

Pilot Energy Strategies (PES)

Aims & conditions

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LowTEMP training package - OVERVIEW

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Heat Pump Systems

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Tap water production

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Best Practice

Best Practice I

Best Practice II

1. Introduction

Problem, aim and definitions of terms

Background

European Climate and Energy Framework 2030 (1)

- Defines course for future orientation of European and national climate and energy policies as well as successful implementation of energy transition
- Key targets for 2030:
 - At least 40 % cuts in greenhouse gas emissions (from 1990 levels)
 - At least 32 % share for renewable energy
 - At least 32.5 % improvement in energy efficiency

Facts on current situation of heating and cooling in EU (2)

- Heating and cooling in buildings and industry accounts for half of the EU's energy consumption
 - In EU households, heating and hot water account for 79 % of total final energy use
 - Cooling demand from households and businesses (e.g. food industry) is rising during summer months (linked to climate change and rising temperatures)
- 75 % of heating and cooling: generated from fossil fuels
- only 19 % is generated from renewable energy
- **To fulfil the EU's climate and energy goals: reduce energy consumption and cut use of fossil fuels**

Problem and solution

- How can countries and their municipalities (LTDH) contribute to EU's climate and energy goals?
→ Low-Temperature District Heating (LTDH) can be one solution
- How can municipalities implement LTDH?
→ Pilot Energy Strategies (PES) can assist

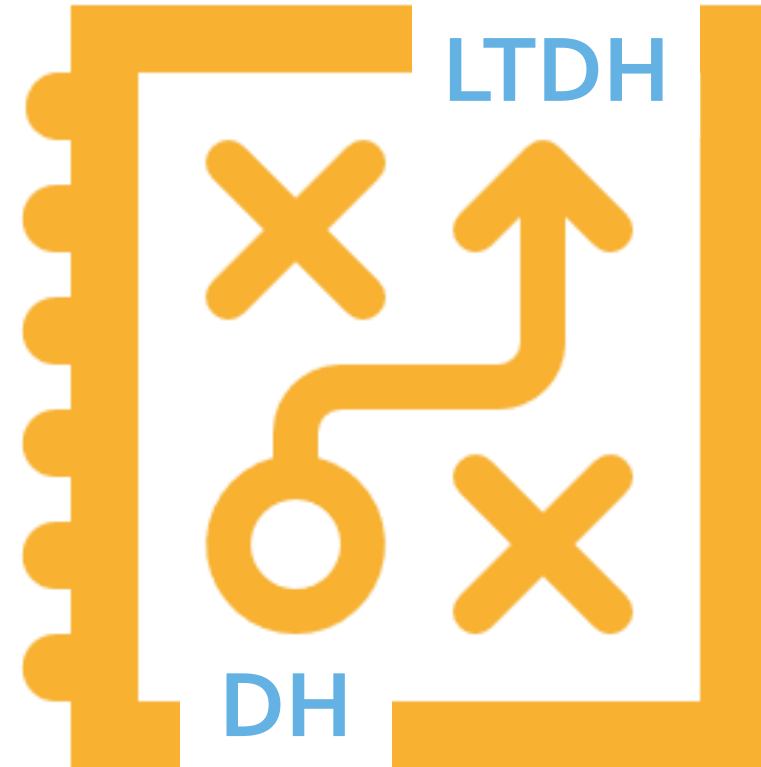


Fig. 1: LTDH as an solution to accomplish climate and energy goals., own graphic

Definition of terms

Pilot Energy Strategy (PES)

- Strategic tool, i.e. document, describing specific actions to implement EU's global targets on local municipal level
- Transferable approaches and guidelines for stakeholders to create achievable energy concepts

Aim and purpose of Pilot Energy Strategies (PES)

- Provides transferable sample approaches and guidelines that enable municipalities to create effective and achievable energy concepts, focusing on the implementation of sustainable energy systems and smart thermal grids in district heating infrastructures
- Describes existing urban structures as well as future developments for transforming DH system
- Brings together stakeholders, politicians, citizens and administrations
- Develops existing DH heating networks into next DH generation: LTDH 4.0
- Provides basis for long-term processes (local goals and framework conditions must be checked and adjusted regularly (if necessary))

Legal status of Pilot Energy Strategies (PES)

- PES complement and deepen existing national, regional or local strategies or planning documents (if they already exist)
- Recommendations of PES are not the only solution, but provide a scope for action
- PES are informal tools and therefore not legally binding



2. Implementation

Planning steps, involved institutions and outcome

Planning steps – How to develop a PES?

