



Localised support for establishing & joining energy communities

*How local and regional governments
can help further energy citizenship*

The concept of energy citizenship concerns rights and responsibilities for each citizen and constitutes an important step towards energy transitions in a wider European energy policy context.¹ As the fifth in a series of policy briefs for the EC² project, this brief addresses shortcomings at the *local and regional levels*, exploring in detail actionable recommendations at these levels to facilitate and accelerate a just and sustainable energy transition. This transition cannot happen effectively without the active role of local and regional authorities in creating conditions for the realisation of citizens' rights.





The insights contained in this policy brief are based on the transdisciplinary research results of the citizen engagement conducted as part of the EC² project.

Our approach incorporates economic, legal and psychological elements and perspectives. These scientific insights capture and synthesise the knowledge co-created with citizens, energy communities, and municipalities in Spain, Poland, Italy, Germany, Austria and the Netherlands.²



KEY CONCLUSIONS

1. In order to create a truly enabling environment for active citizen involvement in the energy transition, local authorities need to play a more active role than they do at present.
2. Local authorities should, for instance, support citizens' rights to clean energy in cities by providing comprehensive information, supporting energy projects, advising on funding and project management.
3. They should also provide a networking role - helping regular citizens who wish to participate in a renewable energy community to link to funders, other would-be members, and further relevant actors.
4. The *Renovation Wave* program is an opportunity for cities to increase buildings' energy efficiency, to design passive buildings, and to produce renewable energy. However, in preparing renovation plans and programs, municipalities ought to create a framework for more inclusiveness.
5. Local authorities should themselves start investing in renewable energy in communal apartments and public buildings, as well as making municipal infrastructure, buildings, and land available to civic communities for energy production.

¹ EC² project (2022). *Policy Brief #1 Energy Citizenship: A missing piece to the energy transition puzzle?* Available [here](#).

² See EC² project (2022). *Deliverable 3.3: Catalogue of potential legal and economic barriers or facilitators of energy citizenship*. Available [here](#).

Introduction

The civic energy movement is becoming key to the energy transformation. Legal regulations at the EU and national level create the framework for transformation. Yet what is important for citizens is what is actually happening in their regions, cities and communes. Local and regional governments can play a far more active enabling role through development of various tools, infrastructure, regulations to support energy community participation. The role of these authorities is crucial, and they should become more active actors in the civic energy transformation. To do so, they may effectively contribute to creating an enabling environment by creating energy strategies, obtaining funds, providing comprehensive information, delivering platforms for co-creation with citizens, or supporting the creation of energy communities. This implies that citizens are considered more than simply consumers: increasingly, they perceive energy not only as a commodity but also as a natural resource and social necessity.



Approximately 21.6% of the EU population is at risk of poverty³ and 9.3% of energy poverty⁴, with local communities exhibiting particularly low energy resilience to increasing energy prices.

Here, one role of local authorities is to support excluded, poor and energy-insecure people. Local and regional entities can also act as initiators or coordinators of activities, making their capacities available to residents to take part in the energy transformation. Cities and communes own many residential, public buildings and plots. These consume energy, but can also be sites of renewable energy production.

Local and regional authorities are currently undergoing a transformation from a legal authority and service provider to participants in a co-creation arena. The concept of co-creation may support the cooperation between society and politics - where regular citizens, not representing any organised interest, can provide valuable insights into possible and desirable options for energy action. Co-creation can be used to make better use of resources and manage public funds in a way that is more responsive to the needs of citizens.



³ Eurostat (2023). *Living conditions in Europe - poverty and social exclusion - Statistics Explained*. Available [here](#).

⁴ European Commission (2023). *Commission publishes recommendations to tackle energy poverty across the EU*. Available [here](#).

Building renovations topic

Energy communities have not traditionally been seen as a common form of energy *saving* activity - rather being seen primarily as producers (through PV, wind energy, etc.). Nevertheless, the EU legislative framework equally introduces this scope of energy *saving* activities as a legitimate field of EC domain. The communities' ability to advance energy efficiency and to fight energy poverty therefore lies with the European Union's Renovation Wave Strategy.

The implementation of the strategy is a multi-layered challenge in terms of economy, law, technology and society. Energy Communities can be a reliable partner for a local government and help achieve the ambitious goals of the Renovation Wave Strategy of doubling the renovation speed in ten years. The energy efficiency projects in municipal and privately owned buildings can create synergistic effects - from lowering energy consumption and reducing CO2 emissions, to increasing resident satisfaction and cost-savings. Conducting renovations together with citizens on a local scale is a way to involve residents more closely in energy transition efforts.



These activities currently have a good chance of being implemented due to the ongoing European Union programs. Funds from the European Union's climate policy will be available to local governments and energy communities in numerous programs. Never before have we had so much European funding for building renovations in all regions.



