



Supported by:



on the basis of a decision
by the German Bundestag



Guidebook on solar energy community development and operation

Executive Summary

This document is prepared under the project “SunSharing - Supporting Solar Energy Communities in SEE” in partnership with the United States Agency for International Development (USAID) Connect for Growth activity. The “Sunsharing” project is part of the European Climate Initiative (EUKI). EUKI is a project financing instrument by the German Federal Ministry for Economic Affairs and Climate Action (BMWK). It is the overarching goal of the EUKI to foster climate cooperation within the European Union (EU) in order to mitigate greenhouse gas emissions. The overarching goal of the USAID Connect for Growth activity is to strengthen energy sector resilience. The opinions put forward in this document are the sole responsibility of the author(s) and do not necessarily reflect the views of the German Federal Ministry for Economic Affairs and Climate Action (BMWK), USAID, or the United States Government.

Table of Contents

Step 1: Preparation	2
Step 2: Choosing an activity	2
Step 3: Membership.....	3
Step 4: Registration of legal entity.....	4
Step 5: Technical project and commissioning	4
Step 6: Financing.....	5
Step 7: Operation.....	6

Step 1: Preparation

In the Republic of North Macedonia, the legal framework for energy communities consists of several key regulations. The Law on Cooperatives introduces the concept of an energy cooperative, a form of association for individuals or legal entities to collectively pursue economic, social, and cultural interests. The Law on Associations and Foundations grants the right to freely associate for achieving various goals, including energy-related activities. The Energy Law allows for the establishment of energy communities by legal entities such as cooperatives or associations, particularly for electricity production from renewable sources. However, the Housing Law limits apartment owner communities from forming energy communities, though they can enter agreements with established energy communities for shared use of residential areas for energy production. Future regulation will come with the new Energy Law and the Law on Renewable Energy Sources, which will transpose the EU Clean Energy Package and allow energy communities to engage in more activities such as energy supply, distribution, and storage.

The process of forming an energy community requires addressing various technical, legal, and financial questions, for which support from higher education institutions, municipalities, NGOs, and relevant state authorities (e.g., Ministry of Energy, Mining and Mineral Resources) is recommended. Engaging local stakeholders, including populations, municipalities, and companies, is crucial for identifying needs and challenges and fostering collaborative partnerships to implement energy projects.

Energy communities should assess local renewable energy potential (solar, wind, biomass) and energy efficiency needs, potentially with expert assistance or tools like Renewables.ninja and PVGIS. Additionally, a thorough analysis of the community's energy consumption, utilizing data from electricity bills or requesting hourly consumption data from EVN Elektro distribucija, is essential for planning and implementing renewable energy investments to meet members' needs. This ensures informed decision-making for sustainable energy solutions.

Step 2: Choosing an activity

To determine the energy activities an energy community can undertake, the following aspects must be analyzed:

- The goals, needs, and limitations of the energy community.
- The technical, technological, and financial prerequisites, needs, and challenges.
- The sensitivity and interdependence of phases in the project's implementation and the operation of the community.
- The distribution of responsibilities and benefits among members.
- Property and legal relations related to the construction of production capacities, infrastructure, and/or storage facilities.
- Environmental, economic, and social impacts resulting from the project's realization.

- This analysis aims to ensure the community's efficiency and sustainability. The text outlines possible energy activities for the community:

Electricity Generation: Can be done in two ways:

- Distributed production: Community members own production units, and the generated energy is shared among them based on the founding agreement.
- Joint production: The community owns one or more production units, and energy is shared among the members.

Electricity Sales: The energy community can sell produced electricity on the market, requiring registration as an electricity producer. It may offer some or all of the energy from community-owned or individual-member units.

Electricity Supply: The community can supply its members with electricity through a license. This can involve energy exchanges between members or agreements with external suppliers.

Energy Sharing: Energy produced within the community can be fully shared among its members instead of being sold on the market, without it being classified as supply.

Storage: The community may use storage systems, such as batteries, to manage surplus or shortages of electricity, which could be owned by members or the community.

Closed Distribution System: Members and producers within the community may be connected to a specific distribution system managed by the community, requiring a license for distribution system operation.

Revenues from these activities must be used exclusively for the community's needs or projects.

Step 3: Membership

Once a certain number of members form an energy community, the primary focus is to retain them and increase their membership by attracting individuals with shared interests in sustainable energy practices. Experience shows that membership is more easily gained once the community begins its activities. Several best practices for acquiring and maintaining initial membership include:

1. **Mission and Values:** The energy community should define a clear mission, such as promoting renewable energy sources, encouraging energy savings, or combating energy poverty. Additionally, core values should be established to guide the community's activities, giving potential members a clear understanding of the benefits they will gain.
2. **Branding:** A strong brand with an attractive name, logo, and messaging is essential for making the community recognizable and appealing to potential members. The brand should reflect the mission and values while being visually engaging.

