

CENTER DENMARK

INTEGRATING ENERGY SYSTEMS



One-pager about Center Denmark

Background of Center Denmark as a national initiative, and the challenges we are addressing

Board of directors :



Board of directors

- Chairman: Lars Bonderup Bjørn, CEO of EWII (Danish DSO)
- Deputy chairman: Professor Henrik Madsen, Head of DTU Compute
- Nicolaj Nørgaard Peulicke, CEO of Energinet Elsystemansvar (Danish TSO)
- Niels Langvad, Senior Advisor at University of Southern Denmark
- Prof. Jakob Stoustrup, Associate Dean at Aalborg University
- Prof. Søren Rud Keiding, Associate Dean at Aarhus University
- Henrik Thorsen, CEO Energy Cool
- Søren Gais Kjeldsen, CEO Aalborg Forsyning
- Bjarne Korshøj, CTO HOFOR

Director: Søren Skov Bording



The why!

The ambition to achieve a fully sustainable energy system and go from about one third fluctuating renewable energy (RE) across the systems to 100 % RE introduces a need for sector coupling across electricity, heat, gas and water supply plus abolish industrial borders to identify and utilize inherent flexibilities as virtual storage within the existing systems and industries.

We will enter a new paradigm for balancing the energy systems where we focus on intelligently consuming energy instead of trying to control a fluctuating RE production. Thereby, we can limit the need for additional new production, grid and storage capacity and still meet the ambition. It requires a data intelligent energy system and innovative new business models to create the needed dynamic and behavior across the entire value chain.

Center Denmark

Center Denmark is established as a **non-profit and independent organization** working to promote development of digitally integrated energy systems in order to enhance society's transition to renewable energy sources and reduce environmental impact. Center Denmark contributes to establishing a national framework to promote research, education, innovation & development, testing and demonstration in connection with the transition to a fossil-free green society, building the foundation for a Danish "Silicon Valley" of energy systems.

Vision: Center Denmark will accelerate the green transition towards 100 % renewable energy in DK through digitalization and sector coupling and thereby unlocking flexibilities and utilize digital opportunities at all levels across energy systems

Mission statements:

- Center Denmark will develop the best-in-class nationwide data platform for energy related data, that combined with forefront artificial intelligence identifies flexibilities on the demand side across the energy systems. Development of decision tools with real time capabilities will enable our partners to develop new innovative business models and commercial services targeting smart grid features for industrial sector and private households.
- Center Denmark will make the data platform a foundation for an international framework for research, representative and scalable tests and demonstrations as well as education.

Offerings

- Real-time **DECISION TOOLS** for controlling energy consuming units intelligently for limited environmental impact, economic incentives and grid capacity constraints.
- Center Denmark creates an **INCUBATOR** environment where we share knowledge, foster new ideas and develop new business models utilizing new technologies and dynamic taxes. The incubator environment is for start-ups and established companies, industry associations, public organizations, universities and funding and network partners etc.
- **SIMULATION ENVIRONMENT** for new business models and technologies in a digital representation of the energy ecosystem utilizing dynamic tariffs and taxes.
- **TEST AND DEMONSTRATION** in a representative real-life test environment with focus on demonstrating effect of energy system technologies as well as impact on environment, people and nature. Center Denmark will digitally connect Living Labs for scaling and establish new scalable micro-grid test and demonstration facilities.