

Energy Citizenship and Energy Communities for a Clean-Energy Transition

# D6.1 Energy Citizenship Briefings - Report



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Abstract	The report describes the production process of D6.1 – six actor and
	level-specific briefings. The document introduces the aims and
	objectives of the deliverable, as well as its target groups. A timeline
	describing the process and the milestones of the collaborations is
	included. The report goes on to explain the overall concept
	development, inspiration taken from previous policy brief formats,
	and division of topics, roles and responsibilities across the six
	policy briefs. The final sections discuss aspects after writing has
	finished, including the design process, plans and rationale for
	translation choices, and upcoming dissemination plans.



# **Table of Contents**

#### Contents

1		Introduction6
2		Aims and objectives
3		Target groups
4		Timeline7
5		Concept development
	5.1	1 General concept development (including format case studies)8
	5.2	2 Topics, roles and responsibilities for each policy brief
	5.3	3 Content and inputs per policy brief
6		Design and layout 10
7		Translation11
8		Dissemination plan
1	8. <sup>-</sup>	1 Policy Dialogue #111
1	8.2	2 Policy Dialogue #212
8		Dissemination plan
An	ne	exes13
		Annex 1: Policy Brief #113
		Annex 2: Policy Brief #213
		Annex 3: Policy Brief #313
		Annex 4: Policy Brief #413
		Annex 5: Policy Brief #5
		Annex 6: Policy Brief #613



# **Table of Figures and Tables**

Table 1. Energy Citizenship Briefings Timeline Table 2. Overview of the respective policy briefs



# **List of Abbreviations**

ZSI	Zentrum für Soziale Innovation GmbH
Uni Graz	Universität Graz
ULEI	Universität Leipzig
WUEB	Uniwersytet Ekonomiczny we Wrocławiu
UG	Rijksuniversiteit Groningen
ICLEI	ICLEI European Secretariat GmbH
GEN Europe	Global Ecovillage Network of Europe E.V.
HCWS	Spółdzielnia Mieszkaniowa Wrocław-Południe
Prusice	Gmina Prusice
Scalenghe	Commune di Scalenghe
TURE NIRVANE	Ture Nirvane Società Cooperativa Sociale di Comunità
ABM	Arterra Bizimodu
Buurkracht	Buurkracht Projecten B.V.
GRO	Groningen municipality
EnCi	Energy Citizenship



#### **1** Introduction

Overall Work Package<sup>1</sup> 6 aims to derive actionable and evidence-based policy recommendations and practical advice based on the work undertaken in WPs 2 to 5, in order to foster energy citizenship and energy communities, and to spur greater social acceptability, as well as more durable governance arrangements. The **focus** will be on **extracting key insights and tailoring them to specific audiences**. Key outputs will then be disseminated using innovative methods in WP7. In essence, WP6 acts as a **knowledge broker** between the research-led WPs and the communication-oriented WP7.

The key output from Task 6.1 specifically will be a series of at least six actor- and level-specific Energy Citizenship Briefings that will then form the basis for Tasks 6.3 and will be exploited in Tasks 7.3 and 7.4. Moreover, the briefings will directly connect to the project's overarching objectives: scaling-up energy citizenship and energy communities to achieve greater social acceptability and more durable governance arrangements via actionable recommendations for policymakers.

#### 2 Aims and objectives

Task 6.1 seeks to distil recommendations from the preceding WPs for policymakers and practitioners at the local, regional, national and EU levels on how to support energy citizenship.

The core aims and objectives are therefore to retrieve from previous WPs key messages for different actors on how they can contribute, and under which conditions, to the successful promotion and implementation of energy citizenship.

#### 3 Target groups

The focus, as stated above, is on policymakers *and practitioners* at all levels, from the localall the way up to the EU-level. However, given that WP6 contains two other tasks that are more directed at the public, the main target audience for T 6.1 was policymakers.

EU member states are at present required to transpose the EU's renewable energy directives to their national contexts. Since the briefs' overall message is that this needs to occur in a more holistic and contextualised way to streamline complex and/or unclear aspects of the EU directives, particular focus is placed on EU and national policymakers.

The aim, accordingly, is particularly to influence *European and national policy design* within EU member states. This is nonetheless done in such a way as to push for an increased role for local-level actors - particularly local governments.

<sup>&</sup>lt;sup>1</sup> Hereafter, 'WP'.



#### 4 Timeline

The timeline for this task was initially from March to October 2023 (project Months 20-28). A request was later granted by the Project officer to extend this to the end of 2023, in order to allow for psychological insights from WP4 - Quantitative Empirical Studies on what motivates people to join energy communities and under which conditions energy citizenship cognition and behaviour can be strengthened.

Nevertheless, as seen in the timeline below, much of the early planning and concept development took place already in 2022.

