A photograph of a man with a beard and a dark jacket pointing towards a building with a corrugated metal roof. Two women, one in a grey sweater and the other in a grey coat and striped pants, are looking in the same direction. The scene is outdoors on a paved area. The image has a dark teal overlay.

Can renewable energy communities be leveraged as one of the vehicles to mitigate the energy crisis, with the ability to lift people out of energy poverty?

Collaborative briefing

March 2023



This briefing was prepared by 10 EU-funded projects working on the topics of energy communities and/or energy poverty and looking at how the two topics actually relate. The briefing provides some answers and policy recommendations to the question “Can renewable energy communities be leveraged as one of the vehicles to mitigate the energy crisis, with the ability to lift people out of energy poverty, and if so how and under which conditions?”. The briefing targets various stakeholders which might use its inputs and examples to draft future EU, national and local policies, and to other stakeholders interested in the topics.



These projects have received funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreement no. 952930 (BECoop), no. 101026972 (CEES), no. 890437 (PowerPoor), no. 890362 (e-Crew), no. 952874 (W4RES), no. 892037 (UP-STAIRS), no. 953040 (COMERES), no. 101022565 (EC2), no. 890345 (NRG2PEERS), and no. 101032239 (Sun4All). **The sole responsibility for the content of this publication lies with the authors.** It does not necessarily reflect the opinion of the European Union. Neither CINEA nor the European Commission are responsible for any use that may be made of the information contained therein.

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**Preliminary
concepts**

Energy communities

Energy communities are non-commercial entities based on open and voluntary participation, collective governance and control requirements formalised by the EU and are under effective control of citizens, local authorities and/or smaller businesses whose main activities do not lie in the energy sector. [1] Their purpose is to provide environmental, economic or social benefits to their members or the local community rather than generate financial profits. The energy community concept is defined in the [Renewable Energy Directive](#) (RED II) and the [Internal Electricity Market Directive](#) (IEMD), which set a regulatory framework for renewable energy communities and citizen energy communities in the EU.

Energy communities may engage in the generation, distribution, supply, consumption, aggregation, energy storage, energy efficiency services / charging services for electric vehicles, or provide other energy services to their members or shareholders. We focus in this briefing primarily on RECs (Renewable Energy Communities) and CECs (Citizens Energy Communities), while other concepts with a broader scope, such as energy sharing, collective self-consumption, Collective Energy Actions are not in primary focus (yet mentioned as they can also positively impact energy justice/energy poverty alleviation).

Energy poverty

Although the number of countries that recognize **energy poverty** formally in legislation or policy is rising, the majority of Member States do not have yet a formal definition, and many policymakers struggle to grasp the multi-dimensional concept of energy poverty. Energy poverty is broadly understood as the inability of households to maintain adequate levels of energy services at an affordable cost. It is caused by the interaction of 3 factors: low incomes, high energy needs (due to energy inefficient housing) and high energy prices. Other factors impacting energy poverty levels can be considered, such as weather, fuel availability, stock type and performance, tenure, high living costs, etc. [Rural communities are the most exposed to the risk of energy poverty](#), with varying rates across EU countries, and a higher level in Western countries (GDP relation). [Energy poverty – or vulnerability – is key to consider for a fair energy transition](#).

Energy poverty remains at high levels in Europe, increased by the pandemic, the pernicious effects of the Ukraine invasion and the resulting high energy prices as well as due to the slow progress on energy efficiency improvements. The impacts on people and on the economy are striking. Energy poverty increased and most governments across Europe tried to put a patch on things with different measures. We explore in this briefing how RECs and CECs could contribute to the reduction of energy poverty as an additional long-term measure, as well as what would be the right conditions, and policy framework for this to happen, through the findings of various EU-funded projects.

The background image shows an industrial site with large piles of material, a tall chimney, and various structures. The text is overlaid on the left side of the image.

The issue at stake

and legislative
framework

The issue at stake

and legislative framework

To tackle high energy prices, but also to save energy and move towards a climate-neutral continent, plans and proposals set forth by the European Commission in the [EU Green Deal](#) and [REPowerEU](#) call for an increased involvement of local and regional stakeholders in the energy sector, promoting active consumers, energy communities and an energy system that works for all citizens.

