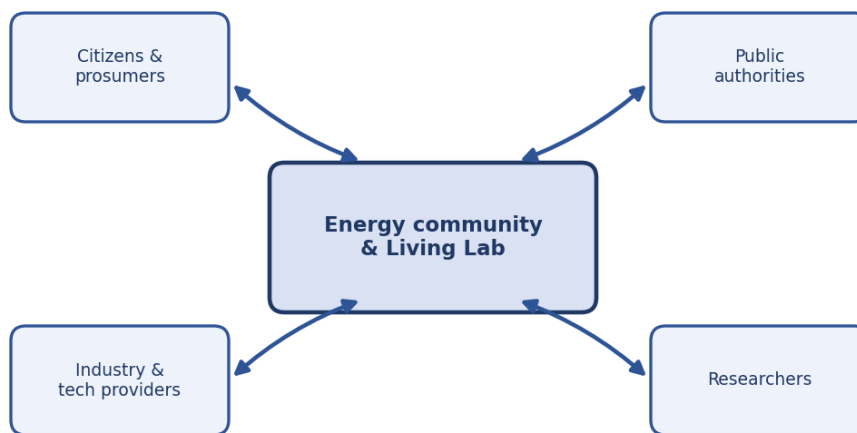


## Power to the community: energy communities at the heart of the transition

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The energy transition is often described in terms of technology — batteries, grids, software. But at its heart lies something more human: people and communities choosing to take an active role in how their energy is produced, stored and shared. FlexCHES places these energy communities at the centre of its work.

### Energy communities and Living Labs at the centre



An energy community brings citizens together to generate, store and manage energy collectively — often from local renewable sources such as rooftop solar. Rather than being passive consumers, members become active participants, and in many cases prosumers, both producing and consuming energy. This shift brings real benefits: lower costs, greater energy independence, and a stronger sense of local ownership over the transition.

FlexCHES supports energy communities by giving them the tools to do more with the resources they already have. Through the project's open platform, communities can pool their distributed assets — solar panels, batteries, heat pumps and flexible loads — into a Virtual Energy Storage System, and offer flexibility to the grid. Transparent, blockchain-based mechanisms ensure that members are rewarded fairly for the flexibility they contribute, and clear, user-friendly interfaces help people understand how their actions affect their energy use.

Energy communities are now firmly embedded in European law. Since the Clean energy for all Europeans package and the recast Electricity Market Directive (EU) 2019/944, citizens have the right to come together to generate, store, share and sell energy, and to provide



flexibility services. FlexCHES gives these communities practical tools to exercise those rights — and, through its Living Labs, a structured way to shape the technology around their needs.

A distinctive feature of the FlexCHES approach is its use of Open Living Labs. These are real-life, user-centred settings in which energy communities, public authorities and other stakeholders come together to co-design solutions, share experiences and explore how the project's results can be used and scaled. Built around the pilot sites, the Living Labs follow an open-innovation philosophy: solutions are not simply handed to communities, but shaped with them.

This community focus is visible across the project's demonstrations — from the renewable energy community in Bullas, Spain, to the island community of Gökçeada in Türkiye. Each shows how local participation can deliver value both to members and to the wider energy system.

By combining technology with genuine engagement, FlexCHES aims to ensure that the benefits of a flexible, renewable-powered grid are shared widely — and that communities are not just affected by the energy transition, but actively driving it.

### **References and further reading**

- [Energy communities — European Commission](#)
- [Directive \(EU\) 2019/944 on the internal market for electricity — EUR-Lex](#)
- [FlexCHES project — CORDIS, European Commission](#)



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