A research alliance:
Enabling and governing transitions to a low carbon society

Developing knowledge and strategies for enabling and governing transitions to a low carbon society

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Introduction

Most of the research on low carbon society in Denmark has hitherto focused on developing scenarios and analyzing possible policy instruments, including market mechanisms, costs and impacts in relation to known options and impacts. The Danish Council of Strategic Research funds the four year research alliance “Enabling and governing transitions to a low carbon society” during 2010-2013. The aim of this alliance is to conceptualize the dynamics of transition processes towards a low carbon society by involving the diverse set of actors from consumers to governmental agencies, companies and organizations.

Transition as a challenge

Transition of the path-dependent, socio-technical regimes in the energy system is a governance challenge, since transitions need to occur simultaneously in different arenas without necessarily having a specific ‘centre’ of co-ordination. Changes of regimes require innovative breakthroughs in technology, changes of institutional frames and changes in social practices, but also increased utilisation of well known solutions is important.

Empirical focus

The research alliance focuses in a number of inter-linked projects on five overall transition arenas in society: ***standards and certifications, households, companies, cities, and national and international policy***.

Methodology

The research alliance builds upon a combination of theories including:

- Social practice theory: fluidity and inertia of the daily flow of activities in households etc.
- Innovation economy: path dependency and path creation in socio-technical changes.
- Institutional theory: guidance by rules, norms etc. of issues as they emerge and persist.
- Actor-network theory: shaping of systems as interactions among human and non-human elements.
- Governance theory: how authority is developed and stabilised in societies.

Through a combination of historical analysis, case studies and action research, the research alliance analyses the roles of socio-technical experiments, creation and utilisation of ‘windows of opportunity’ and stabilisation of changes in societal niches into regime transformation.

Standards and certifications

Analyses of interactions between market-based instruments, regulatory policy and voluntary certification, like certification of biomass and calculation of carbon footprint of products

Households

Analyses of the challenges to everyday household practises, especially during the design and implementation of smart grids for coordinating electricity production and consumption

National and international policy

Analyses of the challenges to governance of bio-energy from international trade, liberalisation of the energy sector and national and international environmental regulation

Companies

Analyses of innovation dynamics in energy systems of production, use and savings, for example in relation to energy system concepts, wind turbines and LED-lightening

Cities

Analyses of the role of municipalities as intermediaries in reconstruction of relations between cityscape and mobility

Expected results

- Methods which enable stakeholders to make continuous adjustments of objectives and means in conflict ridden transition processes.
- Analyses of how key measures and institutions at different societal levels might contribute to transition processes.
- Characterisation of 4-6 typical sustainable transition set-ups as complex contexts, which are identifiable to actors in similar situations.

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