

# Positive Energy Districts and Neighbourhoods





# Joint Call for Proposals: Positive Energy Districts and Neighbourhoods

With this first of a series of calls on the topic of Positive Energy Districts and Neighbourhoods (PED/PEN), JPI Urban Europe invited transdisciplinary and cross-sectoral communities of researchers and practitioners to create projects with focus on smaller-scale joint R&I projects (duration 1-2 years) on PED/PEN implementation, providing transnational alignment, comparison and exchange of experiences between ongoing (European) projects in different PED implementation phases, their integration in general urban strategies, stakeholder involvement strategies and the role of geographical/climatic conditions. The results from projects granted in this call should help to facilitate knowledge transfer and learning from different European contexts, cities and countries to create greater engagement and understanding in PED implementation processes.

## Aim of the call

Positive Energy Districts and Neighbourhoods may serve as a crucial contribution to achieve climate and energy targets. This call focuses on exchange of experience between ambitions and initiatives already going on. With this call, JPI Urban Europe aims to create a transdisciplinary and cross-sectoral community working in the field of the energy transition in the urban context, who can align, synthesise, consolidate, and learn from each other with regard to the development and mainstreaming of PEDs/PENs.

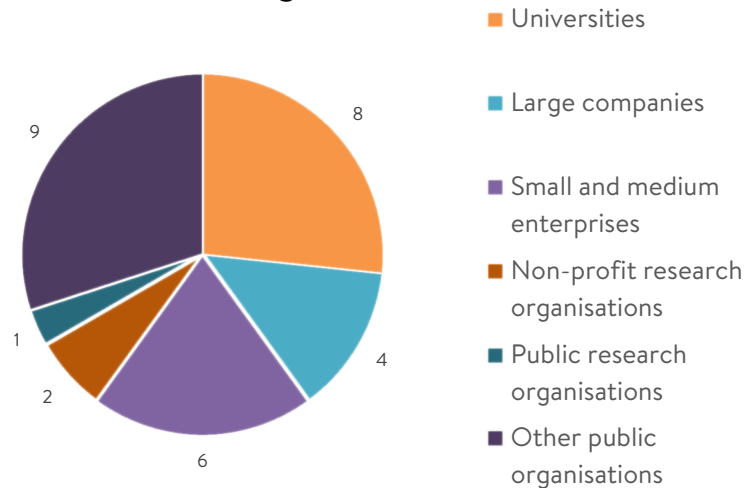
***Participating countries:*** Austria, Belgium (Brussels Capital Region), Czech Republic and Sweden



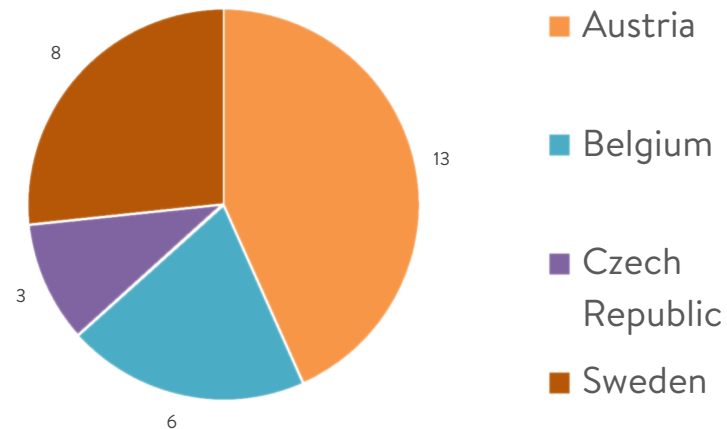


## Statistics

### Project partners per type of organisation



### Project partners per country





# Statistics

## Participating Countries and Funding Agencies

- Austria - FFG
- Belgium - Innoviris
- Czech Republic - TA ČR
- Sweden - SWEA





# The projects

The PED Programme has launched a first pilot call on Positive Energy Districts (PEDs) and now four transnational projects have been selected for funding and support for 1 – 2 years. The call focuses on exchange of experience between existing PED ambitions and initiatives in the fields of *Holistic approaches for PED implementation*, the legal framework and *Urban governance, stakeholder involvement concepts and business models*.

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# INTERACT

## *Integration of Innovative Technologies of Positive Energy Districts into a Holistic Architecture*

Climatic conditions worldwide force the comprehensive integration of renewable and distributed energy resources into the power system, the effective use of the energy and of the existing infrastructures. Business models are changing and becoming more customer-centric: The customers play an active role in energy supply. The way in which the power grid should be managed, as well as the interaction between all actors in the energy value chain, should become more direct, simpler and more structured. INTERACT effectively integrates all innovative technologies of renewable and distributed energy resources in a holistic architecture, and thus designs the first Energy Community worldwide that works in harmony with the power grid.

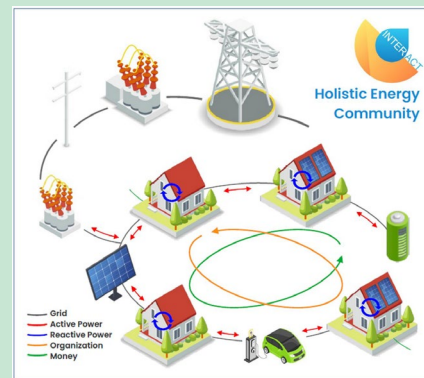
The used LINK-based holistic architecture unifies all interactions within the power system itself, between the network-, generation- and storage operators, consumers and prosumers, and the market. Through its standardised structure, this architecture facilitates all processes that are necessary for a reliable, economic and environmentally friendly operation of smart power systems in order to establish a beneficial situation for everyone. To achieve this, INTERACT builds on and integrates both success factors: the best practices of the European positive energy districts; and the specific local needs and requirements of the communities. INTERACT crowns with a roadmap that guides the implementation of a Local Energy Community through the description of a general and two specific cases in Sweden and Austria.

