# Empowering Citizens for Energy Communities

A Policy Brief from the Policy Learning Platform on Low-carbon economy

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Interreg Europe

European Union | European Regional Development Fund

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Cover image: FIRESPOL Project

## Summary

Europe's transition to a climate-neutral continent by 2050 will require all hands-on-deck, with stakeholders pooling resources and skills to make the most of opportunities in the low-carbon economy. As well as benefitting the climate, the transition can help to boost economic development, as well as energy independence, which, as we have seen so starkly, is vital for our security. Renewable energy communities are emerging as the preferred model of co-operation between citizens, civil society, social entrepreneurs, public authorities, and community organisations, enabling them to have access to clean energy, while also creating jobs, boosting skills, developing the local economy, reducing energy poverty, and enhancing community cohesion.

Energy Communities will be a key tool in the fight against climate change and need to be driven from the bottom-up. However, regional authorities can support the emergence of energy communities by providing the right framework, enabling access to financing, expertise, and advice, and ensuring that regulatory issues can be easily understood and navigated. This policy brief will explain background issues related to renewable energy communities and provide good practices and guidance drawn from the Interreg Europe community.

## Renewable Energy Citizens

Europe currently faces several energy crises, including spiralling energy costs because of post-Covid economic recovery, Russia's invasion of Ukraine and gas delivery reductions, and a drastic need to cut carbon emissions and achieve carbon neutrality by 2050. While top-down solutions are required, there is significant scope for bottom-up energy projects, making use of the resources and drive of citizens and communities, who are also seeking to tackle their own local development and democracy challenges.

Empowering citizens to play a role in the energy transition is widely recognised as a solution, with policy-makers across the continent looking to create 'energy citizens' (prosumers), who both produce and consume energy resources generated by renewable energy technologies. Indeed, both individuals and businesses are increasingly understanding the opportunities of owning and operating renewable energy technologies, both from a cost-efficiency and development perspective, but also in the interest of playing a part in contributing to a more sustainable future. Tapping into their enthusiasm and resources will be essential for speeding up the transition. This democratisation of energy, moving away from corporate run energy systems that function only for profit, offers great, largely untapped potential for the energy transition. The benefits are clear – not only reducing carbon emissions, but also gaining access to cheap and secure electricity, a greater benefit than ever during the current energy crisis.

To empower citizens, policy-makers need to create the frameworks that enable new business models and ownership structures of energy infrastructure to emerge. If individuals can be empowered, the impact can be enormous. Indeed, a 2016 report by energy consultancy CE Delft forecast that by 2050, 50% of European citizens could be involved in producing their own electricity, and accounting for 45% of electricity production.[1] This decentralised generation

[1] CE Delft, 'The Potential of energy citizens in the European Union' (2016)

would be made up of private installations on households and SMEs, but also publicly owned facilities on public buildings, and Energy Communities.[2]

## Community Energy

While many single-family houses now invest in decentralised renewable energy generation, particularly solar panels, there are major benefits available when stakeholders work together on larger scale installations that can provide benefits for the population, and which could not be achieved on an individual basis. One way for citizens to participate in the energy transition is to pool resources with their neighbours and community for larger scale installations that bring both cheaper, cleaner energy, but also economic and social benefits for the community.

Specific legal definitions exist for what counts as an energy community (explored further below), but a guiding principle is that they are a form of open and voluntary co-operation, whether informal or formal, where citizens, public authorities and local Small and Medium Enterprises (SMEs) either own, or have decision-making power, in the running of renewable energy technologies and energy services, with environmental and social community objectives.

Renewable energy communities have a long history, with one of the first being the Tvindkraft project, a wind turbine which was built and installed in 1978 by hundreds of people from the community of Ulfborg, in Denmark. Since then, energy communities have grown most notably in Denmark, Germany, and the United Kingdom. By 2021, according to the Report on the State of the Energy Union, at least two million people in the European Union were involved in more than 7,700 energy communities, contributing up to 7% of nationally installed capacities. This represented an estimated total renewable capacity of 6.3GW, and combined investment of at least 2.6 billion EUR.[3]

### Benefits of Energy Communities

So, what is driving so many people to participate in renewable communities, and why should they be supported at the local and regional level? The benefits are numerous. Perhaps the most obvious are the **environmental** aspects. Since most energy communities invest in renewable energy, this entails the replacement of fossil-fuel energy sources, and a corresponding drop in carbon emissions. The most common technologies used are solar, wind, and bioenergy – all mature and efficient technologies proven to reduce carbon emissions (though for bioenergy, careful consideration must be made of which biomass resources are used, preferably focusing on wastes and residues).

Then there are the **social** benefits, whereby local communities benefit most from the energy system, rather than large utilities and corporations. Energy communities can bring benefits to a larger number of people than would otherwise be involved in the energy transition, and those involved can gain a much greater education and knowledge of renewable energy. Communities often also reach beyond their memberships to educate others, and often also engage in energy efficiency and energy awareness campaigns. Other communities commit to

[2] For more on self-consumption for individual homes and businesses, see the Policy Briefs on 'Energy Self-Consumption' (2020) and 'Championing Sustainable Energy in SMEs' (2021)

[3] State of the Energy Union 2021 – Contributing to the European Green Deal and the Union's Recovery (COM(2021)950)

re-investing part of their profits into supporting local charities and community organisations, or helping those in energy poverty. Indeed, some communities are established with the express intention of helping the most vulnerable (see the POWERTY Pilot Actions, Achievement 2, for examples). Energy communities can help to develop community cohesion through a joint project, especially if there is no lower limit to investments, so anyone can be involved, regardless of their financial resources.

Community energy can also overcome the age-old 'NIMBY' (Not in My Backyard') challenge, and increase acceptance of large-scale installations, such as wind or solar farms. Wüstenhagen's widely used model of social acceptance (below) demonstrates that communities may reject renewable energy at the project level if they are deemed to have high costs for the community (such as disruption during installation, or noise during operation), whilst benefits flow to companies and individuals outside of the community. Communities can also reject projects when they are not included in planning processes, where decision-making is not transparent, or where regional heritage is not taken account of. Community ownership and democratic involvement can help to overcome this, as communities are involved in decision-making and directly benefit from the projects.

