Energy communities are legally-defined citizen-driven entities active in the energy sector with a unique status in the market. Their uniqueness stems from specific regulatory exemptions that distinguish them from traditional energy actors. For instance, they are not required to obtain a supplier license, enabling direct energy sharing among members. Beyond this, energy communities can engage in activities like self-consumption, local energy sharing, acting as DSOs, demand aggregation, heat generation, and storage management. These activities foster participatory, localized energy models, transforming traditional supplier-consumer roles.

Since the introduction of EU directives (2001/2018 and 2019/944) which established energy communities in the form of citizen energy communities and renewable energy communities, numerous initiatives to create such communities have emerged across almost as many regulatory frameworks. The broad range of objectives that energy communities aim to serve under EU legislation has provided significant room for interpretation regarding their forms and operations. For this workshop, we have summarized the stated objectives for energy communities under three headings: increasing renewable energy sources, fostering low-voltage flexibility, and ensuring a fair distribution of the benefits.

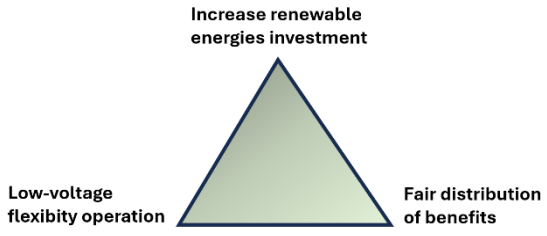

Figure 1: Energy communities' objectives

The first stated objective is to **increase renewable energy investment**. Energy communities facilitate direct investment by citizens in renewable energy, empowering them to take an active role in the energy transition. This approach not only boosts renewable energy deployment but also strengthens public support for local energy solutions.

The second objective is to **foster low-voltage flexibility**. The growing share of intermittent renewable sources and increased electricity demand necessitate greater flexibility on the demand side. Energy communities have been conceived as templates for increasing decentralized generation and reducing grid dependency during peak times.

"By directly engaging with consumers, community energy initiatives demonstrate their potential to facilitate the uptake of new technologies and consumption patterns, including smart distribution grids and demand response, in an integrated manner."

EU Directive 2019/944 - Recital 43

The third objective is to **contribute to a fair transition**. Energy communities aim to enable affordability of electricity consumption, redistribute benefits equitably, and foster inclusive governance. By reducing costs and ensuring broad participation in decision-making, they help create a more equitable and resilient energy system.

Europe currently hosts at least 2,500 energy communities, involving approximately 2 million citizens actively producing electricity.[1] This number is expected to grow significantly. Research by CE Delft in 2016 predicted that by 2050, around 83% of EU citizens and 187 households could be involved in renewable

[1] REScoop.eu

energy production.[2] If this projection becomes reality, energy communities will play a transformative role in future electricity consumption.

Behind the energy community denomination, however, lies a variety of designs: from residential prosumers sharing surplus energy, large cooperatives supplying and balancing energy, to corporate groups investing in on-site production to cut energy costs. The multiple objectives that energy communities pursue explain this diverse landscape, even though encouraging citizen investment and engagement in decentralized renewable energy seems to have been the primary focus of most existing energy communities so far.

This raises the question of whether the emphasis on renewable energy investment and acceptance is a necessary first step before advancing towards fostering innovation and ensuring fairness. If that is the case, it is crucial to ensure that the regulatory framework anticipates the next steps. **Are we on the right path to achieving the broader ambitions set for energy communities?**

This workshop addresses this question, emphasizing evolving organisational forms, activities and business models of energy communities to create synergies with the rest of the energy system and ensure fair distribution of benefits. DemandFlex research[3] and academic literature suggest that we are at a juncture to ensure that energy communities fulfil their multifaceted objectives, now that their potential to boost renewable energy production has been demonstrated.

Integration is key to ensuring that energy communities deliver value to the entire energy system. Effective self-consumption and surplus management can reduce grid reliance and alleviate peak demand. Demand flexibility, through the management of shiftable assets and real-time demand, can play a crucial role in maintaining system balance. Applying proximity criteria ensures that local benefits are maximized while minimizing impacts on the low-voltage grid, thus avoiding infrastructure strain. Furthermore, fair cost-sharing mechanisms are essential to prevent imbalances or unintended negative consequences for non-participating users.

When effectively integrated, energy communities can create virtuous dynamics. They have the potential to drive further adoption of renewable energy, enhance grid flexibility, and stimulate both technological and behavioural innovation.

Currently, this complex landscape is shaped by incumbents' strategies and legal frameworks that, while enabling experimentation, require further refinements to fully unlock these benefits. These include the procedures for obtaining the official status of an energy community, the specific network tariffs applied to these structures, the accompanying governance frameworks, and the proximity criteria they must meet. **Clear and consistent rules are needed for energy communities to become well-integrated and fair players in the broader energy system.**

The DemandFlex project

[2] The potential of energy citizens in the European Union, CE Delft 2016.

[3] Viadere, E. (2025). Promoting energy-sharing communities: Why and how? Lessons from a Belgian pilot project. Energy Policy, 198, 114483.; Beudels, M., & Perl, M. (2024). Las comunidades energéticas locales en Bélgica. In *Comunidades energéticas locales: Claves 45* (pp. 367-382). Fundación Democracia y Gobierno Local.