However, there may be trade-offs to consider. For example, the implementation of renovation projects involves the risk of an increase in rents as a result of the investment outlays incurred. When planning the project, the affordability factor should be taken into account. Combining renovations with the use of renewable energy sources will help keep maintenance costs low. While tackling energy poverty, local-based approaches could create zero-energy districts. Appropriate communication and co-creative practices with stakeholders, especially with energy communities and residents, help in the success of the projects. Engaging residents of multi-family buildings, including municipal buildings, in community energy is yet a great challenge: legal, behavioural, technical and economic.

Also, transforming this EU funding money into successful renovation on the ground remains difficult. Barriers to implementation in places like the Netherlands include a lack of financial and staff capacities in municipalities and the fact that this funding tends to focus on subsidies for technical energy-saving measures, rather than process money for the establishment of organisations or citizen initiatives. The complexity of the funding applications and language barriers also tend to exclude many of the demographics that typically suffer from energy poverty. As a result, funding tends to instead go towards already comparatively well-off households.



CHALLENGES TO ADDRESS



Legal framework and administrative steps to set up an energy community remain complex

Setting up an energy community is a complex process. A variety of regional rules resulting from the existence of federal and decentralised states with regional legislative competencies can make it even more difficult for citizens to become active, as they need to know the legal situation in their country, as well as in their respective region.⁵

Citizens who want to form a citizen energy community regularly have to undergo legal proceedings to create the legal form for the energy community. Different administrative proceedings are also required depending on the plants to be used in the energy community.⁶



Energy production and consumption in the energy community do not match

Private households that generate energy from photovoltaics must either purchase expensive storage units or feed energy into the grid when surplus energy cannot be used. Participants in an energy community have different (and often similar) levels of consumption depending on the time of day.



Self-consumption and energy communities are not adequately connected

Relatedly, we are not adequately taking advantage of the many different forms and uses that energy communities can take. For instance, as a platform for *sharing* energy; as a source of *storage and/or distribution*, rather than generation; or simply as a set-up for more experienced self-consumers to *share knowledge* with less experienced members.



Land scarcity

More and more energy cooperatives have difficulties in obtaining land to implement their projects, particularly in more urbanised areas with a high demand for land.

⁵ See EC² project (2023). *Policy Brief #3 How to mainstream energy citizenship at the national level*. Available [here](#).

⁶ See EC² project (2023). *Policy Brief #2 How to mainstream energy citizenship in EU laws & tools: Adapting EU regulations to best guide and support member states in furthering energy communities & energy citizenship*. Available [here](#).





Regulations surrounding smart meter rollout are lacking

There is a lack of regulations for smart meter rollout, which is a prerequisite for joining an energy community.⁷ Moreover, many consumers are unaware of the benefits of smart meters, find them too complicated and have privacy and data protection concerns. This makes them unattractive to consumers and results in a sceptical attitude among consumers towards the rollout of smart meters.



Finding suitable members for a renewable energy community is difficult

Citizens who want to participate in a renewable energy community have to figure out which distribution grid they belong to.⁸ Yet, ascertaining information about the area and other local stakeholders can be difficult for would-be energy community members.



Exclusion of tenants, including those in social housing, from establishing energy communities

As discussed in EC² policy brief #3, tenants are effectively excluded from many opportunities to participate in energy communities.⁹ At the local level, there is the possibility for municipalities to address this by providing more flexibility and leniency in their public housing.



Phase-out of fossil fuel energy subsidies are likely to impact low income households in particular

Many people do not realise the ongoing trends in terms of traditional sources of energy. Prices are regulated at the moment, and do not cover actual economic and environmental costs. These subsidies will end. If people knew, they might be more active. Instead, they are disincentivised from exploring alternative forms of energy access.



⁷ Ibid.

⁸ In Austria, for example, the members of a renewable energy community in the area of a medium- or low-voltage grid have to be located in the concession area of the same grid operator. See EIWOG 2010 § 16c (2). Available [here](#).

⁹ See EC² Policy Brief #3.



RECOMMENDATIONS FOR SPECIFIC TOOLS AT THE LOCAL / REGIONAL LEVEL:



Establish one-stop-shops

Clear and accessible legal information is key to support citizens in becoming active in the energy transition. Cooperation between the different levels of government, e.g. in providing information in easy and accessible language on a joint webpage with links directing towards the homepages of the competent regional and local authorities, could help to achieve a higher degree of legal certainty.¹⁰

Establishing a super one-stop-shop for energy communities can facilitate setting up an energy community. This one-stop-shop should at least cover all administrative issues and provide an official information point for setting up and running an energy community at regional or local level. The one-stop shop could also have a web page serving as a hub with additional information.

Ideally, energy communities would be supported by a person of the regional or local government (an "energy coach"), who would guide them through the administrative and technological proceedings.



Link self-consumers & energy communities

Energy communities and one-stop-shops can also help to make *self*-consumption more attractive. A common point of information can help explore the possibilities energy communities can offer for self-consumers.

These one-stop shops mentioned before could serve as this common information point, as well as serving as an educational and training platform where those interested in the subject could acquire new knowledge and skills.



Provide tools for peer-to-peer (P2P) energy trading

Peer-to-peer means that prosumers directly engage in energy exchange with one another, using a digital platform as a marketplace. Here, consumers and prosumers can exchange energy without the need for an intermediary.