Figure 1 – Social Acceptance of Renewable Energy Projects [4]


Finally, Energy Communities can contribute **economic** benefits to the community. As noted above, profits can be reinvested into community projects, but even without this aim energy communities can pass on lower energy prices, with greater resistance to market shocks. They also benefit the local economy through the development of new local value chains, skills, and industries, thus directly and indirectly creating new, sustainable jobs. Directly, jobs are created in building, managing, operating, and maintaining installations, while indirect jobs can be created in resource providers (such as farmers and forestry owners), or in existing companies such as construction companies, law firms and consultancies.

### Challenges for Energy Communities

Despite the many benefits, there are still challenges for energy communities, including those of people management, access to finance, planning and administration, and cultural issues.

Firstly, energy community developers need to **gather partners** together and co-ordinate them to build a legal, administrative, and management structure, as well as **managing power dynamics** and different visions. This may revolve around working with existing groups focused

[4] Wüstenhagen, Wolsink & Bürer – Energy Innovation: An Introduction to the Concept (2007)

on charitable or sustainable endeavours, or working with an existing energy supplier, and as well as the local administration and financial institutions. A good deal of **people management** skill and time is required to get such varied interests around the table.

This can be further complicated by **social and cultural issues**, such as low awareness of renewables and resistance to co-operative business models. While some countries are advanced in renewables and have long experience of community models, others are less experienced and community approaches may be harder to implement. For example, older citizens in post-communist countries can have greater resistance to community models as they may resemble collective ownership. As generations change these issues lessen, but there is a need to communicate the project effectively to avoid resistance and explain the benefits.

On the financial front, renewable energy projects typically require **significant up-front investment**. If it is not possible to raise these investments from those interested in building the community, then external financing is required, whether by grant, bank loan, leasing model or crowdfunding. Many banks and financial intermediaries have low awareness of community energy structures and convincing them of the business case for investment can be challenging. Indeed, some lenders refuse to provide debt to co-operatives altogether.

Finally, **regulatory and administrative issues** for new projects can be extremely difficult to navigate. Everything from acquiring planning permission and permits, requires a great deal of paper work, cost, and expertise, to say nothing of the need to develop robust business and financial plans. Grid connection can also be a major challenge, as distribution system operators may not recognise a community energy structure as a supplier or may prioritise energy from other resources. This, however, should change under recent amendments to regulation of the European energy market.

COALESCCE
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**Good Practice 1 – Oldham Community Power**

The challenge in improving renewable energy use for public buildings is that while the local authorities own the buildings, they do not pay the energy bills, meaning there is no business case for them to intervene in improving performance. Community energy can unlock this potential by installing RES and selling the generated electricity to the building occupier at a discount, with any surplus sold to the grid and the profits used to pay interest to the shareholders and fund other local projects. In Oldham, United Kingdom, at the initiative of the local council, feasibility studies were carried out for installing photovoltaics onto public roofs, identifying five schools and one community centre as potential sites. With the support of the council, a Community Benefit Society (co-operative), Oldham Community Power, was formed, and signed roof-top leases at zero rent. The group offered shares to citizens for raising money and borrowed a low interest loan from the council to meet administrative requirements and install the PV panels. Once local people could see the PV panels on the roofs, more of them bought shares in the organisation, and ultimately, over half of the cost of the scheme was paid for by community share sales.

**Interesting features:** This practice was initiated by the local council and demonstrates the role that public authorities can have in initiating community projects – they do not need to be passive in community development. The public authority provided space for the installation, free of charge, as well as a start-up loan.

Click here to find out more about this practice.

## Considerations for Community Energy Projects

As these challenges suggest, there are several parameters that need to be considered to build a successful community energy project, many of which can be influenced or limited by legal and regulatory frameworks. These include the legal form of co-operation, the scope and scale of activities and how to access finance.

### Legal forms of Co-operation

There are several legal forms which are possible for formalising an energy community. Perhaps the most widely used is that of the co-operative, an association of persons who voluntarily unite to meet economic, social, and cultural needs through jointly owned enterprise. Any profits are typically dispersed amongst members of the co-operative, or otherwise reinvested into new projects. The main benefit of the co-operative model is that it is widely known and understood, with clear principles. However, several different legal forms are possible for community renewable energy, though the exact details and requirements will change from country to country. This can include partnerships, trusts, foundations, public utility companies and public-private partnerships, amongst others.

**Table 1 – Legal forms for community energy**

| Legal Form | Characteristics |
|---|---|
| Co-operative | Co-operative societies are intended to primarily benefit their members. Membership is voluntary and open to anyone willing to accept responsibilities and risks. Members benefit from generated energy and have a say in governance and profit allocation with one vote per member. They may provide training and other benefits to members, as required to maintain the co-operative. |
| Partnership | Individuals may decide to work together to establish a legal partnership with the aim of providing energy to a community. Unlike a co-operative, voting power will be determined by the stake that each individual puts into the company. As well as providing a community benefit, partnerships can generate a profit. |
| Trusts, foundations, not-for-profit associations | Trusts and foundations are established as charitable organisations, with the aim of delivering a social benefit rather than profit. These forms enable whole communities to benefit, even when individuals cannot afford to participate. |
| Limited companies | Limited companies can be an appealing structure. Private limited companies (Ltd) can limit the number of shareholders and precent truly open, community schemes. Public limited companies (PLC) however can have more shareholders. |
| Public utility company | Public utility companies are run by municipalities, who invest in and manage the utility on behalf of taxpayers and citizens. These forms are less common than the above forms but are particularly suited for rural or isolated areas. |
| Public-private partnership | Local authorities can decide to enter into agreements with citizen groups and businesses to ensure energy provision and other benefits for a community. |

## Activities and Technologies

Community energy projects can involve renewable energy generation technologies alone, feeding into existing grids and networks, or can include community run management and ownership of distribution infrastructure, such as local smart grids, or heating networks. On the generation side, community energy schemes can use several technologies, with solar, wind or biomass sources being the most frequently used. Examples also exist of community run small hydropower plants, which have often involved restoring abandoned infrastructure and bringing it to modern environmental and safety standards.

