



Picture: David Hong

What are Positive Energy Districts?

The basic principle of Positive Energy Districts (PEDs) is to create an area within the city boundaries, capable of generating more energy than consumed and agile/flexible enough to respond to the variation of the energy market because a PED should not only aim to achieving an annual surplus of net energy. Rather, it should also support minimizing the impact on the connected centralized energy networks by offering options for increasing onsite load-matching and self-consumption, technologies for short and long term storages, and providing energy flexibility with smart control.

Annex 83 Positive Energy Districts

The aim of Annex 83 is developing an in-depth definition of PED and the technologies, planning tools and planning and the decision-making process related to positive energy districts. Experience and data to be used in the Annex will be gained from demonstration cases. The work is divided into the following four subtasks:

A Definitions and context

1. In-depth definition taking into account complexities of PED as far as possible
2. Classification of PED typologies considering various factors and creating archetypes

B Methods, Tools and Technologies for Realizing PED

1. Mapping energy technologies
2. Mapping smart technologies
3. Modelling, simulation and optimization tools: comparison and application

C Organizing principles and impact assessment

1. Economic assessment
2. Environmental assessment
3. Humanities and social impact assessment

D Demos, implementation and dissemination

1. Demonstration cases
2. Planning and implementation methodology guidelines
3. Dissemination

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