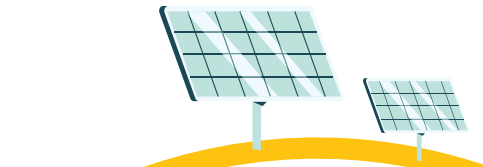
who we are



Let's stay connected

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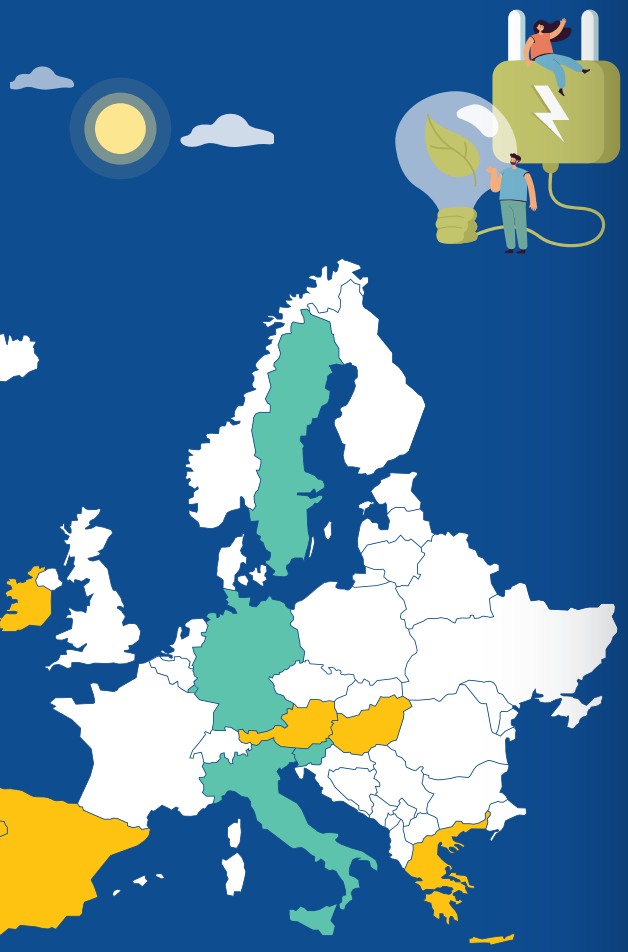

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement N° 101096354

ENPOWER

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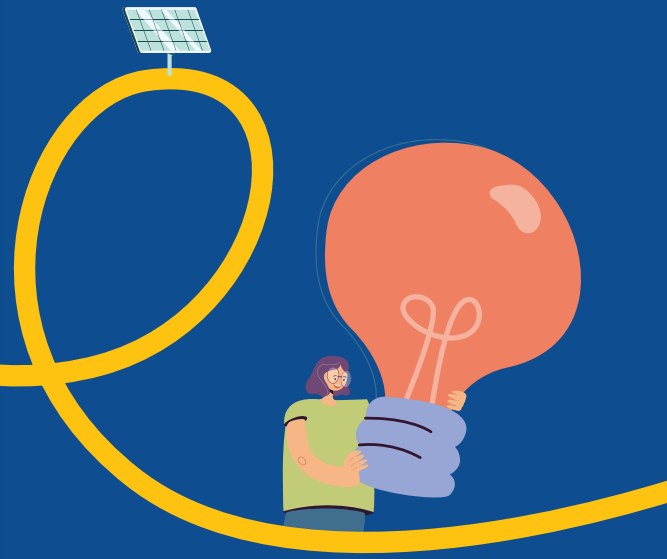
Energy Activated Citizens and Data-Driven Energy Secure Communities for a Consumer-Centric Energy System

Empowering citizens, Strengthening communities.