**Good Practice 2 – Eno Energy Co-operative**

In Eno (Joensuu, Finland), twelve local forest owners joined together to provide heat to public buildings using locally available biomass. The co-operative has grown now to fifty-five forest owners, who own and operate three district heating plants with a distribution network of around 11 kilometres. The members of the co-operative can provide the heating network with around 30% of its wood fuel requirements, with the remainder sourced from other local suppliers. Over fifteen years, customers have saved over four million Euros compared to fossil fuels, whilst creating the equivalent of ten full time jobs and diversifying income for forest owners. In total, it is estimated that the co-operative provides economic benefits to the region of around 2 million Euros per year.

**Interesting features:** This practice was driven by local businesses, in co-operation with the local authority. While participation in the co-operative is limited, the benefits for the wider community are clear, with energy used for district heating, as well as creating sustainable jobs.

Click here to find out more about this practice.

Renewable energy projects can vary in scale, and larger scale installations require larger management and maintenance capacity. Larger systems will also require greater capital investment, but once investment is recovered, benefits are higher, and money saved (or even earned) through community energy can be reinvested in new community programmes and infrastructure. Joining forces may particularly speed up the energy transition in the heating sector as renewable district heating is an excellent means to switch to green heat for older houses that are not suited for heat pumps and that typically rely on gas or oil heating. It is rarer for a community to run a utility-scale project, which are significantly more complicated and need greater expertise and capital investment.

## Financing for energy communities

Sources of finance to launch community schemes can include crowdsourcing, bank loans, third-party financing, leasing, and co-operative funds. The most suitable funding source will depend on regional availability, the partners involved, their level commitment and own resources, and of course the financial requirements of the actions to implemented.

**Achievement 1 – Webinar series on renewable energy finance**

Working with the Interreg Europe projects AgroRES, COALESCCE, FIRESPOL and ZEROCO2, the Interreg Europe Policy Learning Platform organised two webinars in May 2022 on renewable energy finance, each of which featured practices on community funding.

- **Renewable energy financing for the public sector –** This first webinar tackled the issue of finance for renewable energy in the public domain. This webinar looked into project bundling, leasing and community finance in Portugal, Spain and the United Kingdom.
- **Mobilising citizen financing for renewables –** This second webinar explored renewable energy finance in the private domain, with a focus on mobilising citizen financing and what public authorities can do to facilitate it. The webinar included good practices in community energy from Austria, Germany, Malta, and the United Kingdom.

Crowdfunding is a popular source of funds, where citizens can either donate towards a project, take out bonds or loans, or otherwise purchase shares. Bank loans may also be an option, though they can be challenging for first time developers with little proven track record. Third party finance and leasing models are also emerging as key trends for renewable energy finance. Third party finance involves another entity lending money (such as an existing co-operative) to be paid back once a project has gained citizen support. Leasing models see the co-operative rent an installation, with the opportunity to buy it after a certain period.

**Good Practice 3 – Solar Photovoltaic Communal Farm Scheme**

In the Rabat region of Malta, the roof of the Tal-Fiddien Reservoir has been converted into a solar photovoltaic farm that invites investments from citizens who may not be able to invest in solar PV in their own properties as they lack a suitable surface (such as in a ground floor apartment). The installation contains 4,000 PV panels totalling 999 kWp (kilowatt peak – the electricity production of a PV system when at maximum capacity). Residents can purchase between 1-3 kWp at a price of EUR 1,500 per kWp and in return they benefit from a feed-in tariff of 15 cents per kWh generated for the first six years, and 10.5 cents for the remainder of the twenty-year lease. The scheme was established by the Maltese Energy and Water Agency to boost renewable energy generation on the island. Despite an initially slow start, the scheme has been very successful, with all 999 kWp purchased within nine months of the launch, by around 400 households.

**Interesting features:** This practice makes investment into renewable energy possible for those who do not have space at their residence. Driven by a public body, it unlocked significant community investment in renewables, bringing 400 households into the energy transition.

Click here to find out more about this practice.

Where finance options are not available in a region, public authorities can make use of public funds (including EU funds, see below) to provide support to energy communities, typically through financial instruments such as loans, guarantees and equity. Grants, provided by local and national authorities, are also an option, especially for covering start-up costs. These can include co-operative revolving funds, where the public authority provides finance for co-operative establishment, reclaiming the investment for profit, ready for re-investment.

## European Legislation and Support

The European Union's 2050 long-term climate strategy, aiming to reach commitments under the Paris Agreement and backed up by the European Green Deal, commits Europe to becoming a climate-neutral continent by 2050.[5] This means we have just over 25 years to achieve net-zero greenhouse gas emissions. The strategy foresees an important role for prosumers and local communities in uptake of renewable energies, supported through the Clean Energy for All Europeans Package, the European Green Deal, and funding through the InvestEU Programme, the European Structural and Investment Funds and Horizon Europe, amongst others.

### Legislation & frameworks

To support development of energy communities, the European Union has made amendments to three key pieces of legislation via the Clean Energy for All Europeans package; the Renewable Energy Directive, the Internal Electricity Market Directive, and the Internal Gas Market Directive. The changes made to Europe's energy framework should enable the development of energy communities by enshrining their right to produce, consume, store, and sell renewable energy in EU law.

The legislation sets out two different definitions for energy communities: Citizen Energy Communities (CECs) and Renewable Energy Communities (RECs). Both definitions require that communities have open and voluntary participation that households can enter and leave easily, be effectively controlled by citizens, local authorities, and small businesses whose primary activity is not in the energy sector and have social and environmental benefits as their main purpose rather than financial gain.

The differences between the definitions are that CECs do not bind energy communities to being in the immediate vicinity of the installations, can support fossil fuel electricity generation, and can have the participation of any actor, though those involved in large-scale commercial energy activity may not hold decision-making power. In comparison, RECs must in the vicinity of the installations, may use any type of renewable energy (whether for electricity, heat, or mobility), and have more restricted memberships. The full differences are presented below.