**Start/running period:** 01.02.21 / 24 months

**Applicant:** Sonnenplatz Großschönau GmbH

**Consortium:** FH Technikum Wien; TU Wien, Institute of Energy Systems and Electrical Drives; LEEF Technologies s.r.o.; Tornet Fastighetsutveckling AB

**Website:** [www.ped-interact.eu](http://www.ped-interact.eu)





# PED-ID

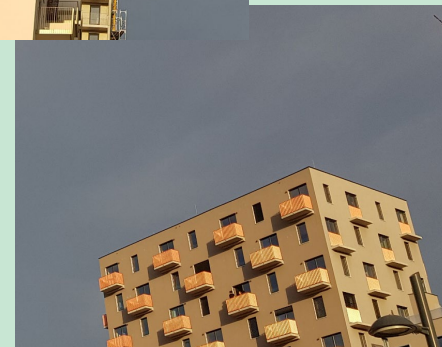
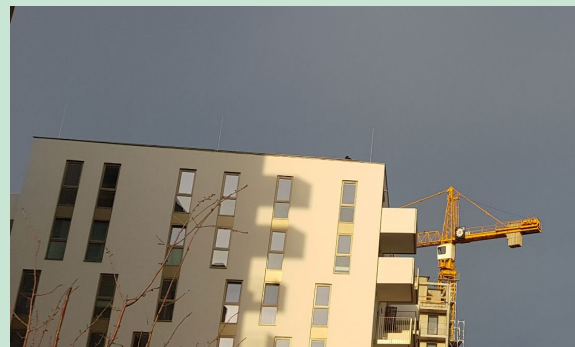
## *Holistic assessment and innovative stakeholder involvement process for identification of Positive-Energy-Districts*

Stakeholder involvement is by far the most important element for a successful implementation of PED, according to a survey by JPI Urban Europe. From our experience it is crucial to involve key stakeholders such as representatives of municipalities as early as possible in the area development in order to develop PEDs. As so often the phase with the highest degree of design possibilities is also the one where only few data about the future area are available. So decision makers have to make decisions without detailed information and long-term effects. This project provides decision makers with improved information at an early stage and creates a corresponding data-based participation process. The data will be collected and calculated with the help of a methodology and prepared for the appropriate target group. The target groups can actively use these in the data-driven participation process, consolidate their opinions and make decisions based on data. This process will be tested using real Living Labs of potential PED projects. This concerns the participation process and the development of the necessary data. With the help of this method, the decision on PED sites will be accelerated to reach the goal of 100 PED sites in Europe.

**Start/running period:** 01.01.21 / 18 months

**Applicant:** e7 Energie Markt Analyse GmbH

**Consortium:** SEVEN, The Energy Efficiency Center, z.ú.; Czech Technical University in Prague; White Arkitekter; Sustainable innovation AB



Source: Gerhard Hoyer, e7







# TRANS-PED

## Transforming Cities through Positive Energy Districts

Positive energy districts and neighbourhoods (PEDs) are a promising approach to rapidly achieve decarbonisation goals while creating more resilient and liveable cities. However, PEDs are challenging to implement because they require fundamental changes in the ways that cities are planned, designed, and operated in the long term. The aim of TRANS-PED is to develop a novel governance approach that can be adopted by PED stakeholders to realise deep and holistic changes to cities. This two-year pilot project will engage a learning network of PED stakeholders in Sweden, Belgium, and Austria to develop a shared set of tools and approaches to frame, embed, assess, and upscale urban energy innovations.

The project partners will engage in a series of online and in-person activities to co-produce a range of practical tools to build a community of practice and position Europe as a global role model for urban energy transformations.

**Start/running period:** 01.02.21 / 24 months

**Applicant:** KTH Royal Institute of Technology – Urban Planning and Environment

**Consortium:** Linköping University; City of Lund; Cosmopolis – Vrije Universiteit Brussel; DUS-explorers; OEAW-ITA; FH Technikum Wien; UFGC GmbH; Kleboth und Dollnig ZT GmbH; StadtLABOR – Innovationen für urbane Lebensqualität GmbH; ElectriCITY Innovation







# Cities4PEDs

## *Research, Exchange and Collaboration on City Levels to Enable PEDs across Diverging Contexts*

So far positive energy districts and neighbourhoods (PEDs) have been predominantly researched from a technological and energy perspective, often with a focus on electricity and related to new buildings. While the building level is clearly regulated with known possibilities for intervention, this is not the case for the level of districts and neighbourhoods. A broader implementation of the PED concept therefore requires a special focus on legal, institutional and organisational issues and a focus on the main actors, the cities, to develop effective instruments and structures. The cities of Brussels, Vienna and Stockholm join forces to initiate and steer in-depth exchange and capacity building, fed with first-hand experiences.

Enlarged by R&I partners, the consortium dives deep to understand how decisive legal instruments and planning processes of cities need to be adapted to realise PEDs. Furthermore, solutions for the missing administrative existence of the district/neighbourhood level are investigated to ensure long-term engagement and follow-up. Ideas and findings are reflected and validated in multi-stakeholder groups in each city. With the commitment from a European-wide network and in dialogue with more cities a transnational community of practice will be stimulated. Results will be summarised in key recommendations for take-up and advancement.

**Start/running period:** 01.01.21 / 24 months

**Applicant:** Architecture Workroom Brussels

**Consortium:** 3E NV; Wien 3420 Aspern Development AG; FH Technikum Wien; City of Brussels; City of Vienna; UIV Urban Innovation Vienna GmbH; City Mine(d); Stockholms Stad