The latest [State of the Energy Union Report](#) expresses deep concern about the impact high and volatile energy prices may have on households' ability to pay their energy bills, risking worsening a situation of energy poverty in which [millions of EU citizens](#) are unable to keep their homes adequately warm. Member States are urged to address the root causes of energy poverty: citizen empowerment and participation in the energy system could be an answer to bridge some of the gaps between social and energy policy.

However, in an assessment of existing legislation and policy initiatives on energy poverty and energy communities, the [CEES](#) project [found that this gap remains significant at both EU and Member State level](#). While progress is being made at the European level in recent initiatives such as REPowerEU and Fit for 55, Member States are struggling to address RECs and energy poverty together. Their legal obligation to enable accessibility to RECs for low-income and vulnerable households has not shown much progress in delivering tangible results. [Member States need to overcome several legal and practical challenges](#) slowing or even halting progress in these developments [2] [3] [4] (see COME-RES [analysis of the transposition](#) in eight EU Member States and Norway).

The extent to which energy communities have the agency to act in the energy domain and effectively realise their goals, depends to a large extent on a consequent transposition of the EU directives into national regulatory frameworks.

The overarching policy intentions of the EU Green Deal make clear that the energy transition must be just and inclusive, where ‘no one is left behind’. The [Renewable Energy Directive](#) states that:

- countries must ensure that RECs are accessible to all consumers, including those in low-income or vulnerable households and
- tools to facilitate access to finance and information are available to low-income and vulnerable households (REDII, Article 22 (2 f and g)).

In [UP-STAIRS](#), the legislative framework, measures and incentives for energy communities were analysed in the 7 partner countries involved in the project: Austria, Bulgaria, Germany, Ireland, Latvia, Poland and Spain. Most [National and Energy Climate Plans \(NECPs\)](#) assessed mention energy communities; however, some of them do not provide any detail regarding their establishment and implementation. NECPs have the potential to detail and clarify the kind of activities energy communities can engage with, as well as how they could help in the accomplishment of national objectives.

Notably, **Austria** and **Ireland** have taken this opportunity and have highlighted the potential for energy communities to alleviate energy poverty. Adding to these, [BECoop](#) produced an NECP scorecard (report in production) for Italy, Greece, Poland and Spain, investigating where energy poverty alleviation is discussed in relation to energy communities, and found that **Greece** links the development of clean forms of energy, funded by projects implemented by energy communities, with the alleviation of energy poverty. **Spain** mentions the right of access to energy as a fundamental aspect of the energy model change. Collective self-consumption schemes are mentioned as enabling public administrations and social organisations to manage situations of energy poverty not only through economic support but also through the allocation of a share in collective self-consumption, which would directly reduce the energy bills of consumers at risk of energy poverty. In contrast, **Poland** and **Italy** did not discuss energy poverty alleviation in relation to energy communities.

A group of people walking in a hallway, overlaid with a yellow filter. The text "Barriers, challenges & opportunities" is written in white, bold font on the left side of the image.

