



**EUROHEAT  
& POWER**

# **Harnessing the potential of District Heating & Cooling to accelerate EU heat transition**

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 **@ABCClimate**

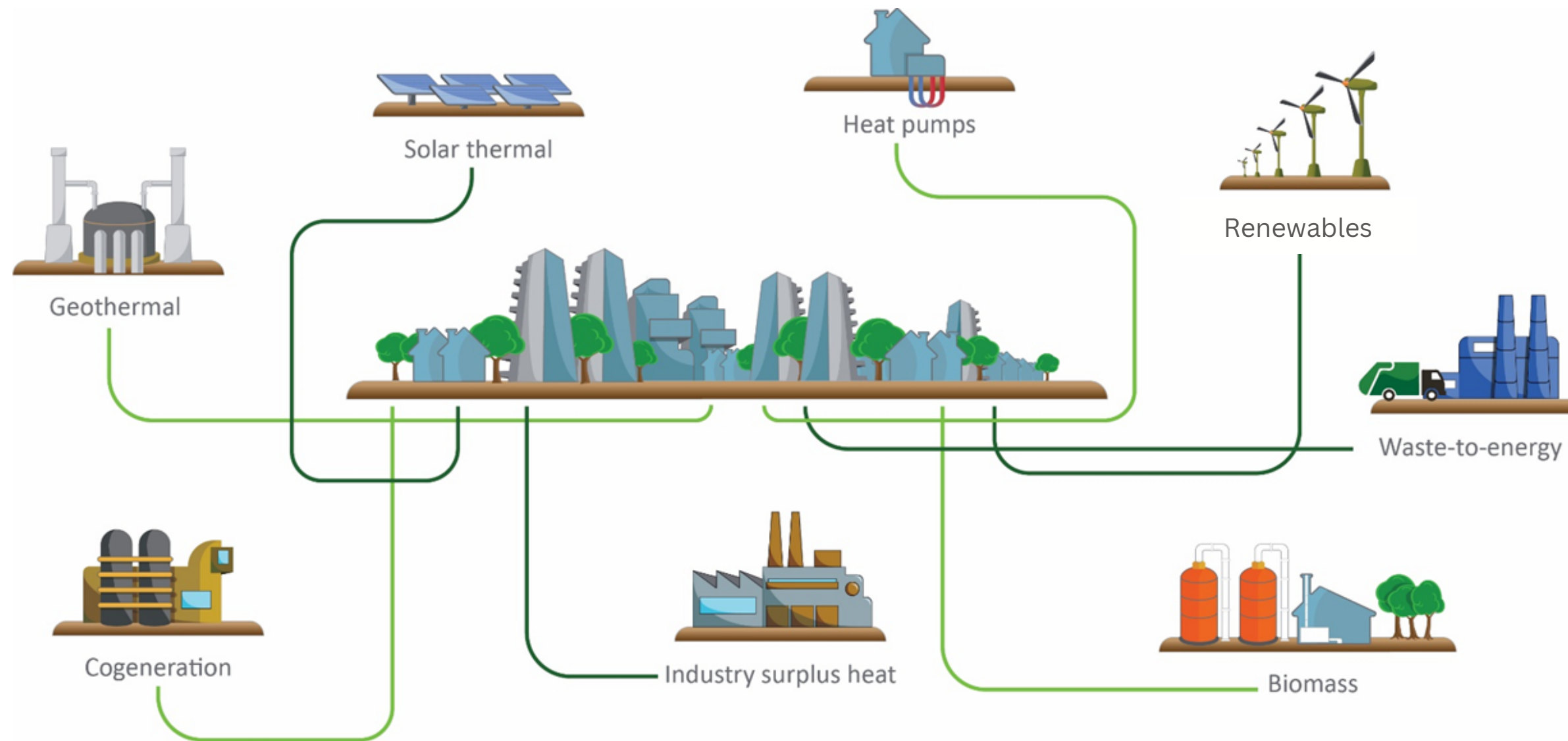
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**21/10/2022**