Energy Citizenship Briefings Timeline		
What	When	
WP6 Pre-kick-off meeting	January 2022	
WP6 kick-off meeting (part of in-person Consortium meeting)	May 2022	
Development of general concept by ICLEI	June - October 2022	
Input into general concept by WP6 core team	December 2022	
Policy brief #1 - consortium commenting deadline first draft	January 2023	
Policy brief #1 - published	February 2023	
Policy brief #2 - consortium commenting deadline first draft	March 2023	
Policy brief #2 - published	April 2023	
Policy brief #3 - consortium commenting deadline first draft	June 2023	
Policy brief #3 - published	July 2023	
Policy brief #4 - consortium commenting deadline first draft	August 2023	
Policy brief #4 - published	December 2023	
Policy brief #5 - consortium commenting deadline first draft	December 2023	
Policy brief #5 - published	December 2023	
Policy brief #6 - consortium commenting deadline first draft	December 2023	
Policy brief #6 - published	December 2023	

#### Table 1. Energy Citizenship Briefings timeline



#### 5 Concept development

#### 5.1 General concept development (including format case studies)

The preliminary concept note for the Energy Citizenship Briefings was developed in mid- to late-2022. This included for each brief a proposal regarding:

- Overall topic
- Potential inputs from previous deliverables most notably <u>D2.1</u> and <u>D3.3</u>
- Focus level (where applicable)

Inspiration was taken from a variety of previous policy briefs and factsheets involving ICLEI, with the example of Open Heritage being chosen as the primary inspiration:

- Open Heritage Example #1 and Example #2
- DECIDE factsheet for individuals and for policy makers
- SONNET Energy read
- STARS Policy Brief
- UrbanA Policy Brief

The layout accordingly took a fairly standard form for the most part, being 6-12 pages long and taking the following form:

- List of key conclusions
- Introduction to the topic of the brief
- Challenges to address; and
- List of recommendations for how to address this.

#### 5.2 Topics, roles and responsibilities for each policy brief

According to the Grant Agreement, ICLEI was assigned as task lead, with support from ZSI and contribution from the entire consortium.

In practice, responsibilities were divided as follows:

- ICLEI solely responsible for writing Brief #1 (*Introduction to Energy Citizenship*), overall coordination of the policy brief writing process, and editing of drafts.
- Economics (WUEB) and Public Law (Uni Graz) research partners responsible for writing Briefs #2-5 (typically one writing and one supporting)
- Psychology partners (RUG and ULEI) responsible for writing Policy Brief #6
- ZSI providing overall input and support as needed, particularly regarding links to the work of other Horizon projects working on the Energy Citizenship topic
- Practice partners providing ad-hoc practical insights, as required
- Entire consortium commenting on first drafts
- GEN Europe taking care of design and layout, and uploading briefs to EC<sup>2</sup> website.



Opportunities for collaboration and discussion were provided by monthly WP6 core meetings and ad-hoc WP6 open meetings. Regular check-ins and brainstorming sessions were also arranged to allow for more focussed work on Task 6.1, as required.

The inspiration for the respective policy brief topics, as well as much of the content for this, was derived from Deliverable 3.3 - *Catalogue of potential legal and economic barriers and facilitators of energy citizenship*.

	Overview of the respective policy	briefs	
Brief	Title	Level focus	Authorship
#1	Energy Citizenship: <i>A missing piece to the energy transition puzzle?</i>	-	ICLEI
#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	EU	Uni Graz (WUEB supporting)
#3	How to mainstream energy citizenship at the national level: Focus on improving legal frameworks (and public understanding thereof)	National	Uni Graz
#4	Furthering energy citizenship in coal regions The importance of sensitive, place-based transition processes	Coal regions	WUEB
#5	Localised support for establishing & joining energy communities: <i>How local and regional governments can help further energy citizenship</i>	Local & regional governments	WUEB (Uni Graz Supporting)
#6	Recommendations for inclusive and empowered energy communities: <i>How policy makers and initiative takers</i> <i>can foster public support for and involvement in energy</i> <i>communities</i> (working title)	-	RUG & ULEI

#### Table 2. Titles, level focus and authorship of each brief

#### 5.3 Content and inputs per policy brief

For most of the six Policy Briefs, the task was more related to distilling and summarising the core messages from existing deliverables. The focus here was on accessible and clear messaging, with a focus on helping to provide actionable recommendations for policymakers at the geographical level in question.

The form therefore typically started with an introductory, contextualisation section, a list of the problems occurring at this level, and a list of actionable recommendations, speaking



directly to the shortcomings previously highlighted. These were also typically categorised further into type - e.g. Actions vs Tools.

Given the novel and somewhat esoteric nature of the energy citizenship concept, Policy Brief #1 sought to simply summarise Deliverable <u>2.1</u> (*Interdisciplinary understanding of energy citizenship*).

Most of the Policy Briefs were directly based on the content from Deliverable <u>3.3</u> (*Catalogue of potential legal and economic barriers and facilitators of energy citizenship*), with #2, #3 and #5 summarising the key actionable recommendations for policymakers at the EU- Nationaland Local & Regional levels respectively.

