

ANNEX 83



IEA EBC Annex 83 on Positive Energy Districts

**Second International Energy Agency,  
Energy in Buildings and Communities,  
Annex 83 Ph.D. Summer School**

**“Principles of energy system modelling for  
Positive Energy Districts”**

Catania, Italy

June 12 – 16, 2023



## IEA EBC Annex 83 on Positive Energy Districts

### Concept

Positive Energy Districts (PEDs) play a significant role in fostering the transition to sustainable, energy-efficient and energy-flexible urban areas, characterized by an annual positive surplus of renewable energy and net zero greenhouse gas emissions. Energy efficiency and energy flexibility are key functions of PEDs that build upon the integration of renewable-based energy systems and their interaction with infrastructures, buildings and markets, while ensuring a reliable access to energy, security of supply and achievement of economic, environmental and social sustainability.

Under this framework, the International Energy Agency (IEA) Energy in Buildings and Communities (EBC) Annex 83 Summer School “*Principles of energy system modelling for Positive Energy Districts*” will provide participants with a perspective at renewables-based production system, energy flexibility issues and sustainability assessment targeted to the PEDs paradigm.

### Framework

The School is developed within the Annex 83 on “Positive Energy Districts” of the International Energy Agency, under the Energy Buildings and Communities program.

The aim the Annex is to provide a comprehensive definition of PEDs and technologies, tools, sustainability assessment and guidelines for planning and implementation of positive energy districts.

More details at the website: <https://annex83.iea-ebc.org/>

## IEA EBC Annex 83 on Positive Energy Districts

### Programme

For this second-year edition, the Annex 83 Summer School will embrace the energy modelling of PEDs as main focus. In this context, the School will focus on a range of issues related to the theoretical and practical challenges for PED implementation, design and energy management issues, as well as some consequent sustainability aspects. Existing case-studies will be presented and discussed.

The School is structured along five days. During the first four days, interactive lectures will focus on key aspects of energy system modelling in PEDs. Each lecture will alternate with working activities sessions, allowing participants to collaborate in teams and explore the insights provided by the lecturers. On the final day, participants will present the results of their group activities with a round-table on future research and application.

The detailed Syllabus of the School will be circulated to registered participants.

### Participants and location

The School will take place in Catania (Sicily – Italy) and it is open to Ph.D. students and post-Docs involved in research and teaching activities. Students with background in energy, environmental, civil, electrical, mechanical and software engineering, urban planning and architecture are welcome. A basic understanding of the main fundamentals of energy system modelling is recommended.

The School will take place in presence only, to foster knowledge sharing and collaborative exchanges among students and Lecturers.

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### Where to apply

Please fill the [registration form](#) before **30<sup>th</sup> April, 2023**. A maximum number of students of up to 30 is accepted, and registration will be closed once this limit is met.

Participation fee: **250 Euros**. Details will be communicated to participants after the due date for registration.

For further information please contact Rosaria Volpe ([rosaria.volpe@unict.it](mailto:rosaria.volpe@unict.it)) and Francesco Guarino ([francesco.guarino@unipa.it](mailto:francesco.guarino@unipa.it)).

### Organizing Committee

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