# What are District Heating and Cooling Networks?



A proven, efficient solution to decarbonise buildings in densely populated areas



Delivers **hot water** through a network of insulated pipes

Over **10.000 heat networks**

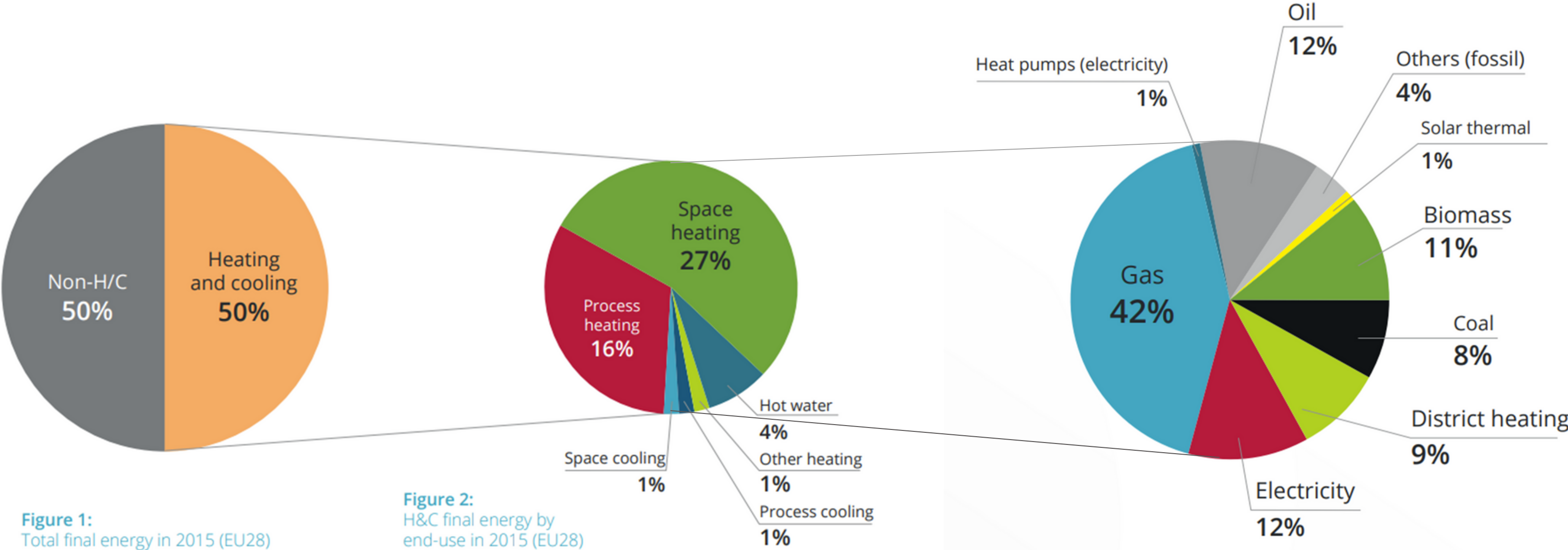
**12%** of the EU heat market (2019)

**60 million citizens** supplied

Nearly **1/3 of renewable & waste heat sources** in the DHC mix

# Heating and cooling matters

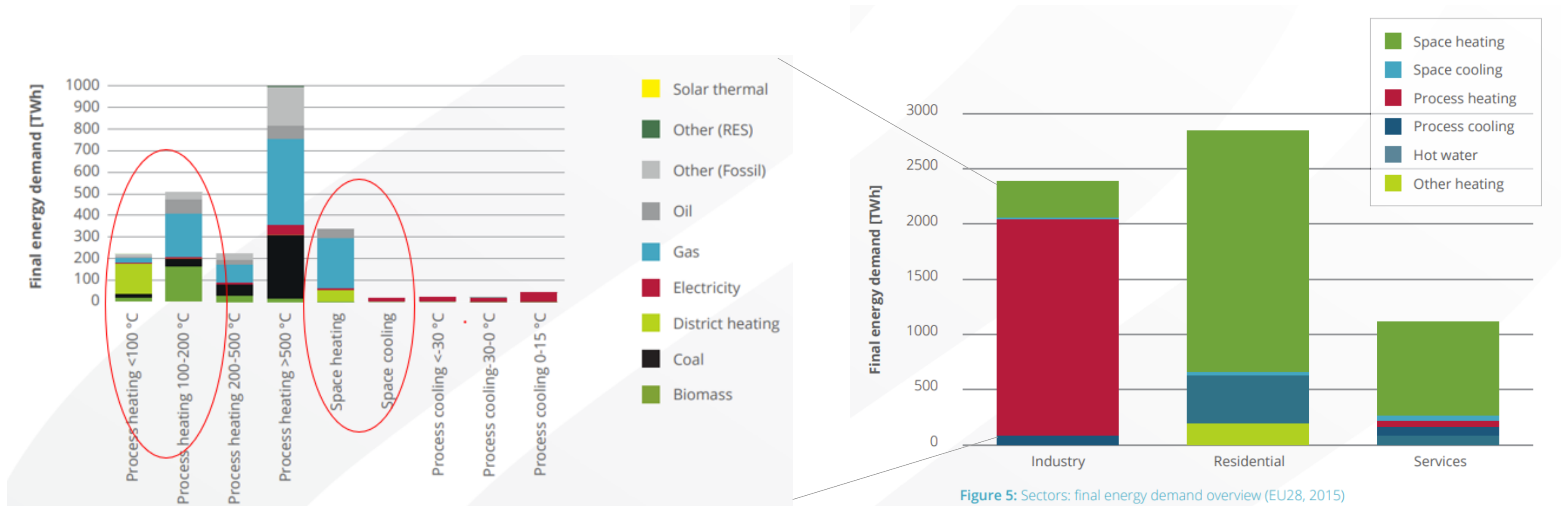
The **size of the challenge**: EU consumes **half** of its energy for heating and cooling purposes. Most of this thermal energy is used in **buildings** (space and water heating) and **industries** (process heating). **It is mainly produced from fossil fuels** (66%) and only 13% comes from renewable energies.



