Guidebook

for Building Energy Communities and Crowdfunding Initiatives

This document was prepared within the framework of the project “SunSharing – Supporting Solar Energy Communities in South-Eastern Europe”. The project is part of the European Climate Initiative (EUKI). EUKI is a project funding instrument of the Federal Ministry for Economic Affairs and Climate Action (BMWK). The EUKI call for project ideas is run by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The main objective of EUKI is to promote climate cooperation within the European Union (EU) in order to mitigate greenhouse gas emissions. The opinions expressed in this document are the sole responsibility of the author(s) and do not necessarily reflect the views of the Federal Ministry for Economic Affairs and Climate Action (BMWK).

SunSharing

1. Introduction

Welcome to the executive summary of the guidebook that aims to inform citizens and local authorities about the creation and management of energy communities and crowdfunding initiatives. This handbook has been prepared within the framework of the SunSharing project, which aims to empower consumers and support the energy transition by creating partnerships and crowdfunding Energy Communities in Croatia, Greece, Bulgaria and North Macedonia. Renewable energy and citizen initiatives are central to energy transition plans and the Green Deal, but it is difficult to find practical information on how citizens can be part of this movement towards a carbon-neutral economy and a greener future. In this executive summary, you will find practical information on what energy communities and crowdfunding initiatives are, how they are set up and what they can contribute to your life.

What is an energy community? – energy communities are a legal entity that empowers citizens, small businesses and local authorities to produce, manage and consume their own energy. They enable their actors to be more independent, to use greener energy and to be a part of citizen initiatives that bring communities together.

Crowdfunding initiatives – an alternative funding scheme that relies on many small investors though an online platform, who contribute to a communal project in exchange for different expected returns. This type of financing often serves as an option for non-profit projects that are not solely aimed at profit, but can also have a social character

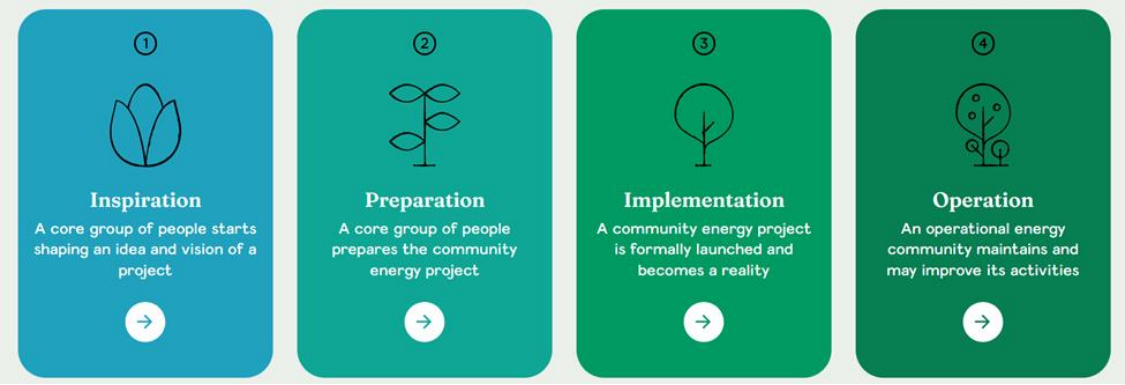
2. First steps with an energy community

Energy communities allow people to work together to create and use clean energy, helping the environment and saving money. By joining an energy community, citizens can benefit from lower energy bills, more energy-efficient systems, fewer people struggling with high energy costs and more green jobs in their area.

Energy communities are based on some fundamental concepts that remain consistent between different countries:

- **democratic governance and shared ownership** of the energy source between citizens, local authorities, small businesses and other entities. They do not allow companies, for example, whose main activity is in the field of energy production.
- **the purpose of energy communities is** to produce energy for personal needs or to sell to the grid in order to reduce members' bills, but **not for profit;**
- **energy communities seek to decentralize the energy system,** empowering local actors and reducing the dominance of large, centralized utilities;
- **ECs can also be a factor in tackling energy poverty,** which is a key focus of the European Commission. They enable local production of renewable energy, making energy cheaper and more accessible to all.
- **Energy communities aim to include a diverse range of actors,** including marginalized and low-income groups, while ensuring equal access to the benefits of renewable energy.

