CIVIS

Cities as drivers of social change

Energy paradigms have had a major role in shaping societies and people's behaviours. Major changes in energy paradigms corresponded to tipping points in the evolution of society and economy. We are now about to reach a new tipping point. Environmental factors (related to global warming), together with developments in renewable energy technology and ICT, are leading to a radical change in the way energy is generated, transmitted, distributed and consumed. At the same time, the way in which ICT can re-shape societies into distributed and peer-to-peer models that empower people and communities is another major change that cannot be neglected.

The CIVIS Project Concept

CIVIS focuses on the **ICT-enabled social dimension** for harnessing the innovation potential of individuals and collectives with respect to energy prosumption. CIVIS will contribute to the design of a fairer, more sustainable, energy-optimized smart city. CIVIS will link energy, ICT and society to achieve, at the same time, significant impacts in terms of CO_2 reduction and new forms of social innovation. In this sense, CIVIS will go one step further than existing approaches that focus on economic incentives (*e.g.*, cost reduction) for. CIVIS will prove that energy may be turned into a good that people can consume, generate and allocate on the basis of diverse and heterogeneous needs, preferences and values.

CIVIS in a Nutshell

The CIVIS project will provide answers on:

- How to handle, measure and incentivize peer production and consumption of renewable energy and distributed energy storage in households;
- How to benefit from individual and collective social dimensions in the provision of new services and opportunities in the energy value chain;
- What kind of ICT system architecture can enable these new services;
- How to make this system scalable in the 'horizontal' sense (widening potential target users and cities) and in the 'vertical' one (improving the services offered).

Outcomes & Impacts

The main outcome of the CIVIS project will be an integrated ICT platform and a decision support system able to achieve energy savings and CO_2 reduction by enabling a close interaction between prosumers and main stakeholders.

CIVIS will enable a more efficient, sustainable and CO_2-aware energy system in smart cities. CIVIS will foster the adoption of more energy-aware behaviours through the deep involvement of the social system and the leverage on community-based dynamics in the energy system.

CIVIS will enable communities, interest groups, business and non-business players to decide how to allocate energy according to shared goals, intents and beliefs. This will foster the arising of new forms of social aggregations able to enact new energy eco-systems.

CIVIS will enable the emergence of new actors in the value creation process. In particular, the technology developed in CIVIS will empower end-users with more control over the usage of the energy they generate.

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The Consortium includes:

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- Aalto University (FI)
- Enel Foundation (IT)
- Imperial College (UK)
- Instituto Superior Tecnico (PT)
- Karlsruhe Institute of Technology (DE)
- KTH (SE)
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