Source: Heat RoadmapEU, 2015

# Where can DHC play its part for heat decarbonisation?

Smart & Sustainable DHC is suitable for 100% of **residential buildings** heating & cooling needs, about 80% of **tertiary** and **low to medium temperature** industrial processes (Temp. below 160°)



# District heating & cooling: the underdog of Europe's heat transition



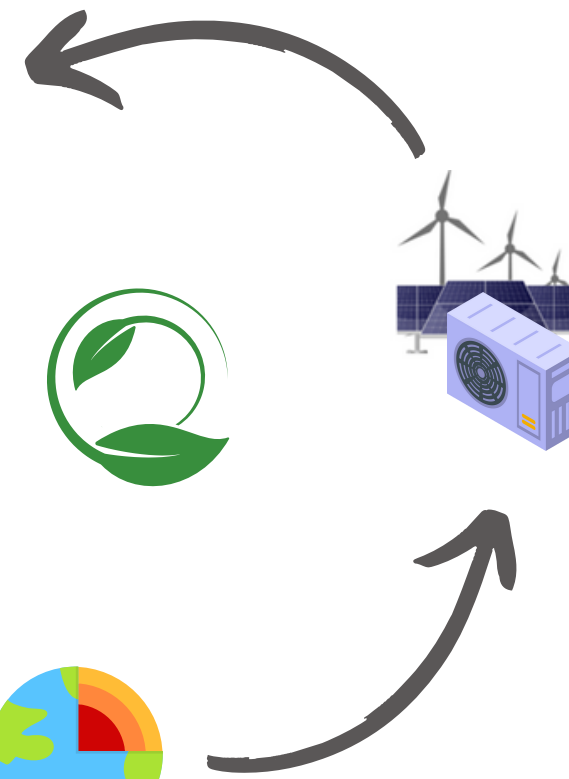
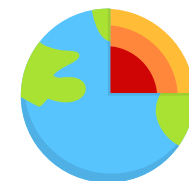
DHC is one of **Europe's most untapped clean heating & cooling resource**. From 12% today, it could supply up to **50%** of the European heat demand in 2050. In Germany the share is set to double by 2045 reaching 26%.

Growth pillars for smart and sustainable heat supply

Recovered/waste heat from industries & tertiary sector could provide **25% of the future DH supply**.



**RES heat sources:**  
**Geothermal** (18% GR, FR, CZ, HU), **solar thermal** (DK, GR, SP, HU), **biomethane** (CZ, AT, FR)



**System integration.** DHC networks can channel **RES electricity** into RES heat, using **large-scale heat-pumps**.

It can also recover heat from **H2 and nuclear** production.

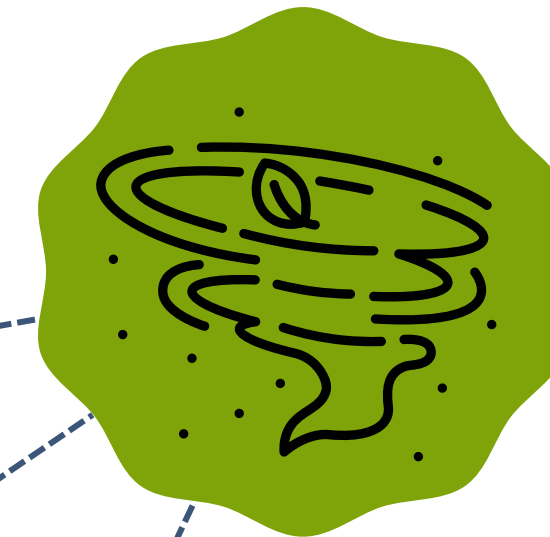
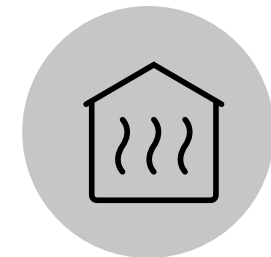


