October 2019

Introducing Cultural-E: climate and cultural-based solutions for Plus Energy Buildings

On 8 and 9 October 2019, the Cultural-E kick-off meeting took place in Brussels.

Cultural-E is a H2020 EU-funded project, which goes a step beyond Nearly Zero Energy Buildings (nZEBs) towards the future of Plus Energy Buildings (PEBs). The team is approaching this topic by looking at climate and cultural differences in the use of residential buildings around Europe. By the end of the five years the project will have built four new Plus Energy Buildings in France, Germany, Italy and Norway. Cultural-E will also produce design tools, smart technologies, methodologies and policy recommendations.

Research applied to construction sector is more and more demanding nowadays in terms of energy efficiency, carbon emissions, sustainability, in terms of resource use and life-cycle management, and indoor environmental comfort. Climatic factors, such as local temperature, weather, sun orientation, relation with the surrounding context are integral parts of the design process, because, inevitably, they influence the daily habits and how we consume energy. Studies have shown that a Norwegian uses a different amount of energy for cooking than a French, and an Italian heats his/her house in a different way than a German.

Cultural-E will try to establish guidelines for designing PEBs in Europe taking into account these cultural and climatic differences.

The project will last 5 years and will build four multifamily housing demonstration cases in:

- Medicina (Bologna – IT), representing the Mediterranean area
- Armentièrs (Lille – FR), for the Oceanic area
- Eislingen/Fils (Stuttgart – DE), for the Continental area
- Oslo (NO), for the Sub-Arctic area.

The project is coordinated by EURAC, a research centre headquartered in Bozen (Italy), and includes 17 participants, such as local authorities, SMEs, technology providers, designers, European universities, construction companies and the Architects' Council of Europe.

The project team will develop technologies that take into consideration the local climate and socio-cultural contexts to enable a comprehensive optimisation of value/cost ratio of PEBs. One of the design tools will be an interactive atlas of the different European climate-cultural geo-clusters in combination with possible solution sets in order to provide guidance for architects and designers interested in building PEBs. During the kick-off meeting, the partners had a working session and established the foundations for it.

The team will also look at co-benefits, such as health and community impact. For instance, a PEB could balance the energy needs of a cultural heritage building in the same district which cannot be retrofitted.

The next consortium meeting will be held in six months in Bolzano, Italy, where the partners will present the first research results.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement **N. 870072**.

More information:

Website > https://www.cultural-e.eu

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Press contact

Julie Deutschmann

Julie.deutschmann@ace-cae.eu