Content-wise, Policy Brief #4 provided most likely the most novel insights of all the policy briefs, seeking to apply the EC<sup>2</sup> conclusions and insights to the context of goal regions (not an explicit focus of the project or its preceding deliverables per se). The paper used Poland as a case study, focusing on the hard coal region of Silesia, as well as the lignite areas of Bełchatów and Turów. In 2021, The Katowice Housing Cooperative and the "Nasz dom" Housing Cooperative in Bytom established the Helios Energy Cooperative. In October 2023 The Katowice Housing Cooperative, which manages 19,000 apartments in Katowice, in response to the residents' interest, has defined the conditions for installing photovoltaic panels on balconies.

Finally, Policy Brief #6 sought to summarise the results from the psychological studies conducted in Work Package 4 (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*). The resulting recommendations are not level-specific, like many of the other policy briefs, but provide recommendations regarding the key set-ups of energy communities (barriers and enablers), and resultant recommendations for which forms of energy communities most efficiently foster citizens' empowerment and the participation of underrepresented social groups.

#### 6 Design and layout

The design and layout of the Energy Citizenship Briefings was undertaken by GEN Europe, based on the EC<sup>2</sup> visual identity. The goal was to provide a professional and clearly readable layout to appeal to the target audience and encourage easy access to the key conclusions. Social media publications announcing the briefings maintained the same style.



#### 7 Translation

Translation will be finalised in 2024 (in preparation for the final EC<sup>2</sup> dissemination events) and will be handled by GEN Europe. Quotes for translation services have already been requested and based on this, a decision will be made on the extent of translation.

Within WP6, the empowerment kit translation is considered the most important to prioritise. Remaining budget will be spent on translating selected briefs, with the order of priority and translation languages foreseen as:

- First, Policy Brief #5 (all four project practice languages Spanish, Polish, Italian and Dutch) since this is targeted at the local level, where knowledge of English might be lower.
- Second, Policy Brief #4 (definitely Polish and perhaps one or two of the other coal region languages, such as Greek and Czech) since the brief focuses on coal regions and Poland in particular.
- Third, Policy Brief #3 (again, all four project practice languages).

#### 8 Dissemination plan

Dissemination of the policy briefs will largely take place through two targeted policy dialogues, with selected policymakers and other stakeholders invited to.....

The briefs have also been disseminated through the EC<sup>2</sup> newsletter and social media channels as they have been published, and when the final brief is published a social media campaign and newsletter drawing attention the the collection of briefs as a whole and their key messages will be published.

#### 8.1 Policy Dialogue #1

Policy Dialogue#1 will take place online on the 14th of February 2024, 10-12.30 (CET). The event is organised as part of a short energy series hosted at the ICLEI event series <u>Breakfast</u> <u>at Sustainability</u>. The first event will be moderated by ICLEI and it will contribute to the dissemination of the Briefs focusing on the local level. The second event is organised by the <u>Sun4All</u> and <u>EnergyPROSPECTS</u> projects on the 20th of February, 10.15-12.00 (CET). The aim for the first event is to invite four speakers, two representing policy-makers at the local level and two representing energy community members or leaders. The objective of the event is to discuss with speakers and participants the narratives, recommendations, and key messages conveyed through the Briefs for and at the *local level*. The targeted audience for the event is quite broad, including policymakers, practitioners, energy community members, and subscribers of the Community Energy Academy.



#### 8.2 Policy Dialogue #2

The narratives, recommendations, and messages conveyed through the Briefs will be integrated into the writing of a joint Paper, written in collaboration with EC<sup>2</sup>'s "sister projects" working on the energy citizenship concept: <u>EnergyPROSPECTs</u>, <u>Dialogues</u> and <u>ENCLUDE</u>. In addition to this, the Briefs will guide the organization of policy sessions that will be held at the second policy event. This will be held in Brussels on the 5th of March 2024. The event will have a stronger focus on the *European-level* trends regulating and framing the energy transition and the emergence of energy citizenship. The one-day event will include panel discussions, interactive sessions, and many parallel sessions with different focuses and groups. It will target policymakers at the local level, as well as energy community members, legislators, practitioners, and the public generally.

#### 9 Conclusion

Overall, this policy brief writing process was a relatively smooth one, made easier by a collaborative and flexible core writing team across the three topical disciplines represented in the project.

Initial difficulties were created by the broad messaging of the EC<sup>2</sup> project and its definition of energy citizenship. The obligation of member states to create an enabling environment for citizen involvement in the energy transition can mean a broad array of things in different contexts. Focusing a large part of the briefs on the EU's renewable energy directives and the transposition process by member states provided a helpful means of narrowing this messaging down and providing clear(er) examples of shortcomings and recommendations in a real-life context.

