)
- 27 billion EUR by 2040 (+57% vs 2030)
- 44 billion EUR by 2050 (+59% vs 2040)

*Source: Heat Roadmap Europe – a long-term path to resilient and competitive heating systems, Aalborg study*



