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**Socio-Technical and Policy Lessons
from Denmark's Heating Transition
Framework**

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A bit about me

- 2nd year PhD student funded by the Natural Environment Research Council (NERC) through the Grantham Institute's SSCP-DTP and the Onassis Foundation.
- Research focuses on creating a consumer-centric heating transition framework for urban England.
- Returned from a 5-month traineeship at the European Commission's DG ENER where I led the Unit's research on thermal communities and where I got to manage, coordinate and write policy documents on energy communities and the heating transition.

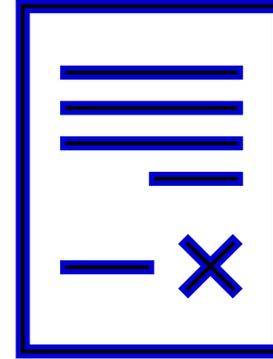
Presentation Structure

- 1 Introduction & Background
- 2 Methodology
- 3 Danish Case Study
- 4 Q&A

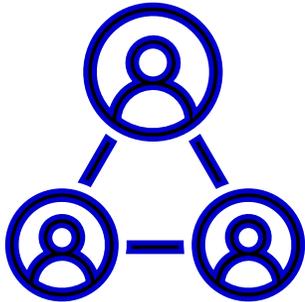
Setting the Scene



EU Climate Goals & legislative action



Draghi Report & a social contract



Citizen Energy Package & consumer engagement



District heating as a *“swiss army knife for decarbonisation”* [5]

!! Currently only provides 12% of EU heat

Methodology

Case Study

Why a case study?

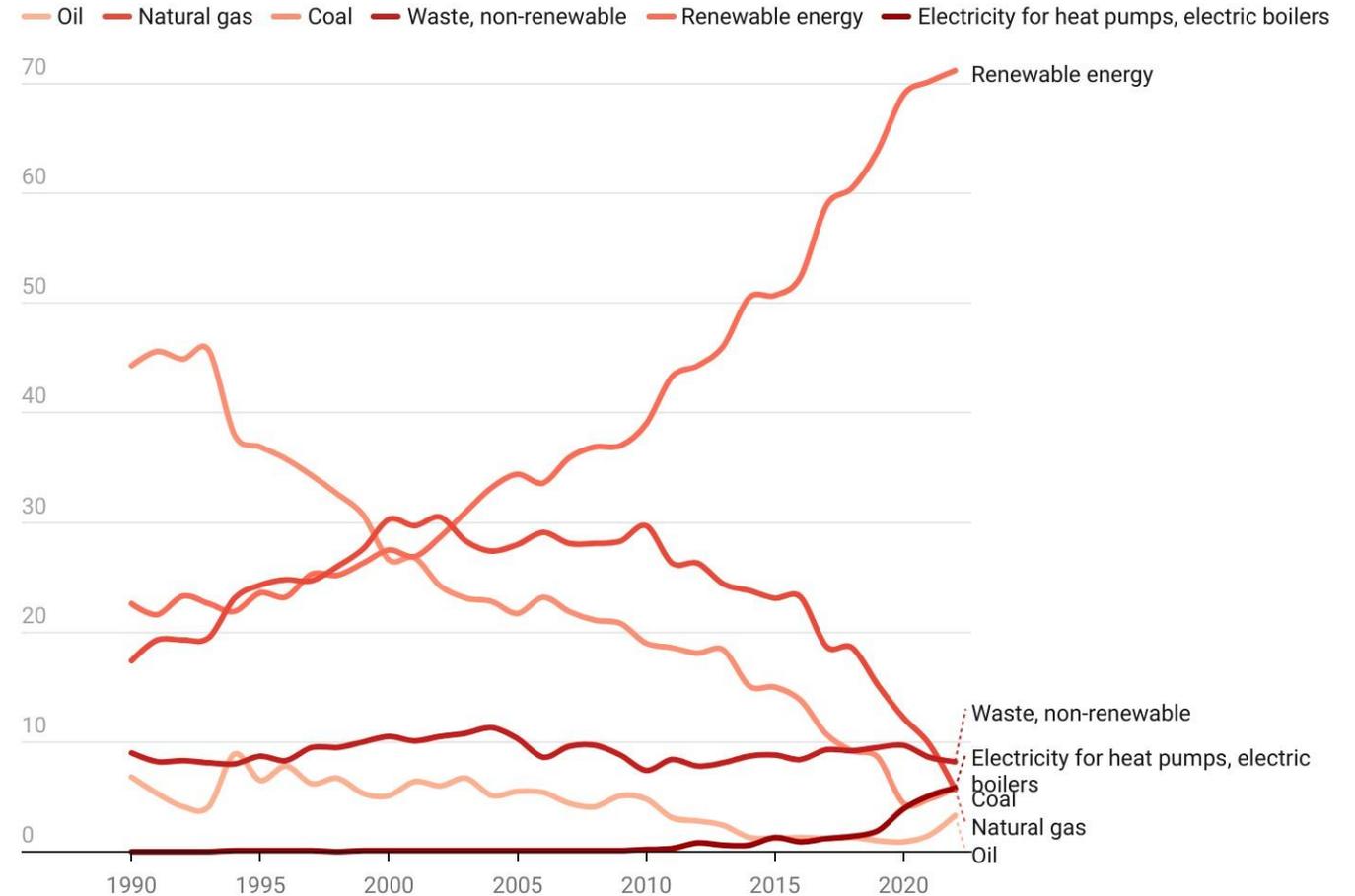
- Why, what, how? [19; 24]
- Depth & data collection fit for purpose [20].

