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EnergyPLAN Newsletter no. 23

December 2021

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**Call for abstracts 8th International Conference on
Smart Energy Systems**

8th International Conference on

Smart Energy Systems

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

13-14 September 2022, Aalborg

#SESAAU2022



AALBORG UNIVERSITY
DENMARK



We announce the Call for abstracts for the 8th International Conference on Smart Energy Systems. The conference is organized by Aalborg University and Energy Cluster Denmark with the aim to establish a venue for presenting and discussing scientific findings and industrial experiences related to the subject of Smart Energy Systems – including renewable energy, 4th Generation District Heating Technologies and Systems (4GDH), electrification of heating and transport sectors, electrofuels and energy efficiency. This 8th 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. Again in 2022, we look forward to welcoming our participants to a hybrid conference with the possibility to attend either online or in person – this time in Aalborg.

The Call is open and you can submit your abstract until 28 March 2022.

[See Call for abstracts](#)

NEW Heat Plan Denmark 2021

Denmark has a target to reduce greenhouse gas emissions by 70% in 2030 compared to 1990 and a goal of climate neutrality in 2050. Heat Plan Denmark 2021 is a concrete

proposal for what should happen in the Danish heating sector in order to implement the green transition in a technically, economically and environmentally appropriate way in 2030 (VPDK-30) as well as in 2045 (VPDK-45). With "Varmeplan Danmark 2021" it is shown that the heating sector can be transformed quickly and with technologies that are already available on the market:

36-40% energy savings in the building stock are important. We need to find the right balance between energy savings and energy efficiencies and renewable energy. 36% energy savings provide economic savings of more than 1.1-1.3 billion kroner and 40% provide the most biomass savings

District heating should be expanded 63-70% as we shut down natural gas and oil-fired boilers. Outside the district heating areas, heat should come from individual heat pumps. This combination provides the most energy efficient and flexible solution, which at the same time must reduce the biomass and the amount of wind turbines.

In the district heating supply, a targeted focus should be placed on the transition to 4th generation district heating with lower temperatures. It provides the lowest costs (100-200 million DDK) and the most efficient use of geothermal energy, surplus heat, efficient electrification through large heat pumps and existing and new heat storage. Up to 2 TWh biomass can spare parts.

In the energy system of the future, there is great potential for geothermal and surplus heat from industry, data centers and Power2X. These opportunities should be exploited. In the plan, 44% utilizes the total potential.

To be able to achieve these points requires planning - and therefore all municipalities are encouraged to prepare strategic energy plans, where the possibilities for district heating expansions, heat savings and new heat sources MUST be investigated.

As part of the project both reports and mapping tools have been developed (in Danish). You can find them here:

[See Heat Plan Denmark 2021](#)

New Publications

H. Lund, J. Z. Thellufsen, P. A. Østergaard, P. Sorknæs, I. R. Skov, B. V. Mathiesen:
[EnergyPLAN - Advanced Analysis of Smart Energy Systems](#), 2021

A. Nikas, A. Gambhir, E. Trutnevyte, K. Koasidis, [H. Lund](#), [J. Z. Thellufsen](#), D. Mayer, G. Zachmann, L. J. Miguel, N. Ferreras-Alonso, I. Sognaes, G. P. Peters, E. Colombo, M. Howells, A. Hawkes, M. van den Broek, D. J. Van de Ven, M. Gonzalez-Eguino, A. Flamos, H. Doukas: [Perspective of comprehensive and comprehensible multi-model energy and climate science in Europe](#), January 2021.

A. D. Korberg, B. V. Mathiesen, I. R. Skov, L. Clausen: [The role of biomass gasification in low-carbon energy and transport systems](#), 2021

M. Chang, J. Z. Thellufsen, B. Zakeri, B. Pickering, S. Pfenninger, H. Lund, P. A. Østergaard: [Trends in tools and approaches for modelling the energy transition](#), May 2021

Season's greetings

With this last newsletter of the year, we send you season's greetings and our best wishes for a happy and fruitful new year. We look forward to our continued cooperation in 2022.



The EnergyPLAN development team



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