



## The Status and Potential of DHC in Europe

Jack Corcadden - Project Officer, Euroheat & Power



NATURAL COOLING

WIND FARMS



LARGE HEAT PUMP

DATA CENTRE



METRO

BIOMASS PLANT



SEWAGE

SOLAR THERMAL

WASTE HEAT & COLD FROM INDUSTRY

COMBINED HEAT & POWER



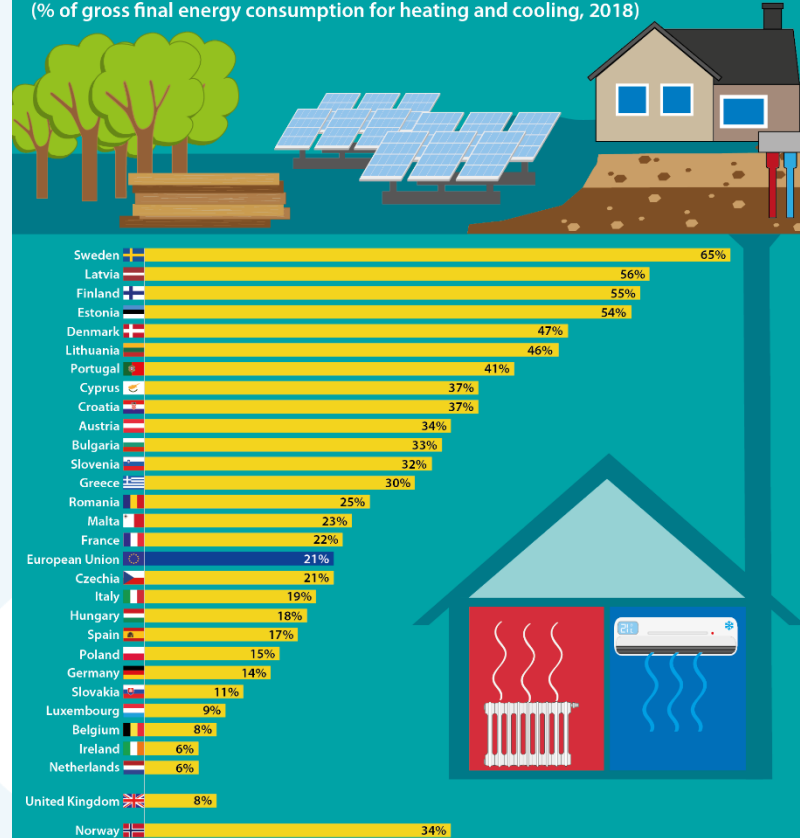
GEOTHERMAL DH PLANT

# State of the art and market

DHC in Europe

- **RES share of EU H&C – 21%**
  - Varies widely between countries
  - Mainly biomass - 12% of overall heat consumption
- **60 million EU citizens served by DH**
  - 140 million living in cities with at least one DH system.

**Renewable energy used for heating and cooling**  
(% of gross final energy consumption for heating and cooling, 2018)



# EXCITING SECTOR TO WORK IN

European cities with district heating systems

NOW



13%

Europe's heat demand is met by district heating systems.