**Barriers,
challenges &
opportunities**

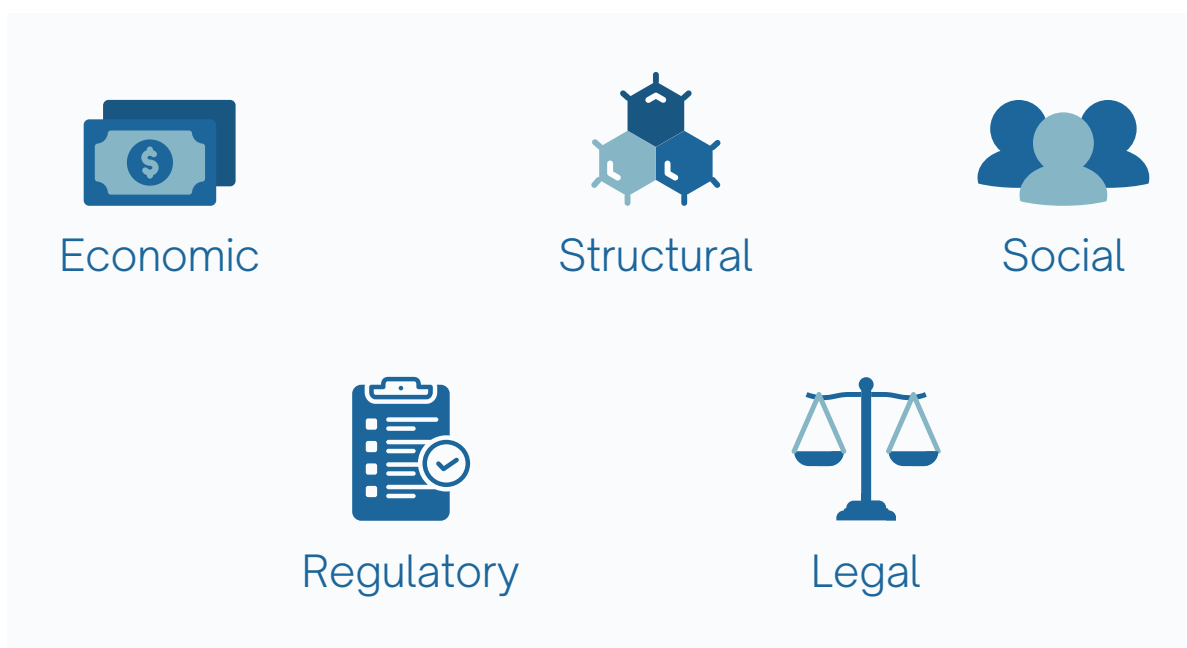
Barriers, challenges, and opportunities

The current energy price crisis is driving many Europeans to look for alternatives to traditional energy sources and providers. Community-owned and -managed renewable energy projects, as new decentralised energy system models, seem to have the potential to reduce costs, increase energy security and accelerate decarbonisation and could be an answer to this search. Energy communities can pave the way towards the uptake of renewable energy, enabling and incentivising consumers to become prosumers, empowering them to participate in the energy market. But what are the challenges and barriers?

COME RES [analysed](#) the barriers and drivers for the establishment of renewable energy communities that considered the regional, environmental, legal and social contexts of five selected target regions with a low deployment of renewable community energy: Balearic and Canary Islands (Spain), Latvia, Norte (Portugal), Norway and Warmian-Masurian (Poland). The analysis addressed a diversity of technologies and rationalities such as energy security, tourism, farming, as well as social motivations and behavioural aspects relevant for promoting renewable community energy. The findings were drawn from focus groups as well as individual interviews with potential REC actors (citizens, local authorities and SMEs). This method enabled qualitative and detailed understanding of the participants' role or involvement in the establishment of RECs, including their social motivations for engaging in RECs, organisational structure, how they try to promote RECs, who they cooperate with and what they perceive as key impediments for the establishment and running of RECs. The provisions to stimulate the uptake of community energy contained in RED II require all EU MS to mainstream community energy by providing enabling frameworks for RECs: this represents a tremendous driver. Results from this analysis indicate that policymakers need to address the manifold regulatory complexities associated with turning community energy from grassroots to mainstream. Adjustments in planning and participation practices as well as the ownership models

require time through a trial-and-error process that has only just begun. Local authorities often face time, informational, and staff constraints. [Sun4All](#), another EU-funded project, is testing in four pilot cities (Almada, Barcelona, the Community of Communes Coeur de Savoie, and Rome) different financial schemes aiming to find new approaches to facilitating access to renewable energy generation (and its economic and environmental benefits) for vulnerable households suffering from energy poverty, and would not have the capacity of investing in solar installations. Following the concept of ‘energy communities’, participants of the project receive advice on efficient energy management at home, as well as the possibility to participate in workshops related to the topics of energy rights and efficiency. Through knowledge transfer and an essential community programme, empowerment of participants is being promoted. All pilots have encountered bureaucratic and administrative barriers, together with a generalised lack of knowledge on how some of the necessary procedures should be done, for example for changing to a self-consumption contract, between others. The testing phase is still ongoing, so a final evaluation and results are not yet available.

The experience and lessons learned in those projects and studies from [EC2](#) and [BECoop](#) analysing the advancement of RECs implementation show that the main barriers can therefore be summarised as:





The social role of energy communities

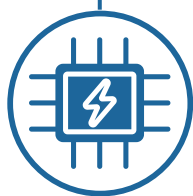
and their potential to
address energy poverty

Energy communities' social role and potential to address energy poverty

The Greens/EFA Group of the European Parliament have compiled, supported by several organisations, [practical solutions to combat the impact of spiralling energy prices and to overcome energy poverty in a handbook](#): it includes concrete examples of activities energy communities can set to support tackling energy poverty. In addition, below are the benefits that joining or setting up RECs can bring with potential to address social injustice and energy poverty. To fully tap into this potential, specific frameworks can be set, described in the next pages.



