

# Chapter 1a of the Heat Supply Act and municipal engagement in strategic energy planning

DISTRICT HEATING, THE LAW, AND OVERCOMING LOCK-IN

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1. The plan of your PhD research
2. Results or potential results
3. Your collaboration with other PhD Fellows and/or industry in 4DH
4. Your ideas for an abstract for the conference next year

# Practical aspects of my PhD

- Start November 2012, finish February 2016
- Teaching – done
- Overseas research stay – done/doing
- Courses – done
- Writing – will be done

# WP 3.1 – Strategic energy planning in a municipal and legal perspective

<b>Setting</b>	Hypothesizing that heat planning is challenged by outdated and obsolete plans, emerging low-energy buildings, increased waste incineration and surplus wind energy, this part focuses on the legal aspects of future strategic energy planning.
<b>Energy planning today</b>	The commitment to heat plans jointly made by municipalities, supply companies and other parties has weakened since 1990, when written plans became optional. Planning is challenged by renewable energy and energy efficiency.
<b>The challenge to planning</b>	Energy price change, technology development and land use change affect the zoning of heat supply, further confronted by the complaint system and legislation.
<b>The problem</b>	The legal obligations of district councils are considered and a comparison is made of the obligations and the actual behaviour of councils.

“The legal obligations of district councils are considered and a comparison is made of the obligations and the actual behaviour of councils.”

- Empirical analysis based upon a legal finding
- Legal analysis based upon an empirical finding
  - The law has changed in response to legal uncertainty
    - Legal uncertainty is the empirical situation
  - Examining whether legal certainty is reduced as a result of the amendment

“What impact does the introduction of Chapter 1a of the Heat Supply Act (Varmeforsyningsloven) have upon a Danish municipality’s position under the law to engage in strategic energy planning?”

# Heat Supply Act Chapter Ia – 1st July 2015

- Heat Supply Act – Varmeforsyningsloven – regulates a large part of the Danish heating sector
  - District heating & town gas – permission, prices, expropriation etc.
    - Zoning – also relates to natural gas, plus by exemption individual heating (low energy house)
- Chapter Ia relates to the involvement of municipalities in district heating and the heating sector in general

# Heat Supply Act Chapter 1a – 1st July 2015

1. Statutory authority for municipal engagement in the heat sector – HSA §2b(1)
2. Municipal engagement in heating companies in other municipalities – HSA §2b(2)
3. Inclusion of repayment of initial capital costs in the actual cost based pricing charged to heat consumers – HSA §2c
4. Municipal loan guarantees – HSA §§ 2d & 2e
5. Engagement in related businesses - §2f
6. Ministerial oversight of the heat sector - §2g



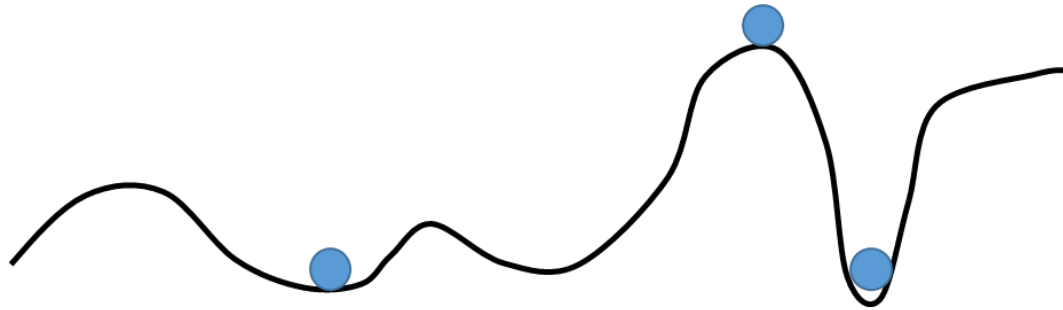
# Heat Supply Act Chapter 1a – 1st July 2015

- Bill setting out the amendment cites law's rationale is to address legal uncertainty regarding direct and indirect municipal involvement in heat sector firms.
- Big part of this uncertainty is caused by technological mix
  - CHP – which part can be financed by municipalities?
  - Electricity market perceived as competitive – open to competing retailers
  - District heating – local monopolies, price regulated and non-competitive
- Move from the kommunalfuldmagt to a statutory basis
  - Provide greater certainty as to the rules

# Link to Strategic Energy Planning: Path dependency and lock-in

- Current regulatory framework is based upon the promotion of cogeneration
  - Most kWh per litre of oil consumed
  - Energy efficiency paradigm
- Future energy system is based upon renewable energy
  - Least CO<sub>2</sub> emissions per kWh generated
  - Carbon avoidance paradigm
- Change the way we talk about efficiency
- But this is complex:
  - Current infrastructure
    - Energy networks from "bean to cup"
  - Societal understanding of energy consumption
    - Energy is a service
    - Energy on tap
  - Legal framework
    - For instance taxation
      - Also seen in the skatteforvindingstab

# Link to Strategic Energy Planning: Path dependency and lock-in



- Facility ownership increases strategic oversight
- Financial assistance for start up – eg. 4GDH
  - Promote projects
  - Determine the "right type of project" for funding
  - Loan guarantees, turn 5% to 0.5%...

## **Path dependent/Lock-in**

- "Dynamic equilibrium", where movement occurs, but within hurdles – challenge is to get the ball over the hurdles, but still land in a safe place
  - Path-dependence – past decisions define what is available in the future
  - Solutions become locked-in

*Source Chris Zuidema (Uni. Groningen)*

# Some potential problems

- Which firms are not covered under the new rules?
  - What kind of district heating company would fall under this description?
    - Production of heated water, steam, or gas with a heat capacity (varmekapacitet) under 0.25 MW
    - Distribution of heated water, steam, or gas where the production facility that supplies to the distribution facility has a total heat capacity under 0.25 MW
  - Does 4DH make this kind of company more or less relevant to consider?
  - May municipalities still engage in these companies, and if so, under which rule set – the old or the new?
- Sacrifice of legal flexibility warranted by the level of certainty delivered?
- Arbitrary figures – e.g. 10% - become fixed into the system (locked-in)

# Collaboration

- Nature of research means have mainly worked independently – some discussion with industry partners, as well as others in the energy sector
  - Meeting with a number of interested people in Scotland... some interest in 4DH
  - Want to use my thesis as a basis for future cooperation, comparative legal studies and so on
- Would be interested in speaking with people about future articles who have interest in my findings, but also with regard to:
  - Strategic energy planning in general
  - Energiopland concept
  - Municipal participation in the energy sector
  - Renewables in small communities

# Conference abstract

## **Thesis**

- The implications for municipal involvement in district heating following the introduction of Chapter 1a of the Heat Supply Act
  - Does the kommunalfuldmagt still apply?
  - Municipal involvement in heating firms not covered under the Act

## **New angle**

- Democratic citizen participation in the energy sector, energioplund, and strategic energy planning

# Thanks for listening!

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