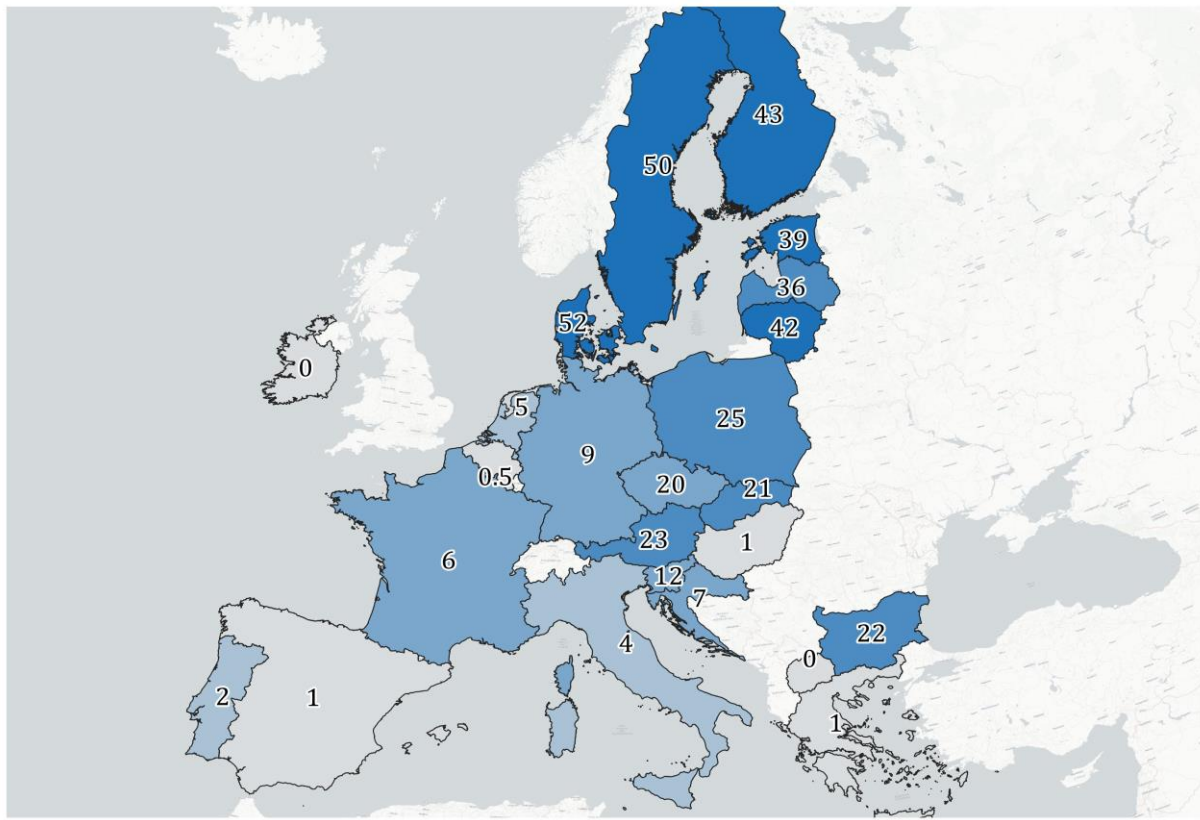
2050



50%

Europe's heat demand could be met by district heating by 2050 – If appropriate investments are incentivized by EU regulatory framework.

# Share (%) of DH in fuel consumption for space heating



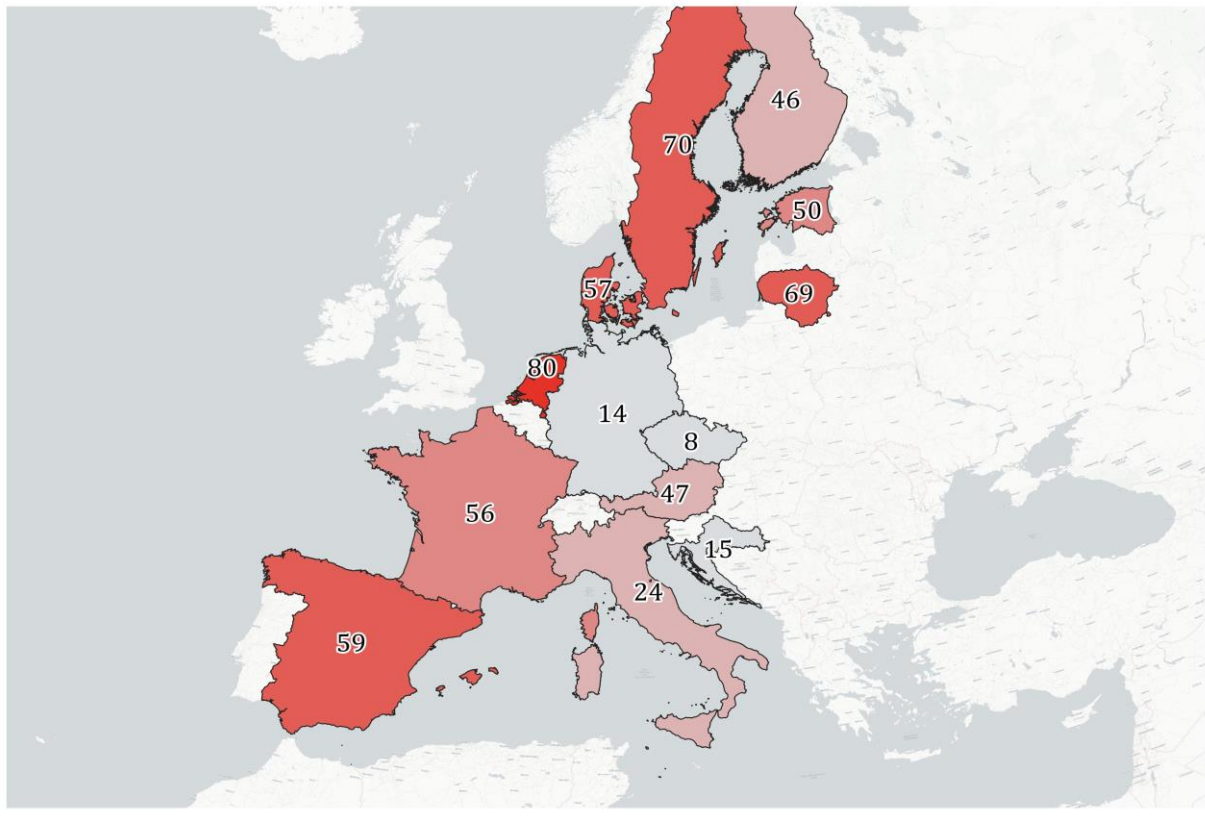
- **Highest DH shares:**  
Denmark, Sweden, Finland, Lithuania, Estonia, Latvia
- **Lowest DH shares:**  
Malta, Ireland, Cyprus, Belgium, Spain, Greece

