



UNIVERSITY OF LEEDS

# Local authority decision-making on district heating – implications for fuel poverty

Ruth Bush and Catherine Bale

[r.e.bush11@leeds.ac.uk](mailto:r.e.bush11@leeds.ac.uk)

[www.personal.leeds.ac.uk/~pmreb](http://www.personal.leeds.ac.uk/~pmreb)



Doctoral Training Centre in Low Carbon Technologies

Energy Research Institute

University of Leeds

UK

# What is district heating?



UNIVERSITY OF LEEDS



UK: Pimlico district heating developed to improve air quality



UK: Bunhill district heating, Islington developed to reduce fuel poverty



# Multiple benefits of district heating



UNIVERSITY OF LEEDS



Environmental

- Reduce GHG emissions
- Improve air quality



Economic

- Reduce costs of heating
- Reductions on CRC costs



Social

- Improve comfort and living conditions
- Reduce fuel poverty

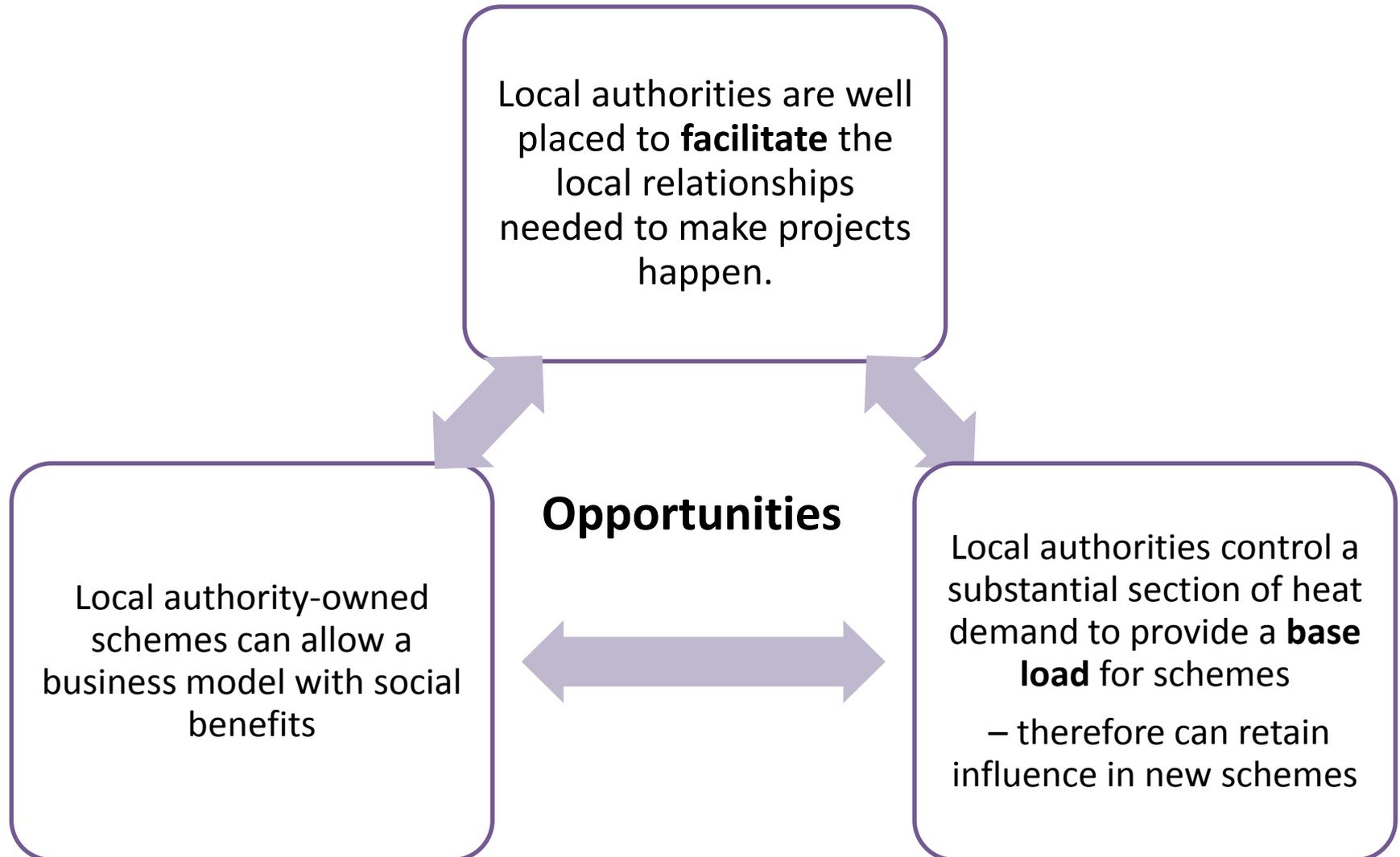
Only happens under the right business models