Regarding the writing process itself, the choice to write most briefs collaboratively and across disciplines was relatively labor intensive but arguably led to a more holistic and well-rounded result. In the future, more time would be set aside for editing and incorporating consortium feedback. This process was surprisingly complex and time-consuming, but worth the effort - again contributed to final outputs that incorporated a far larger and more diverse number of perspectives.

It is hoped that the policy dialogues outlined in 8.1 and 8.2, above, can be successfully planned so that the briefs reach their intended audience and lead to tangible policy changes at all levels.





# **Energy Citizenship:** A missing piece to the energy transition puzzle?

The concept of Energy Citizenship concerns rights and responsibilities for each citizen and is considered an important step towards energy transitions in a wider European energy policy context. As the first in a series of policy briefs for the EC<sup>2</sup> project, this brief unpacks the *concept* of Energy Citizenship. It delves into the source and extent of the rights and responsibilities that come with Energy Citizenship, and situates this concept within the wider European energy policy context.

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#### The insights contained herein are based on the transdisciplinary research results of the citizen engagement conducted as part of the EC<sup>2</sup> 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 and the Netherlands.





#### **KEY INSIGHTS**:

**1.** Member states have an obligation to create an **enabling environment** for active citizen involvement in the energy transition (an inherent part of EU citizenship).

2. This extends beyond democratic participation and access to energy, to also include **co-creation and ownership** of different forms of production and consumption.

**3.** The Clean Energy Package partly recognises this, by adding new energy community actors and citizen rights and responsibilities to more direct involvement in the transition.<sup>1</sup>

**4.** Yet the wider European level regulatory and economic **framework still largely reflects a top-down producer-consumer relationship**, with inadequate active involvement of the public.<sup>2</sup>

#### Keywords:

#EnergyCitizenship #EnergyTransition #EnergyDemocracy #CoCreation #CoOwnership #EnergyCommunities #Empowerment

<sup>1</sup> See European Commission *Clean energy for all Europeans package* (2019). Available <u>here</u>.

<sup>2</sup> With such neo-liberal, consumer-based approaches also continuing to prevail at the national level.



**"Energy citizenship** is people's rights to and responsibilities for a just and sustainable energy transition." <sup>3</sup>

#### Nature & Scope of Energy Citizenship

Energy Citizenship can be viewed as an additional new layer of EU citizenship, adding to the latter's multi-layered political and market dimensions. It is akin to freedom of movement, existing regardless of whether or not someone makes use of their rights. Therefore, one's individual or collective energy citizenship can be viewed as less a binary than a spectrum of weak to strong citizenship.<sup>4</sup>

Energy citizenship emphasises that **member** states have an obligation to create an *enabling environment* for citizen involvement in the energy transition. This goes further than democratic participation, by also emphasising empowerment of individuals and communities to engage in energy policies (decentralisation of power) and agency relating to different forms of production and consumption.

This builds on the wider EU policy landscape. The *EU Pillar of Social Rights* encompasses access to essential services *including energy*,<sup>5</sup> while the *EU Green Deal* has a specific focus on combating energy poverty - strengthening the conception of energy as a right.<sup>6</sup> The *Clean Energy Package* has also added new opportunities for democratic citizen participation and co-creation, thereby highlighting the importance of co-ownership of the energy transition by individuals and communities.

The possibility to establish and participate in an energy community can be seen as a particularly promising and empowering example of energy citizenship (in addition to more fundamental aspects such as basic supply and combating energy poverty).<sup>7</sup> However, energy citizenship could also include various different forms of consumption and production from renewables, as well as co-creation of the energy ecosystem - all with particular emphasis placed on *localising* production and involving local communities.<sup>8</sup>



- <sup>3</sup> See EC<sup>2</sup> project Deliverable 2.1 Interdisciplinary understanding of energy citizenship (2022). Hereafter 'D2.1'. Available <u>here</u>. <sup>4</sup> D2.1 § 2.7.
- <sup>5</sup> See European Commission Establishing a European Pillar of Social Rights (2017). Available here.
- This is fleshed out in a more specific universal service obligation <u>Directive 2009/72/EC</u> of the European Parliament and of the <u>Council 143</u> (the Electricity Directive).
- <sup>6</sup> European Commission Delivering the European Green Deal (2020). Available here.
- <sup>7</sup> D2.1 §§ 3.3 & 2.7.
- <sup>8</sup> Including at individual, household, and local community level.

#### Energy citizenship as a co-responsible process



#### Source of **Energy Citizenship**

The term "energy citizenship" is not explicitly stated, but is implicit in the web of EU norms encapsulated in EU law - creating a picture of citizens as proactive *players* in the energy transition<sup>9</sup>. For example, RED II and IMED<sup>10</sup> speak to just transition factors such us supporting vulnerable customers, addressing energy poverty, and enabling energy communities. The Aarhus convention also works towards more participation of individuals and civil society in climate policy, including within the energy transition.<sup>11</sup>

Taken together, these paint a **dual picture** of Energy Citizenship - encompassing both specific rights and duties for everyone (including individuals), and a general commitment to a (just and sustainable) energy transition.<sup>12</sup> While this commitment stems from the EU level, rights and duties should also include local, regional or national level content. Energy citizenship can be considered stronger in instances where more such rights and duties exist and are supported.