Steps towards creating an Energy community



Crating an EC starts with a small group of people coming together around an idea, thinking about what they want to achieve and what challenges and opportunities lie ahead. They share a vision for the future, understand what skills they already have, and identify the ones they will need to make it happen. Then the group forms a leadership team, sets clear goals, and outlines the steps they will need to take to make their vision a reality. They research different technologies, research funding opportunities, and begin to develop a business plan. At this stage they talk to more people in the community, gather feedback, and begin to build support for the project. After this, the project officially begins to take shape. The group sets up a legal structure, works with local authorities, applies for funding, recruits members and signs construction or installation contracts. Everything is in place so that the project can move smoothly to the longest stage – operation and keeping things running. It includes the management of the day-to-day operations and finances and works on improving the way things are run. Bigger goals can be set once the initial ones are achieved. It's crucial that all members have a say, and that the vision is kept up to date, including ways to involve more people in the management of the community.

3. Choosing a technology

When planning your energy community, it is important to take into account what kind of renewable technology will best suit your needs and the conditions of your specific situation. You should take into consideration the type of terrain available, the local climate, policies and requirements. Different technologies have varying initial costs, times for return on investment, requirements, and many more. You might want to consult specialists and gather as much information as possible beforehand.

Solar energy is one of the most affordable options, it's easily scalable, and a relatively low-maintenance renewable energy source with a long lifespan, making it ideal for various community needs. However, its efficiency depends on weather, and the high cost of battery storage for reliable supply can pose financial challenges.

Biomass energy uses organic materials like agricultural waste and manure, providing a continuous and controllable energy supply while reducing landfill waste. It is most feasible for communities near farms willing to collaborate long-term, as proximity to resources is crucial. However, biomass systems can release pollutants and require careful management to prevent overharvesting and environmental degradation.

Wind energy is a clean, efficient, and sustainable option that can power small properties or entire communities, but its success depends on suitable wind conditions. While it offers significant benefits, concerns about aesthetics, noise, and wildlife impacts must be addressed through careful planning and design.

Hydropower is a reliable and efficient energy source, with small-scale projects offering affordable and stable energy production after proper environmental assessments. High-head systems, using steep streams, are typically cheaper and easier to build than low-head systems, which rely on high water flow with minimal height differences.

Integrating **electricity storage** with renewable energy sources ensures a stable energy supply by storing excess power for use during low production periods. This approach is vital for weather-dependent sources like solar and wind, improving energy independence and efficiency. Though storage systems add upfront costs, they optimize renewable energy use and reduce reliance on external grids.

The choice of energy source should be consistent with the geographic, economic, and ecological context of the community. A combination of these sources, tailored to local conditions, often offers the most sustainable and practical solution for energy communities.

4. Structuring the Energy Community - Legal and Organizational Form

The EU definition of energy communities divides them into two types: citizen energy communities and renewable energy communities (CEC and REC). Both are used to engage citizens in energy production, but differ in certain aspects: CEC have no limitations for location of the members; the scope of activity is limited to electricity production, consumption and sale, and there isn't a limitation on the of technology used. REC on the other hand exclude private companies who trade in the energy sector, and require the member to be geographically close to the installation, unlike CEC, they don't limit the scope of activity to only electricity, however the technology is limited to only renewable sources of energy.

In Bulgaria, there are a few legal entities to be considered, the most wide-spread being:

- a **Cooperative** – a legal entity with the express purpose of benefiting its members. A key feature is that each member receives one equal vote, regardless of how much they have invested, making everyone equal in the decision-making process.
- **Partnership** – here, unlike a cooperative, votes are proportional to the individual capital contribution of the members. Profits can be reinvested in the company or distributed among the members, depending on the internal decision.
- **Trusts, foundations, NGOs** – usually created for the purpose of public benefit, not profit. These organizations can use the profits from projects to benefit the entire community, even when there are representatives of the community who cannot afford to participate.
- **Public-Private Partnerships (PPPs) with local partners** – Municipalities and other local authorities may decide to enter into public-private partnership agreements with civic groups/local SMEs to provide (cheaper) electricity and other benefits to a given community

5. Източници на финансиране

Funding an energy community requires a well-thought-out approach to securing funds while ensuring long-term sustainability. You should look into all of your options and may even choose a mix of different funding options, depending on your needs.