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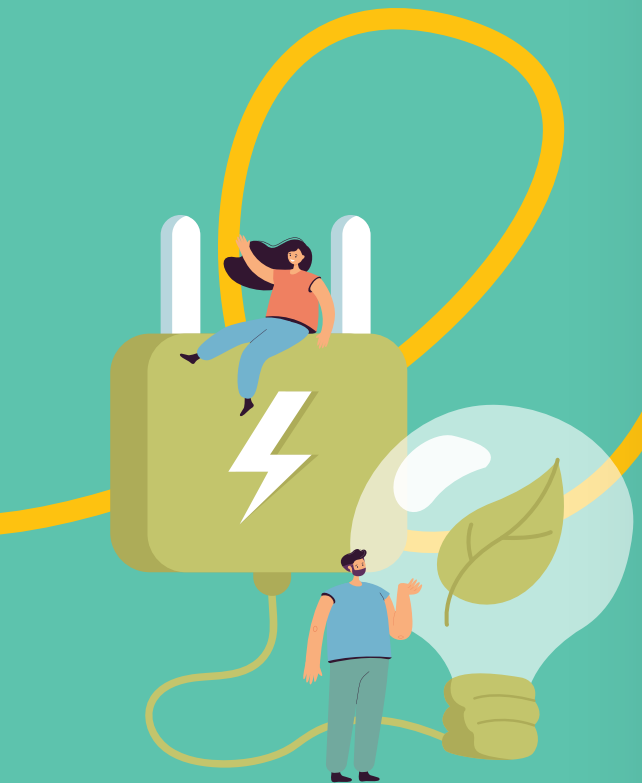
About ENPOWER

ENPOWER aims to design, develop, and demonstrate social sciences and humanities driven methodologies, and interactive, closed-loop ICT tools and services for energy activated citizens and data-driven energy-secure communities towards a consumer-centric energy system. The project strives to turn traditional passive energy consumers into active energy citizens enabling them to take full control on their energy usage.

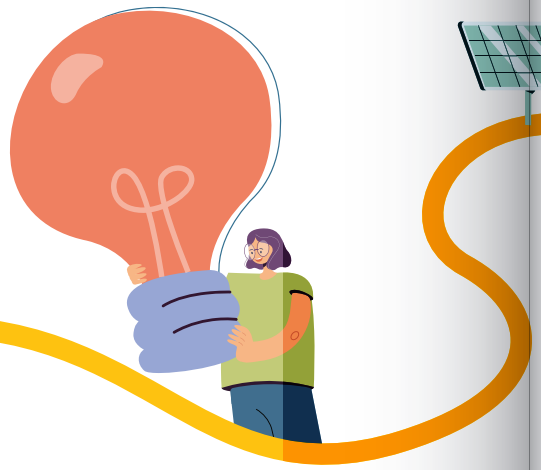


Social Layer:

Enpower's social layer provides a Social Science Framework adopting a variety of established methodologies investigating consumer preferences and behaviour to facilitate consumer activation in the context of energy communities.

Technological Layer:

Enpower's technological layer includes facilitation and planning services on an individual and community level including but not limited to Consumer clustering algorithms, an Energy Community planning tool, and data-driven services for optimally managing and upscaling consumer activation.



Business layer:

Enpower's business layer is designed to create sustainable economic models for energy consumption. We collaborate with energy providers, policymakers, and stakeholders to develop strategies that benefit both the economy and the environment.

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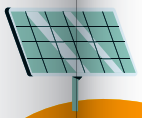
Expected outcomes:

The project aims to deliver a comprehensive set of results to advance the energy landscape including:

- A Social Science Framework,
- AI-based consumers clustering and market segmentation algorithms,
- An interactive decision support tool and facilitation services,
- An Energy Data Space compliant digital backbone,
- Interoperable DR, and privacy-preserving federated learning,
- A Peer-to-peer digital marketplace for tokenized energy assets,
- Data-driven services and apps for energy efficiency and activation performance management, and
- A Business Sandbox to explore novel sharing economy and social innovation-based business models.



Expected impact

- **Economic:**
  - 13–15% cost reduction in the energy bill for activated energy consumers
  - 15% increased energy efficiency
- **Technological:**
  - Harmonise and extend existing automation-oriented standards, business DR standards, ontologies, and languages,
  - 45% increased energy data sharing by active consumers after 5 years,
  - 10 new data-driven services to facilitate consumer activation and market participation,
- **Societal:**
  - 30–35 energy communities created, set up, and/or upscaled/replicated after five years from the project starting date,
  - >1500 consumers engaged and >1000 consumers activated,
  - 40% average yearly increase of the share of consumers energy market participation via energy communities,
  - > 500 active consumers engaged in automated DR,
  - 15–20% carbon emission reduction in the areas of the 6 pilots due to increased decentralized management of energy infrastructures