Yet the decision to strengthen Energy Citizenship is not unanimous. In the Clean Energy Package tensions exist between two worldviews.

with the admission of new actors in EU law (most notably citizen energy communities and renewable energy communities) and a host of new rights surrounding participation, production, access, and co-creation.<sup>13</sup> On the other hand these continue to exist within a wider regulatory and economic framework which still largely reflects the traditional neoliberal economic model centred on a top-down producer-consumer relationship.<sup>14</sup>

This has been partly recognised

The introduction of thes new actors and rights alone is unlikely to spark the kinds of profound change and engagement anticipated.<sup>15</sup> Current energy systems are structured in a way that provides little agency to the majority of citizens. What is required are concrete steps to support citizen involvement through enabling policies which address issues of exclusion and inequality head-on and provide citizens with the resources to actively participate (see examples listed at the end of this brief). Only then can people build strong psychological energy citizenship and actively engage in a just and sustainable energy transition. In this regard, it is worth noting that the EC<sup>2</sup> project has also developed a psychological measure by which energy citizenship can be monitored in specific contexts - an Energy Citizenship Scale.<sup>16</sup>

<sup>11</sup> Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (1998), 2161 U.N.T.S, p.447 (The Aarhus Convention), to which the EU is a signatory.

- <sup>13</sup> As summarised in D2.1 § 3.8: "People have the rights to (...) an access to sustainable energy and clean environment (...),
- to produce and organise sustainable energy; to co-create (...) the sustainable energy transition, to equal rights to access the energy market, and the responsibilities for the co-creation of a sustainable energy transition (...).

- <sup>15</sup> Such as the establishment of at least one renewable energy community per municipality above 10,000 residents by 2025. See the European Commission EU solar energy strategy (2022). Available here.
- <sup>16</sup> See EC2 D2.3 Energy Citizenship Scale Validation Study (2021). Available <u>here</u>. See also the Energy Citizenship Quiz (2022) for self-assessment using this scale. Available <u>here</u>.

<sup>&</sup>lt;sup>9</sup> Encapsulated in, inter alia, primary and secondary law, EU policy papers, communication of the European Commission, and relevant international conventions.

<sup>&</sup>lt;sup>10</sup> Renewable Energy Directive 2018/2001/EU (RED II) & Directive on Common Rules for the Internal Market for Electricity 2019/944/EU (IMED).

<sup>12</sup> See D2.1 § 2.5.3.

<sup>&</sup>lt;sup>14</sup> See D 2.1 § 3.1.

#### **Relevance of Energy Citizenship**

What does this new concept add to the current energy transition debate? Primarily, it strengthens the argument that **policymakers cannot expect ambitious energy targets to be met**, and for the public to play its part, **unless an enabling environment is created** in which people can participate. Research highlights that the switch to renewable energy is not happening quickly enough. This, despite studies suggesting that 80% of EU households have the potential to be active players in the energy system by 2050.<sup>17</sup>

In the context of renewable energy communities we see concerns being raised about a "copy-paste" approach to transposition of the EU's Renewable Energy Directive, without paying attention to national and local contexts. The enabling frameworks that have so far been developed in the EU member states are generally not yet sufficiently advanced to comply with the minimum requirements of the Directive.<sup>18</sup> These mismatches prevent or hinder policies to trigger effective and concrete actions locally, such as supporting citizens to set up and join energy communities. Energy Citizenship helps to provide specific insights into how a holistic and contextspecific enabling environment can be achieved. Two examples are the focus on legislative coherence extending to other domains *beyond energy law*, and the far greater guiding role required from intermediaries particularly local and regional governments, but also civil society actors and local communities.

Energy Citizenship also contributes to wider policy debates.<sup>19</sup> It strengthens arguments for a more holistic, systemic approach to tackling energy poverty, with both emphasising the idea of energy as a *right*. It further argues for broadening our conception of energy communities beyond the narrow understanding of EU law. It therefore adds to voices calling for the better mobilisation (inclusion) of already existing collective energy actions that are arguably equally capable of contributing to the EU's overarching goals regarding the energy transition.<sup>20</sup>

, - 1	· _ ·	FURTHER RESOURCES:
     	$\bigotimes$	Academic article based on EC <sup>2</sup> deliverable D2.1: An interdisciplinary understanding of energy citizenship: Integrating psychological, legal, and economic perspectives on a citizen-centred sustainable energy transition (2023). <sup>21</sup>
   	$\checkmark$	EC <sup>2</sup> paper: Catalogue of potential legal and economic barriers or facilitators of energy citizenship (2022).
     	$\bigotimes$	DECIDE position paper: Energy Communities and Collective Actions (2022).
   	$\checkmark$	EC <sup>2</sup> project Energy Citizenship (online) quiz (2022).
         	3	<b>Dialogues project:</b> Pathways to energy citizenship and their connection with ownership, participation, and conflict (2022).
<sup>17</sup> Se <sup>18</sup> Se	ee EEA ee CON	Energy prosumers in Europe - Citizen participation in the energy transition (2022). Available <u>here</u> . IE RES Comparative Assessment of Enabling Frameworks for RECs and Support Scheme Designs (2022). Available <u>here</u> .

