Heating typology as a basis for policy recommendations

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Susana Paardekooper
susana@plan.aau.dk; @SusanaPaardekoo
Our purpose in HRE4

• Creating scientific **evidence** to support long-term energy strategies at local, national, and EU level and empower the transition to a **low-carbon** energy system

• By **quantifying** the impact of various alternatives for addressing the heating and cooling sectors
Heat Roadmaps for transitions

Everywhere
- Deep energy savings
- Combine savings and supply
- ~30-50% demand reduction

Urban areas
- District energy networks
- High demand density areas
- Supply ~50% of energy demand

Rural areas
- Mainly heat pumps
- Low demand density areas
- Remaining ~50% of the energy demand

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 695989.

www.heatroadmap.eu
@HeatRoadmapEU
Regions with a tradition of heat planning

• High DH shares indicates systematic planning for developing the infrastructure
• Market share for DH: similar
• Energy savings: on track
• BUT: shift in production

• District heating should be there to stay for market shares
• Should move towards 4DH in temperature and production: partially phasing out
• Integration of with electricity sector is key
Regions with deteriorating heat infrastructure

- Existing DH shares, but low share of renewable energy
- Market share for DH: similar or higher
- Energy savings: highest potential
  - Doubling rates – further investigation needed

- District heating should be there to stay
- Plan renovation of DH systems in accordance with buildings
- New, clean sources are necessary

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Regions with underrated heat demands

- There are in fact heat demands!
- There is much higher potential!
- DHW vs space heating means high heat loads
- Energy savings vary widely

- Planning practices need to be established
- District heating has high potentials
- DH supply with excess and renewables have high potentials
Regions with current gas systems

- It can seem tempting, because it is relatively clean!
- Already a tradition of thermal demand management
- Infrastructure planning already exists
  - Different types of pipes but similar policy issues

- Planning practices need to change
- District heating has potentials but has to come from far
- Start by using the available resources
Typologies: can they be useful?

- Imperfect knowledge
- Countries; regions; cities
- **Transferability** of methodology and (technical) findings
- Policy learnings

- Requires looking at characteristics
  - Current technologies
  - Current planning practices
  - BAU developments
  - Technical potentials
  - Intervention potentials
Thank you!

Contact: susana@plan.aau.dk

Heat Roadmap Europe: www.heatroadmap.eu

District Energy in Cities Initiative: www.districtenergyinitiative.org

EnergyPLAN website: www.EnergyPLAN.eu