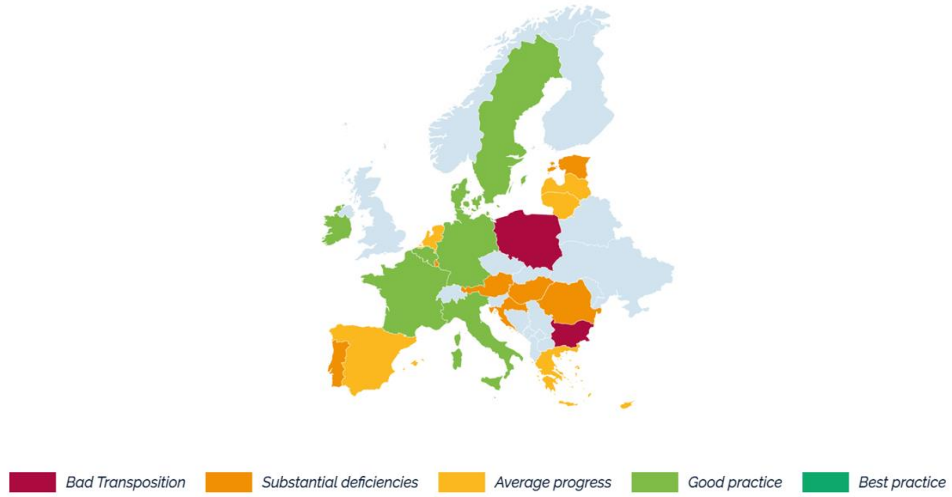
[5] A Clean Planet for All – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy (COM(2018)773)

Table 2 - European Commission Definitions of Energy Communities [6]

| | **Citizen Energy Community (CEC)** | **Renewable Energy Community (REC)** |
|---|---|---|
| Legal Basis | Directive (EU) 2019/944 – Electricity Market Directive; Directive 2009/73/EC – Internal Gas Market Directive | Directive (EU) 2018/2001 – RED II |
| Members | Any actor - natural persons, local authorities including municipalities, and companies – can participate. | Membership is restricted to natural persons, local authorities including municipalities, MSMEs whose membership is not their primary economic activity. |
| Governance | A legal entity which is based on voluntary and open participation and is effectively controlled by members or shareholders. Stakeholders involved in large-scale commercial activity where energy is the primary economic activity are excluded from being able to exercise effective control. | A legal entity which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous from individual members, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity. A REC can be controlled by MSMEs that are 'located in the proximity' of the renewable energy project. |
| Geographic Scope | Not bound to immediate vicinity | RECs 'must be in the vicinity' of renewable energy projects owned or developed by that community |
| Purpose | Primarily to provide environmental, economic, or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits. | |
| Activities | Operate only in the gas or electricity sectors and are technology-neutral (fossil fuel source or renewable). May engage in generation, distribution, supply, consumption, aggregation, storage, energy efficiency services or charging services for e-vehicles. | Broad range of activities related to all forms of renewable energy including generation, energy efficiency, supply, aggregation, mobility, energy sharing, self-consumption, and district heating & cooling. |

In practice, these legislative changes means that every EU Member State must remove barriers to energy community participation in the energy market and ensure their own legal frameworks support community energy. Specifically, this means transposing the two definitions into national legislation, performing an assessment of barriers and potential for energy communities, developing an enabling framework, including amendment of rules for grid access, and developing support schemes for energy communities, such as reduced administrative burdens for permitting and operation, financial grants, or advisory agencies.

**Figure 2 - Transposition Tracker, as of October 2022**




[6] Rural Energy Community Advisory Hub

The RESCoop.eu Transposition Tracker which monitors the transposition of CEC and REC definitions, as well as establishment of support schemes, reveals the process to be proceeding at various speeds across the continent.[7] While several countries are making progress in transposing community definitions, as of October 2022, few have completed their assessment of barriers and potentials, nor established enabling frameworks (see Figure 2). This work is expected to continue into 2023.

Finally, the REPowerEU Plan was introduced in May 2022, to cut dependence on Russian fossil fuel imports, with a focus on saving energy, diversifying supplies, combining investments, reforming markets, and quickly substituting fossil fuels by accelerating the roll-out of renewable energy technologies. This proposed increasing the 2030 target for renewables from 40% to 45% of the final energy mix, as well as removing barriers to renewables and making financial resources available for quick impact measures.[8]

**State Aid Rules**

To maintain fair competition in the EU's Single Market, State Aid – government support to companies – is typically prohibited unless justified by economic and social development needs, with flexibility built in to the rules to help meet specific policy goals.

In December 2021, the European Commission adopted the new 'Guidelines on State aid for Climate, Environmental Protection and Energy' (CEEAG), which came into effect on 1 January 2022 to help implement the European Green Deal.[9] These were supplemented by additional changes in July 2022 as part of the Temporary Crisis Framework which was established so Member States could intervene in their economies in the face of the energy crisis, as part of the REPowerEU initiative.[10] State aid rules are too complex to comprehensive outline in this brief, but key take aways are:

- The revised CEEAG allows support for projects that enable low-carbon development including renewable energy and energy efficiency measures. They put a specific focus on empowering citizens, communities, and SMEs. Renewable Energy Community projects can now benefit from aid (grants, repayable advances, loans, guarantees, or tax advantages) without competitive bidding if projects are below 6MW installed capacity, or 18MW for wind generation;
- Under the revised Temporary Crisis Framework, member states can set up schemes for investment in renewable energy projects that can accelerate and expand the availability of renewable energy to quickly reduce dependency on Russian fossil fuels. This includes greater aid for small renewable energy community projects (with the same installed capacity as above) without competitive bidding, of up to 20 Million EUR per project, exceeding no more than 45% of the total investment cost. Aid under this provision must be granted by the end of June 2023 and installations must be operational within two years to be eligible.

[7] RESCoop.eu Transposition Tracker
[8] Communication on the REPowerEU Plan
[9] Guidelines on State Aid for Climate, Environmental Protection and Energy.
[10] Amendment to the Temporary Crisis Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia

## European Funding

At the European level, a significant number of funds are available for supporting the energy transition, including several new instruments set up in recent years to support the European Green Deal and COVID recovery, such as NextGenerationEU, the Recovery and Resilience Facility (RRF), and the Just Transition Mechanism.[11]

The REPowerEU Plan is to be implemented in EU Member States by integrating a dedicated chapter into their Recovery and Resilience Plans, under the RRF.[12] As well as the funds remaining under the RRF – 225 billion EUR at launch of REPowerEU – member states can also transfer up to 12.5% of their cohesion funds and European Agricultural Funds for Rural Development to the RRF.