Why Denmark?

- The Energy Trilemma Index – 1st
 - Role of District Heat in this performance [10; 11].
 - DH makes up 2/3 of domestic heat [3].
 - 66% of DH was produced with electricity.

Fuel consumption for district heating production, percentage distribution

Fuel consumption for district heating production

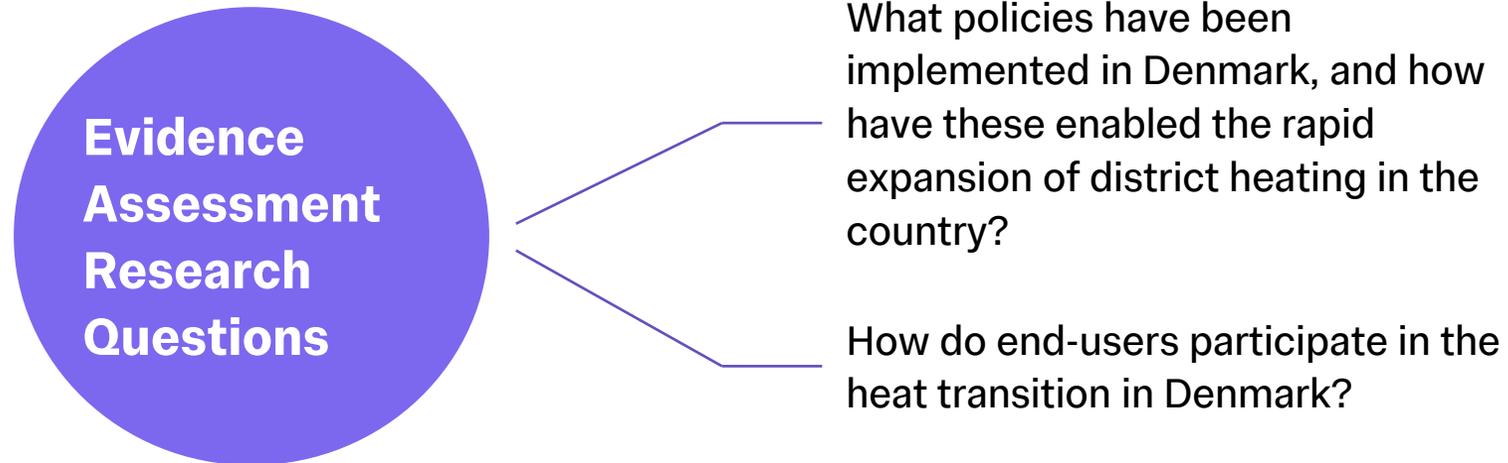