<sup>19</sup> Including achieving climate goals with better efficiency and speed, reducing energy dependence on centralised actors, increasing energy autonomy, etc.

<sup>20</sup> See EC2 D2.1 § 2.3.1; DECIDE Energy Communities and Collective Actions (2022). Available <u>here</u>.

<sup>21</sup> Hamann, K. R. S., Bertel, M. P., Ryszawska, B., Lurger, B., Szymanski, P., Rozwadowska, M., Goedkoop, F., Jans, L.,

Perlaviciute, G., Masson, T., Fritsche, I., Favaro, T., Hofer, A., Eisenberger, I., Gutschi, C., Grosche, C., Held, J., Athenstaedt, U., & Corcoran, K. (in press). An Interdisciplinary Understanding of Energy Citizenship: Integrating Psychological, Legal, and Economic Perspectives on a Citizen-Centred Sustainable Energy Transition. Energy Research and Social Science (2023).

This is the first 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 EC<sup>2</sup> 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.

IMPRINT:

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## **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

The concept of energy citizenship concerns rights and responsibilities for each citizen and is considered an important step towards energy transitions in a wider European energy policy context.<sup>1</sup> As the second in a series of policy briefs for the EC<sup>2</sup> project, this brief attempts to provide an overview of shortcomings at the *European level*, exploring in further detail the kinds of actionable recommendations that can be made at this level to facilitate and accelerate a just and sustainable energy transition.

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#### The insights contained herein are based on the transdisciplinary research results of the citizen engagement conducted as part of the EC<sup>2</sup> 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.<sup>2</sup>



**KEY CONCLUSIONS 1.** The recommendations in this brief target either broad regulatory changes or specific actions and tools (particularly in relation to the European Energy Communities Repository). 2. Easily available and understandable information plays a central role in strengthening energy citizenship and energy communities. 3. The legal structures for the establishment and running of energy communities also still need to be simplified and harmonised to increase accessibility. 4. Being an energy citizen should be affordable, so that large parts of the EU population can be included.

Keywords:

#EnergyCitizenship #EnergyTransition #EnergyDemocracy #EnergyCommunities #EnablingLegislation #AccessibleInformation #EnergyCommunityRepository

<sup>1</sup> See EC<sup>2</sup> Policy Brief #1 Energy Citizenship: A missing piece to the energy transition puzzle? Available <u>here</u>.

<sup>2</sup> See EC<sup>2</sup> project (2022). Deliverable 3.3: Catalogue of potential legal and economic barriers or facilitators of energy citizenship. (Hereafter, 'D 3.3). Available <u>here</u>.

## Introduction

EU directives RED II and IMED implicitly encompass the rights and duties of "energy citizens" and provide for "energy communities", enabling citizens to take part in the energy and electricity market.<sup>3</sup> Citizens and energy communities are still included in the rules and criteria of the market game - consisting of supply, demand, prices, efficiency, liberalisation, individual decisions or competitiveness. Therefore, a neo-liberal market model still determines the instruments for the energy transition: financial resources, funding systems, participation in the decision-making process, and access to knowledge and information. Moreover, in the neo-liberal model, the burden of responsibility for achieving a sustainable energy system is on individual citizens, who are expected to have the necessary knowledge, as well as being technological, financial and managerial experts. In this model, individual households are viewed as indistinguishable from professional energy managers - framing citizens primarily as economic actors obeying a normative economic logic. Considering the EU and its energy market as a whole, there is thus a tension between neo-liberal and citizen-oriented economic models. which makes it difficult for collective and citizendriven energy actions to flourish.

Our legal and economic recommendations aim at strengthening energy citizenship by empowering energy citizens and energy communities. Their degree of abstraction or concreteness varies: Whereas the more **economic-oriented recommendations** are rather concrete, some of the **recommendations regarding the law and legal techniques** are less so. This is inherent to the matter: EU directives are not directly applicable, and therefore do not seek to regulate every detail, instead allowing Member States to "translate" the content into their national system through legislation. EU law can however be very powerful, since it secures a certain degree of uniformity, as well as making it easier for member states to implement (sometimes less popular) measures. It can further contribute to mainstreaming newer approaches (such as energy communities and energy citizenship), which have traditionally been seen as more grassroots in nature. Besides the law itself, improved **legal** *information* is also core to bring about energy communities. Therefore, we also provide suggestions on how to improve the information hub provided by the EU - i.e. the Energy Community Repository.



