

SUSTAINABLE ENERGY PLANNING



THE SUSTAINABLE ENERGY PLANNING RESEARCH GROUP AT AALBORG UNIVERSITY

DEPARTMENT OF SUSTAINABILITY AND PLANNING
TECHNICAL FACULTY OF IT AND DESIGN

The research group works with energy planning with a cross-disciplinary focus on the design, evaluation and implementation of future sustainable energy solutions.

RESEARCH

KEY RESEARCH AREAS

The sustainable energy planning research group looks at how we as a society can develop and implement sustainable energy solutions.

What technical affordable alternatives do we have?
How feasible are they from a broader perspective of jobs, balance of payments, environment and growth?
How can we as a society organise ourselves and implement them?

The results show:

- › how Denmark from a technical point of view can go to 100% renewable energy
- › how feasibility studies can include jobs, balance of payments and rural development
- › what Aalborg should do to be part of the green transition
- › how ownership and market conditions influence the implementation
- › the role of specific technologies like electrolysers and district heating in future energy systems

EDUCATION

STUDY RELATED ACTIVITIES

The group teaches:

- › energy planning (national, regional and local)
- › energy systems design and analysis
- › feasibility studies and public regulation
- › transport demand and future fuels

COLLABORATION

WHO BENEFITS FROM OUR RESEARCH

The research concerns society as a whole; citizens and consumers, politicians and administration, industry, manufacturers and NGOs.

EXTERNAL PARTNERS

- › Manufacturers such as Danfoss, Logstor, Topsoe, DESMI, EMD and many others as well as utility companies such as Aalborg Forsyning, HMN and many others
- › Authorities such as the European Commission, the Danish Energy Agency, Energinet, Frederikshavn Municipality etc.
- › Organisations such as Samsø Energy Academy, Euroheat & Power, UNDP, political parties and many others

PUBLICATIONS

IMPORTANT PUBLICATIONS

- › [Renewable energy systems: A smart energy systems approach to the choice and modeling of 100% renewable solutions](#)
- › [Smart energy systems for coherent 100% renewable energy and transport solutions](#)
- › [4th Generation District Heating \(4GDH\): Integrating smart thermal grids into future sustainable energy systems](#)
- › [A review of computer tools for analysing the integration of renewable energy into various energy systems](#)



AALBORG UNIVERSITY
DENMARK

KEY PROJECTS

Since 1970s the group has been involved in the design of a number of alternative energy strategies from the first Danish "Alternative Energy Plan" from 1976 to the IDA smart energy plan for Denmark in 2015 and onwards.

CEESA

In the CEESA project from 2011 the group developed the concept of smart energy systems.

4DH

In the 4DH project from 2012-2017 the group developed and promoted the 4th generation District Heating concept and among others influenced the European Heating and Cooling Strategy.

VIDEO PRESENTATION



CONTACT

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