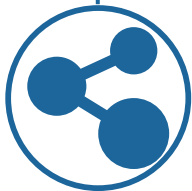
RECs, as a way to organise local actors to participate in the energy system, have an impact on socio-economic and environmental factors: they can **tap regional value creation potential and strengthen social cohesion**. On top of reducing energy poverty and dependency, (bio)energy communities also allow **(local) job creation, and revenues for the municipalities**. In Italy, [SEV](#), a service provider in South Tyrol, reminded customers in their annual wishes that **their energy prices did not increase in 20 years**.



They can provide **potential for a bottom-up transformation of the energy system**, making a key contribution to enhance its decentralisation and democratisation [5]. Renewable energy communities can support the in-depth transformation of the economy and society to achieve climate neutrality in a way that takes account of local circumstances and issues of social justice. Energy communities can act as a life buoy when the markets are out of control, especially in mountain areas and methane-free zones.



They can help provide sustainable, secure and affordable energy, accelerating the transition to renewables, reducing dependence on outside sources and diversifying energy supplies. This is a key point that has been brought to the fore in a dramatic way through the Ukraine war and its pernicious consequences: community energy offers a great opportunity to overcome inequalities, affecting young people in particular, as well as generational, territorial and educational divides. The community approach can empower individuals and territories that embrace it: (bio)energy communities for instance can allow savings with lower heating costs while reducing energy dependence, improving air quality and wellbeing - that is especially the case in regions where fossil fuels are still the vast majority, [such as coal in Poland](#).



Research has investigated RECs' particular impact on social value creation, energy and climate justice [6]. Energy communities offer the potential to provide multiple answers to the crises faced, should the barriers previously mentioned be lifted. They can support **sharing locally-produced energy with vulnerable consumers, ending in more accessible and stable energy prices**, strengthening system resilience, reducing the need for investments in electricity grid extensions/reinforcements and enhancing local acceptance of renewable energy projects. To be inclusive, they should agree on favourable conditions for joining, for instance lifting entry fees for specific members.



They provide the opportunity to participate in collective energy generation **with no or low investments**.



Community energy can strengthen inclusiveness, social cohesion and sustainability [7], by redistributing some of the benefits they receive to support social actions and community priorities. A recent example is the [energy community of Karditsa](#), Greece, collecting local coffee to turn it into pellets and redistributing thermal energy to the nearest school in cooperation with local authorities and citizens. [Previous research](#) investigating social acceptance of renewable energy shows that local ownership and local benefits are important dimensions as they enable trust and influence over processes.




Beyond offering solutions to decarbonising our lives and increasing social acceptance of the energy transition and renewable energy projects through participatory processes, “energy communities can create social cohesion and spaces to educate and train people on issues of energy, climate and democracy”. [8]

In the short term, energy communities are well placed to build local solidarity networks and reach out to their members and community to help out with energy savings measures, energy sobriety and lasting behavioural change. In the long run, they have the potential to create a meaningful approach to citizen empowerment and can increase accessibility to the benefits of the energy transition to all citizens.

Nurturing local heroes

“It takes one motivated individual to raise awareness within their community.” The [POWERPOOR](#) project investigates how bringing forward local heroes and providing them with tools and knowledge can foster energy democracy. **Providing information and sharing knowledge** is key in enabling a just energy transition, coupling this notion with the development of specific support schemes to alleviate energy poverty while bringing forward the uptake of joint energy initiatives is within the aims of POWERPOOR. In eight European countries (Bulgaria, Croatia, Estonia, Greece, Hungary, Latvia, Portugal, and Spain), trainings were given to interested individuals and municipalities on energy poverty (what is it, what are the mitigation policies and actions?), performing an energy audit, energy community/cooperative (what are they and how can they be used to alleviate energy poverty?).

The local heroes - Energy Supporters and Mentors, currently more than 850 individuals across EU - visited energy poor households to provide them with free advice on how they can lower their energy bills and enhance their energy efficiency by implementing low cost no regret energy efficiency interventions and behavioural changes using tools. Municipalities and local authorities were also trained and in some of the interested municipalities, **local energy poverty alleviation offices** were established (17 in the 8 countries). These one-stop-shops of information on how to mitigate energy poverty also share information on how to be part of joint energy initiatives such as energy cooperatives or communities and how to leverage innovative financing schemes. Municipalities can play a crucial role in establishing and operating energy communities while incorporating actions that can tackle energy poverty. Read more in the [Energy Poverty Guidebook for energy planning](#).