These recommendations arise in a wider context of tension caused by Russian military aggression in Ukraine. This may have severe consequences for energy supply from fossil fuels and for energy prices in the European Union (EU). On average the electricity prices in EU countries doubled between October 2021 and October 2022.4 There is a growing pressure to increase energy independence and to reduce the share of fossil fuels in energy production. In the last year many EU countries have thus accelerated their 2030 renewables targets.<sup>5</sup> Decentralisation and democratisation of the energy system will strengthen Europe's energy security, with the development of energy communities taking on additional importance (as outlined in the REPowerEU plan).<sup>6</sup> Yet this will also require creating new capacities in the energy system to enable new energy communities and individuals to connect.

<sup>3</sup> See Renewable Energy Directive 2018/2001/EU (<u>RED II</u>) & Directive on Common Rules for the Internal Market for Electricity 2019/944/EU (<u>IMED</u>).

<sup>4</sup> See Green Match (2022). European Energy Prices Increase up to 500% Compared to Pre-crisis Levels. Available here.

<sup>5</sup> Austria from 87 to 100%, Netherlands from 68 to 97%, Germany from 62 to 80%, Italy from 60 to 70% and Poland from 32 to 35%.

See Euronews (2022). These EU countries are aiming for 100 percent clean power by 2030; Ember (2022). Available here;

Ember (2022). "Coal phasedown" a year on from COP26 Available here.

<sup>&</sup>lt;sup>6</sup> European Commission (2022). *REPowerEU Plan*. Available here.

#### **CHALLENGES TO ADDRESS**

# Resource-intensive generation plant construction, inflexible ownership models:

The construction and maintenance of a photovoltaic plant is time-consuming and cost-intensive. To set up an energy community, interested parties often need knowledge and skills, since they often lack the necessary know-how to construct or maintain a generation plant. Therefore this typically has to be constructed and maintained by a *third party* - incurring additional costs. Moreover, citizens regularly have to undergo legal proceedings to create the legal form for the energy community. This, in addition to administrative proceedings regarding the plants or installations they wish to use in their energy community, can be a barrier.

On the other hand, both the electricity produced from a generation plant, as well as plant construction and operation costs, can be shared across several energy communities. This could increase the attractiveness of energy communities. This use of a generation plant in several energy communities is not precluded by RED II or IMED, yet in the Member States studied there are also hardly any legal provisions regulating such use. The possibility of sharing a generation plant by several energy communities should therefore be given in general.<sup>7</sup>

#### High seasonality and large fluctuations in electricity generation from renewable energy sources:

Electricity generation from renewable energy sources is subject to large and highly seasonal fluctuations. Geographical location also has a major influence on energy production. The capacities for generating electricity from hydropower or wind also vary between member states. In addition, there are typically time-of-day fluctuations in energy consumption within an energy community.<sup>8</sup>

# Lack of regulations for smart meter rollout:

Smart meters are a prerequisite for joining an energy community. The EU regulations had to be transposed into national law by the individual Member States.<sup>9</sup> A widespread rollout of smart meters has already begun, but has not yet been implemented in all Member States.<sup>10</sup>

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# Lack of readily available information on energy communities:

For people interested in setting up an energy community, it is often time-consuming and (in the case of legal advice) also costly to obtain information from a variety of sources on the various aspects. This is because setting up an energy community initially requires information on the aspects required to comply with all legal and regulatory requirements (permits needed, the installation of the generation plant, establishment of the community, and legal issues).<sup>11</sup>

Under the principle of subsidiarity, translation of EU law focuses on *national*-level measures, oftentimes leaving it disconnected from local realities. More multi-level governance is necessary to fill these gaps, and provide for actions as close as possible to citizens. The Energy Community Repository is one promising tool to support this.

<sup>8</sup> D 3.3 §§ 3.5.3 & 4.2.11.

<sup>10</sup> D 3.3 § 3.7.1.

<sup>&</sup>lt;sup>7</sup> D 3.3.

<sup>&</sup>lt;sup>9</sup> Including the Member States studied in EC<sup>2</sup> - Italy, Austria, Germany, the Netherlands, Spain, and Poland.

<sup>&</sup>lt;sup>11</sup> See D 3.3 generally, on how lack of information curtails the development of energy communities.



## RECOMMENDATIONS FOR <u>SPECIFIC TOOLS & ACTIONS</u> AT THE EUROPEAN LEVEL:

# Introduce energy assistants for energy communities<sup>12</sup>

A free EU- or state-funded universal assistant for energy communities should be made available to all citizens. This would assist in setting up, but also running, an energy community.

Whereas the directives should also make it mandatory to install an energy assistant, the EU's Energy Community Repository is a first step towards the idea. A **digital assistant** could help interested people in collecting the necessary information.

