

Enabling to ensuring: heat networks as a tool for local re-engagement in energy?

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Overview

- PhD exploring the roles local governments are taking in the development of low carbon energy infrastructure, specifically heat networks
- Focussed on how competing discourses and ideas are promoted and how this interacts with the institutional framework
- Based on analysis of policy frameworks in England (and Germany), case studies and interviews with local government, policymakers, industry and other stakeholders

Why heat networks?

- Considerable uncertainty regarding low-carbon heat but increasing focus on heat networks.
- Necessarily local infrastructure and monopoly characteristics.
- Increasing awareness of the potential benefits (system flexibility, renewable integration, multiple objectives)
- Local authorities are key actors but could take numerous roles
- Still a rather limited policy environment in England



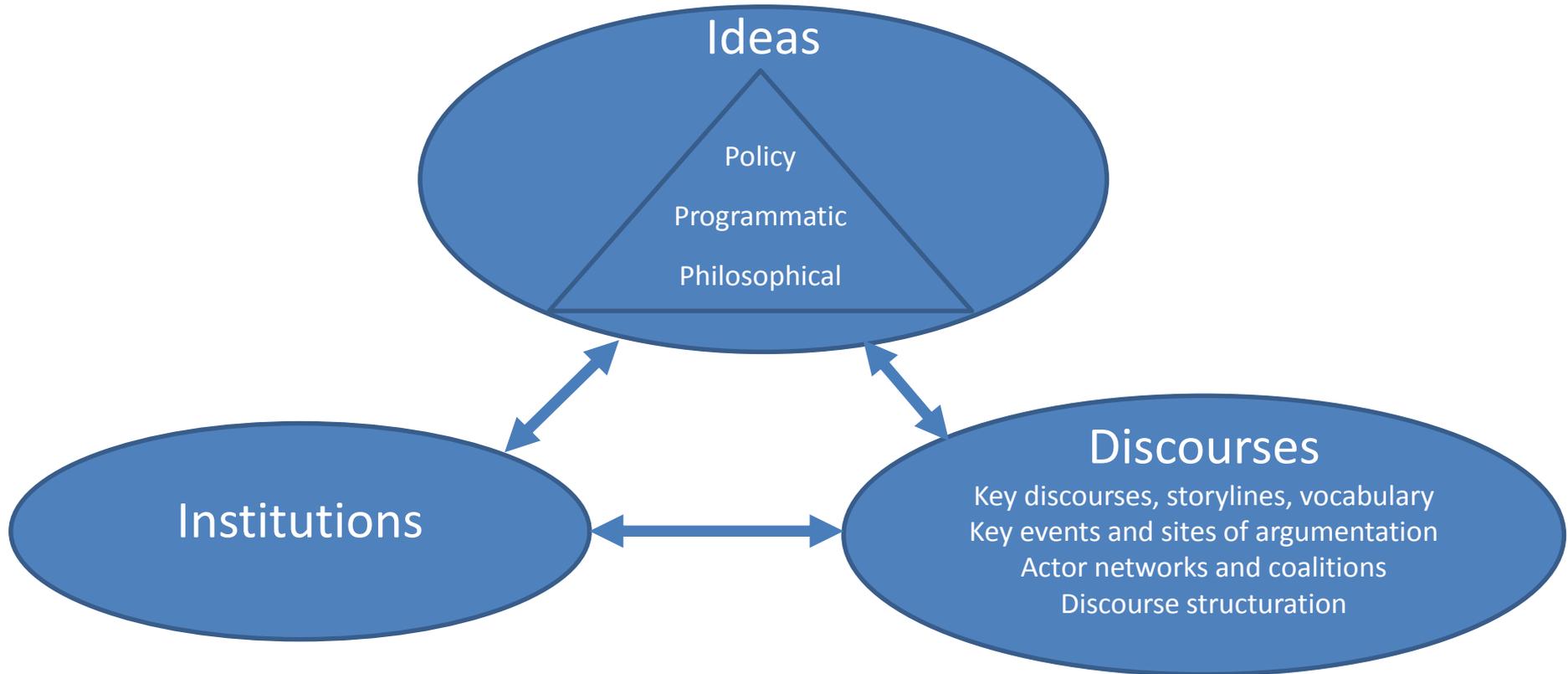
Department for
Business, Energy
& Industrial Strategy

Low-carbon heat networks

- ✓ Also known as 'central heating for cities' or 'district heating'.
- ✓ Could provide **20%** of UK heating by 2050. In Denmark, **60%** of heating in homes is from low-carbon heat networks.
- ✓ Can use a range of low-carbon heat sources.
- (!) Requires coordinated take-up and enough local heat demand.