European Structural and Investment Funds (ESIFs), particularly the European Regional Development Fund and the Cohesion Fund, can also be used to establish grants and financial instruments under Policy Objective 2, 'a greener, low-carbon Europe', specifically the priority, 'promoting renewable energy in accordance with Directive (EU) 2018/2001'.[13]

FIRESPOL
Interreg Europe

**Good Practice 4 – Templederry Community Wind Farm**

Templederry Windfarm Ltd., in Tipperary, Ireland, is a 4.6MW project of two wind turbines, that can provide power to around 3,500 homes. The funding for the community came from a mixture of EU (LEADER) and national grants, tax relief and guarantees, used to leverage private and community financing. Individual members of the community were able to become shareholders for an initial capital investment of 1,000 EUR. Some additional shares were also bought up by Tipperary Energy Agency, who also provided technical and financial advice. Other shares were given to another community co-operative to benefit the broader community. It is expected that once the initial investment is recouped, the farm will generate 1-1.4 million EUR per year for the local community. The shareholders have re-invested income into grid connection and planning permission for three solar farms around Ireland, as well as a community-based Virtual Power Plant.

**Interesting features:** Templederry made use of an innovative combination of funding sources to get their project off the ground. The community made use of the public limited company (Ltd.) legal form allows for wide involvement. Shares for a local co-operative mean that some profits will be reinvested into local projects. The support of the local Energy Agency is a best practice in itself.

Click here to find out more about this practice.

The LEADER programme can provide support to rural communities across the EU to lead and direct local development, through community-led schemes. These can include enterprise and

[11] EU funding possibilities in the energy sector
[12] Guidance on Recovery and Resilience Plans in the context of REPowerEU
[13] Common Provisions Regulation (EU) 2021/1060, ERDF & CF Regulation (EU) 2021/1058

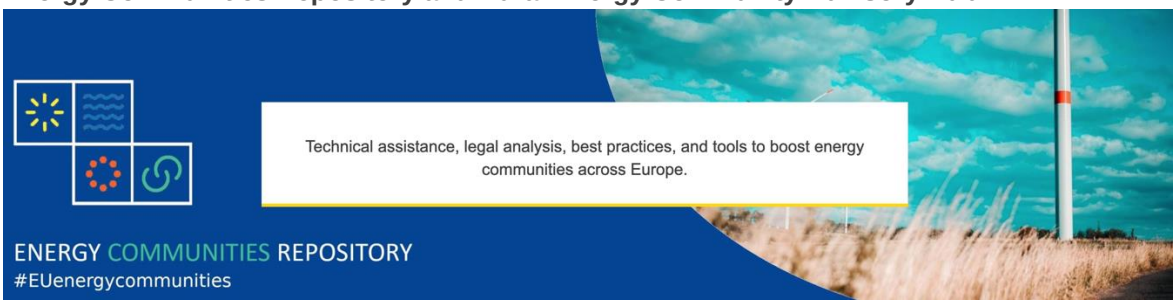
renewable energy development, administered by national Local Action Groups under Rural Development Programmes of the European Agricultural Fund for Rural Development.

Distribution of most of the above funds are programmed at the national or regional levels, under agreement with the European Commission. Direct project funding from the European Union is available under Horizon Europe and the LIFE Clean Energy Transition sub-programme. Horizon Europe funds research and innovation in low-carbon energy, with energy communities as a cross-cutting issue throughout many topics under Cluster 5, 'Climate, energy and mobility'.[14]

The LIFE sub-programme has one billion EUR available over 2021-2027 to facilitate the transition towards an energy-efficient and renewable energy-based economy by funding co-ordination and support actions.[15] These aim to break market barriers by engaging SMEs, public authorities, non-profits, and consumers to create new policy frameworks, accelerate technology roll-out, attract investment in sustainable energy, support local project development and empower citizens.

**Platforms & Initiatives**

**Energy Communities Repository and Rural Energy Community Advisory Hub**




In 2022, the European Commission launched the Energy Communities Repository (ECR), to assist local actors to set up clean energy projects and contribute to a just transition to climate neutrality, primarily in urban centres. Another platform, the Rural Energy Communities Advisory Hub (RECAH), provides support for non-urban areas.

The ECR is collecting and analysing national legislation and enabling frameworks, establishing a database of energy communities (both urban and rural), and carrying out an impact assessment of them. It provides Technical Assistance, online twinning, and peer-learning activities, as well as capacity building webinars and workshops, as well as access to best practices, guidance, and a helpdesk.

The RECAH provides technical assistance for business plan development, energy technologies, and legal advice, amongst other issues, as well as organising conferences and events.

To implement pilot and demonstration actions and provide advice and guidance, the European Commission also funds several initiatives targeting Energy Communities. Firstly, the Energy

[14] Horizon Europe, Cluster 5: Climate, Energy and Mobility
[15] LIFE Clean Energy Transition Sub-programme

Communities Repository and Rural Energy Community Advisory Hub (see above) will act as the main European-level support hubs.

However, many other resources are also available, including results from Horizon-funded research projects such as BECoop, CEES, COME RES, RESCoop VPP and UP-STAIRS.[16] Other Commission-funded platforms include the Energy Community Platform and the Energy Communities Hub.

## Energy Communities in Interreg Europe

The topic of Energy Communities has been a cross-cutting theme that appears in many of the Interreg Europe Low-carbon economy projects funded between 2014 and 2020, with a few having their development as the key focus topic. Interreg Europe projects have been working to find good practices in Europe's regions that can be transferred to others, resulting in the production of action plans for each participating region. In some case, regions have also implemented pilot actions with Interreg Europe funding, to demonstrate newly identified approaches. The Key Projects related to energy communities are:

| | |
|---|---|
| COALESCCE Interreg Europe | **Community owned and led energy for security climate change and employment**<br>**Duration**: 2017-2021<br>**Website**: interregeurope.eu/coalescce |
| FIRESPOL Interreg Europe | **Financial Instruments for Renewable Energy Investment**<br>**Duration:** 2018-2022<br>**Website:** interregeurope.eu/firespol |
| POWERTY Interreg Europe | **Renewable energies for vulnerable groups**<br>**Duration**: 2019-2023<br>**Website**: interregeurope.eu/powerty |
| RESOR Interreg Europe | **Supporting energy efficiency and renewable energy in European islands and remote regions**<br>**Duration**: 2018-2022<br>**Website**: interregeurope.eu/resor |

While the good practices and achievements of these projects provide the backbone of this brief, many projects have identified relevant good practices, which are also referenced.

