

What are PEDs?

Positive Energy District (PED) is important for city development. PED-ACT focuses on process optimization for enhanced stakeholders' cooperation and reinforced decision-making. PED-ACT contribute to standardisation of the database of existing PEDs (planned, designed or implemented) with a focus on Sweden, Turkey and Austria.

PED-ACT further learns from the database and creates digital PED references by mapping stakeholders' needs and priorities in the cities of Borlänge (Sweden), Umeå (Sweden), Ankara (Türkiye), Karsiyaka (Türkiye) and the county of Lower Austria (Austria). PED-ACT pursues bilateral learning and co-design strategies among different cities for wide replication of PEDs towards 'climate-neutrality and smart cities' goals.



We have four main tasks:

- **contribution to common PED database**
- **development of digital models of demo districts**
- **co-design process**
- **replication and scaling**



What do we offer ?

This project will involve the development of a database and new models for making a PED. The added value will be verified using co-creation between all partners.

We observed;

1. The need of a common database of existing PEDs,
2. The lack of a deep learning of the database to characterise PED and further guide PED development,
3. Insufficient co-learning/co-design strategies and cooperation,
4. The need to boost the potential of replication models of PEDs for climate neutral cities with reinforced decision-makings.



Themes

- **Rethinking how & when we save energy**
- **Rethinking how & when we produce energy**
- **Rethinking PED planning**
- **Rethinking who is driving the energy ecosystem**

Local State

- **Rethinking whom to involve**
- **Rethinking how to progress**
- **Rethinking the ways (scenarios)**

PED-ACT Synthesis

- **Common objectives and challenges**
- **Themes related to the PED development**
- **Potential Needs and Contributions**
- **Parallel themes**



We aim ;

1. To contribute to standardisation of PED common database for information integration;
2. To investigate co-design matrix for multi-criteria characterization of PEDs and generate digital references;
3. To enhance co-learning and co-creation strategies with iterative process;
4. To propose a replication plan for PEDs to contribute to a climate neutral city.

Collaboration

The international collaboration will enable the partners to create new relationships and collaboration and to link with other relevant initiatives, including the IEA new TCP on Cities/Annex 83 on PEDs, the COST Action Positive Energy Districts European Network, and Lighthouse Projects.

Who are we?

The PED-ACT consortium includes leading research institutes and universities in Europe in their specific field of expertise, and public/ industrial partners who have a strong business strategy to contribute to the transition of urban energy systems and circular economics. The cooperation will create the knowledge required for innovative solutions and technical support regarding current energy situations in various environments.



CONTACT

Xingxing Zhang - Project Coordinator. email: xza@du.se

Bahanur Nasya - Austria National Coordinator. email: office@wonderland.cx

Beril Alpagut - Türkiye National Coordinator. email: balpagut@demirenerji.com

A network of potential PED actors.

Why “settlements” instead of “city”?

European urban areas face significant challenges that can only be solved on different scales. The partnership works therefore on different scales, with two big Turkish metropolitan cities, two medium-sized cities in Sweden and smaller towns in Austria.



Partners

Austria



Sweden



DALARNA UNIVERSITY



UMEÅ UNIVERSITY



UMEÅ ENERGI



BORLÄNGE

Türkiye



DemirEnerji



ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY



T.C. ANKARA
BUYUKSEHIR
BELEDIYESI



T.C. KARSIYAKA
BELEDIYESI

Co-Operation Partners



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TÜBİTAK



Viable
Cities

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Auto characterization of
PEDs for digital
references towards
iterative process
optimisation

the project guide
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