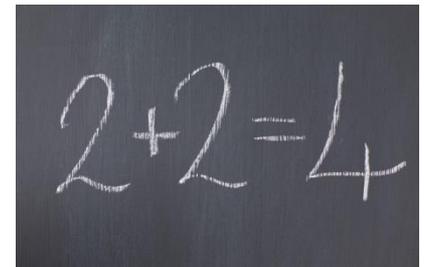


Does how we talk about heat networks matter?

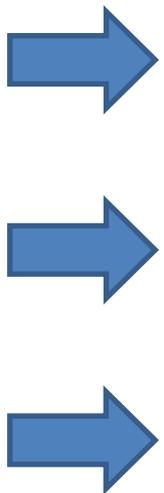


Government discourses

- LAs have a ‘critical’ role in development and deployment (DECC, 2013).
- Recognition that HNs often providing insufficient RoR for private capital so LA financing likely to be important
- But ‘enabling state’ narrative maintained – facilitators, ‘brokers’, partners
- HNs framed as essentially apolitical undertakings with decisions based on techno-economic feasibility and the risk appetite of partners.
- Government starting to put higher profile on local growth and revenue benefits but pervading focus on standard economic barriers:
‘A range of barriers are impeding the development of good quality heat network projects...lack of information on the risk profile of heat network investment, which adversely affects investor perceptions of risk, a funding gap between hurdle rates and project internal rates of return...’ (BEIS, 2018, p. 4).
- Limited engagement with ownership debates



Meta-discourses influencing national policy/institutions

- Market liberal approach to energy
 - Enabling state
 - Depoliticisation
 - Scepticism of local public state as entrepreneurs
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- Focus on techno-economic modelling and 'unlocking' finance
 - Limited assessment of broader benefits
 - Importance of trade associations

Local authority discourses

- LAs increasingly connecting heat networks to wider discussions of the role of the local public ownership and (re)municipalisation.
- Ownership as value laden and political.
 - Control, revenue, lack of trust in alternative (commercial) models.
 - Linking of public ownership and multiple objectives (inc. safeguarding consumers).
 - a focus on ‘trust’, ‘social good[s]’ and ‘sustainability’.
- Limited discursive space at the national level to explore ownership risks/benefits.
- General trend towards increased experimentation and a stronger ‘ensuring’ role in energy
 - HNs as a forum for experimentation?
 - But ability to engage in debates and experiment patchy?
 - Not easy to evaluate ownership options

But also discourses shared between national and local level

- Austerity
- Devolution
- Experimentation - limited nature of heat networks in UK means few 'templates'
- Wider decentralisation of energy systems (technologies and business models)

