



Framework for strategic energy planning

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Introduction

Denmark is currently in the middle of a green transition of the energy system, involving a decentralization of energy production and consumption to facilitate a complete phase out of fossil energy sources. This leads to challenges at the institutional level and in terms of how strategic energy planning is carried out today. The decentralization of energy production puts a new responsibility on local authorities to carry out strategic energy planning in a way they have not been used to.

Therefore this study has examined the challenges in Danish strategic energy planning, followed by a literature review of strategic energy planning in an international perspective in order to develop a framework for a new strategic energy planning practice.

Methodology

The work presented here is a summary of the work carried out in the paper "A comprehensive framework for strategic energy planning based on Danish and International insights"¹ and the PhD thesis "Coordinated Planning for Renewable Smart Energy Systems"².

The work is based upon a literature review of strategic energy planning in the scientific literature. Furthermore, other energy planning approaches are reviewed in order to identify similarities and gather inspiration for how to further improve the strategic energy planning approach.

In addition, a case study of a Danish municipality has been carried out to understand how strategic energy planning is framed and carried out in practice today. The data has been obtained through a mix of interviews, participant observation and document analysis.

¹Jensen, L.K., Coordinated Planning for Renewable Smart Energy Systems – How Strategic Energy Planning could help meet Local and National Goals, 2019

²Krog, L. and Sperling, K., A comprehensive framework for strategic energy planning based on Danish and international insights, Energy Strategy Reviews (24), 2019

Results

The main result of the work carried out in the studies is a new framework for strategic energy planning that can be used to guide actors working with strategic energy planning. **The framework includes five steps** that should be considered when doing strategic energy planning, as illustrated in the figure. However, depending on the specific conditions (e.g. geography, interests, available energy sources) of the place strategic energy planning is carried out for, the actions and decisions made within each step will differ from case to case. It is important to emphasize that strategic energy planning is a dynamic process that requires continuous reconsideration in order to secure the best possible transition to a renewable energy system.

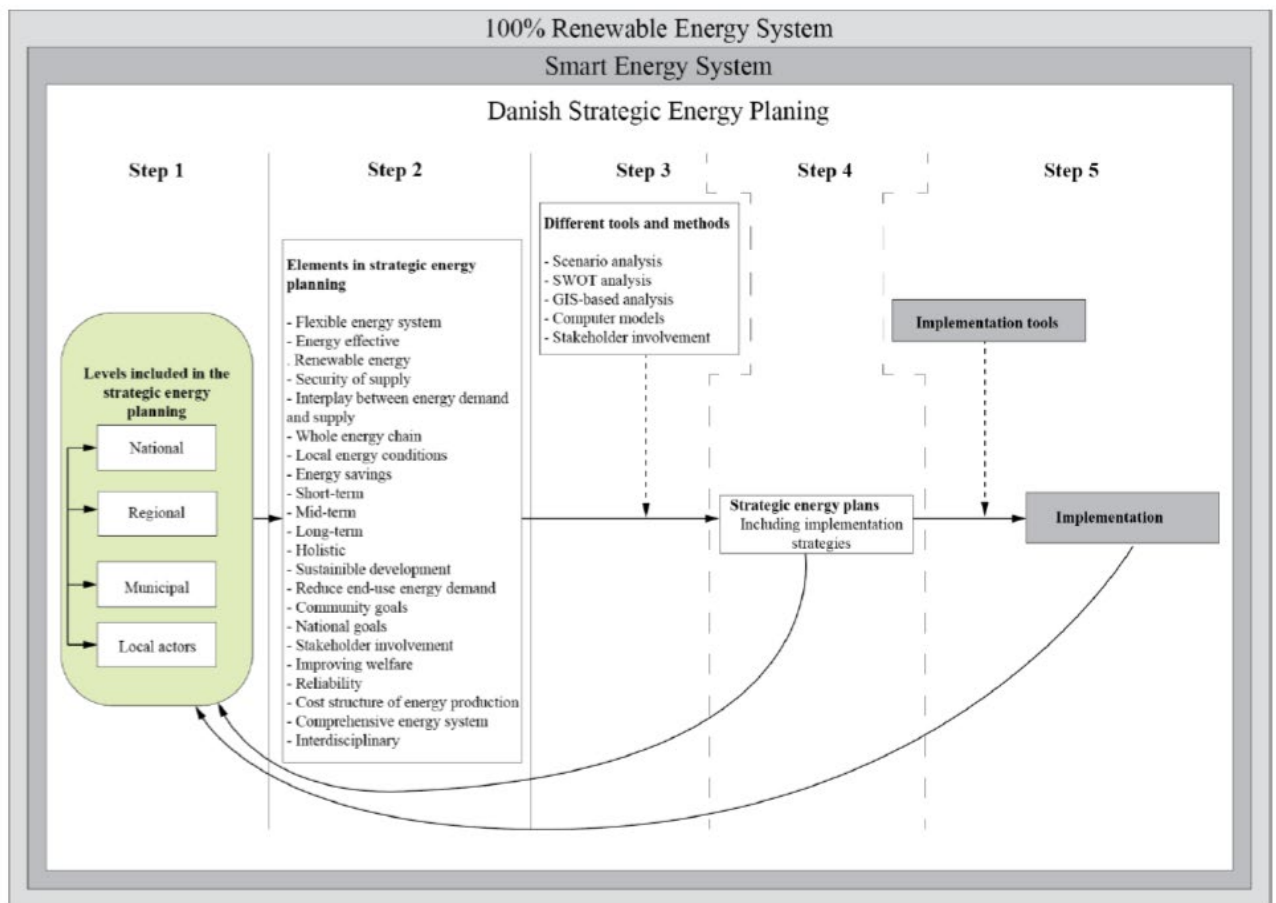


Figure: Analytical framework for strategic energy planning

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