SYMPOSIUM

The Building as the Cornerstone of our Future Energy Infrastructure

The importance of dynamic and real data for reliable assessment

10-11 April 2019, Bilbao, Spain

In the transition towards a new energy system, based on minimal carbon use and circular economy principles, the building is the cornerstone of the future energy infrastructure. Energy use in European buildings is still around 40 % of the total final energy use. Decarbonisation of power and heat are high on the agenda of EU Member States. Present initiatives by governments for a proper energy transition are based on reducing energy use, increased use of renewable energy resources and making the energy infrastructure more intelligent (SRI as mentioned in the EPBD). The citizen should become at the centre of the energy system; from passive consumers to engaged energy customers. For that purpose digitisation is essential, enabling monitoring and control of optimised energy use for a comfortable living and working environment. The level of balancing between the building end-user and the climate is not often carefully considered. Also, the energy flow between buildings and the energy networks will become more and more multi-directional. Buildings will produce energy: electricity that is partly delivered to the grid, and heat that is stored in the building or underground. The near future may see more self-consumption in buildings, including the electricity stored in electric cars. One may conclude that buildings in which presently 40% of final energy is used, will take a more prominent position in the energy infrastructure. Seven invited experts will present the challenges and innovation aspects that may facilitate the energy transition.

Invited speakers are international experts on seven selected topics:

- *Measurement for validation (in-situ and real data)* - Richard Fitton, Energy House, UK
- *Documentation of performance gaps and energy flexible buildings (Annex 67)* - Søren Østergaard Jensen, DTI – DK
- *Building energy related standards – CEN/ISO* - Jaap Hogeling - EPB Centre, NL
- *Renovation projects for buildings and cities (EPBD, EED and the building stock)*– César Valmaseda - CARTIF, ES
- *Renewable Energy integration (CITIES)* - Henrik Madsen - DTU, DK
- *Electric Vehicles integration (Array of Things)* – Pete Beckman, Argonne National Laboratory, USA
- *Urban dimension (from building to city modelling; CityGML)* - Volker Coors - HfT Stuttgart, DE

  During a final panel discussion, these topics will be discussed with IEA – EBC Annex71

These seven topics are introduced in a separate article *SymposiumSevenTopics.pdf*
The symposium runs from Wednesday noon till Thursday noon. It is organised in the frame of the IEA-EBC Annex71 6th Expert meeting, 8-11 April 2019 in Bilbao. There is no registration fee but registering is required through www.dynastee.info