

# Energy communities as a tool for developing decentralised generation and resilience of the Ukrainian energy system

In the context of war and the energy challenges accompanying Ukraine's reconstruction, communities are seeking tools to strengthen local energy resilience. Energy communities — a model that has already proven effective in the European Union (EU) — empower local energy production and consumption, bolstering energy independence, involving citizens in project management, and ensuring sustainable development.

In Ukraine, this concept is only beginning to take shape in legislative initiatives. Although current legislation already allows the establishment of energy cooperatives, such models have not become widespread.

## Part I: Legal foundations and development challenges of energy communities in Ukraine

In 2019, an amendment to Ukraine's Law "On Alternative Energy Sources" introduced the definition of an energy cooperative as a legal entity established to engage in business activities for producing, procuring, or transporting fuel and energy resources, storing energy, and providing related services to members or territorial communities, with the aim of meeting community needs while generating profit. However, in practice, this model remains not. One notable success story is the "Solar City" cooperative in Slavutych, yet despite the approach's potential, the number of similar initiatives has not significantly increased. This points to systemic barriers requiring further analysis: ineffective state support mechanisms, lack of economic incentives, administrative burdens for initiators, and low trust in cooperative structures rooted in soviet-era experiences.

Currently, two main legislative tracks are emerging in Ukraine regarding energy communities, driven by EU integration obligations. In EU law, energy communities are defined in two separate terms: "citizen energy communities" under Directive 2019/944 on the internal electricity market, and "renewable energy communities" under Directive 2018/2001 on renewable energy (RED II). Accordingly, Ukraine is simultaneously working on amending its electricity market law and

implementing RED II provisions, requiring careful coordination to avoid duplication, contradictions, and to create a coherent legal framework.

However, merely transplanting EU norms into national law is insufficient. Priority should be given to developing a domestically adapted model that takes into account Ukraine's economic, social, and legal particularities of territorial communities.

At this stage, Ukraine faces a choice between two approaches. The first approach involves incorporating a single, unified concept of an "energy community" into national legislation. This term would encompass both models of citizen energy communities and renewable energy communities, bringing them together under one legal framework. Such an option would simplify the regulatory framework and streamline communication at the national level. However, it would also introduce certain discrepancies between Ukrainian legislation and EU law, which would necessitate separate consultations and coordination with the European Commission.

The second approach—aligned with the EU's model—would involve implementing both terms separately: "renewable energy community" and "citizen energy community," but defining their legal nature, membership requirements, objectives, and scope of rights more clearly (potentially even more precisely than in the EU). This approach would require careful work to ensure legal and terminological consistency between these concepts, as well as adapting them to Ukrainian legal institutions.

The status of energy cooperatives already included in current legislation also needs clarity. Their low practical usage stems from legal ambiguity, procedural complexity, and mixed understanding of the cooperative model. Two options exist: remove cooperatives from energy law as ineffective or redefine them explicitly as one viable organizational form for renewable or citizen energy communities. In many EU countries, cooperatives are just one among several forms such as LLCs, non-profits, municipal companies.

Therefore, the final solution must be legally sound and strategically consistent. Ukraine should either introduce a simplified national model of energy communities or fully implement and refine the EU concepts, clearly distinguishing and modernizing cooperatives.

One critical aspect of successful implementation is defining the organizational form. EU experience shows the most effective models combine democratic governance, community control, and limited income generation with mandatory reinvestment in projects and social needs. This ensures societal benefit over private profit while retaining structural flexibility.

In this context, it is important to foresee that Ukrainian legislation should enshrine a flexible model that allows for different organizational and legal forms of energy communities, such as cooperatives, associations, limited liability companies or other legal entities, provided that their internal documents and governance mechanisms guarantee democratic control, open participation and social orientation of activities. Such an approach is in line with Directive EU No. 2019/944 on common rules for the internal market in electricity, which stipulates that the main purpose of energy communities should be to create public benefit for members of the community or local community, rather than to maximize profit. At the same time, EU legislation does not establish a strict requirement for the status of a non-profit legal entity, allowing the generation of income provided that it is used for the needs of the community.

