

5TH INTERNATIONAL CONFERENCE ON

# Smart Energy Systems

4th Generation District Heating,  
Electrification, Electrofuels and  
Energy Efficiency

10-11 SEPTEMBER 2019 - COPENHAGEN

## Keynote speakers



**KRISTIAN RUBY**  
Secretary General  
of the Union of the  
Electricity Industry



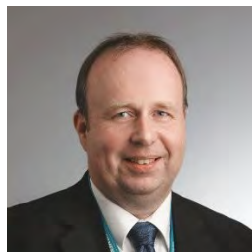
**SØREN HERMANSEN**  
CEO and  
Founder of the  
Samsø Energy  
Academy



**JEAN-MICHEL GLACHANT**  
Director of the  
Florence School of  
Regulation



**DAVID CONNOLLY**  
Chairperson of the  
Irish District  
Energy Association



**POUL SKJÆRBÆK**  
Chief Innovation  
Officer & Senior  
Principal Expert  
in Siemens  
Gamesa



**JIANJUN XIA**  
Deputy Director at  
the Building Energy  
Research Center,  
Tsinghua University

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Innovation Fund Denmark



More information on [smartenergysystems.eu](http://smartenergysystems.eu)

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# Smart Energy Systems

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**AALBORG UNIVERSITY**  
DENMARK

The Smart Energy System concept is essential for cost-effective 100% renewable energy systems. The concept includes a focus on energy efficiency, end use savings and sector integration to establish energy system flexibility, harvest synergies by using all infrastructures, lower energy storage cost as well as to exploit low value heat sources.

In future energy systems, energy savings and 4th generation district heating can be combined, creating significant benefits. Low-temperature district heat sources, renewable energy heat sources combined with heat savings represent a promising pathway as opposed to individual heating solutions and passive or energy+ buildings in urban areas. Electrification in combination with district heat is a very important driver to eliminate fossil fuels. Power heat, power to gas and power to liquid together with energy efficiency and 4th generation district heating create a flexible smart energy system. These changes towards integrated smart energy systems and 4th generation district heating also require institutional and organisational changes that address the implementation of new technologies and enable new markets to provide feasible solutions to society.

## Important Dates 2019

**31 August** - Registration closes

**9 September** - Technical tour

**10-11 September** - Conference

**12 September** - Technical tour



We invite researchers and experts from industry and business to contribute to further enhancing the knowledge of smart energy systems, 4th generation district heating, electrification, electrofuels and energy efficiency.

### Aim and Organisers

The aim of the conference is to establish a venue for presenting and discussing scientific findings and industrial experiences related to the subject of Smart Energy Systems based on renewable energy, 4th Generation District Heating Technologies and Systems (4GDH), electrification of heating and transport sectors, electrofuels and energy efficiency.

This 5th conference in the series cements it as a main venue for presentations and fruitful debates on subjects that are pertinent to the development and implementation of smart energy systems to fulfil national and international objectives.

### Conference Chairs

Prof. Henrik Lund, Prof. Brian Vad Mathiesen, Prof. Poul Alberg Østergaard, Aalborg University, Denmark

### Conference Topics

Smart energy system analyses, tools and methodologies

Smart energy infrastructure and storage options

Integrated energy systems and smart grids

Institutional and organisational change for smart energy systems and radical technological change

Energy savings, in the electricity sector, in buildings and transport as well as within industry

4th generation district heating concepts, future district heating production and systems

Electrification of transport, heating and industry

The production, technologies for and use of electrofuels in future energy systems

Planning and organisational challenges for smart energy systems and district heating

Geographical information systems (GIS) for energy systems, heat planning and district heating

Components and systems for district heating, energy efficiency, electrification and electrofuels

Renewable energy sources and waste heat sources for district heating

Further information and registration:  
**[www.smartenergysystems.eu](http://www.smartenergysystems.eu)**