Source: Danish Energy Agency, 2022 • Created with Datawrapper

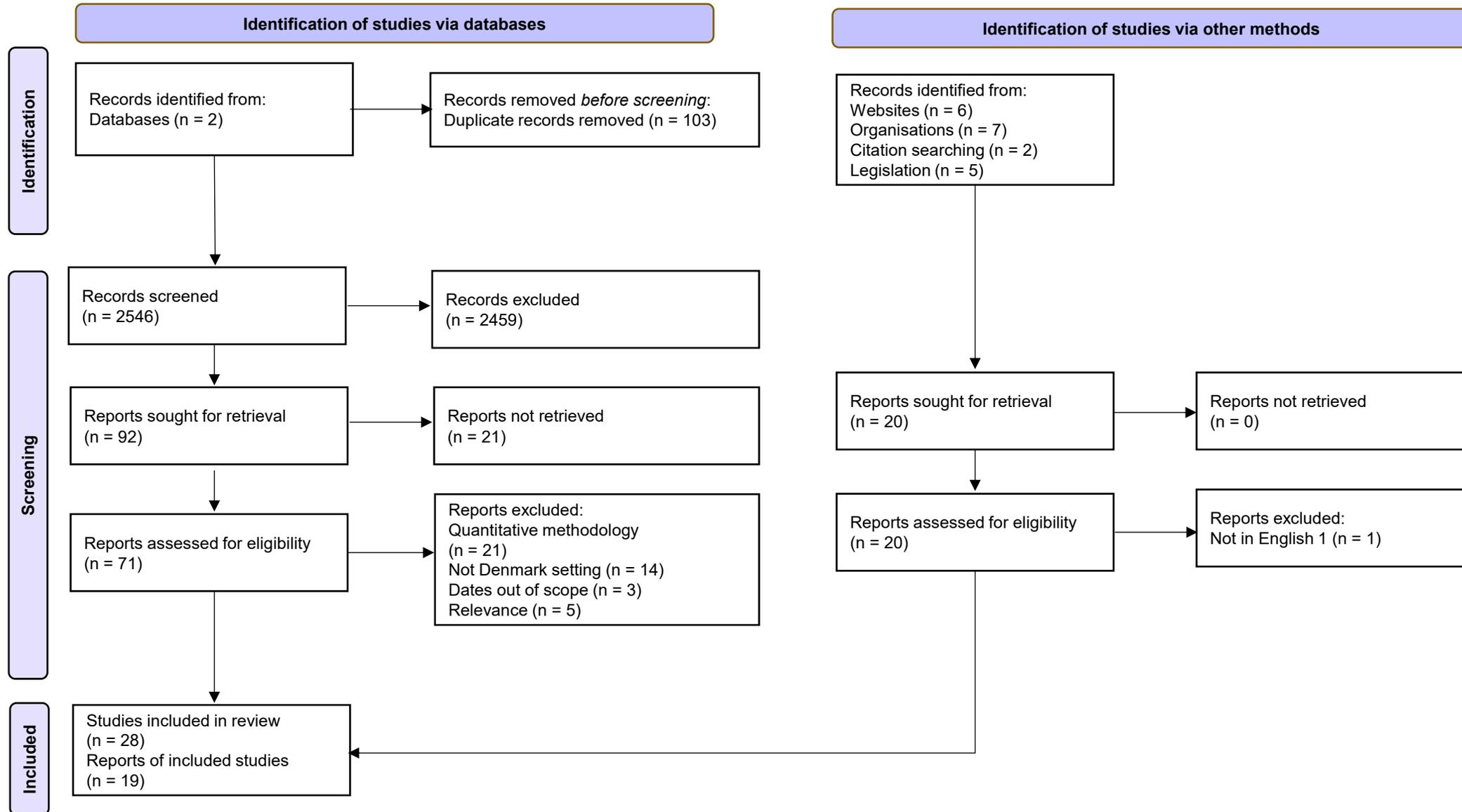
Methodology

Rapid Evidence Assessment

- Objective and systematic review of evidence to ensure the creation of well-designed and effective policies.
- Providing: systematic, shortened & replicable evidence assessment.