How can RECs be a solution to tackle energy poverty and energy injustices?

Conditions and policy
recommendations

How can RECs be a solution to tackle energy poverty and energy injustices?

Conditions and policy recommendations

The European Parliament, in a [briefing listing measures that can be considered to tackle energy poverty](#), includes the development of local energy communities. But *what would be the right enabling and incentivising frameworks for RECs to become one of the tools to alleviate energy poverty and what should policymakers prioritise?*

As mentioned in the previous pages, if RECs are to be one of the tools we can use to alleviate energy poverty and address social justice issues in the energy transition, specific governance and membership models need to be in place. Our projects have gathered the following policy recommendations for energy communities to be part of the solution and provide an alternative way of tackling energy poverty and engaging citizens in the energy system:

LEGAL FRAMEWORK



As a priority, Member States should correctly **transpose the Renewable Energy Directive's provisions on RECs** (definition, rights and duties of RECs as well as creation of an enabling framework for RECs pursuant to Art. 22(4) of RED II and their proper consideration in support schemes).



European legislation (RED II, Art. 22(4)) asks Member States to create an enabling framework for RECs ensuring that, inter alia, **the participation in RECs is accessible to all consumers**, including those in low-income or vulnerable households. Hence, national (and where applicable) regional governments could ensure that low-income and vulnerable households can participate in energy communities (this could also be ensured by the RECs, asking no membership fee).



Include dedicated actions on promoting the inclusion of energy poverty in municipalities' **Sustainable Energy & Climate Action Plans (SECAPs / NECPs)**. The next version of NECPs are expected by countries in 2023 (draft) and 2024 (final), providing an opportunity, especially in [setting up multilevel climate and energy dialogue](#).



National, regional and local governments are encouraged to **remove barriers discouraging or prohibiting the participation of low income and vulnerable households in renewable energy communities**. Social policy, in several Member States, is designed in a way which requires recipients of social benefit payments to first liquidate their existing assets before investing. As a result, it becomes very unattractive for vulnerable households to participate in a REC despite the fact that many RECs offer low entry hurdles. For instance, governments could ensure that tenants can participate in energy communities and collective energy consumption schemes, by promoting landlord-to-tenant electricity models and removing administrative barriers. While the EU's competences on social policy are limited, it would nevertheless be prudent to issue guidance or recommendations to Member States suggesting that the participation in RECs for vulnerable households (recipients of social benefit payments) becomes decoupled from the need to liquidate assets before investing in RECs in particular.



Introduce a **more inclusive energy poverty definition and an indicator set**, possibly complementing the indicator set currently used by the European Energy Poverty Advisory Hub and the EU Covenant of Mayors.

FINANCING



Governments should provide **access to financing tailored to the needs** of RECs, rather than only allowing RECs to apply to financing schemes open to other market actors. For example, dedicated citizen/community energy funds designed as revolving funds as they have been established in The Netherlands and some regions in Germany provide unbureaucratic start-up financing to cover

upfront costs of RECs (e.g. feasibility studies, permits etc.). [9]



As working with groups and people living in vulnerable situations may come with additional challenges, **RECs that want to focus on energy poverty as a priority should be met with support from EU and national governments** through for instance: grants, procurement, lower grid prices or incentives for using renewable energy, an EU-wide unified tariff-setting / regulations.

TECHNICAL CAPACITY & IMPLEMENTATION



National and regional governments are encouraged to **establish one-stop-shops which provide technical assistance for citizens, community energy initiatives, local authorities and SMEs**. These may build upon already existing intermediary structures like national or regional energy agencies and related competence centres. The coordination office for energy communities established in Austria provides a good example.