Community investment is a common method where members contribute with their own funds, promoting ownership and accountability.

Grants and subsidies from government agencies or international organizations can provide essential funding, with many governments offering incentives for renewable energy projects.

Private investors or green energy funds can offer financial support, but the community

must balance investor expectations with its mission.

Green loans, if available, can help cover upfront costs for renewable energy projects but require careful financial planning to ensure manageable repayment schedules.

Crowdfunding has become a popular way to raise funds, increasing awareness and support through small contributions from a broad public.

6. Organizing a crowdfunding campaign

Crowdfunding is an effective way for communities to pool resources for shared causes, but success depends on a clear plan and realistic expectations. Key steps include setting achievable financial goals, defining a detailed timeline with key phases, and choosing the right crowdfunding platform based on the campaign's needs. Crafting a compelling narrative that connects emotionally with supporters, along with a strong marketing strategy using social media, events, and influencer partnerships, will help generate momentum and engagement.

Additionally, offering attractive incentives or benefits for backers, such as rewards or recognition, is crucial to maintaining interest. Transparency and consistent communication with contributors are vital to build trust and keep supporters informed on how funds are being used. By ensuring clear goals, strong outreach, and regular updates, a crowdfunding campaign is more likely to succeed.

7. Managing an energy community

The successful operation of an energy community goes beyond installation, requiring consistent planning and implementation of governance, technical, and financial processes. Effective governance involves establishing a structured decision-making process, such as regular meetings where members can express opinions and vote on key issues. Transparency is crucial to maintain trust, with regular updates on operations and finances. Operationally, maintaining the technical infrastructure through regular monitoring, partnering with qualified technicians, and implementing energy management systems ensures the efficiency of the renewable energy systems and energy distribution.

Financial sustainability is key for long-term success, involving clear budgeting for maintenance, administrative costs, and potential investments. Communities should explore additional revenue streams, like selling excess energy or applying for grants, while ensuring fair member contributions. Keeping members engaged is vital; organizing workshops, maintaining clear communication channels, and encouraging member involvement in decision-making fosters a sense of ownership. Informed and engaged members are essential for the community’s cohesion and continued success.

8. Equipment and infrastructure maintenance

Implementing a robust monitoring system is crucial for tracking real-time energy production and consumption, which combined with a routine maintenance plan ensures the proper functioning of renewable energy systems through inspections, cleaning, and servicing. If community members lack technical expertise, consider hiring external experts for equipment maintenance and troubleshooting. For systems that involve selling excess energy or require backup power, it's essential to work with local utility companies to ensure grid compliance, while planning for the lifespan and replacement of batteries if

included in the system. Future planning should account for potential expansions, such as adding capacity or integrating new technologies, with a design that allows for growth without major disruption. Additionally, emergency protocols should be established to minimize downtime during equipment failures or extreme weather. Finally, prepare for the plant's end-of-life, including decommissioning or recycling components, ensuring compliance with environmental regulations and promoting sustainable disposal practices.

9. Examples

Bulgaria already has a few examples of existing energy communities, the most prominent one being the EC in Gabrovo – an initiative that was started by the local municipality that open a crowdfunding sheme, where citizens could invest in a solar installation on a municipal property – the waste treatment plant – and thus started and executed a citizen-based investment initiative in renewable energy. The system is now up and running and you can read more about the good practice on the SunSharing website

10. Instruments for energy communities

To address the lack of awareness, there are many sources of information on the topic of energy communities and crowdfunding initiatives. Some of them provide technical advice on the processes, others provide good practices that can be emulated in other countries. Some useful sources can be found here:

- Energy Communities Repository
- Map of energy communities in Europe
- Energy Community Platform
- Rural Energy Community Advisory Hub
- European Energy Communities Facility

11. Conslusion

Creating and operating an energy community is a transformative journey that empowers individuals and organizations to control their energy future while promoting local sustainability and energy independence. By integrating renewable energy sources like solar, wind, biomass, and hydropower, and incorporating energy storage, energy communities can maximize efficiency. Clear governance and decision-making frameworks are essential for equitable participation, while securing funding through grants, member contributions, or campaigns ensures financial viability. Though ongoing effort is required, with transparent governance, member engagement, and careful financial planning, energy communities can thrive as hubs of innovation, collaboration, and environmental stewardship, benefiting both members and the broader world.