Simply Positive

Supporting innovative and ambitious cities and municipalities on their pathway to Positive Energy Districts through easy, clear, and understandable guidelines, targets, and strategies

Paving the way for PEDs

SIMPLY POSITIVE supports the emergence of Positive Energy Districts and the transition to Climate Neutral Cities:

- Produce more energy locally than consume it
- Implement sensible cost-cutting measures
- Minimize CO_2 emissions and relieve the climate

This project has been developed in the framework of the PED Program, which is implemented by the Joint Programming Initiative Urban Europe and SET Plan Action 3.2.
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4 Focus Regions

Amsterdam/NL **Settimo Torinese/IT** **Reșița/RO** **Großschönau/AUT**

different: nations - sizes - climatic conditions - existing sustainability strategies in place

Urban PV Maximization

To the PV potential in urban areas, a geospatial map was created, considering roof sections, module fitting, and energy yields, while factoring in roof usage and building limitations. The results show that combining photovoltaic (PV) with thermal systems (PVT) can significantly increase energy efficiency. Additionally, policy recommendations emphasize automating PV installations, offering financial incentives, and developing guidelines for diverse panel configurations. Stakeholder involvement is crucial to ensure successful implementation.

Download the results here:

Local RES as support for e-mobility

The electricity demand for private e-mobility was assessed using a simulation model based on a parking-based approach, focusing on driver habits and charging patterns without requiring trip matrix data. Key inputs included vehicle characteristics, driver behavior, and charging on infrastructure, with seasonal variations like reduced battery efficiency in winter affecting demand.

Download the results here:

Reducing Energy & Carbon Footprint through Behavioral Change

Energy-saving potentials and GHG reductions from various best practice measures in heating, cooling, electricity, mobility, and public areas in the Focus District Großschönau were calculated and ranked. This final ranking provides a strategic roadmap for implementing the most impactful measures, balancing both environmental benefits and practicality for broader adoption.

Download the results here:

Embedding Climate Action Targets in City Policies

The SECAP methodology was used to set up a guideline for implementing PEDs by aligning with municipal goals like decarbonization and energy efficiency. Key steps include stakeholder collaboration, clear action plans, and robust monitoring. Success relies on effective communication and leveraging shared data and resources.The developed „PED demonstrator“ tool permits accurate tracking of the specific indicators defined.

Download the results here:

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Key facts

- Project submission to the Positive Energy Districts (PED) pilot call of the JPI Urban Europe framework program
- **Project duration:** January 23 - December 24
- **Project budget:** ~ 1,2 Mio. EUR
- **Project type:** Applied research

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Project consortium

SONNENPLATZ Großschönau

denkstatt create sustainable value

PV Works

Reșița

FH University of Applied Sciences TECHNIKUM WIEN

AMS Amsterdam Institute for Advanced Metropolitan Solutions

Città di Settimo Torinese

TU Delft

Key results

Development of a SIMPLY POSITIVE PED framework with innovative strategies, concepts, and guidelines to increase the participation level of municipalities and cities to foster the creation of Positive Energy Districts (PEDs) and Positive Energy Neighborhoods (PENs):

- Focus on and expansion of **existing urban strategies** for climate & environmental strategies
- Creation of a **standardized and practicable energy balance calculation process** based on available data
- **Monitoring system** to see, qualify and verify actions
- **Evaluation of participation strategies** based on impact and acceptance.

Framework definition

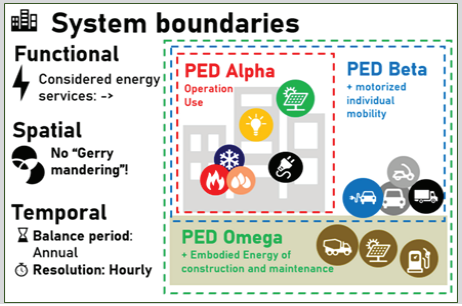
A PED is defined through a quantitative energy balance, involving **system boundaries**, a **weighting system**, and **balance objectives**.

System boundaries are categorized as:

- **Spatial:** Physical limits of included energy services.
- **Temporal:** Balancing period, typically one year.
- **Functional:** Specific energy uses, such as operational energy, mobility, and embodied energy.

This approach creates three PED variants:

- **PED Alpha:** Focuses on operational energy and electricity use.
- **PED Beta:** Adds private daily mobility
- **PED Omega:** Includes embodied energy from construction and maintenance.



Energy balance calculation results

Each layer brings increasing complexity and uncertainty, requiring **robust data collection across 5 categories**:

- general characteristics
- energy use
- geometry
- climate, and
- building attributes.

These datasets enable precise modeling and evaluation of PED performance, ensuring alignment with net-positive energy goals.

The most effective development scenarios combine a **variety of available strategies**, such as flexible grid usage and the integration of renewable energy technologies. For the considered Focus Districts **2 primary strategies** can be emphasized:

- **building renovations** (including insulating walls, roofs, and basements, as well as replacing windows)
- and the **installation of PV panels.**

All results can be found here: