Solar Energy and Building Physics Laboratory LESO-PB

LESO LUNCHTIME* LECTURES

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Innovation of urban districts and cities in a context of energy transition

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Summary

Currently, cities are responsible for the majority of the world's greenhouse gas (GHG) emissions (71–76%). Both in terms of availability of renewable resources and in terms of the environmental impacts of our consumption and production, we are pushing beyond the limits, leading to acceleration of extinction rates, ocean acidification, loss of clean potable water and so on. A new concept of 'post carbon city' has recently emerged which implies a paradigm shift about relationships between energy, climate change and city. Post carbon cities must reach a massive reduction of GHG emissions and develop the capacity to adapt to climate change. This implies the establishment of new types of cities that are zero-carbon as well as environmentally, socially and economically sustainable (EU POCACITO project, 2013). This presentation will refers to a number of recent European projects on energy transition at urban level with the aim to present the components of innovation in cities. Specifically it will focus on the role of evaluation and GIS-based decision support systems for improving our decisions and management in cities. The presentation will specifically refers to both: i) a study of the transition towards future production and consumption systems developed by the MILESECURE-2050 project. This has reviewed about 1500 of European 'anticipatory experiences of energy transition', highlighting the basic features of a broader and more complex transition to environmentally sustainable ways of producing, consuming and distributing energy; ii) a recent Smart city project named DIMMER which has focused on the improvement of energy consumption and distribution at district level, through the use of ICT for monitoring and empowerment of users.

About the speaker

Patrizia Lombardi is Chair of Urban Planning Evaluation and Project Appraisal of Politecnico di Torino and Head of the Interuniversity Department of Regional and Urban Studies and Planning. She is Scientific Coordinator of the UNESCO Master "World Heritage and Cultural Projects for Development" managed by ITC-ILO since 2010. She coordinates the Green Team / Sustainable Path of POLITO. She is an established figure in the field of evaluating smart and sustainable urban development for over 20 years, publishing widely in the subject area and coordinating, or serving as lead partner and principal investigator, in several Pan-European Projects related to Smart Cities, Energy transition, and Cultural heritage: BEQUEST, INTELCITY, INTELCITIES, ISAAC; SURPRISE; Marie-Curie UNI-metrics (coordinator); MILESECURE-2050 (coordinator); POCACITO; DIMMER; KIC InnoEnergy/ EIT ICT Lab; EEB Cluster/MIUR; SHAPE- ENERGY (H2020).

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*Presentations are followed by drinks & snacks, to give the opportunity to guests and speaker to further discuss the topic.

Organized by Dr Nahid Mohajeri, & Barbara Smith