To do so, they require an enabling legal framework and new business models. The latter includes the development of smart grid, and (on the consumer side) embracing digital technologies such as smart metering and digital platforms generally.

However, implementing digital solutions requires professionalisation and extensive knowledge from energy communities. When more advanced tools come into use, people need time to acquire new skills or hire people who have skills in modern technologies.



Establish regional toolboxes and software for simplifying energy communities

In countries where energy communities are of a niche character (e.g. Poland, Italy, Spain), regional authorities can support by providing e.g:

- A toolbox that shows the entire process of establishing an energy community and its functioning, including on-line simulations of energy processes and flows in energy communities.
- Software for the management and accounting of energy produced and consumed by energy communities.

By creating such online platforms and similar networking tools, regional governments can create the optimal opportunities for effective co-creation.

¹⁰ See EC² Policy Brief #2.



RECOMMENDATIONS FOR SPECIFIC ACTIONS AT THE LOCAL / REGIONAL LEVEL:



Increase involvement of municipalities in various ways

The EU directives allow municipalities to participate in energy communities themselves. This, again, could facilitate access to energy communities for regular citizens.

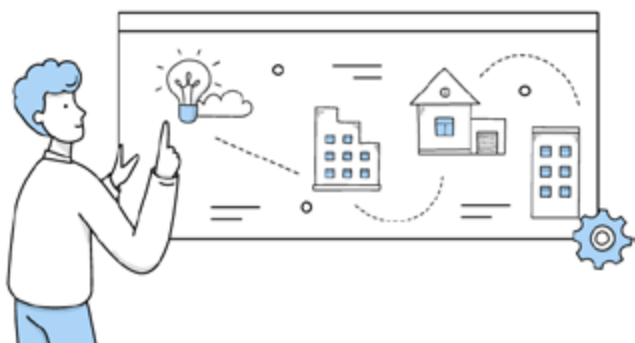
For example, EC² found that engaging local government units in creating structures that integrate energy communities in partnership with citizens, SMEs, and scientific entities is crucial.¹¹ At present, energy communities are atomised – based on members with very similar energy consumption profiles. This poses a challenge of low self-consumption and the need for investment in expensive energy storage.

The only alternative would be selling energy back to the energy system at prices that do not ensure a return on investment. Therefore, local government units should engage in partnerships that integrate and balance the production and consumption of energy from renewable sources in a given area.

However, EC² research suggests that energy communities that are led with a top-down approach by the municipality gain less support and involvement of citizens, compared to those led by community members. Energy communities should therefore still be led by community members – either independently or in co-operation with the local government and municipality.¹²



Create links to diversified energy users (energy communities, schools, etc.)



In a situation where the growing share of the electricity settlement system is based on net-billing, local authorities should actively engage in citizen energy communities. Combining residential homes and public buildings, such as local schools, preschools, libraries, and pools, within an energy community allows for increased self-consumption, reduced demand for energy storage, and alleviates issues in low-voltage grids.

¹¹ See forthcoming publications: D4.1 *Report on experimental lab studies on energy communities*; D4.2 *Report on experimental lab studies on energy citizenship*; & D4.3 *Longitudinal study report* on the EC² website [here](#).

¹² Ibid.





Unlock land parcels and communal buildings for energy communities

Local authorities should make municipal infrastructure and buildings available to civic communities for energy production¹³.

They could make plots of land available to cooperatives for the implementation of larger projects. The conditions of sharing for social purposes should be preferential, while maintaining local legal regulations.

The land could be used for virtual prosumerism - where electricity is generated and consumed elsewhere (in places and contexts where production is not feasible).



Establish energy clusters - Local and regional authorities as an energy communities integrator

Local authorities and regional governments, in cooperation with energy communities, should create energy clusters that integrate energy communities at the low-voltage network level and balance energy production and consumption at the local level. This increases energy auto-consumption and reduces the need for expensive energy storage.

The cluster also creates the opportunity to implement joint investments requiring greater financial outlays, such as wind farms, and hydrogen energy storage, which are necessary to achieve greater energy independence.



Regional and district authorities should serve as the operator of the electricity distribution system (low and medium voltage networks).

The development of energy communities is strictly dependent on the operator of the electricity distribution system. For example, in Poland, where the distribution system operator is managed by an energy oligopoly, there is a conflict of interests that hinders the development of energy communities.

Therefore, the operation of the electricity distribution system within the low and medium voltage networks should be managed and developed based on the local needs of citizens and the sustainable development of the region.

¹³ Examples here can be found on the *Erneuerbare Energien Rottenburg eG* [website](#). See examples of PV installation on local schools [here](#) and [here](#).



This is the fifth in a series of Policy Briefs aimed at exploring the concept of energy citizenship and its requirements. The series shares key insights on how the concept can be used as an effective tool for accelerating the renewable energy transition, together with citizens. The EC² project aims to support policy and decision makers through a series of actionable recommendations, targeted primarily at policy makers - from the European through to the local level.



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