

The logo for ENEA, featuring the word "ENEA" in a bold, white, sans-serif font. To the left of the text is a stylized graphic of a sun or starburst with rays emanating from it, set against a dark blue background.

AGENZIA NAZIONALE
PER LE NUOVE TECNOLOGIE, L'ENERGIA
E LO SVILUPPO ECONOMICO SOSTENIBILE

PED Landscape

Driving Urban Transitions through Positive Energy Districts – **Contribution of UERA**

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PED – work in progress

WHY

WHERE

WHEN

WHICH

WHO

WHAT



PED : WHY



EU's long term climate and energy strategies : aims to be climate-neutral by 2050 – an economy with net-zero greenhouse gas emissions. This objective is at the heart of the European Green Deal and in line with the EU's commitment to global climate action under the Paris Agreement.

MAIN REGULATORY STEPS

1. November 2016 - All Parties to the Paris Agreement are invited to communicate, by 2020, their mid-century, long-term low greenhouse gas emission development strategies.
2. March 2019 - The European Parliament endorsed the net-zero greenhouse gas emissions objective in its resolution on climate change.
3. The European Council endorsed in December 2019 the objective of making the EU climate-neutral by 2050.
- 4 .March 2020 - The EU submitted its [long-term strategy](#) to the United Nations Framework Convention on Climate Change (UNFCCC).
5. The technology pillar of the EU's energy and climate policy is the SET-Plan.

PED : WHERE

Countries involved in the PED Programme



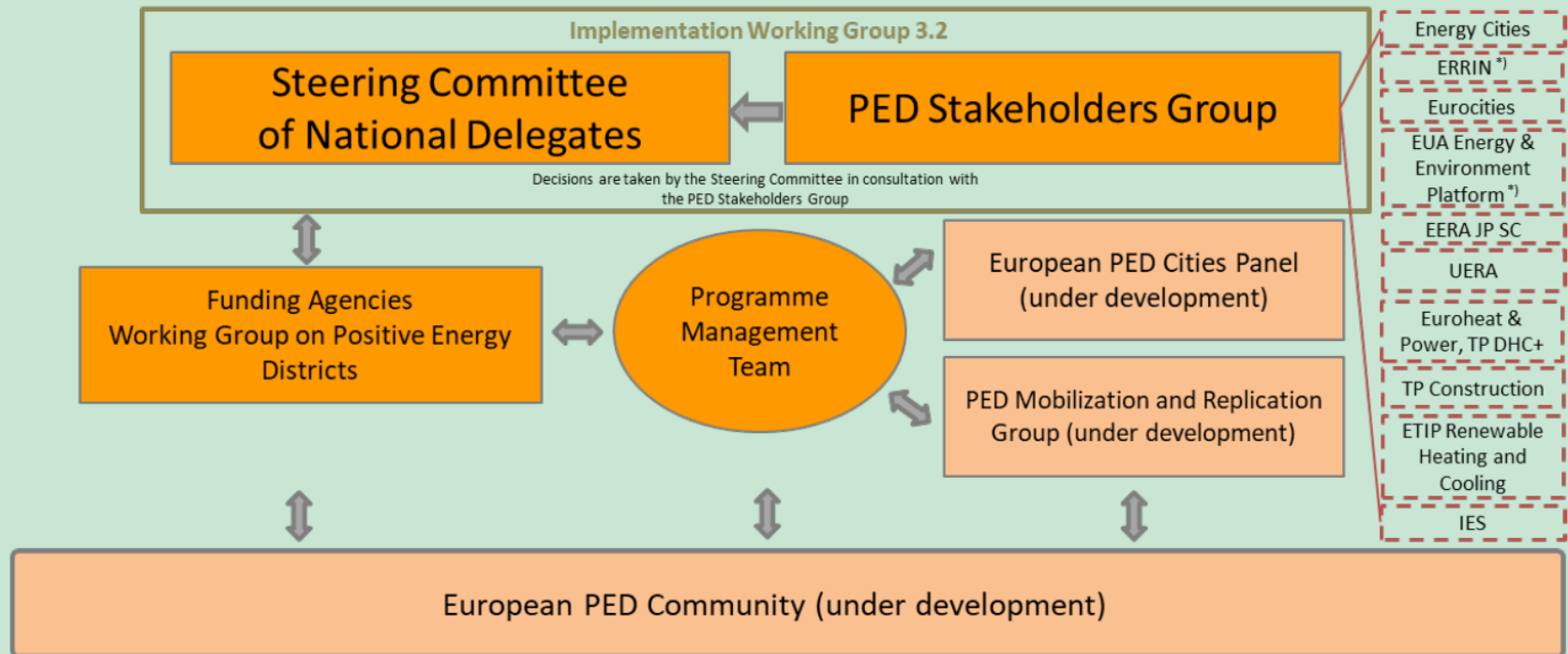
**are involved 20 countries
and stakeholders from
R&I funding networks,
cities, industry, research
organisations and citizen
organisations.**

2025

**100 'Positive Energy Districts'
synergistically connected to the energy system in Europe.**

PED : WHICH

Governance Structure SET-Plan Action 3.2



PED : WHO



COAST Action:
PED EU – NET
drives the deployment of PEDs by harmonising, sharing and disseminating knowledge and breakthroughs on PEDs across different stakeholders, domains and sectors.

IEA EBC Annex 83:
aims to enhance the cooperation on PED development to an international level from a technical enabler solution and governance model point of view.

PED PROGRAMME
(SET Plan Action 3.2 / JPI Urban Europe)
The Programme ,conducted by JPI Urban Europe, involves stakeholders from R&I funding networks, cities, industry, research organisations and citizen organisations.

PED : WHAT

PED is a district with annual net zero energy import, and net zero carbon dioxide (CO₂) emissions working towards an annual local surplus production of renewable energy.

(cit. SET-Plan ACTION 3.2 – Implementation Plan)

“Positive Energy Districts are energy-efficient and energy-flexible urban areas or groups of connected buildings which produce net zero greenhouse gas emissions and actively manage an annual local or regional surplus production of renewable energy. They require integration of different systems and infrastructures and interaction between buildings, the users and the regional energy, mobility and ICT systems, while securing the energy supply and a good life for all in line with social, economic and environmental sustainability.”.

(cit. White Paper on PED Reference Framework)

PED : WHAT

- *PED autonomous—a district with clear geographical boundaries that is completely self-sufficient energy wise, meaning that the energy demand is covered by internally generated renewable energy. The district is thus not allowed to import any energy from the external electricity grid or district heating/gas network. The export of excess renewable energy is, however, allowed.*
- *PED dynamic—a district with clear geographical boundaries that has an annual on-site renewable energy generation that is higher than its annual energy demand. The district can openly interact with other PEDs as well as the external electricity grid and district heating/gas network.*
- *PED virtual—a district that allows the implementation of virtual renewable energy systems and energy storage outside its geographical boundaries. The combined annual energy generation of the virtual renewable energy systems and the on-site renewable energy systems must, however, be greater than the annual energy demand of the district.*
(from PED definition workshop organized by the European Energy Research Alliance (EERA) Joint Programme Smart Cities)

Thank you
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