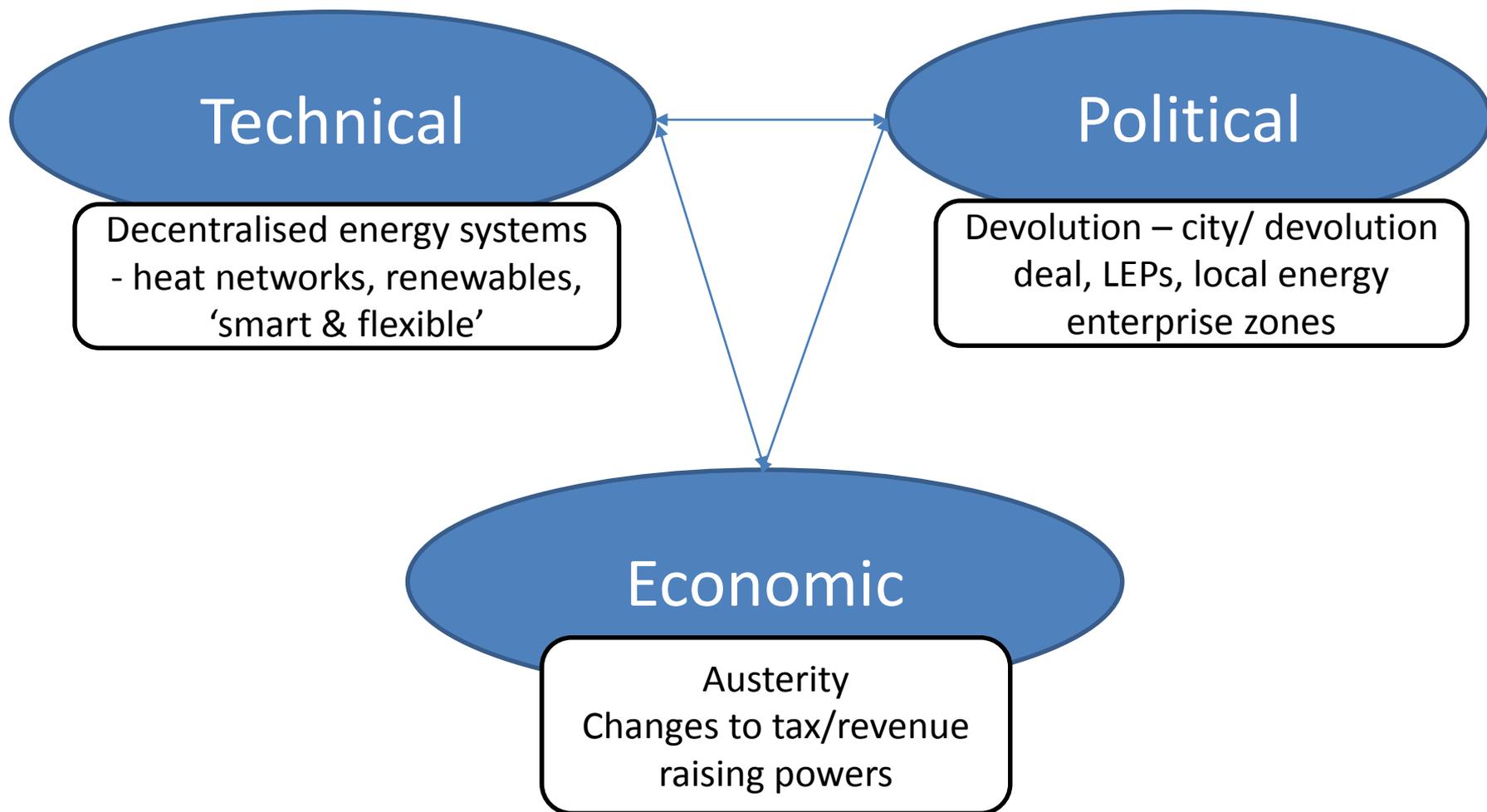
Local councils at financial breaking point due to austerity, warns National Audit Office

NAO estimates that if local authorities keep draining their reserves at the current rate, one in 10 will have exhausted them in just three years' time

Ben Chu Economics Editor | @BenChu_ | Wednesday 7 March 2018 15:23 GMT | [42 comments](#)



Interlinked decentralisation trends



Conclusions

- Differences in approach to debate of ownership by many local and national actors in England
 - largely regardless of actual ownership experiences at local level
 - Still early to determine how this will impact on final HN ownership structures
- Demonstrates how interlinked political, economic and technical decentralisation trends are influencing local ownership debates in energy
- Assessment of ability of HNs to deliver multiple objectives as a hinge for a refocussing on municipal ownership

But...

- Ambition and capacity mismatch?
- Accessing capital tends not to be the issue (interviews and BEIS, 2018) but assessment of risk and competencies is leading many to a blended funding model/JVs.
- HNIP all about investability ('funding gap') but viability assessments for LAs are very complex
 - Relative assessments of strategic drivers
 - increasing reference to income generation as a driver and emphasis on higher ROIs.
 - Competition with other infrastructure projects
- Significant criticisms from academics and practitioners that current decentralisation and localist reforms are not reversing long-term centralisation trends in UK