POWERTY Interreg Europe

**Achievement 2 – Energy Communities tackling energy poverty**

The POWERTY project is implementing three pilot actions, two of which relate to how energy communities can be used to tackle energy poverty. The pilots, in France and Spain, take different approaches but both provide excellent examples of how community energy can tackle societal challenges.

[16] Energy Communities Repository – EU Projects and Initiatives

**Energy communities serving vulnerable households in Auvergne-Rhône-Alpes**

The Auvergne-Rhône-Alpes Energy Environment Agency in France has implemented a pilot action to develop a new Energy Savings Company (ESCO) contract model between citizen energy communities and vulnerable households to install renewable energy technologies in the latter's homes. The ESCO model enables a community energy group to finance the installation of renewable energy technologies for vulnerable users. The community group owns the installation until it is paid off by the user from their energy bill savings. The model also involves local social services, who have the role of identifying households in need, and the local energy agency, which provides advice and support.

**Energy and educational community for a vulnerable area in Andalusia**

The Andalusian Energy Agency has set up a pilot to test the creation of the "Torreblanca Ilumina" Energy and Educational Community, in a vulnerable area. The pilot aimed to give vulnerable groups access to renewable energy to save on their electricity bills and alleviate energy poverty, as well as to educate vulnerable users on their energy use and on sustainable energy more broadly. As a starting point, Som Energia, a POWERTY stakeholder, established the community as a legal entity, choosing a 'non-profit association' form, and identifying a location for the pilot installation. As a result, a fifteen-kW photovoltaic collective self-consumption installation has been set up on the roof of two public schools, which will supply electricity to eleven vulnerable households. An energy office has also been created, where personalised advice on energy is offered to families in the neighbourhood.

For more information, see the Pilot Reports at the POWERTY library or read more in the Policy brief on 'Tackling Energy Poverty with Low-carbon interventions'

As well identifying good practices and implementing pilot actions, other projects have sought to analyse their practices further and provide guidance for others looking to develop communities.

**Achievement 3 – COALESCCE Community Project Pathway**

The COALESCCE project brought together seven organisations from the UK, Spain, Germany, Italy, Bulgaria, Romania, and Hungary to look at how to increase regional capacity for community renewable energy generation. Recognising that so far community energy is only achieving part of its potential, the project explored how regions can use European structural funds to support the emergence of community owned energy.

In this framework, and starting from guidance developed by Co-operatives UK, COALESCCE held a workshop in 2019 to define the steps and activities for setting up a community energy project. While primarily intended for project developers, understanding the process is important also for policy-makers to identify where support is needed. Full details are available in the COALESCCE Energy Toolkit, with a summary of actions presented below.[17]

[17] COALESCCE Community Energy Toolkit

1. **Idea** – The first step is to consider what your energy community is aiming to do, what issues it is tackling, and why it would be interesting for the community. Is it tackling energy poverty, supporting economic growth, or supporting community cohesion? Is it a business, or a charitable project? The aim will inform decision of what model to use, the technologies to operate, and who to involve. Project developers can research existing projects and begin to gather statements of interest.
2. **People & Networks –** From the initial list of interested organisations and individuals, is any skill profile missing? Are there conflicts of interest, and are the wider community on board? What sort of external partners are needed, including customers and investors? A full stakeholder and skills mapping can help to answer these questions, while community meetings can help in engagement.
3. **Outline Proposal: Feasibility Studies & Market Research –** Is your project idea feasible? Carry out technical, market and financial research to find out, and amend the idea as needed, considering; What will your product or service be? Is there a market for it? What costs will be incurred? Consider the regulatory framework to identify opportunities (grants, tax breaks, technical support) and risks (changes to regulations). Consider to what external support is needed, and who does what in the group. The result should be a feasibility study with estimated costs, as well as a capacity and organisation mapping.
4. **Formalising & Registering the Organisation –** Establish the community as a legal form, to enable it to enter into agreements and access support. The form will depend on national legislation and the community's aims, but also needs to consider control, operation, distribution of profits, and financial and tax reporting requirements. As well as registering the organisation, you should also develop rules for running the community, and a constitution or statutes. (For more on legal forms, see Table 2).
5. **Business Planning –** A detailed business plan will be needed to raise funding, describing the business, governance structures, key people, its purpose, resources, market research, success factors, financial planning, and timelines. The business model canvas is a well-known approach for developing a business plan, which should also contain a delivery plan, a finance raising strategy, a risk register, and a marketing and communications strategy.
6. **Raising Finance –** Your community will need money to get started, including capital investments into technologies and infrastructure, and enough cash to pay employee wages until first incomes are made. You should consider how much money you need for this, where to access it (grants, loans, equity/shares). A first step is to research available loans and grants, find out what other projects have done, and get professional assistance if needed.
7. **Project Delivery –** How will the project itself be implemented? Is everyone's role clear? What are the internal milestones to be reached for the community implementation? Are all permissions received from the local administration? It will be necessary to establish a set up an implementation plan, monitoring system and flexible management system that can adapt to issues as they arise. Set up collaborative structures such as working groups to tackle different parts of the implementation, under supervision of an overall project manager.
8. **Operations, Maintenance & Management** – Once it's up and running, the community needs to be kept on track, and members need to be kept on board. Monitor performance towards financial, environmental, and social goals, ensure smooth day-to-day running, manage the budget and staff. Communicate with members on project achievements, and update planning and financial documentation for investors.
9. **Communications & Advocacy –** Finally, it will be important to raise awareness of your work and contribute more widely to the energy transition by spreading good practice and engaging with policy-makers. Consider joining national and international associations (see Good Practice 5), taking part in international projects, and develop links with external partners. As well as inspiring others, this can lead to new opportunities and development.