# A new role for local authorities?



UNIVERSITY OF LEEDS





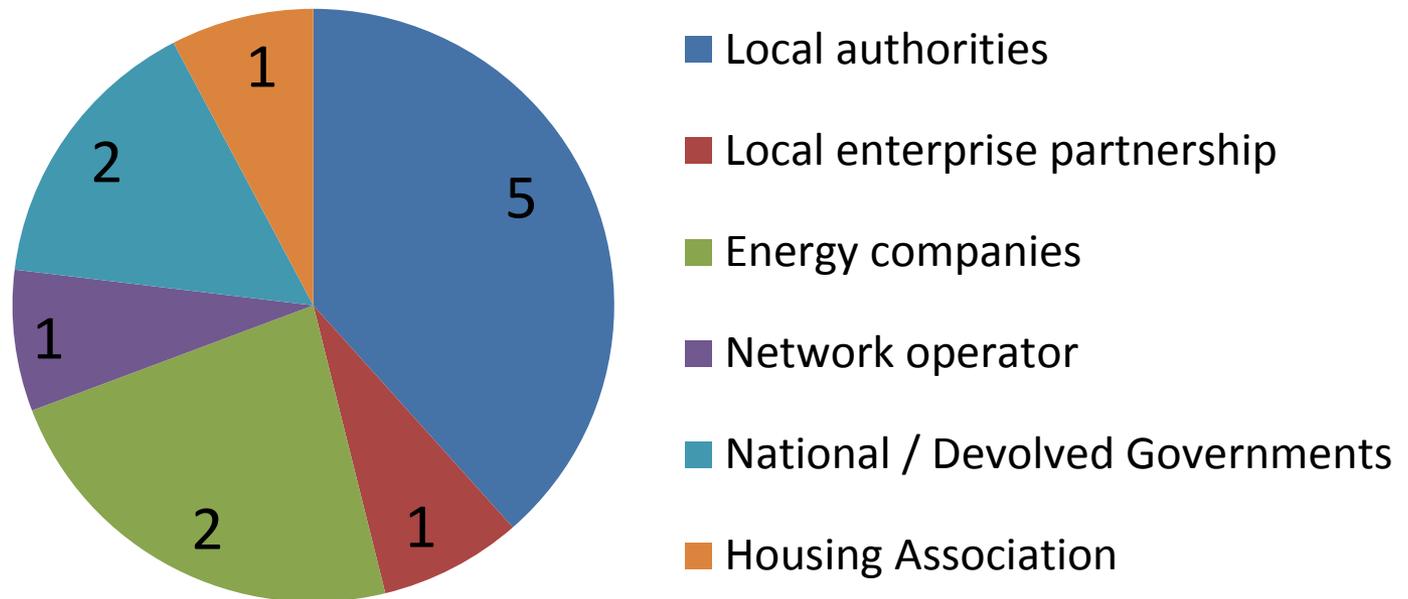
## Challenges

- High capital investment required for the infrastructure of pipes to be installed.
- For over 50 years, local authorities have had no role in the energy system.
- Significant cuts to local authority budgets and staff resources.

1. To what extent does fuel poverty feature as a **motivation** for local authority involvement in district heating development?
2. What are the **decision criteria** local authorities use for deciding whether a scheme is viable? Does fuel poverty feature?
3. What are the **policy opportunities** for encouraging use of district heating to alleviate fuel poverty?



- 12 semi-structured interviews with key stakeholders:



- Review of policy environment (which is changeable).

# Results: How do local authorities value DH?



UNIVERSITY OF LEEDS

Fuel poverty

Regeneration of  
housing stock

Carbon  
reduction

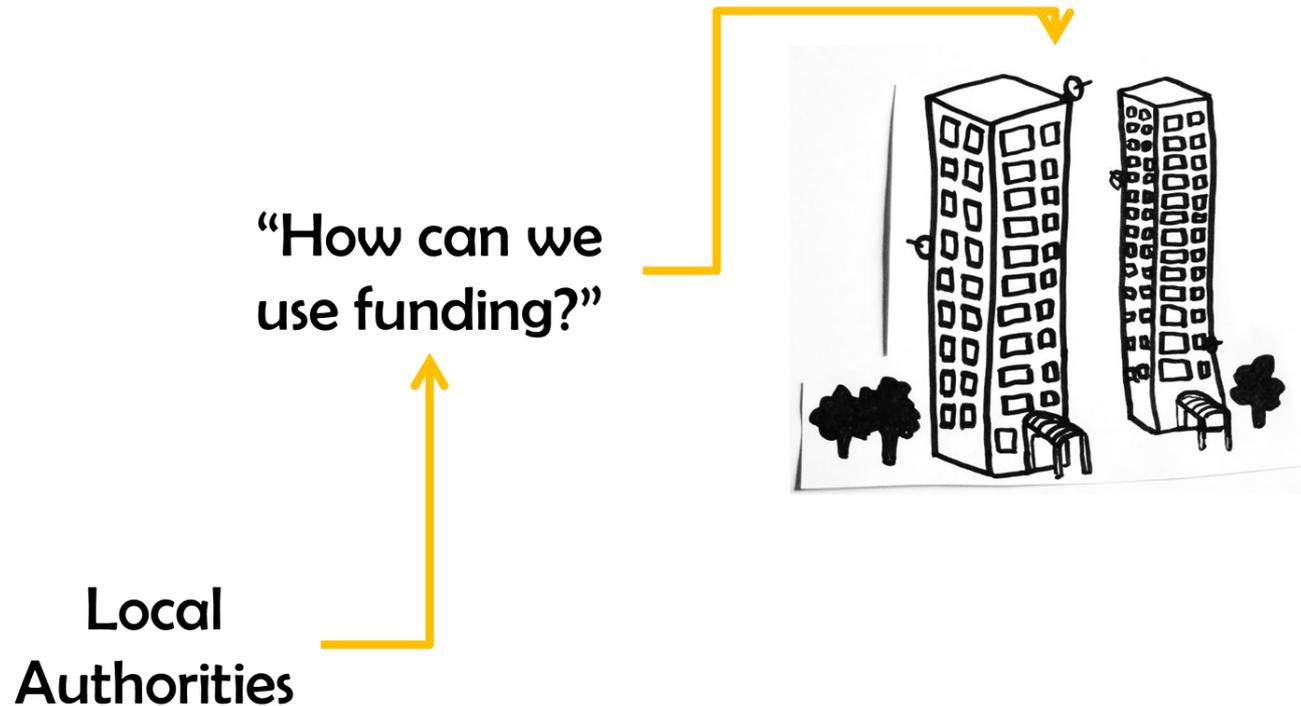
Regional  
competitiveness  
• e.g. attracting  
industries with low-  
carbon heat

