



U2DEMO

**Use of open-source P2P
energy sharing platforms
for energy Democratization**



**Empowering Citizens
through Energy Sharing**

The **U2Demo project (Use of open-source P2P energy sharing platforms for energy democratization)** aims to create innovative, consumer-centered management strategies that facilitate a widespread participation in Peer-to-Peer (P2P) trading and energy sharing. Launched in September 2024, the project will promote equitable and democratic access to sustainable energy resources.

Funded by European Union's Horizon Innovation Action programme, under grant agreement no. 101160684, U2Demo brings together **nineteen participant partners, including 2 associated partners, from eight countries**, pooling their expertise to develop strategies that will be seamlessly integrated into open-source, non-proprietary tools and platforms. These solutions align with principles of openness, technology neutrality, interoperability, scalability, replicability, reliability, security, and trustworthiness.

These strategies will undergo **testing in 4 pilots within at least four diverse Energy Communities**, located in Italy, Belgium, Netherlands and Portugal and each with unique attributes and governance models.

The overarching objective is to assess advanced P2P trading and Energy-sharing tools, determine optimal implementation conditions, and consolidate the most promising solutions and associated business models.

U2Demo in Numbers



42 months



**17 partners +
2 associated**



**September 2024
to February 2028**



8 Countries



4 Pilots



**5 M€
EU Funding**

The Four pilots

Belgium Pilot Flanders, Antwerp

In Belgium, the pilot will have a strong social feature, focusing on overcoming energy poverty, as the demo will take place in a social housing neighborhood in the province of Antwerp.

This pilot will be led by Klimaan, a local cooperative managing a Citizen Energy Community (CEC) in the Otterbeek social neighborhood. The area faces low acceptance of new concepts by residents, resulting in an excess of solar energy due to low demand. One of the project's objectives is to analyze the reasons for this situation and explore ways to overcome it.

Dutch Pilot Hague, Netherlands

Living Lab Scheveningen is the flagship programme of The Hague's Smart City activities where the municipality, companies, residents and research institutions look for smart and digital inventions to solve societal challenges. Since last year, a collaboration with the local DSO (STEDIN) started allowing the development of deeper studies involving grid factors and the test of flexibility services.

Portuguese Pilot Évora, Portugal

The Portuguese pilot will be located in Valverde, a small rural village in Évora with about 450 inhabitants. Valverde was already involved in projects like DOMINOES and Inte-Grid, and is equipped with advanced devices for local energy monitoring and control.

In this pilot, the project will test the concept of Peer-to-Peer (P2P) energy trading within a Renewable Energy Community (REC) to evaluate and compare energy-sharing algorithms in a regulated environment.

Italian Pilot Teramo, Italy

The Demo is based in an operative Renewable Energy Community (REC) in Vallevignale managed by EnGreen. The REC involves 10 buildings: 5 of these can be considered prosumers (as they produce, self-consume and share their renewable energy production) and the remaining 5 are consumers (which can use the low-cost energy produced by the other members of the REC).

The goal of this Demo is to phase out natural gas, before 2024 by replacing gas boilers with heat pumps, conventional stoves with induction ones and supporting peak loads with solar water heaters.

Coordinator



Beneficiary Partners



Associated Partners



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Funded by
the European Union

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