- “Methodology for strategies to implement LTDH” gives guidance on how to develop a PES
 - Contains 10 planning steps (working steps)
 - Planning steps should be implemented one after the other
 - Planning steps can be worked out individually, depending on the local preconditions, resources (e.g. administratively, financial budget), requirements and political goals



Fig. 2: Methodology for strategies to implement LTDH, Romagnoli, Francesco at lowtemp.eu [3]

Involved institutions

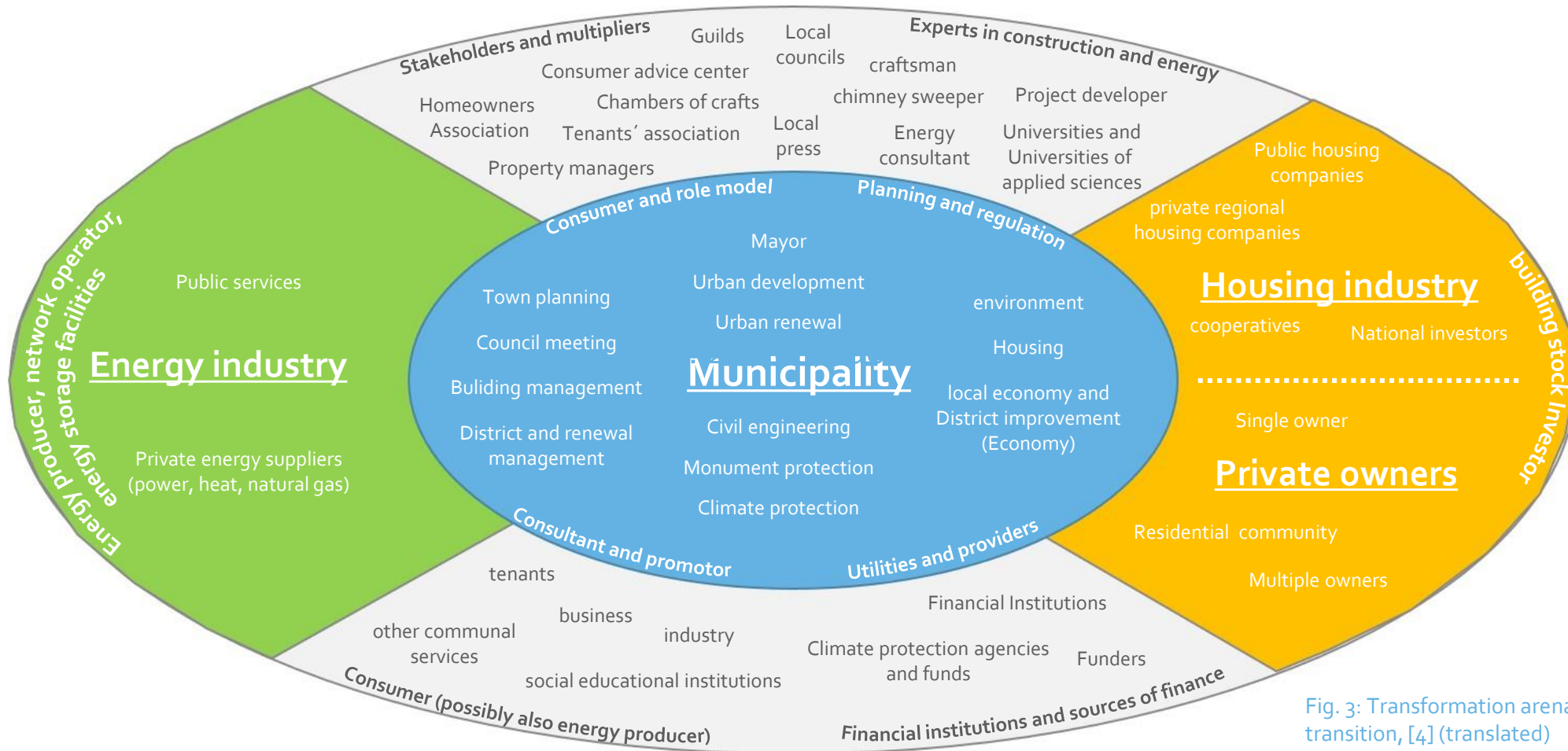


Fig. 3: Transformation arena of the local heat transition, [4] (translated)

Outcome

The outcome (PES) should represent...

- A jointly elaborated document developed by all important stakeholders of the region
- A summarizing, non-compulsory guideline combining already existing planning documents
- A strategy defining the future developments that are necessary for the transformation towards LTDH
- A range of all possible, feasible and reasonable pathways for future developments



Fig. 4: PES Gulbene, Ekodoma, Gulbene municipality, RTU Riga Technical University at lowtemp.eu [5]

PES examples

- PES developed during LowTEMP project for...
 - **Gulbene (Latvia)**
 - **Ilmajoki (Finland)**
 - **Tartu (Estonia)**
- 3 PES can act as guideline and inspiration for other BSR municipalities and regions
- Explanation in seminar module „Pilot Energy Strategies – Examples“

Pilot Testing Measures

Click on the pins to learn more about the activities in the different municipalities.



Fig. 5: PES Examples in the Baltic Sea Region, lowtemp.eu [6] (edited)

3. Conclusion

Conclusion

- PES are **comprehensive strategies** → promotion of LTDH in BSR regions
- **Collaborative process** of PES development → brings stakeholders together
- **Transferable examples exist for other BSR municipalities** with similar framework conditions → promotion of LTDH in whole BSR
- **Inspiration and guidance** for developing own energy strategies, especially underlying methodology for developing PES



Fig. 6: Team Spirit, Anemone123 at pixabay.com [7]

Sources

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