Considering Ukrainian realities, energy communities could be framed as social enterprises or cooperatives with capped profit distribution and mandated reinvestment in infrastructure or pricing stability for members. Such an approach enhances investment appeal and project viability while maintaining social orientation and balancing community needs with European legal standards.

Regulation is also needed for access to state support mechanisms. Specifically, energy communities should have the right to participate in competitive procedures (e.g. auctions) for financial support and potentially be exempted from such procedures for small entities. This is in line with the European Commission's Climate, Environment, and Energy Aid Guidelines (CEEAG) for 2022–2030, which allow flexible conditions for energy communities. According to the Energy Community recommendations, national authorities can hold separate auctions exclusively for energy communities or enable support without auctions, applying social criteria such as public participation, job creation, or community backing. If energy communities participate in general auctions, less stringent requirements for example submitting permissions or guarantees at later stages — should apply.

In addition to legislative changes, state policy must ensure the creation of comprehensive support mechanisms aimed at stimulating the development of energy communities at the local level. Among the priority measures, it is important to highlight preferential loans for households, homeowners' associations, housing cooperatives, and small businesses, as well as the establishment of educational programs and advisory centers for representatives of local self-government bodies.

It is also essential to formalize that energy communities may operate either as isolated microgrids ("energy islands") or synchronized with the national system (integrated with Ukraine's Unified

Energy System). They should be able to meet local demand and connect to the grid via distribution system operators (DSOs). This balanced approach to decentralized energy addresses generation capacity shortages, meets community needs, and aligns with EU integration obligations. Introducing these tools also promotes equal footing for small players, improves access to support, and accelerates community-level pilot initiatives.

## Part II: Local experience and needs

Many territorial communities in Ukraine already have distributed generation infrastructure: rooftop or ground-mounted solar PV, cogeneration units, small wind turbines, and other local generators produced locally. There is keen interest in forming energy communities. However, absence of implementation mechanisms hinders launch and effective operation. For example, Zhytomyr operates solar plants and cogeneration units, but local governments lack institutional capacity and professional human resources to develop strategies and sell generated power in various market segments.

Noteworthy are initiatives by condominiums and small businesses installing generation assets for self-consumption. This demonstrates consumer interest in market participation and the potential for energy communities given proper support and barrier removal.

During discussions with local officials and mayors, several needs were articulated:

- Simplified grid connection procedures;
- Clear DSOs interaction rules;
- Access to advisory, technical, and legal support for energy projects.

Current mechanisms for distributed generation, such as the “active consumer” scheme, suffer from limited economic appeal. In 2023, approximately 900 MW of solar panels were imported, but only around 80 MW were connected as active consumer installations—indicating low uptake.

Taking into account the outlined issues, local communities are formulating specific requests to the central executive authorities. In particular, at the legislative level, it is necessary to establish the legal status of energy communities and to provide preferential conditions for the consumption of electricity produced within such communities.

Furthermore, as one possible approach, it would be advisable to develop and approve a methodology that would enable the national regulator, the National Energy and Utilities Regulatory Commission, to reasonably assess the feasibility of reducing tariffs for electricity transmission and distribution services in cases of local self-consumption. Such a methodology

should provide for economic incentives to foster the development of energy communities by applying tariff-setting approaches that differ from the traditional regulatory mechanisms used for natural monopolies. In particular, this involves the possibility of establishing differentiated conditions for paying for transmission and distribution services for participants of energy communities, in line with the European Union’s practice as set out in the European Commission’s Guidelines on State Aid for Climate, Energy, and Environmental Protection 2022–2030 (CEEAG), which emphasize the need to create an enabling environment for the development of small producers and local energy initiatives.

State policy must also include technical support for integrating energy communities into regional energy infrastructure planning. An important tool is the “energy independence passports” introduced by the government in 2024, which assess resources, vulnerabilities (e.g. the assessment of risks to the continuity of energy supply, dependence on centralized energy sources and the lack of local generating capacity, as well as the physical condition of the infrastructure), and resilience potential.

