

**Seminar 22 October 2018**

**13h30–17h30**

**SMART GRIDS AND SMART ENERGY SYSTEMS  
FOR THE LOW CARBON ENERGY  
TRANSITION**

EnergyLab, Sundkaj 7, 2150 Nordhavn, Copenhagen

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We are pleased to invite you to the **ISGAN Annex 7 seminar – Denmark: “Smart grids and smart energy systems for the low carbon energy transition”**

The seminar will discuss the key concepts of smart grids in a context of smart energy systems for a low carbon future and focus on the regulatory and market challenges to achieve a fully flexible and decarbonised energy system. Experts from the industrial sector and the academics will present their views on the topic and will be invited to debate in a panel discussion on the business opportunities and challenges emerging from flexible integrated solutions across energy systems.

The workshop ends with a guided tour of the [Nordhavn showroom](#), followed by a networking reception.

**ISGAN** is the short name for the International Energy Agency (IEA) Technology Collaboration Programme (TCP) for a Co-operative Programme on Smart Grids (ISGAN – International Smart Grids Action Network).

This seminar marks the start of the **second phase of the Danish ISGAN Annex 7** project, and is co-organised with the [CITIES](#) and [Flex4RES](#) projects. For more details on the first phase of the project, see the [pamphlet on Smart Grids initiatives](#) where DTU is involved.

#### Smart Grids And Smart Energy Systems For The Low Carbon Energy Transition

13.30 – 13.45	<b>Simon Bolwig</b> - Systems Analysis Division, DTU Management Engineering Welcome words
<b>13.45 – 14.45</b>	<b>Session 1 - The concept of smart energy systems coupling</b>
13.45 – 14.15	<b>Karin Widegren</b> – Chairman of ISGAN's Executive Committee “Smart grids as an enabler for smart energy systems coupling – international experiences”
14.15 – 14.45	<b>Klaus Skytte</b> – Head, Energy Economics and Regulation, DTU Management Engineering “Nordic experiences with and barriers for smart systems coupling”
14.45 – 15.00	Coffee break
<b>15.00 – 16.00</b>	<b>Session 2 - Enabling systems coupling and flexibility through energy policy and new business models</b>
15.00 – 15.30	<b>Nicolaj Mølgaard Jakobsen</b> – Chief Consultant, Danish Energy “An industry take on tariffs and flexibility: ensuring meaningful incentives and transparency”
15.30 – 16.00	<b>Mads Blumensaat</b> – Cluster Lead Energy Integration, Vestas Denmark “Vestas Renewable Hybrid Systems: The market and technology rationale”
<b>16.00 – 16.45</b>	<b>Panel discussion with all presenters and the audience</b>
<b>16.45 – 17.30</b>	Tour of the EnergyLab Nordhavn showroom and networking reception

## Registration

There is no participant fee, but seats are limited and will be given on a 'first come first serve basis'. Use the following [link for registration](#).

The **deadline for registration is Friday 12<sup>th</sup> October**. For any inquiries, please contact [Claire Bergaentzle](#).

## The presenters

**Karin Widegren** is Chairman of ISGAN's Executive Committee and Senior Adviser to the Swedish Energy Agency and the Swedish Energy Markets Inspectorate. During 2010 - 2016 she held several positions at the Swedish Energy Markets Inspectorate, the Swedish energy regulator, e.g. as Director of International Affairs. Since 2017 she has served as an independent consultant and senior adviser to both the Swedish Energy Agency and the regulator, with expertise in electricity market design and implementation of new technology with focus on smart grid and demand side flexibility. In 2017 she was elected Chair of ISGAN's Executive Committee (International Smart Grid Action Network).



Karin Widegren has also been the Director of the Swedish Coordination Council for Smart Grids, assigned by the Swedish government with the scope to develop a national action plan for smart grid. She is one of 18 members of the Forum for Swedish Smart Grids, led by the Ministry of the Environment and Energy with the mission to implement the action plan proposed by the Swedish Coordination Council for Smart Grids.



