

Strategic energy planning

*Facilitating the shift from centralised
to local energy planning*

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Introduction

- PhD Fellow at University of Southern Denmark
- Main Supervisor
 - Professor Bent Ole Gram Mortensen (SDU)
- Co-supervisor
 - Professor Emeritus Ole Jess Olesen (RUC)
- Research interests
 - competition law, law and economics, energy and environmental law
- Started in November 2012
 - Completion in February 2016

Research area – work package 3.1

Hypothesizing that **heat planning is challenged by outdated and obsolete plans**, emerging low-energy buildings, increased waste incineration and surplus wind energy, this part focuses on the **legal aspects of future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**.

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. Energy price **change**, technology development and land use change affect the zoning of heat supply, further confronted by the complaint system and legislation.

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

Danish energy policy – the background for SEP

- Energy strategy as a response to paradigm shifts
 - Oil shocks and the power of the producers
 - Cost-effectiveness, competition, liberalisation and the public sector
 - The environmental movement
- Process of centralisation
- These concerns are all well-represented in current laws
 - Energy security/independence
 - Economic efficiency and energy sector
 - A future energy supply based 100% upon renewables

Energy market structure

- Electricity and Gas – unbundled and liberalised
 - Price regulation primarily through the market
 - “Reasonableness” provisions
 - Natural monopoly grids in state hands – Energinet.dk (Danish TSO)
- District heating – local and bundled
 - Price regulation through cost pricing
 - Markets protected through zoning

The 2050 energy goals

- 2050 goals are part of a political agreement rather than a legal agreement
 - 100% VE energy in 2050
 - 100% VE in electricity and heat sector by 2035
 - Coal phased out by 2030
 - Oil-burning boilers phased out by 2030
 - Windmills responsible for 50% of electricity production by 2020
- Number of municipalities aiming for CO2 neutrality
 - Convergence of goals
- Three trends – renewables, localisation and integration between sectors

Electrification/renewables – the how

From Danish Energy Authority's Smart Grid Strategy

“In 2020, wind power will therefore cover half of total electricity consumption, and at the same time, the expectation is that a relatively larger proportion of Denmark's total energy consumption – to inter alia transport and heating – will be provided through electricity in the run up to 2020....”

“...That challenges the electrical infrastructure we have today. We are used to regulating electricity production according to consumers consumption patterns, but large amounts of wind power and increasing amounts of solar energy requires a more flexible energy consumption.”

Key concerns with localisation

- Localisation risks national coordination
 - Bounded freedom
 - Coordination at a national level, freedom at a local level
- Enforcement of coordination
 - Who has overarching control of the energy sector (where expensive long-term investments are common)?
- Responsibility for planning – sectoral, political and geographical
- SEP as a means of solving this

Strategic energy planning fund

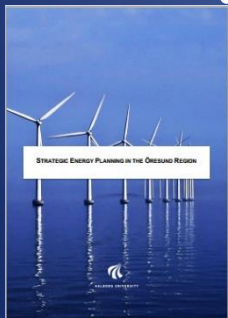
- Fund announced in Energy Agreement 2012 (*Energiaftalen*)
- Promote conversion to a more flexible and efficient energy system with more renewables
- Support municipalities in the planning of the energy system in most socially beneficial manner
- SEP covers **all** forms of energy consumption and supply within a municipality's geographic boundaries

Key elements of strategic energy planning fund

- Introduction of renewables
- Coordination
- Long term planning
- Voluntary
 - 85 municipalities out of 98
 - Second funding round for September 2014
 - Potentially, all municipalities will be engaged with SEP by the end of this year?
- Reach societal goals

Defining strategic energy planning

- Little attention to definition of this term (internationally)
- Guidelines from the Danish Energy Agency detail the nature of the process and the rationale for SEP
- Definition of the process from Rasmus Lund, Brian Vad Mathiessen, David Connolly, and Karl Sperling
“Strategic Energy Planning in the Öresund Region”
 - “The process where municipalities are planning for the development of energy supply and demand within electricity, heating, mobility and other relevant sectors, based on long term scenario analyses, in coordination with the relevant municipal departments and external actors including the local communities, to reach **long term societal goals** in the most feasible way.”



But which strategy?

- Which societal goals?
 - Different societal goals will result in different applications and actors
 - What if the goal was development rather than environment?

Whose strategy?

- In the fund, the strategy is centrally defined
- Achieving these goals is a prerequisite for fund applicants – this becomes a constraint upon their behaviour rather than a choice to act in a certain manner
- Broadly similar goals are also enshrined in law, and thus SEP fund reinforces these rather than challenges them

SEP fund criteria for project goals

- **Reduction of energy consumption** in public and private companies as well as households
- Reduction of energy consumption and **conversion of electricity and heat supply in central combined heat and power areas**
- Reduction of energy consumption and **conversion of electricity and heat supply in other combined heat and power areas and individually supplied areas**
- Reduction of energy consumption and **use of new fuels in the transport sector**
- **Analysis of the total energy renovation**, for example in connection with deciding upon the energy and climate goals for the municipality or municipalities

Strategic Energy Planning as a means of balancing power and control?