3. **Target Group:** By mapping ideal members (households, businesses, public buildings), the community can more effectively reach and present its values to the target audience.
4. **Marketing Strategy:** Utilizing various marketing channels, such as social media, newsletters, local events, partnerships, and targeted advertising, can help promote the community and attract members.
5. **Events and Workshops:** Organizing workshops, webinars, and local events on topics like renewable energy, energy efficiency, and policy updates can strengthen members' sense of belonging and facilitate knowledge exchange.

Step 4: Registration of legal entity

A cooperative and an association acquire legal entity status through registration in the Central Register of North Macedonia. The cooperative can issue shares, which represent the rights and obligations of its members based on their contribution to the cooperative's capital. Each member holds one share, and no member can hold more than 30% of the shares.

Foundation/ Membership:

- An association is founded by at least five individuals or legal entities, three of whom must reside in North Macedonia. Membership is voluntary and can be limited by the statute.
- An energy cooperative is also founded by at least five entities, with members joining voluntarily and freely upon contributing capital. The number of members is unlimited.

Assets: Both entities have ownership and rights over movable and immovable property.

Financing: Both can be financed through membership fees, contributions, donations, and activities generating profit. The details of financing are defined in their statutes.

Profit Distribution: Associations are non-profit and cannot distribute profits among members, while cooperatives distribute profits based on members' share or participation.

Management/ Decision-making: An association's decisions are made directly by its members or their representatives. An energy cooperative operates on a "one member, one vote" principle.

Registration: Both must submit an application for registration in the Central Register, with different requirements for documentation based on the entity type.

Step 5: Technical project and commissioning

Technical Project: The energy community should develop a project to optimize energy use, supply, and network capacity, addressing numerous technical, financial and economic pre-requisites.

License for Energy Activities: The community must obtain a license from the Energy Regulatory Commission (ERC), which grants rights and obligations under the Energy Law. The

license application requires a fee of EUR 500 and takes about 30 days to process. A license is not needed if energy production is for the community's own use and does not use the transmission/distribution system or if renewable energy production surplus is sold to a non-member supplier.

Grid Connection and Start of Operations: Community members maintain rights and responsibilities for their connections and permits. The community can also act as a single system user with one connection and metering point. After connection approval, they must pay a fee, and EVN Elektrodistibucija issues a decision (within 40 days). For facilities above 10 MW, connection to the transmission network is required, which involves a more complex process. After construction, the facility must be registered with the Energy Agency.

Step 6: Financing

Financing Challenges for Energy Communities: One of the main challenges faced by energy communities is financing projects, requiring various forms of funding throughout the planning, development, investment, and operational stages. Overcoming financial barriers often involves combining innovative approaches with existing funding sources and tools. Several innovative solutions are outlined in this section.

Grants: An effective option, especially in the early stages, is applying for grants available at national, regional, or European levels. These grants could support community development or promote sustainable energy practices, covering initial costs. Grant applications typically require a community mission statement and an explanation of how the funds will be used.

Crowdfunding: Several forms of crowdfunding can be considered:

- **Donations:** Community members contribute funds or resources without expecting anything in return, simply to support the project.
- **Rewards:** The community offers non-financial rewards to contributors. For example, allowing a business to host a facility on its roof in exchange for part of the energy produced.
- **Loans:** Investors lend money to the community, expecting principal and interest repayment. Interest may be paid annually or at the end of the loan period.
- **Shares/Equity:** Members invest money or assets, acquiring shares in the community. Shares provide ownership, voting rights, and a share of profits, but carry financial risks depending on project success. Citizen energy communities organized as energy cooperatives can finance projects by issuing shares.

Bank Loans: Bank loans are a standard financing option. Increasingly, local banks are offering project financing, providing loans to smaller investors (startups) in energy production. The financed facility is used as collateral for the loan.

Leasing: Leasing involves renting energy production equipment from a third-party company, with the option to purchase the equipment after a set period. Leasing is particularly useful for

early-stage communities that need time to accumulate funds from members. For example, Sparkasse Leasing offers leasing options for legal entities.

Step 7: Operation

Operating an energy community involves various administrative, financial, and operational tasks to ensure smooth functioning and compliance with regulations. Key activities include:

Management: The community must fulfill legal obligations under the Associations and Foundations Law or the Cooperatives Law, such as holding annual meetings and regular member gatherings. It should stay updated with relevant laws and financial support mechanisms related to energy production, consumption, and distribution. Regular communication among members through meetings, newsletters, emails, and social media is essential.

Financial Management: The community needs a bank account for financial operations, bookkeeping, and preparing budgets and financial reports. Hiring an accountant or finance manager is recommended. A membership fee system can help cover operational costs.

Cost and Benefit Allocation: A transparent framework for distributing costs and benefits among members should be established. This may include allocating investment costs for projects and sharing potential profits. The community may also choose to donate part of the energy produced to socially vulnerable households.

Project Development and Management: The community should develop new energy projects, including feasibility studies, cost assessments, and funding options. It is crucial to coordinate project implementation, procurement, contract signing, permits, and construction oversight. Participation in national and international projects like Horizon Europe can provide financial support.

Networking and Promotion: Collaboration with other energy communities, such as through membership in REScoop, can facilitate new project opportunities. Regular feedback from members, and organizing events and educational programs, helps strengthen community engagement and mission alignment.