**Good Practice 5 – Community Energy England**

Community Energy England is a not-for-profit umbrella association, bringing together energy communities from across England. It aims to provide support to communities, and lobby government and local authorities for improved policy frameworks and support instruments. In terms of direct support, CEE implements actions to build capacity, disseminate the benefits of energy communities to stakeholders, share best practices, and educate developers. CEE has a permanent staff and is funded by membership fees, event sponsorships and charitable funding. It holds an annual event, the Community Energy Fortnight, to promote and celebrate community energy achievements. CEE works closely with its sister organisations, Community Energy Wales, and Community Energy Scotland, and is also a member of RESCoop, the European association of renewable energy communities.

**Interesting features:** This practice demonstrates a dedicated support network for energy communities, and represents how they can work together in advocacy and communication to advance the cause of energy communities. Such bodies can act as important intermediaries with policy-makers to help improve frameworks for community proliferation.

Click here to find out more about this practice.

## The Role of Municipalities

While the European Union provides a legislative framework to enable the transition to citizen and community focused energy, with financial and technical support aplenty, it is on the ground, in cities, regions and municipalities, where energy communities develop. While citizens, citizen organisations and SMEs are usually in the lead, there is much that regional and local policy-makers can do to support community energy development.

**Good Practice 6 – SUN Nordhessen**

The Stadtwerke Union Nordhessen, which is comprised of six public municipal utilities, was formed to enable these utilities to collaborate with consortia in renewable energy projects. In particular they focus on wind energy, which has high upfront costs for project development and a high risk profile. SUN participates to jointly finance projects, working with local banks. In this way, they can de-risk renewable energy project investments by taking them through to permitting. Once permits have been awarded and development risk is low, projects can then be opened for community investments, and shares are sold to municipal energy co-operatives to bring additional private funds into projects. The

funds returned can then be used to invest into the next project, in a revolving manner. Municipalities and municipal utilities, who have an insight into local realities and permitting processes, can act much more easily as project developers than individuals, incubating a project to a more mature stage, before transferring to local energy co-operatives. This allows local ownership at reduced risk in exchange of a slightly reduced profitability.

**Interesting features:** This practice demonstrates the active role that local and regional authorities can play as enablers of energy communities, helping to access finance and reduce risks for citizen investors. The revolving nature of the funding helps to provide long-term support for the community.

Click here to find out more about this practice.

Firstly, municipalities and public authorities can take the lead in **raising awareness** of the benefits of energy communities with policy-makers and elected representatives. Political commitment has often been a pre-requisite for success, so actions cannot target citizens alone. In communications, emphasise the benefits of energy communities, not only in reducing carbon emissions, but set out the economic and social arguments, with links to existing policy goals like reducing energy poverty or creating new jobs.

With political buy-in, it becomes possible to **include energy communities in planning and programming**, setting targets for community energy generation, or introducing new funding lines, to indicate long-term commitment. This includes recognising that energy communities are not pursuing economic benefit alone, which may require new performance indicators to reveal their true value.

**Easing administrative burdens** for energy communities is an effective step. Public authorities can aim to either reduce the barriers by simplifying procedures for community initiatives, or otherwise provide additional support to be able to navigate the paperwork. They can also explore land-use and building regulations that can benefit community schemes, such as mandatory use of renewables in new buildings. Authorities can also use their considerable influence through **public procurement**, giving preferential treatment to local providers of energy by amending procurement procedures to focus not only on economic performance, but also the additional benefits in terms of local development, job creation, and local resilience.

There is also significant potential in providing bespoke **financing tools** and instruments for energy communities. This need not be a major investment in technology and infrastructure, but authorities can instead provide seed funding, provide a small grant for legal and permitting advice, or fund feasibility studies and business plan preparation, supporting the initiative until citizen finance is sufficient to keep it afloat, via a revolving fund.[18] Additionally, under the definitions of RECs and CECs, public authorities are able to **become members of energy communities themselves**, working with citizens and local authorities.

Municipalities may also look to **share resources** with energy communities. More and more practices are available whereby a public authority makes their land or space available for community energy development (as in Oldham and Malta, Good Practices 1 and 3, or Torreblanca, Achievement 2). The most common approaches are using the rooftops of public

[18] For more on financial instruments, see the Policy Brief, 'Funding energy efficiency through financial instruments'

buildings for installation of community owned solar photovoltaics. Otherwise, they can also make local municipal solid waste, or other biological waste streams, available to communities to use in bioenergy projects, helping also to tackle waste management issues. They may also choose to make meeting facilities or office space available, or otherwise provide staff time to support the energy community in the early stages.

**Good Practice 7 – Citizen ownership and leasing of solar panels for self-consumption**

Realising that a major barrier to the uptake of self-consumption technologies was the price for purchase and installation of solar panels, the municipality of Lorient (Brittany, France) entered into an agreement with a group of organisations, led by 'Bretagne Énergies Citoyennes', which had established the OnCIMè Citizen and Participatory Company, for the rental and installation of solar PV systems on two schools, the townhall and an apprentice training centre. The solar facilities are owned by OnCIMè (which is itself owned by 106 citizen shareholders) and leased to the municipality to power public buildings, who pay an annual rent. In this way, the municipality gets cheaper electricity than purchasing from the grid, whilst costs paid are returned to citizen shareholders rather than to utilities and energy companies. As part of the rental contract, OnCIMè is also obliged to carry out awareness-raising actions for the users of the buildings, giving this practice an additional educational angle.

**Interesting features:** An existing energy community has played a key role in enabling a switch to renewable energy for public buildings. The leasing model is replicable for other public authorities who can work with energy communities.

Click here to find out more about this practice.

Local authorities can play a role in **developing networks** that bring people and organisations together to discuss community projects, gather ideas and facilitate capacity building, whether in-person or via digital platform. Individually project ideas can be aggregated into an attractive bundle. This can allow public authorities to support communities while also steering developments towards answering social challenges. Networks can also include banks and financial bodies to build better understanding.

Finally, local authorities can also support the development of energy communities by **supporting skill development**, ensuring that the necessary competencies are available in the local area for installation, operation, and maintenance.[19]

## Recommendations & Key Learnings

### General

- Europe's energy transition will require the activation of all stakeholders, including citizens. Their involvement in the transition will contribute to sustainable and inclusive growth,

[19] For more information and examples, see the Policy Brief on 'Skills for the low-carbon transition' (2021)

bringing many benefits beyond just the reduction of carbon emissions. Accessing these benefits is particularly important in the face of current energy price rises and increased energy insecurity.