# Rethinking heating and cooling through the "energy storm"

## Steep reduction of gas demand

50% of EU energy consumption is used for heating & cooling purposes, with **42% from natural gas**.

Most of this thermal energy is used in buildings (space and water heating) and industries (process heating).



## Ultimatum VS long-term vision

According to EC emergency scenarios, the EU could face gas shortage as of March 2023, which will have strong impact on our industry and citizens.

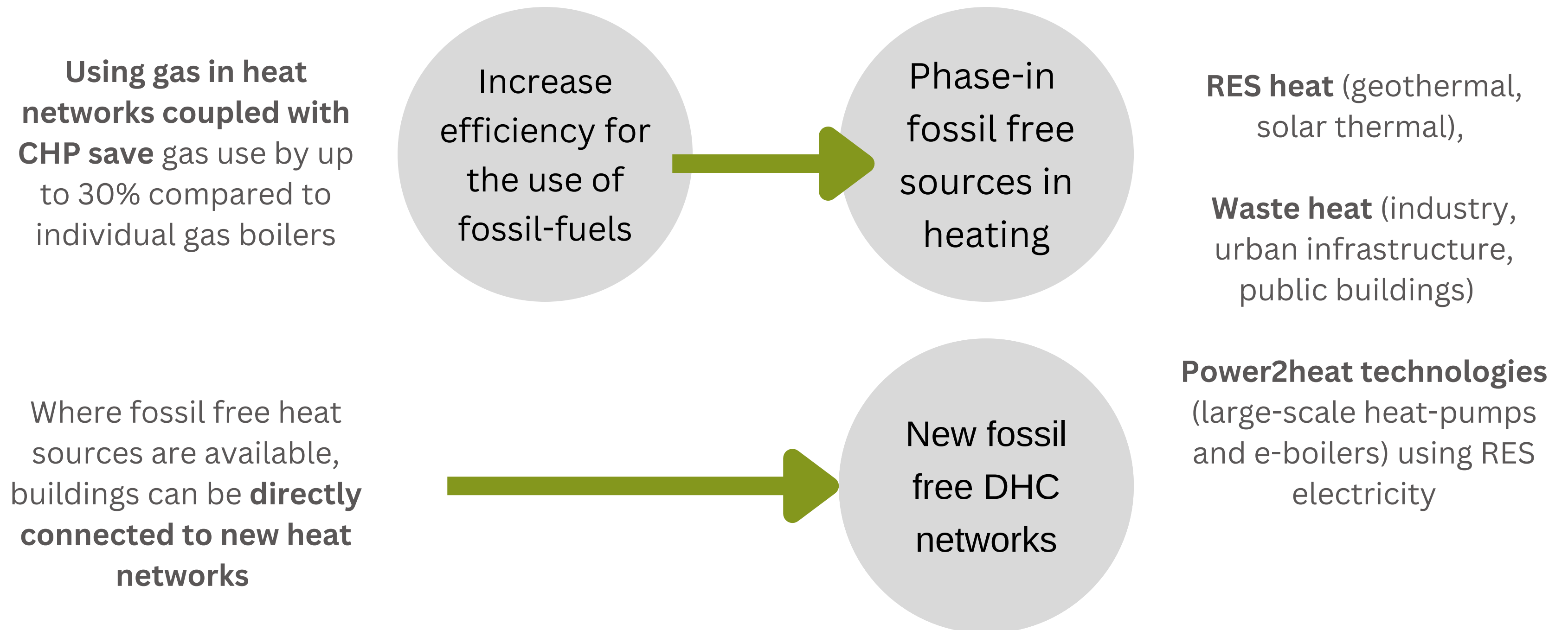
Little can be done in 6 months, but **within 2 to 5 years a deep H&C transition can be initiated**.

## Social bomb

Energy bills are soaring, SME's are closing. EU unity is being torn apart by the current economic crisis and rising social discontent.