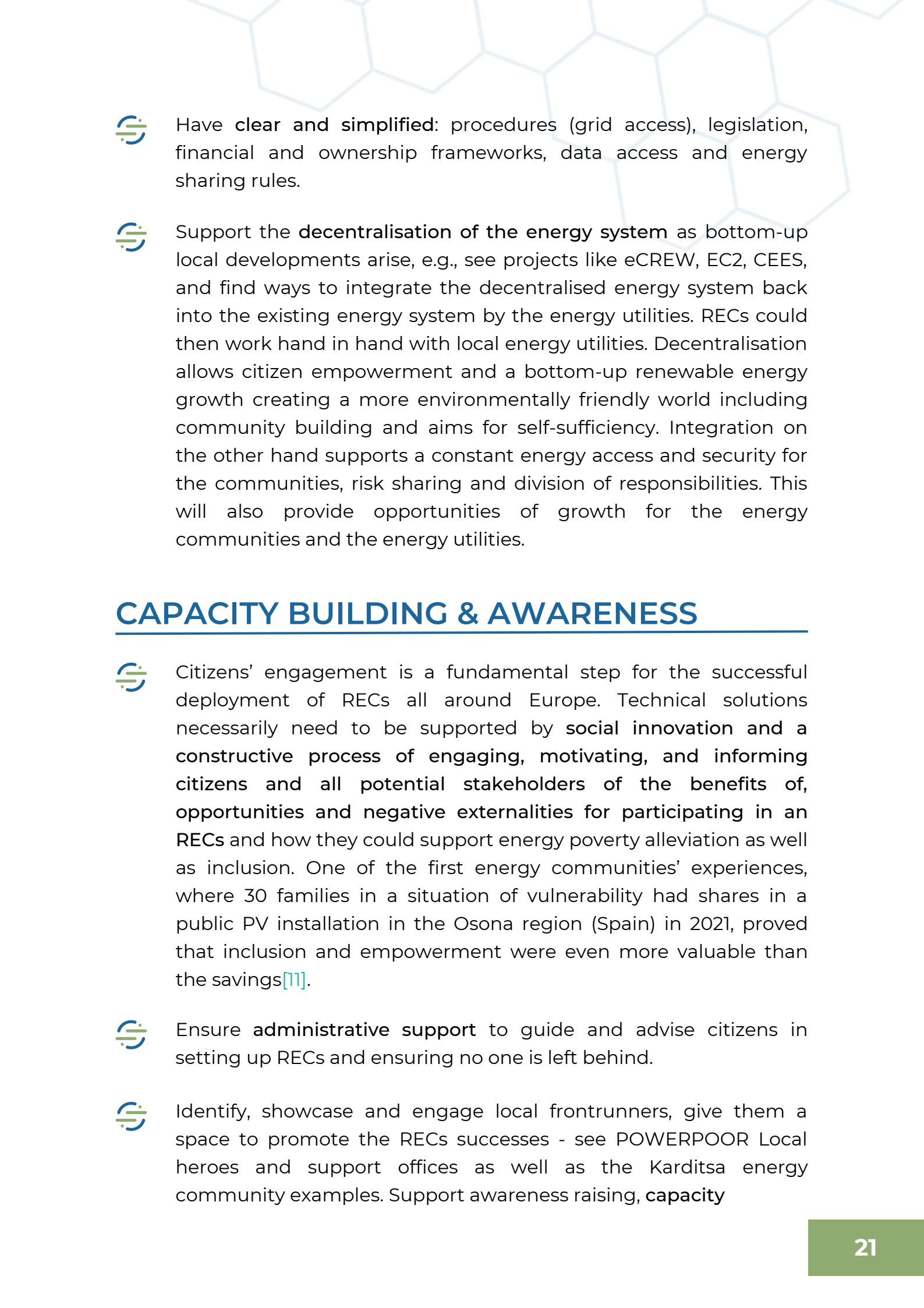


Support at the local level is needed to foster energy communities that include the participation of people suffering a situation of vulnerability. The Energy Poverty Advisory Hub (EPAH)[10] is carrying technical assistance to municipalities willing to promote energy communities accessible to all.






Depending on the national context, **municipalities have manifold ways to promote and facilitate the development of energy communities**: they can lease municipal land/buildings/roofs they own to energy communities with social and environmental criteria and conditions to alleviate energy poverty. They are potential initiators, investors and members of a REC and can act as facilitators, awareness raisers and networkers. They may disseminate good practices (see local heroes example above). Furthermore, municipalities can help create trust in and legitimacy for energy community initiatives



Have **clear and simplified**: procedures (grid access), legislation, financial and ownership frameworks, data access and energy sharing rules.

- 
-  Have **clear and simplified**: procedures (grid access), legislation, financial and ownership frameworks, data access and energy sharing rules.
 -  Support the **decentralisation of the energy system** as bottom-up local developments arise, e.g., see projects like eCREW, EC2, CEES, and find ways to integrate the decentralised energy system back into the existing energy system by the energy utilities. RECs could then work hand in hand with local energy utilities. Decentralisation allows citizen empowerment and a bottom-up renewable energy growth creating a more environmentally friendly world including community building and aims for self-sufficiency. Integration on the other hand supports a constant energy access and security for the communities, risk sharing and division of responsibilities. This will also provide opportunities of growth for the energy communities and the energy utilities.

