

Invitation to iPower Consortium Meeting  
13-14 May 2014 at AAU Copenhagen



# Smart Grid in Residential Buildings

## This years' Consortium Meeting focuses on research and development of Smart Grid in Residential Buildings

The consortium is delighted to present some results from our experimental setups at the Danish Technological Institute in Taastrup and Grundfos' experimental house in Bjerringbro. These experimental setups were planned when iPower started in 2010.

*Has the requirements for energy flexibility changed since then? We have invited Niels Træholt from energinet.dk to give us an overview of the development in the society's expectations 2010-2014.*

The conference will also touch upon standards for residential smart grid. Founded

in the European MIRABEL project, Aalborg University and TNO has developed methods and standards for grouping blocks of flexible consumption into larger, more valuable, chunks of flexibility. Also, the Open ADR standard will be presented by Rish Ghatikar from Lawrence Berkeley National Laboratory. This standard may play a significant role in the future of residential smart grid.

A significant part of the research in residential building energy flexibility focuses on heating comfort. Based on the keynote from Didier Roux (Vice President, R&D, Saint-Gobain), the conference

will host a seminar to discuss buildings, heating comfort and energy flexibility.

iPower is proud to invite all iPower consortium members as well as the general public to this conference to share knowledge and exchange ideas within the area of Smart Grid in Residential Buildings.

### Registration

It is possible to register for the full conference or just parts of the event. Please register at <http://bit.ly/iPower2014>.

Registration is free, and the conference is open to the public. Please note that a fee of DKK 300 will be charged in case of no-show.

### Venue

Aalborg University Copenhagen  
A.C. Meyers Vænge 15  
DK-2450 København SV

### How to get there

AAU in Copenhagen is just 10 minutes away from the airport by taxi or an eight-minute walk from Sydhavn train station. Please refer to the below web page for details on how to get there: [www.en.cph.aau.dk/How+to+get+there](http://www.en.cph.aau.dk/How+to+get+there).

### Contact

If you have any questions about the Consortium Meeting please contact:

*For practical information:*

Eva M. Nielsen,  
+ 45 46 77 49 80, [evmn@elektro.dtu.dk](mailto:evmn@elektro.dtu.dk)

*For information about the professional programme:*

Platform Manager, Rasmus Villefrance,  
+45 20 70 25 89, [rasvil@elektro.dtu.dk](mailto:rasvil@elektro.dtu.dk)



# Tuesday, 13 May 2014

## IPOWER GENERAL ASSEMBLY

- 09:00 Registration and coffee (iPower consortium members only)
- 09:30 iPower General Assembly (iPower consortium members only)
- 11:00 Break

## SCIENTIFIC PROGRAM

- 11:00 Registration for public attendees to the conference
- 11:30 Welcome and introduction. By iPower Platform Manager Rasmus Villefrance and iPower work package leader Eva Ryberg
- 11:45 FlexOffer - the MIRABEL project. How do we handle large quantities of flexibility offerings? By Prof. Torben Bach Pedersen, Center for Data-intensive Systems (Daisy), Aalborg University
- 12:30 Developments in Energy Flexibility standardization. By J.P.C. Verhoosel, TNO Netherlands
- 13:15 Lunch
- 14:00 The need for flexible consumption in Denmark; Development 2010-2014. By Niels Træholt, energinet.dk
- 14:30 Mapping of SGAM (Smart Grid Architecture Model) to iPower. By David Tackie, Dansk Energi

- 14:50 Monitoring of the load on the distribution grid. By Fannar Thordarson, Danish Energy Association and Sisse Merete Østberg, Dong Energy
- 15:15 Break
- 15:45 Open ADR – standard of the future? By Acting Deputy Leader Rish Ghatikar, Grid Integration Group, Lawrence Berkeley National Laboratory, USA
- 16:30 Networking and drinks

---

## SPECIAL REGISTRATION FOR EVENING DINNER

Let us meet for a meal at 19:00. We suggest that we meet at the Argentinian restaurant **Asador** near the Christianshavn Metro station.

The menu is DKK 515/325 with/without wine. iPower does not have a budget for the dinner, so please organize payment via your own project or similar.

Please register your intended participation when you register for the conference, so we can order tables to seat us all.

---

## DINNER

- 19:00 Dinner at **Asador** near the Christianshavn Metro station. Address; Overgaden Neden Vandet 17, 1414 København K

# Wednesday, 14 May 2014

## SCIENTIFIC PROGRAM

- 08:30 Coffee and registration
- 09:00 iPower research on residential buildings: An overview. By Frank Elefsen, Technology Manager, Danish Technological Institute
- 09:20 Using EnergyFlexHouse to demonstrate equipment from Greenwave Reality, Kamstrup, Develco Products, Nilan and ENFOR. By Christian Holm Christiansen, Senior Consultant, Danish Technological Institute
- 09:40 Greenwave Reality solution in EnergyFlexHouse. By Oliver Dufour, Senior Sales Engineer, GreenWave Reality
- 10:00 Develco solution in EnergyFlexHouse. By Poul Eriksen, VP Sales and Technology, Develco Products A/S
- 10:20 Demonstration of a solution for Model Predictive Control of Heat Pumps. By Jacopo Parvizi, Peder Bacher DTU compute and Erik Sørensen, Martin Clausen, Grundfos
- 11:00 Break
- 11:20 Transition towards 'smart grid heating' – potentials, user experiences and barriers in the dissemination of residential heat pumps. By Prof. Inge Røpke and PhD student Sophie Nyborg, Aalborg University Dept. of Development and Planning
- 11:40 Consumer preferences for temperature variations. By Senior Economist Jørgen Jordal-Jørgensen, COWI

- 12:00 Economic scenarios of domestic smart grid solutions. By Morten Stryg, Consultant, Danish Energy Association
- 12:45: Alternative control methods for residential buildings. By Associate Professor Claus Nygaard Rasmussen, Dept. of Electrical Engineering, Technical University of Denmark
- 13:00 Lunch

## GENERAL SEMINAR FOR ANYONE WITH AN INTEREST IN BUILDINGS AND ENERGY

### The house of the future: Saint-Gobain's perspective as a material innovator and producer

- 13:30 Registration for new attendees
- 14:00 Didier Roux, Vice President, Research and Innovation, Saint-Gobain, France, speaks on the subject
- 14:30 Panel discussion moderated by Elin Sondergard, R&D Habitat Director, Saint-Gobain Nordic & Baltic Delegation. Panelists:
- Dr. Didier Roux, VP R&D, Saint-Gobain
  - Dr. Frank Elefsen, CTO Energy & Climate, Danish Technological Institute
  - Prof. Henrik Stang, Dept. of Civil Engineering, DTU
  - Prof. Per Heiselberg, Dept. of Civil Engineering, AAU
  - Dr. Rasmus Villefrance, iPower Platform Manager
- 15:00 End