# Centre for IT-Intelligent Energy Systems in Cities

Program for CITIES inaugural General Consortium Meeting, 26<sup>th</sup> - 27<sup>th</sup> May 2015, DTU Lyngby Campus, Denmark.

CITIES is happy to present the program for the second General Consortium Meeting.

In this pamphlet you will find the program for the CITIES General Consortium Meeting and practicalities regarding registration, venue, transportation, and hotel opportunities.

## Registration

Registration using this link no later than 20th of May: <u>https:</u> //docs.google. com/forms/d/13pncbWuJWrBse5c RAywqyemFksvgCr-\_aKbCcCeBq8Y/viewform

## Venue

Building 101, Meeting room 1. The Technical University of Denmark, 2800 Lyngby, Denmark.

### Directions

The Lyngby Campus of DTU is 25 minutes from Copenhagen airport by taxi (approx. USD 60). The efficient Danish public transportation system can get you to the Lyngby Campus from the airport in approximately 1 hour. See more on how to get there: www.dtu.

dk/english/About/Practicalinformation/Directions/DTU-Lyngby-Campus

### Hotel

We recommend the Scandic Hotel

<u>www.scandichotels.</u>
<u>com/Hotels/Denmark/Copenhage</u>
<u>n/Scandic-Eremitage/#.</u>
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in Lyngby which is frequently used to serve DTU's guests. It is located in central Lyngby and is approximately 5-10 minutes from the campus by either taxi or bus. Busses 300S and 190 depart from the bus stop opposite the hotel (Lyngby Storcenter), and busses 180E and 181E depart from Lyngby train station.

The bus timetable and general travel information can be found at <u>www.rejseplanen.dk/</u>.

There will be a self-financed GCM dinner the 26th at Madklubben.dk. Expected price range: 3-400 DKK.

# Contact

If you have any questions please contact:

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# Centre for IT-Intelligent Energy Systems in Cities

### <u>Tuesday</u>

#### **Block 1: Introduction**

- 9:00 Registration and coffee
- 9:30 Welcome; *Alfred Heller*, DTU Civil Engineering
- 9:40 CITIES Status and visions; *Henrik Madsen*, DTU Compute *Block 2: WP1-7 "Status + example"*
- 10:00 A platform for automated data transformation and anonymization: *Xiufeng Liu*, DTU Management
- 10:15 Status and results for modelling energy supply in CITIES; Illustrated by application of data for the case of Sønderborg; *Dadi Sveinbjörrnsson*, DTU Energy
- 10:30 Aggregation of building energy demands; Sønderborg case; *Panagiota Gianniou*, DTU Civil Engineering
- 10:45 Coffee break

11:00 Embedding demand-side participation in electricity markets; *Pierre Pinson*, DTU Elektro

50

- 11:15 HPMPC A new software packages with efficient solvers for model predictive control; *Gianluca Frison*, DTU Compute
- 11:30 Modelling cities in relation to countries -Copenhagen as an example; *Jakob Zinck Thellufsen*, AAU Plan
- 11:45 Mathematical models for the management <sup>14:40</sup> of combined heat and power systems; *Marco Zugno*, DTU Compute
- 12:00 Lunch

# Block 3: Data repositories and cloud solutions

- 13:00 Cloud based control of heat pumps; *Per Dahlgaard Pedersen*, NeoGrid
- 13:20 Forecasting and Energy Information Services; *Henrik Aalborg Nielsen*, ENFOR

# Block 4: Description of demonstration projects

- 13:40 SIFRE and perspectives for city and national planning; *Anders Bavnhøj Hansen*, Energinet.dk
- 14:10 Methods and methodologies for implementing a fossil-free society on Faroe Islands; *Emil Sokoler*, DONG Energy and DTU Compute
  - <sup>D</sup> Use of frequent measurements in DH systems; *Nina Detlefsen*, Dansk Fjernvarme/Grøn Energi
- 15:10 Price responsive predictive control of heat pumps in a family house; *Jacopo Parvizi*, DTU Compute and Grundfos

# 15:40 Coffee Break

16:00 Use of data for energy efficiency improvements in buildings; Intelligent energy management before intelligent energy renovation of buildings; *Gorm Elikofer*, HOFOR, Copenhagen



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### Tuesday - continued

### **Special presentation**

- 16.30 Challenges with the Danish pricing model; Helle Juhler-Verdoner, Dansk Energi.
- 17:00 Information on a new EERA JP on Energy Systems Integration; *Mark O'Malley*, UCD, Ireland
- 17:30 Summary by Henrik Madsen, DTU Compute 11:30
- 17:45 End of day and transportation to Madklubben (dinner)

### <u>Wednesday</u>

### Block 4: continued

- 8:30 Coffee and croissant
- 9:00 Dynamic prices for heat delivered to district heating systems; *Mikael Togeby*, EA Energy Analyses, Fjernvarme Fyn, and AffaldVarme Aarhus.
- 9:30 Integration of distributed energy resources and demand response in energy systems, *Niamh* O'Connell, DTU Compute and *Benjamin* 13:40 *Kroposk*i, NREL, Denver, US.

10:00 District heating production using heat reclaim in a supermarket refrigeration system; *Torben Green*, Danfoss 14:00

Dansar

### 10:30 Coffee Break

- 11:00 Model predictive control of heat supply to greenhouses; *Henrik Madsen*, DTU Compute, and *Lasse Elmelund Pedersen*, Fjernvarme Fyn
  - Power flexibility in summer houses, TSO and DSO interactions, *Thomas Kieldsen*, NOVASOL; *Juan Miguel González*, DTU Compute; *Anders Bavnhøj Hansen*, Energinet.dk and *Claus Amtrup Andersen*, Eurisco

### 12:00 Lunch

13:00 Energy flexibility in wastewater treatment; *Rasmus Halvgaard*, DTU and Krüger

### Special presentations

- 13:20 Examples of Data as a Service (DaaS) for Distributed Energy Resources; *Claus Amtrup Andersen*, Eurisco.
  - 0 Thermal mass in buildings and energy flexibility; *Jérôme Le Dréau*, AAU Civil Eng.

## Block 5: International Advisory Board

Status and plans for integration of wind and solar power in Australia; *Magnus Hindsberger*, Australian Energy Market Operator (AEMO), Australia

## 14.30 Coffee Break

- Energy performance of buildings; Status and strategies for using dynamical calculation methods; *Hans Bloem*, EU Joint Research Centre, Ispra, Italy
- 15:30 Discussion and summary; *Poul Erik Morthorst*, DTU Management and *Peter Rathje*, ProjectZero

## 16:00 End of day

Immediately after the closing of CITIES second general consortium meeting there will be a meeting between the IAB, the WPMT and the CMT focusing on advices to CITIES. This will take place between 16:15 and 17:15.