Image: Hamburg Institut.

Source of data used: JRC (2019):

Decarbonising the EU heating sector.

# Share (%) of renewable energy in the generation of DH



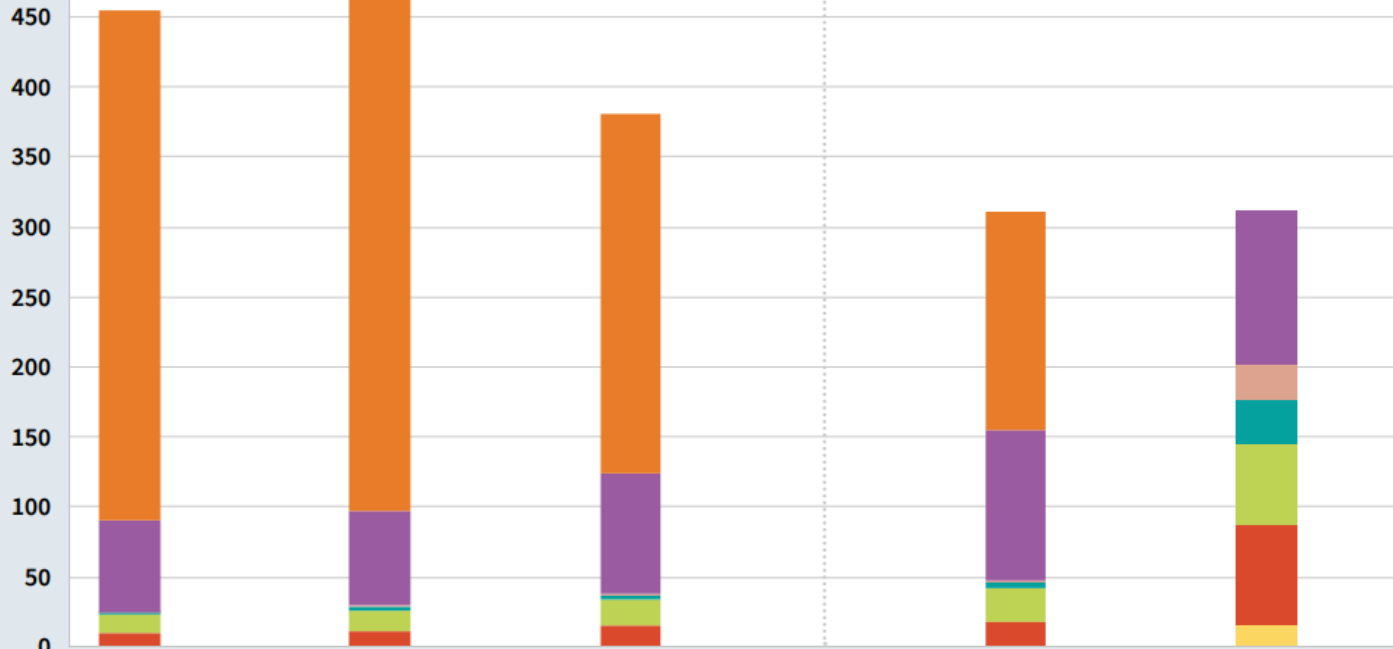
- Difficulty collecting data due to local nature of H&C

Share of RES in gross final energy consumption for heating and cooling 2018.