Local economic  
growth and job  
creation

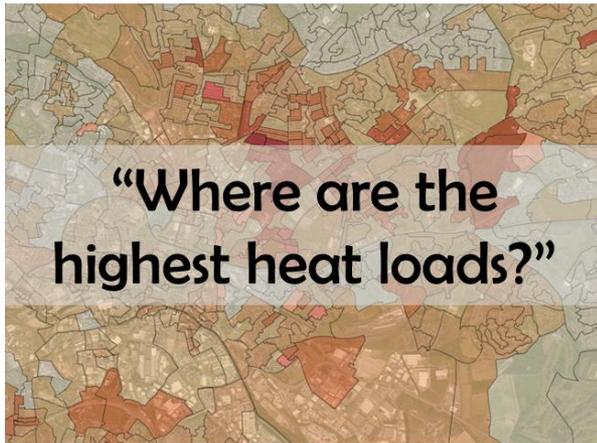
Revenue  
generation

Reduction in  
council energy  
bills

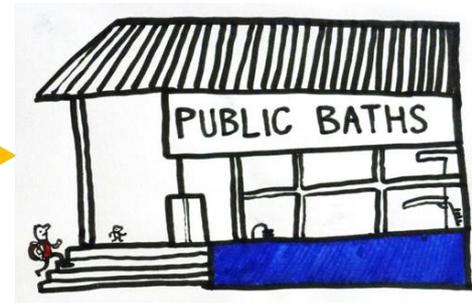
## Funding Driven Approach



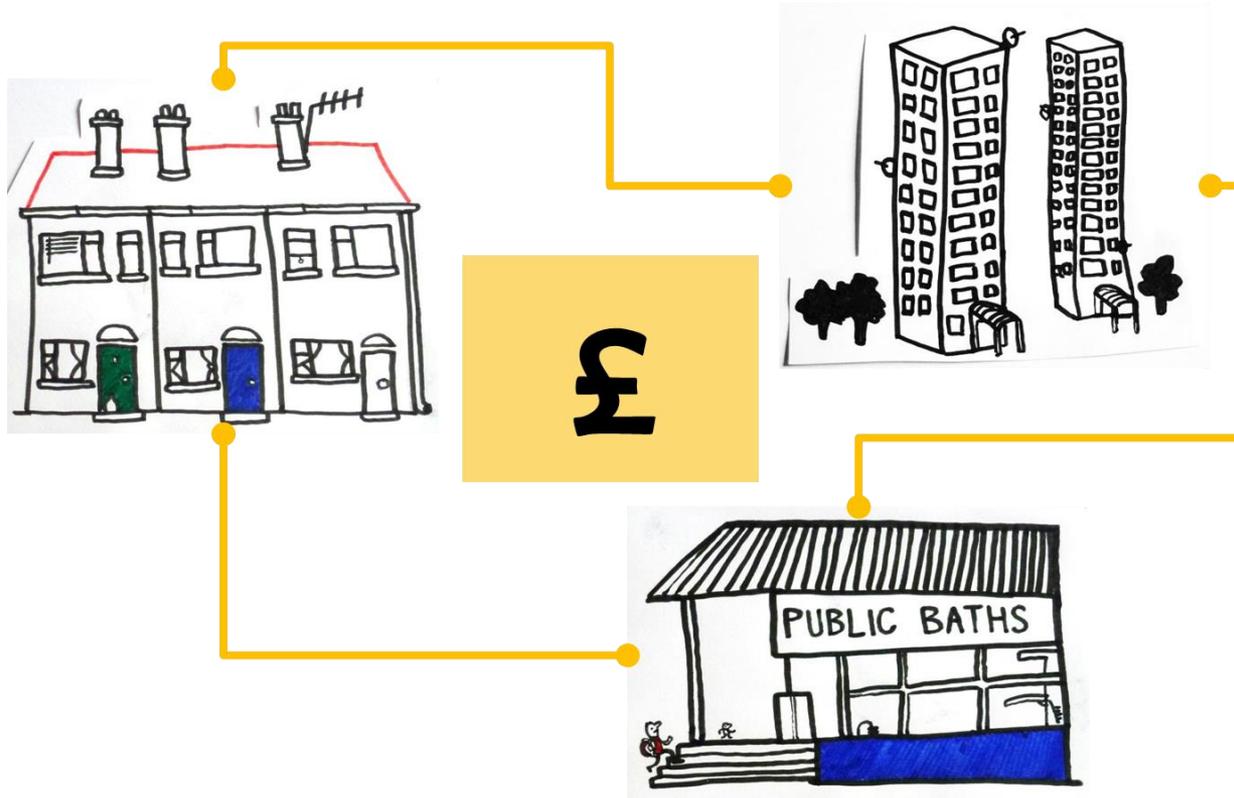
## Commercial Approach



£ £ £



## Mixed Approach



## Motivations

### 1. Social

Regeneration of housing stock

Fuel poverty

### 2. Environmental

Carbon reduction

### 3. Economic

Regional competitiveness e.g. attracting industries with low-carbon heat and electricity

Local economic growth and job creation.

## Decision Criteria

### 1. Economic

Where are opportunities to offer lower-risk, financial returns to:

- Potential investors?
- The local authority?

### 2. Social

Can we use ECO funding ?

Can we add on households to a planned commercially competitive scheme?

### 3. Environmental

Will the carbon savings offered by a scheme reduce costs on the CRC?



- Local authorities one of the key institutions that can enable realisation of the **social benefits** of district heating.
- Local authorities have a **range of motivations** for encouraging district heating.
  - Fuel poverty alleviation is often very important.
- There is a strong ambition in local authorities to take a **mixed approach** to district heating development.
- At the moment there is a **mis-match** between strategic motivations and the decision criteria they are using on the ground.
  - Existing policies are **one reason** for this mismatch



- How can the capacities of local actors be increased to enable realisation of a business models that ensure the social benefits of district heating?
- More to understand about planning powers and regulation for district heating
- How can capital funding for this infrastructure technology be sourced?

# Leeds Heat Planning Tool



UNIVERSITY OF LEEDS

## Leeds Heat Planning Tool

HOME ABOUT PEOPLE HEAT PLANNING TOOL CONTACT US USER INSTRUCTIONS DATA REFERENCES

Welcome to Leeds Heat Planning Tool



Start using the tool

Welcome to the Leeds Heat Planning Tool, a district heating planning tool for England and Wales.

This tool offers energy planners a quick and simple way to include social factors right from the early stages of district heating planning, offering an additional evidence base to support business cases for potential schemes and to open up discussions with stakeholders.

The tool gives users an initial indication of locations that have the potential to offer viable district heating alongside social benefits such as alleviating fuel poverty.

This tool has been developed by [Ruth Bush](#) and [Dr. Catherine Bale](#) at the University of Leeds as part of a research project funded by the [Cheshire-Lehmann Fund](#) and [Energy Leeds](#).



<http://sure-infrastructure.leeds.ac.uk/leedsheatplanningtool/>