Need for **inclusive & fair** solutions which work for everyone.

# DHC is a **long-term** solutions that deliver an **immediate phase-out of natural gas in buildings**

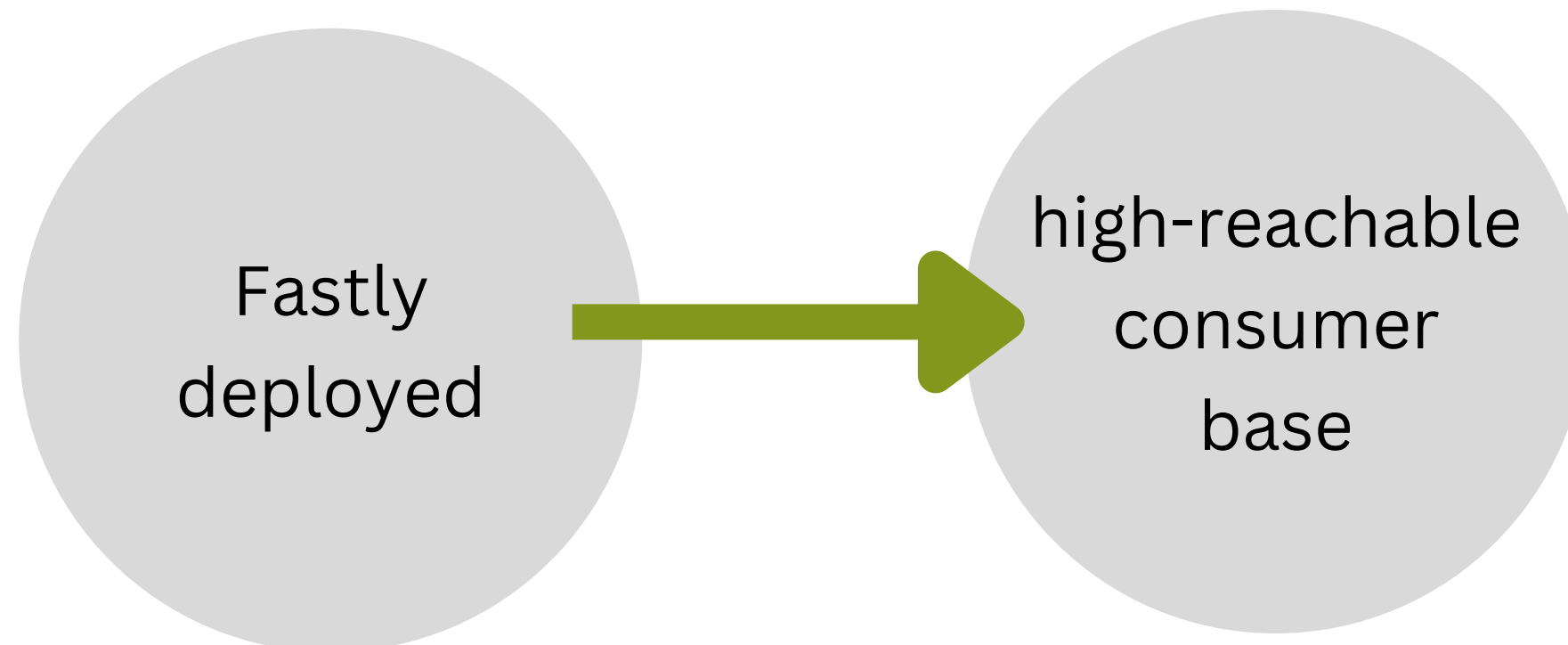


# DHC is reality-proofed and can be quickly deployed

District heating & cooling networks have **successfully accompanied the transition of EU cities since the 70's**. EU countries with highest shares of renewables in heating are also the ones with highest shares of DHC. in 3 to 5 years, whole districts can be converted to 100% climate neutral & modern DHC systems.