Image: Hamburg Institut.

Source of data used: Eurostat (2020): Renewable energy for heating and cooling.

Final heat supply by sources [Mtoe]



2040 scenarios

- E-gases, hydrogen
- Heat Pumps (amb.heat & geothermal)
- RES fraction of derived heat
- Solar Thermal heat
- Geothermal heat (mainly deep geothermal)
- Biomass heat
- Non-RES heat

The European Green Deal has brought a new wave of policy initiatives with a direct impact on our sector

### EU Climate Target Plan 2030

Building a modern, sustainable and resilient Europe

Have your say  
on the new  
**#RenovationWave**  
initiative!

#EUGreenDeal

**AN EU ENERGY  
SYSTEM INTEGRATION  
STRATEGY**

#EUGreenDeal

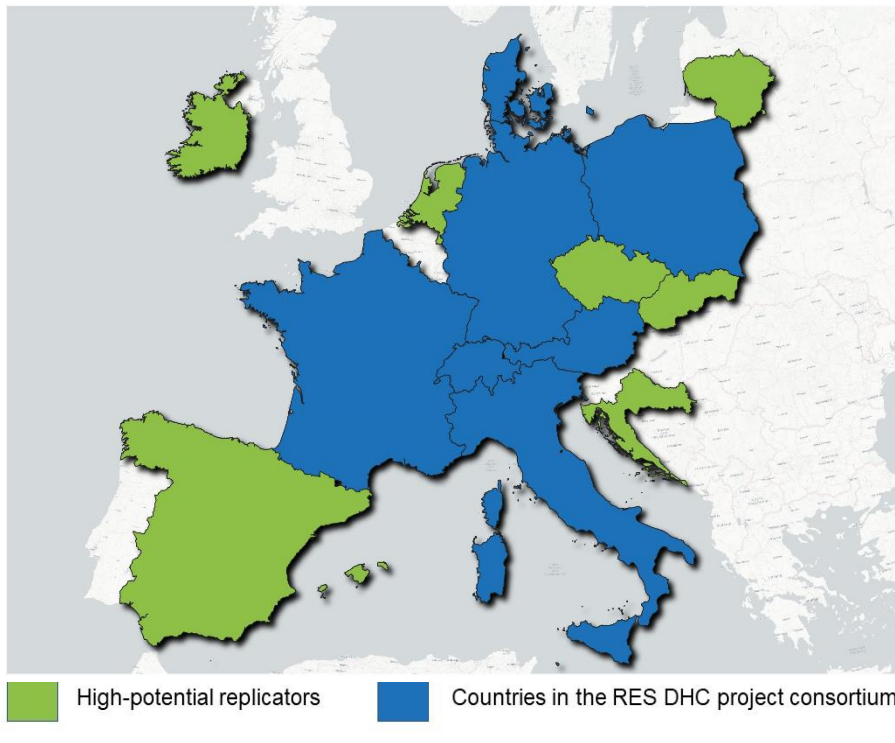
 **RED and EED currently being revised**



# Funding

- **Public funding** on EU level: 26 funding instruments available
- Multiannual financial framework (MFF) for 2021 – 2027 adopted
  - Horizon Europe -> largest research and innovation programme ever created
- **European Investment Bank:** important actor in financing DHC projects
- **European Central Bank:** shifting towards greener monetary policy
- **Private financing:** insurance, pension funds etc. are expected to invest increasingly in renewable energies

# High Potential Replicators



High potential to deploy 5GDHC

Selected countries:

- Geographical, population and climate distribution
- Differ in their H&C decarbonisation progress
- Croatia, Czech Republic, Ireland, Lithuania, Netherlands, Slovakia, Spain.

# Conclusion

- 5GDHC fueled by RES represents the most effective and economically viable option to decarbonise the H&C sector and deliver Europe's climate targets.
- Jack Corscadden, Euroheat & Power - [jc@euroheat.org](mailto:jc@euroheat.org)
- Thank you!



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 952873.