Local strategic planning relies heavily on Local energy plans (LEP). Since 2021, local authorities are legally required to develop and approve LEPs, with the deadline extended to November 13, 2025. Energy planning must explicitly consider energy communities as a key tool for strengthening energy independence and community resilience.

Currently, territorial communities are increasingly facing new challenges related to the need for comprehensive energy planning, as well as attracting financial and other resources for the preparation and implementation of technically complex projects. At the same time, there is a growing need to involve qualified specialists, ensure participation in the electricity market, and create conditions for the sustainable management of local energy systems.

## Recommendations

Despite the registration of several draft laws (Draft Law on Amendments to the Laws of Ukraine on the Integration of Electricity Markets of Ukraine and the European Union, aimed at formalizing the concept of energy communities in national legislation, No. 12087 dated 02.10.2024, and the Draft Law on Amendments to Certain Laws of Ukraine Regarding the Implementation of European Law on the Integration of Energy Markets, Enhancement of Supply Security, and Competitiveness in the Energy Sector, No. 12087-1 dated 18.10.2024), there is currently an insufficient understanding of the mechanisms for their launch and practical functioning. The situation is further complicated by the fact that EU legislation defines two separate concepts: "renewable energy community" under

Directive 2018/2001 (RED II) and "citizen energy community" under Directive 2019/944. It is critically important not only to formalize the terminology but also to establish practical mechanisms for implementing such initiatives at the local level.

It is therefore proposed to:

- **Develop a unified concept of energy communities**, either simplifying the EU model and obtaining Commission approval, or distinctly defining energy cooperatives, renewable energy communities, and citizen energy communities with clear rights, duties, and functional scopes.
- **It is important to enshrine flexibility in the concept and at the legislative level regarding the organizational and legal forms of energy communities, providing for the possibility of their operation in the form of cooperatives, associations, limited liability companies, or other legal entities.** At the same time, it is necessary to require that the internal documents of such communities guarantee democratic control, open participation, a social orientation in their activities, and a mandatory mechanism for reinvesting profits into the development of infrastructure or social needs of the community.
- **Enshrine at the legislative level the right of energy communities to preferential participation in state support mechanisms**, taking into account the provisions of the European Commission's Guidelines on State Aid for Climate, Energy, and Environment (CEEAG). In particular, provisions should include the possibility of participating in relevant competitions under simplified conditions or exemption from competitive procedures for small projects.
- **Take into account the recommendations of the Energy Community regarding the organization of auctions:** national authorities may provide for the holding of separate competitions exclusively for energy communities or, if necessary, offer support without competitive procedures. In such auctions, it is advisable to apply social selection criteria, such as public participation in the project, creation of new jobs, or enhancement of community support. If energy communities participate in general auctions alongside other project developers, less burdensome requirements should be considered, including the possibility of submitting certain permits or financial guarantees at later stages of the competitive process.
- **Establish a national support program for energy communities** that includes:

- access to preferential lending;
  - state or international grants for training, technical support, and project development;
  - provision of assistance to communities in developing the necessary knowledge, skills, and organizational capacity to launch and manage energy communities;
  - implementation of a “Energy independence passports of community” program to assess the potential for renewable energy use.
- **Integrate existing decentralized energy mechanisms** (active consumer scheme, aggregation, small distribution systems) into the broader legal and policy framework for energy communities.
  - **Develop a system for interacting with potential participants in energy communities**, including municipal enterprises, homeowners' associations, and small and medium-sized enterprises. This work should include information and educational activities, implementation of pilot projects, and organization of public consultations. The relevant ministries and other executive authorities (Ministry of Energy, Ministry of Development, State Energy Efficiency Agency) should be responsible for the implementation of this task.

Energy communities can drive decentralization and democratization of Ukraine’s energy sector — provided a comprehensive support system is established across legal, financial, organizational, and educational dimensions.