- The potential of prosumers and energy communities is substantial and if fully unleashed could account for 45% of EU electricity consumption by 2050, a significant contribution to Europe's energy targets.
- Renewable energy community projects can drive the energy transition in the heat sector through joint larger investments into renewable district heating networks that allow older less energy efficient houses to switch from fossil fuels to renewable heating.
- There is significant scope for regional authorities to support communities. This can include providing space, expertise, advice, and financing, as well as ensuring that regulatory issues can be easily understood and navigated.
- Much advice and support is available. In particular, the European Commission's Energy Communities Repository – learn from what is already available, including the good practices in this policy brief.

**Legal Frameworks & Regulation**

- The EU's Energy Union Strategy enables consumers to take ownership of the energy transition and play an active role in decarbonising Europe. Many member states are still transposing European legislation into national frameworks. This process should be sped up, keeping as much flexibility as possible and considering also what support communities will need in form of advisory and financial assistance. REPowerEU and the Temporary Crisis Framework should give additional impetus to member states to move now while flexibility is available in state aid rules.
- As required by the RED II, national governments need to take stock of the possible legal forms available in their countries for establishing energy communities and ensure that there are no unnecessary barriers.
- Energy strategies should be amended to include targets for community energy, indicating long-term commitment. Strategies should define community energy but avoid overly-limiting definitions that would prevent all possible legal forms from being used.
- Community energy should be included in regional development strategies, to make clear the link between renewable energy and regional challenges, such as energy poverty, energy scarcity and unemployment.

**Finance & Resource Sharing**

- Financial support – such as project development grants or low-interest loans – should be provided to groups who are interested in building community projects to enable them to perform feasibility studies and access consultancy services. Such support can be established under the ERDF;
- Public procurement can be used to support community energy development. Tenders for energy infrastructure can apply a minimum requirement for community ownership of shares, and regions could preference community-run models for provision of energy to public buildings and infrastructure, such as street lighting or district heating.
- Authorities can designate public infrastructure, such as large roofs, closed landfills, dam faces, or reservoir tops for renewable energy community development, as was done at Malta's Tal-Fiddien Reservoir, and in Oldham and Andalusia on school roofs.

**Expertise & Guidance**

- Regional authorities can organise workshops and educational efforts to build capacity for the creation of community energy organisations and can support the training of individuals for managing and maintaining renewable energy technologies.
- Authorities can also ensure that expertise is available when needed by community developers, by providing an information point dedicated to community energy development. This can be done in house, or through independent organisations such as Community Energy England.
- Local government departments should be available to help community energy planners with regulatory issues such as land use planning, permitting and environmental regulation.

**Awareness Raising & Networking**

- Regional policy-makers can lead the way in communicating about the benefits of community energy, highlighting not only the economic benefits for those who get involved, but also the broader societal challenges that could be overcome.
- Regions can help to kick-start the process of community energy development by performing a regional assessment of renewable resource availability and demonstrating that there is potential return on investment. The assessment should also include a mapping of relevant stakeholders and those with technical and legal capacity to assist in community energy development, to assist individuals along the project development pathway, as identified by the COALESCCE project.
- Public authorities can mandate their energy agencies or other suitable players to create a platform that can gather citizens to inform them about community energy and enable discussion.

**Does your region need support in defining new instruments and strategies?**

The Policy Learning Platform, provides several services to the regional policy community, including on-demand Expert Support via a helpdesk, matchmaking service and peer reviews:

- At the Policy Helpdesk, Policy-makers may submit their questions to our helpdesk to receive a set of resources ranging from inspiring good practices from across Europe, policy briefs, webinar recordings, information about upcoming events, available European support and contacts of relevant people, as well as recommendations on matchmaking and peer review opportunities.
- A Matchmaking session is a thematic discussion hosted and moderated by the Policy Learning Platform and designed around the policy needs and questions put forward by the requesting public authority or agency. It brings together peers from other regions in Europe to present their experiences and successes to provide inspiration on overcoming regional challenges.
- Peer Reviews are the most deep and intensive of the on-demand services, bringing together peers from several organisations for a two-day working session to examine the specific territorial and thematic context of the requesting public authority of agency, discuss with stakeholders, and devise recommendations. The Platform has recently organised a peer review for the Autonomous Province of Trento on Green Communities, very closely linked to the concept of Energy communities

## Sources and further information

### European Commission Documents

- Communication on the REPowerEU Plan
- Guidelines on State Aid for Climate, Environmental Protection and Energy
- Amendment to the Temporary Crisis Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia
- Guidance on Recovery and Resilience Plans in the context of REPowerEU
- Common Provisions Regulation (EU) 2021/1060
- ERDF & CF Regulation (EU) 2021/1058
- State of the Energy Union 2021 – Contributing to the European Green Deal and the Union's Recovery (COM(2021)950)
- A Clean Planet for All – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy (COM(2018)773)

### Policy Learning Platform Resources

- Policy Brief on 'Championing Sustainable Energy in SMEs' (2021)
- Policy Brief on 'Energy Self-Consumption' (2020)
- Policy Brief on 'Funding energy efficiency through financial instruments' (2019)
- Policy Brief on 'Skills for the low-carbon transition' (2021)
- Virtual study visit to Normandy (France) and the energy cooperative Les 7 Vents

### Other Resources

- CE Delft – 'The Potential of energy citizens in the European Union' (2016)
- Community Power Coalition – Financing Community Energy
- Friends of the Earth – Barriers and threats to the people-owned energy revolution
- Hoicka, Lowitzsch, et. al. – 'Implementing a just renewable energy transition: Policy advice for transposing the new European rules for renewable energy communities' (2021)
- RESCoop.eu – Community Energy: A practical guide to reclaiming power (2019)
- RESCoop.eu – RESCoop Business Models
- Wüstenhagen, Wolsink & Bürer – Energy Innovation: An Introduction to the Concept (2007)

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*#RenewableEnergy*
*#Communities*
*#EnergyTransition*


# Interreg Europe Policy Learning Platform on Low-carbon economy

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