

TITLE: Sustainable energy solutions for smart cities: the importance of citizen energy communities

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Abstract

Today's societies face huge challenges regarding their energy needs. Energy is required for economic development and for human comfort, but climate changes are harming the planet and raising health issues and must be mitigated by sustainable energy production and use.

The use of renewable energy should still increase to meet ambitious targets regarding carbon neutral societies and almost one hundred per cent renewable-based power and energy systems. Changing from a vertical utility centric approach towards a distributed user-centric approach is key to enable the changes. Organized citizen energy communities and active citizens participation is a crucial factor in this process.

The class will focus on the roles of citizens and citizen energy communities, addressing the related social and technical challenges and the business and technologic models that can enable a secure progress towards sustainable power and energy systems. Practical case studies will be used as illustration of those models.