**2 to 5 years project life-span** for new DHC districts.

**12 to 18 months** for industrial systems.



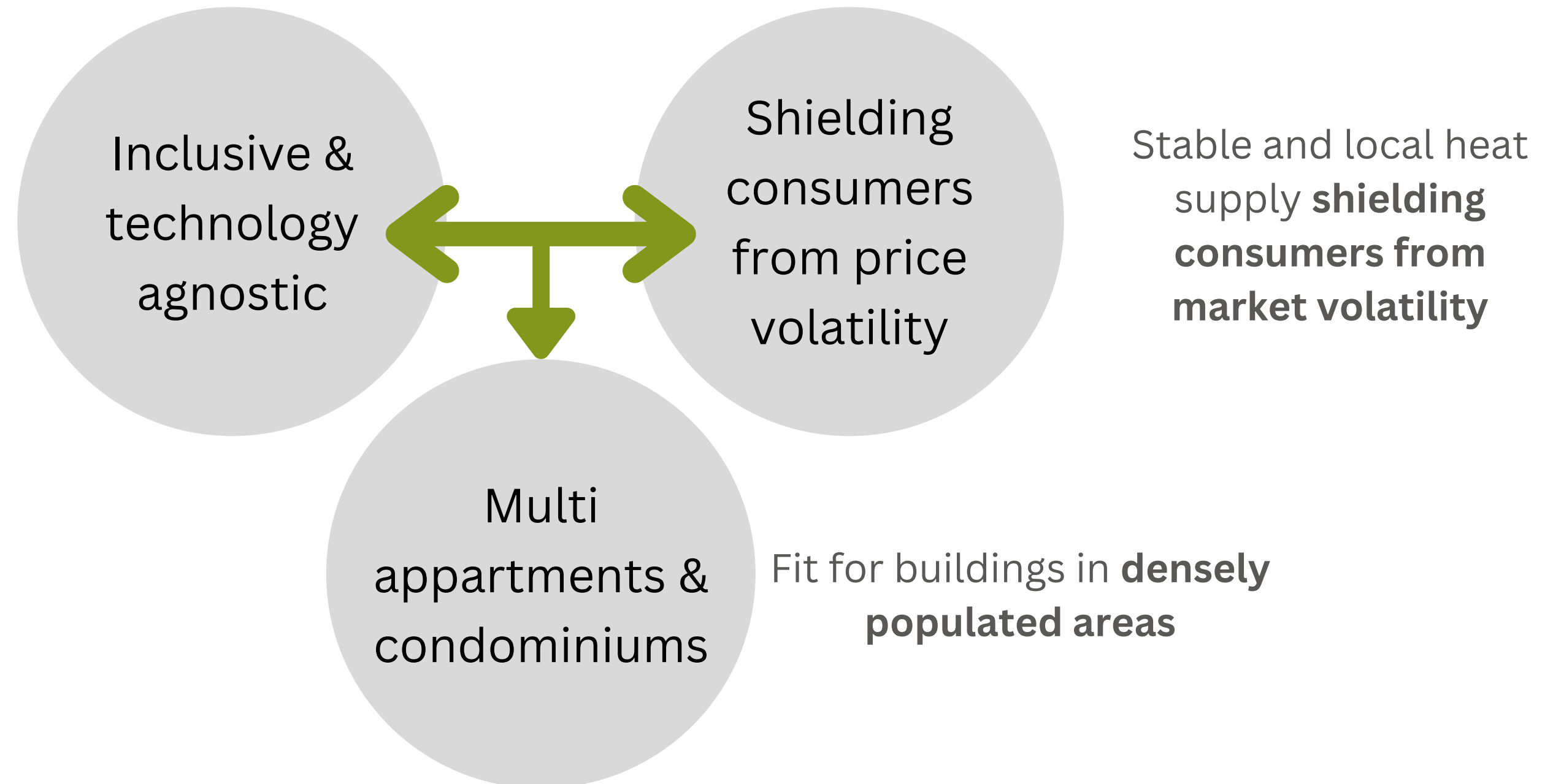
60 million citizens are supplied with DHC in Europe, **but 140 million EU citizens live in a city equipped with DHC networks**



# DHC is inclusive and affordable

There is no one size-fits all, or silver bullet to tackle the heat crisis. But District heating & cooling networks have the advantage of adapting to a variety of EU and even local energy mixes.

**DHC network integrate clean heating resources, depending on local and national specificities** (CHP, recovered and ambient heat, geothermal, solar thermal, wind and solar, sustainable biomass)



# A 10-Point plan to accelerate EU heat transition



Develop a **robust EU Heating & Cooling Strategy** to align with the climate Law and energy security imperative



Develop a **holistic approach to building renovations**: connecting with local renewable and sustainable waste heat sources



Introduce **mandatory heat planning** for local authorities



Rethink the **financing framework** to de-risk investments in sustainable district heating



Ban **individual fossil-only boilers** in new, refurbished and renovated buildings



# 3 **concepts** for a successful heating transition



**Resource efficiency** and **circular energy systems**



Local and spatial **planning is key**



**Diversification** means resilience

Thank you,  
ask your question!