

# The Role of Energy Communities in a Just Energy Transition

## Problem

While each country where GIZ operates has its own regulatory definition of an “energy community” (EC), there is currently no shared definition within the organization or among commissioning parties.

This internal lack of clarity creates confusion around what qualifies as an energy community and, more importantly, what does not. This makes it difficult to identify and implement projects, and to structure proposals that meet the expectations of all stakeholders involved.

Given this, there is an urgent need to establish a common position that ensures coherence across the countries where GIZ is working under the EC framework, while also reflecting national contexts.

This document aims to initiate this conversation from the perspective of Colombia.

## Colombian Context

The Colombian state is responsible for ensuring the reliability of energy services and for offering better conditions to all users across the country.

Electricity supply in Colombia is organized through the National Interconnected System (SIN), which covers one-third of the territory and serves 96% of the population, and through isolated local systems in the Non-Interconnected Zones (ZNI), which provide partial electricity coverage to approximately 0.5% of the population. The remainder of the population lacks access altogether.

The SIN includes the full energy value chain: generation, transmission, distribution, and commercialization, ensuring constant and uninterrupted service.

## Current Challenges in the Electricity Sector

Colombia's energy system is marked by deep territorial and social inequalities. Despite a high national coverage rate, structural barriers continue to hinder a just energy transition.

In rural areas, many communities still lack reliable, continuous, and affordable electricity access. Additionally, the current tariff system is inequitable; subsidies often fall short of offsetting high costs in non-interconnected regions.

The rollout of renewable energy has been slower than anticipated, despite Colombia's vast solar and wind potential. This is due to regulatory bottlenecks, territorial conflicts, and the absence of social license from local communities.

In this context, energy communities emerge as a key strategy to address these challenges and to help transform the energy system into a more inclusive and just model. These communities can help ensure affordable, high quality energy access; electrify areas with limited or no service; and support new productive initiatives that strengthen local economies.

Such models promote social empowerment, strengthen territorial governance, and accelerate a just energy transition particularly in coal-dependent regions. Beyond improving technical and social conditions for electricity service, they contribute to a structural transformation of

the energy sector in line with principles of equity, sustainability, and civic participation.

## Energy Communities

Colombian regulation defines energy communities as actual or potential users of energy services who can organize themselves to generate, commercialize, and/or use energy efficiently through Renewable Energy Sources, renewable fuels, and distributed energy resources. These communities may consist of both individuals and legal entities.

Currently, many of these initiatives lack sustainable income-generating mechanisms to ensure long-term viability. Moreover, the economic benefits generated are not always reinvested within the community, limiting their transformative impact.

Combined with weak governance structures, unstable revenue flows, and limited payment culture, these challenges raise the risk of failure for implemented energy solutions.

## Energy Communities Approach

In light of local challenges, an energy community for GIZ Colombia is understood as a social structure (i.e., a community) with robust governance based on written rules and/or traditional practices organized around a productive project, where energy serves as a catalyst to improve quality of life

and equity within the community.

For example, the IKI JET and Interfaz IKI projects prioritize communities that demonstrate: (1) strong and sustainable governance structures with clear rules and effective decision-making capacity; (2) productive projects that generate income for the community; and (3) a formal legal entity that can act as the owner and manager of the energy solution, whether in the SIN or in the ZNI.

The sustainability of these communities' rests on two core pillars. Financially, it is supported through mechanisms such as: (1) the sale of energy surpluses (if connected to the SIN); (2) the strengthening of productive activities; and (3) the reduction of energy costs. In parallel, local capacity-building efforts focus on consolidating effective and transparent governance, improving the technical and organizational management of productive projects, and fostering a culture of sustainability grounded in community reinvestment.

Trust-building is also prioritised, both within the community and with external stakeholders such as companies, public entities, and NGOs—as a key condition for the long-term stability and scalability of these initiatives.

The ultimate goal is for the income generated to be reinvested equitably within the community, with priority given to the long-term administration, operation, and maintenance (O&M) of the energy system.

## Conclusions and Recommendations

As a first step, it is essential to understand the motivation behind creating an energy community in a specific context. These motivations may stem from technical factors (e.g., access to the grid or supply intermittency) or social drivers (e.g., inequities in access or pricing).

The motivation directly influences the project's approach, as elements like design, activities, costs, engagement strategies, and timelines can vary significantly. In general, addressing a technical challenge tends to involve less complexity than tackling a social one.

Once the motivation is clear, the energy community must be framed considering local regulations, the expectations of the commissioning party and political partner, and the project timeline. The level of community cohesion and the pace of dialogue processes can create vastly different implementation realities. Aligning expectations is therefore essential, as project outcomes can vary widely depending on the timeframe and the type of initiative selected as an energy community.

When defining funding sources and long-term sustainability strategies, it is crucial to identify local partners, companies with interests in the region or the project, government entities (national and/or local), energy service providers, NGOs, philanthropic institutions, and other international cooperation agencies.

It is also recommended to support local planning processes that can incorporate energy communities as part of a broader strategy for economic development and diversification, turning them into scalable and replicable models.

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