



ENPOWER

POWER IN OUR HANDS

Transforming the energy system in a consumer centric structure with energy activated citizens and data driven energy secure communities

Bringing together people and actors from all layers of the energy system to design, develop, and demonstrate methodologies, interactive tools and services, and business models towards a consumer centric system.

The approach combines the Social layer with the Technological and Business ones. A Social Science Framework adopting a variety of established methodologies investigates consumer preferences and behaviour to facilitate consumer activation in the context of energy communities while facilitation

and planning services for individual and community level services foster optimally managing and upscaling consumer activation, coupled with the creation of sustainable economic business models for energy consumption.



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



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who we are

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