- What is strategic energy planning as a process? Is SEP strategy, planning, or strategic planning?
- Understanding the term tells us what type of process this is
 - What we ought to expect from the process and how to support it
 - Consider where control of the energy sector lies

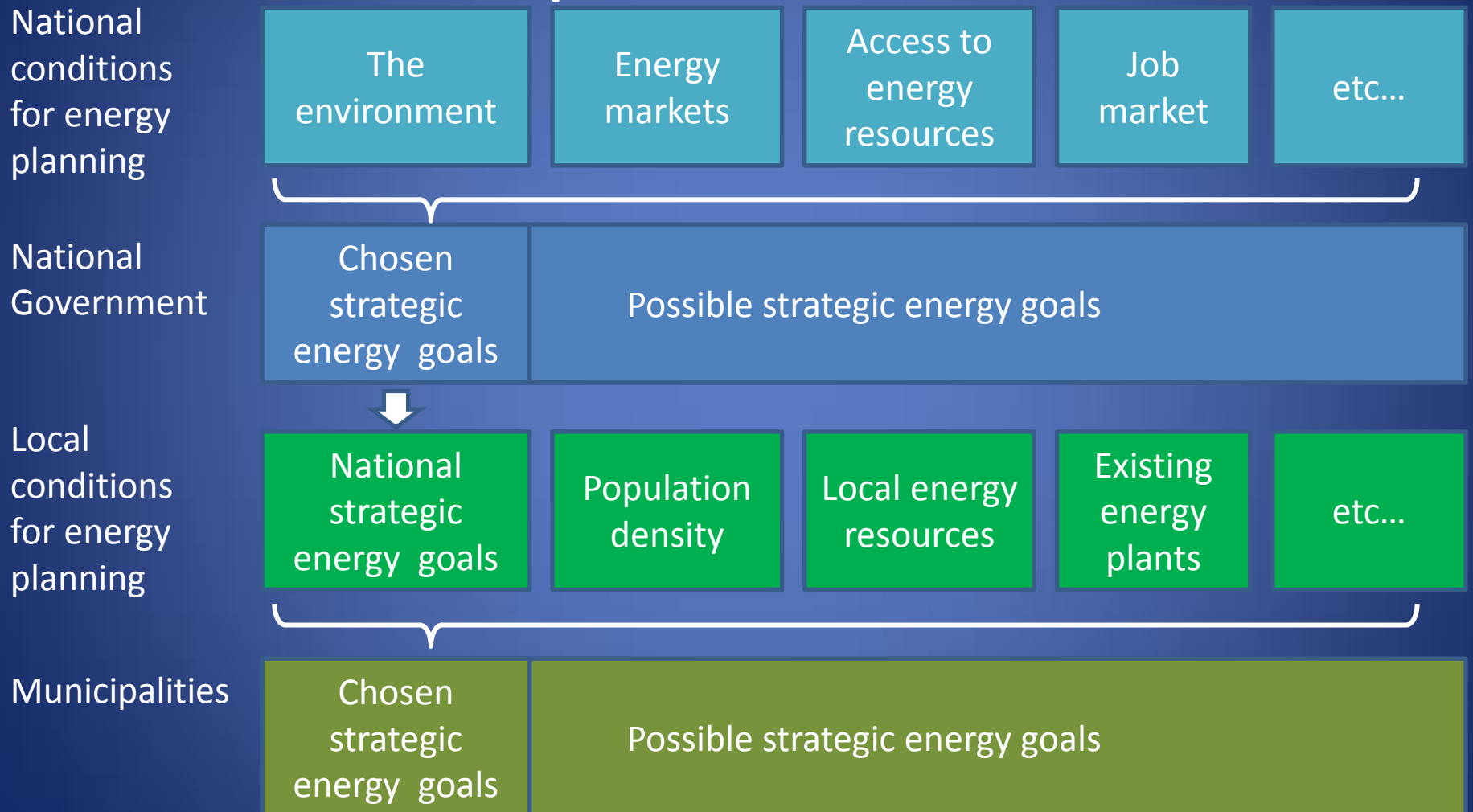
Possible constructions of SEP with regard to strategic competences

- Strategy implies *power*, planning implies a *function*, energy implies a *jurisdictional* boundary
- 3 possible interpretations
 - Interpretation one – *strategic planning* of the energy system
 - Interpretation two – *strategic* direction of energy-planning
 - Interpretation three – *planning* of strategic energy *projects*

Balancing strategic interests in a political hierarchy

- Strategic energy planning is a means of protecting strategy in a political hierarchy
 - Freedom for municipalities to operate, within limits, according to local conditions
- Correlation of goals
 - Conversion of strategic goals into constraints
 - From competitive forces to competitive visions

Municipal powers – strategic possibilities



Strategic energy planning and strategy

Strategic energy planning is the management and delegation of control over energy strategy and its subsequent implementation in a manner that promotes cooperation over competition between political actors, allowing for the implementation of local strategic goals while still geared toward the achievement of broad societal goals set at the highest levels of the hierarchy.

What does SEP promise?

- Conversion of national strategic goals into “voluntary” local constraints
 - Correlation of goals
- Ability to implement local strategic concerns into the planning of the energy sector
- Coordinated responses in regional groupings/neighbouring municipalities

Thanks for your attention