**Klaus Skytte** is head of Energy Economics and Regulation at DTU Management Engineering, Technical University of Denmark. With more than 16 years of experience in energy planning and system analysis he is an entrepreneur who sees new perspectives and solutions to different issues. He holds a PhD in economics and has coordinated several national and international research projects, e.g. the Nordic flagship project Flex4RES. Klaus Skytte is appointed as national expert for Denmark in IEA ISGAN Annex 7 Smart Grid Transition.

**Nicolaj Mølgaard Jakobsen** is Senior Adviser in Danish Energy, the association of Danish energy companies. Nicolaj has extensive industry experience focused on the regulation of DSOs and in finding operational solutions to policy, regulatory and economic problems facing the Danish DSOs. He currently heads the DSO-part of a joint industry project conducted in collaboration with the Danish TSO to find a future tariff design for the Danish electric grid. His areas of expertise include regulatory economics, tariffs and pricing, energy economics, industry policy, and industry benchmarking.



**Mads Blumensaat** is leading Vestas' innovations initiatives within Energy Integration, which covers a range of topics including: energy storage, power to gas/heat/XX, off-grid systems, electrical infrastructure, emerging market models and adjacent revenue streams for future renewable projects. Prior to this role he was tech lead on Vestas' Hybrid Solutions initiative, taking the integration of wind, PV and battery storage to a commercial stage. His interest and focus is in enabling or bridging emerging market opportunities through technologies, top-tier partnerships and consortia. He holds a M.Sc. in Electrical Engineering from DTU.

## The venue is a full scale smart grid demonstration site

*"EnergyLab Nordhavn is a pioneering example of how researchers, businesses, and public authorities can work together to develop solutions aimed at ensuring efficient and sustainable transition to the energy systems of the future"* - Anders Bjarklev, President of Technical University of Denmark (DTU)

The project EnergyLab Nordhavn – New Urban Energy Infrastructures develops and demonstrates future energy solutions. The project utilizes Copenhagen's Nordhavn as a full-scale smart city energy lab and demonstrates how electricity and heating, energy-efficient buildings and electric transport can be integrated into an intelligent, flexible and optimized energy system.

<http://energylabnordhavn.weebly.com/>



## Social event

Workshop participants are invited for a **special tour of the Nordhavn Energy lab showroom**. You will get a short introduction to the Nordhavn project and the demonstrations taking place in Nordhavn, which includes the grid-integrated battery in P-hus Lüders and district heat-substation. This will provide the participants a chance to get a unique preview of the future, flexible energy system.

A **networking reception** will close the day.

## ABOUT THE IEA-ISGAN ANNEX 7

The ISGAN project strengthens Danish participation in Annex 7 of the International Smart Grid Action Network (ISGAN) and disseminates knowledge on smart grids to Danish stakeholders. The project partners are DTU Management Engineering, Danish Technological Institute, and the Danish Ecological Council, in collaboration with The Danish Intelligent Energy Alliance. The project is supported by EUDP (Energiteknologisk Udviklings- og Demonstrationsprogram).

The objective of Annex 7 in the International Energy Agency's (IEA) International Smart Grid Action Network (ISGAN) is to investigate smart grid transition processes in society and institutional including market changes associated with these. Using a transition framework, the Annex intends to gather information and knowledge from a cross-disciplinary field of social sciences, e.g. innovation studies, political sciences, energy economics, institutional economics, and sociology. The Annex is supporting and complementing technology oriented smart grid activities and can make important added value for policy makers, strategic planners, and other stakeholders in the smart grid field. The Operating Agent for Annex 7 is Austrian Institute of Technology.

Additional information about the different projects involved in this seminar, either via organising collaboration or via presentations during the seminar can be found here;

<http://smart-cities-centre.org/>

<http://www.nordicenergy.org/flagship/flex4res/>

<http://www.sys.man.dtu.dk/Research/EER/Research-projects/INCAP>