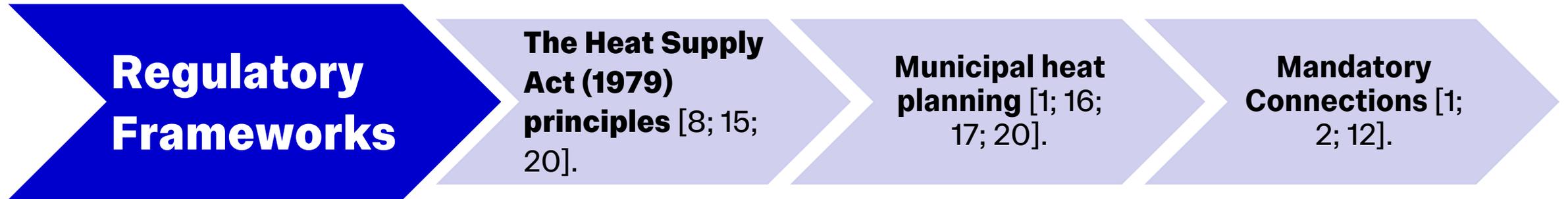


Methodology



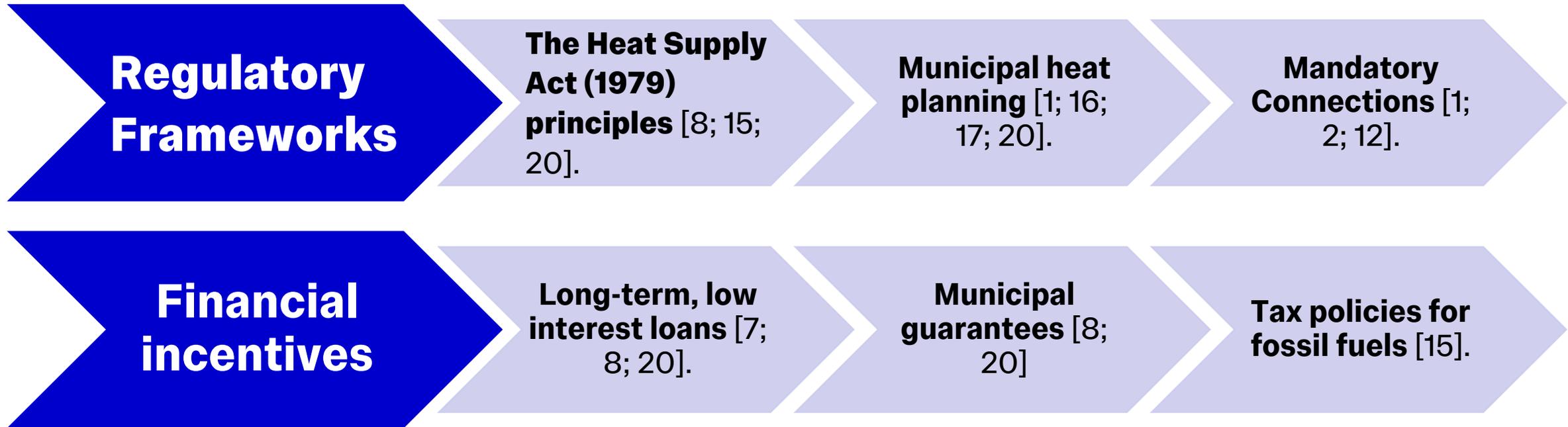
Discussion

What policies have been implemented in Denmark, and how have these enabled the rapid expansion of district heating in the country?