CAPACITY BUILDING & AWARENESS

-  Citizens' engagement is a fundamental step for the successful deployment of RECs all around Europe. Technical solutions necessarily need to be supported by **social innovation and a constructive process of engaging, motivating, and informing citizens and all potential stakeholders of the benefits of, opportunities and negative externalities for participating in an RECs** and how they could support energy poverty alleviation as well as inclusion. One of the first energy communities' experiences, where 30 families in a situation of vulnerability had shares in a public PV installation in the Osona region (Spain) in 2021, proved that inclusion and empowerment were even more valuable than the savings^[11].
-  Ensure **administrative support** to guide and advise citizens in setting up RECs and ensuring no one is left behind.
-  Identify, showcase and engage local frontrunners, give them a space to promote the RECs successes - see POWERPOOR Local heroes and support offices as well as the Karditsa energy community examples. Support awareness raising, **capacity**

building and learning between communities.

SOCIAL CAPACITY & INCLUSIVITY



Energy communities show particular potential as mechanisms for **participative and collective decision-making, problem solving and action, which, in combination with membership diversity** (age, gender and minorities), could contribute meaningfully to strengthening social justice in the energy system. But they are faced with significant challenges in the current energy market, which is not built to accommodate small, community players, making it hard to practise a social role and increase inclusivity. Member States are encouraged to investigate why vulnerable households haven't been able to participate in the energy transition in their country and why RECs experience difficulties attracting people from diverse social groups. We recommend that Member States, when assessing barriers for the development of RECs at the national level, as a priority pay attention to identifying and lowering the barriers which are preventing energy communities from becoming more accessible to vulnerable and low-income households, and tenants. [12]



By definition, the potential of energy communities lies in their ability to be representative of diverse actors. Engaging women and non-binary people in energy communities, still under-represented, is essential to achieving this diversity in any community. Political top-down support for women integration in the energy transition needs to be targeted for instance by demanding a **necessary percentage of women involvement in the governance board and decision making bodies**.



Energy communities could have a **gender quota**, requiring at least in the short term, an equal share of women and men on boards and steering groups.



An **inclusive language in policy** is also needed, as well as going beyond binary data collection and representation. [For more information on this topic, see the after-even material of a](#)

[collaborative discussion: More women in renewables and energy communities – safeguarding an enabling policy framework.](#)



Women are the underestimated driver for the energy transition. European initiatives and projects can support addressing women's inclusion, through capacity building, awareness raising actions and more. [eCREW](#) layed a focus on women integration in all awareness programs in its lighthouse communities (LCs) where access to the energy management was digitalised. [W4RES](#) is scaling up the involvement of women in the market deployment and uptake of Renewable Heating and Cooling solutions via replicable support measures tested and validated across 8 European countries, such as international projects development, transformation strategy, prospective meetings but also seminars, webinars, hackathons, mutual learning and co-creation workshops that provide concrete gender tools.



Attention should be paid to energy (in)justice and energy citizenship: improving access to energy and rights to energy are crucial for strengthening the role of citizens in energy systems. EC²'s approach highlights people's rights to and responsibilities for a just and sustainable energy transition. The structures of the current energy systems (neoliberal energy market) limits people's agency and the collectivist approach of energy communities could provide an empowering alternative. Energy communities can potentially unite a variety of aspects of energy citizenship - by incorporating democratic processes and social justice goals.



Provide platforms for minorities and all members of the community to express their needs and priorities. This can be done through various [engagement strategies](#). DECIDE is building on the work of [COMPILE](#) and the [Interreg_MED_RED](#) project to identify economic, environmental and social KPIs that can help provide quantitative analysis of the impact of collective energy actions, which for social impact are currently [not well measured](#).

Energy communities can be leveraged to alleviate energy poverty and strengthen social justice in the energy system, but bold policy actions are needed to structurally tackle social justice issues across the EU.

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Other resources

[EUSEW2022 | Community-based renewable energy projects for a just and green transition \(video recording\)](#)

<https://friendsoftheearth.eu/publication/redistributing-power-energy-communities-relieve-energy-poverty/>

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