

"Smart cities and climate neutrality: the contribution of Renewable Energy Communities"

Climate neutrality must be accomplished in cities. Cities in EU cover about 4% of the soil but produce over 70% of all global greenhouse gas emissions. Cities are not only growing rapidly, but they represent the "laboratory" in which the decarbonisation strategies of energy, transport, buildings, and even industry and agriculture coexist and intersect. The density of infrastructures and their use is larger in cities, where there is larger potential for intersectoral integration to achieve the smart grid paradigm.

The progressive electrification of consumption in various sectors, favoured by the growing diffusion of generation powered by renewable sources, underline the growing importance that the electricity system will play in this context. However, the primary energy sources that are needed to produce electricity remain an issue still which needs major and coordinated efforts to be solved, as the use of renewable sources is still very limited. The present picture in this respect will be summarised in this keynote from different perspectives: World, Europe and Italy.

Energy Communities, envisaged by the RED II and IEM European directives, and formed by citizens' associations, commercial activities or companies for the production and sharing of electricity from renewable sources. They may bring a significant contribution for the accomplishment of the energy transition in several countries and represent the core of smart districts, capable of transforming themselves into so-called Positive Energy Districts. Some results relevant to the GECO project, which aimed at establishing a renewable energy community in the city of Bologna will be presented, to show both potentialities and gaps that still needs to be bridged in order to promote the diffusion of renewable energy communities.

Short biography:

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