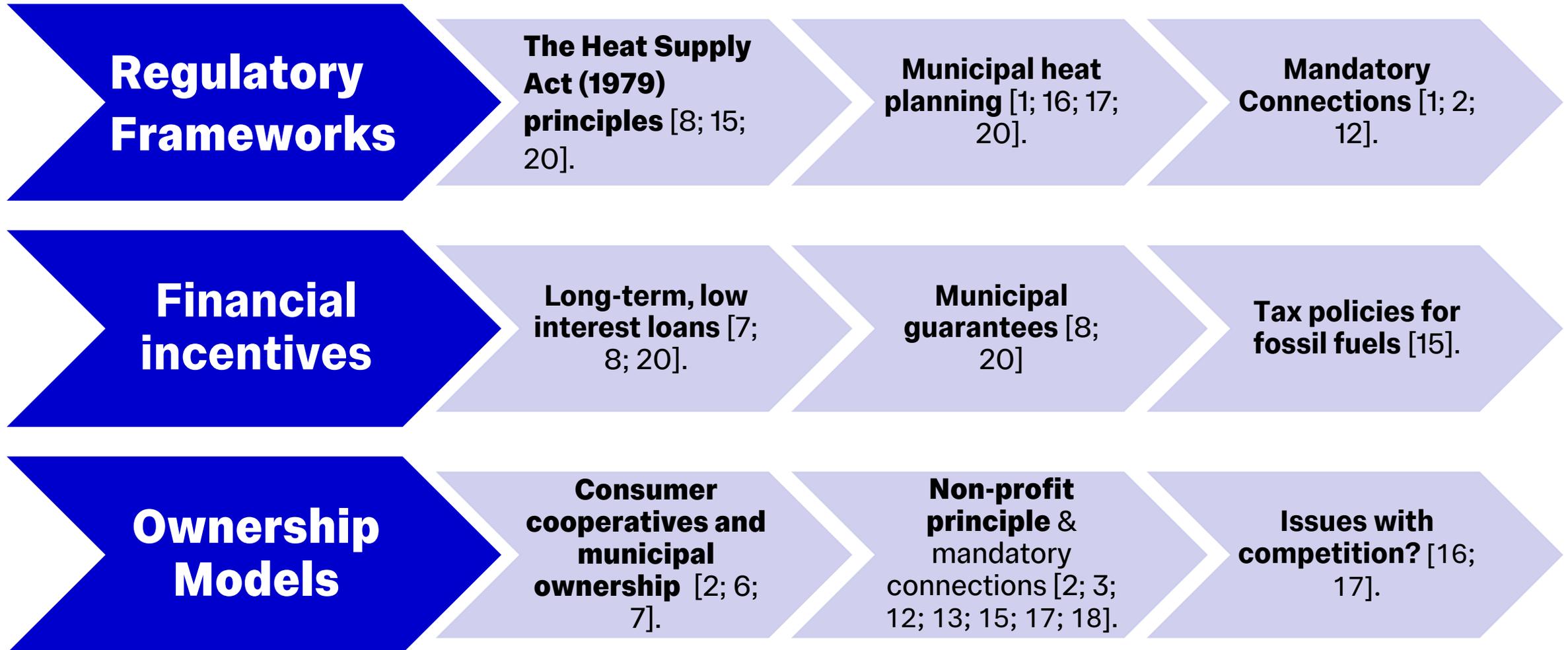
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Discussion

How are end-users included in the heat transition?

Consumer rights

- **Power to dismiss boards**
[6;7].
- **Buying powers**
[8].

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Today:

- Lack of public interest in utility governance; few residents volunteer for DH boards [11].
- Residents viewed as consumers, not co-creators with diverse needs and practices [1; 11].

Discussion

How are end-users included in the heat transition?

Consumer rights

- **Power to dismiss boards** (Gorroño-Albizu, Sperling & Djørup, 2019; Gorroño-Albizu & de Godoy, 2021)
- **Buying powers** (Herrerias Martínez et al., 2025)

Municipal & cooperative ownership

- Direct consumer decision-making [16; 21]. Technology is the competition – not other cooperatives
- Trust and local engagement [3; 15].

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A new actor in the market?

- A form of prosumerism (i.e. producing and consuming your own energy).
- They enable *collective and citizen-driven energy actions to support the clean energy transition*.
- Electricity Market Directive 2019/944 and Renewable Energy Directive 2018/2001: *Citizen Energy Communities and Renewable Energy Communities*.

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Consumers as Political Constituents:

- Effective DH policy sees users not just as customers, but as citizens—support secured through affordability, convenience, and protection [16; 17].
- Innovative Democracy – political process influenced by market-dependent actors and market independent actors (such as NGOs) [16; 21].

Policy Recommendations for the EU



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Thank you

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