For instance, an energy chatbot could be implemented for the Repository website to answer citizens' questions and direct them to other relevant websites.



# Provide a one-stop-shop and official point of information for energy communities

An official information point for setting up and running an energy community should be provided by member states.

Both a one-stop-shop for energy communities as well as the official point of information for energy communities should be required in the Directives.



Member states would have to decide how to best implement them, with recommendations for implementation provided in the European Energy Community Repository.



#### Provide a step-by-step guide on setting up an energy community (checklists)<sup>13</sup>

A step-by-step guide (e.g. in the form of an online and/or offline **checklist**,) should be provided, showing how to set up an energy community. The Directives could make such a check-list mandatory for the member states. Two such examples come from the Community Power Coalition and the SHAREs project.<sup>14</sup>

In addition, the Energy Community Repository website could benefit from the addition of a comprehensive Q&A section and an accessible informative video for citizens interested in setting up an energy community.<sup>15</sup>



# Provide information in an easy and accessible language and way<sup>16</sup>

Providing information in a short and understandable way and being available for all questions during the establishment process can help to eliminate uncertainties and encourage more people to establish energy communities.

For instance, information on the Energy Community Repository website could also be available in **languages other than English** to ensure access to information for more citizens.

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#### Inspire creative solutions from the public

The EU energy community repository could host a yearly "energy community hackathon" where citizens can present their ideas for energy communities. The **best energy community idea** from each member state would receive funding to implement their proposal.

<sup>12</sup> See D 3.3 generally, on how lack of information curtails the development of energy communities.

- <sup>13</sup> D 3.3 § 3.1.4
- <sup>14</sup> Community Power Coalition (2020). Community Energy: a practical guide to reclaiming power. Available here;
   SHAREs Project (2022). D 4.1 Overview of existing tools and platforms to support collective actions. Available here.
   <sup>15</sup> For example, Österreichische Koordinationsstelle für Energiegemeinschaften (2023). Schritte zur Gründung. Available here.
   There could also be the possibility of adding subtitles to video to make the content more accessible in other languages.
   <sup>16</sup> D 3.3 §§ 3.1.1 & 3.1.4.



RECOMMENDATIONS FOR BROADER <u>REGULATORY CHANGES</u> AT THE EUROPEAN LEVEL:

# Take into account that effective implementation requires changing not only energy law, but also other national legal concepts<sup>17</sup>

The implementation of energy communities into national law requires changes in both energy law and wider laws. Sometimes national differences in legal concepts such as, for example, national notions of property influence implementation. Spatial planning or heritage protection laws can also slow down or complicate the establishment of energy communities. The EU should (in the Energy Community Repository), provide information such as **checklists for legislators** and point at legal fields which might prove to influence the implementation of energy communities in energy law.



Push for a complete smart meter rollout and for smart grids<sup>18</sup>

Regulations at EU level should push even harder towards a complete smart meter rollout in all Member States, so that energy communities and other innovative forms of energy use (e.g. P2P) can be introduced and operated nationwide. For instance, concrete information could be available on measures available to citizens if a Member State has not yet properly transposed an EU directive. Effective rollout also requires addressing *public concerns* surrounding data privacy and data protection. Regulations at the EU level should address these concerns, and push for devices to have the simplest possible user interface.<sup>19</sup>

Finally, smart meters are also important for a network of *smart grids*. The EU should provide the necessary legal background for the development and installation of these grids.

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# Promote Agrivoltaic and Agro-Hydro-Voltaic technology in rural energy communities, as an alternative to traditional PV farms<sup>20</sup>

The long-term ratio between total profits and total cost is higher for Agrivoltaics and Agro-Hydro-Voltaics than for traditional PV-farms. The use of Agrivoltaics and Agro-Hydro-Voltaic technology in agriculture can help to increase crop productivity, reduce evaporation, and mitigate the risks of torrential rain and acidification. In contrast, traditional PV farms can cause negative externalities.<sup>21</sup>

- <sup>17</sup> For example, D 3.3 § 3.4.
- <sup>18</sup> D 3.3 §§ 3.7 & 4.2.
- <sup>19</sup> D 3.3 § 3.7.2.
- <sup>20</sup> D 3.3 § 4.2.2.

<sup>21</sup> Both in the environment (reduction of the biologically active areas) and in agriculture (loss of valuable agricultural land).

Therefore, Agrovoltaic and Agro-Hydro-Voltaic technology should be promoted in rural energy communities as an alternative to traditional PV farms.





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#### Provide for VAT-free purchases<sup>22</sup>

In April 2022, the Council of the European Union adopted a directive stipulating that Member States are free to apply a reduced VAT rate from zero to five percent on *solar modules*, including their supply and installation.<sup>23</sup> Such a VAT exemption should be extended to the purchase and installation of *other renewable energy equipment* (PV, heat pumps, thermal insulation, underfloor heating, energy storage), to make these technologies more accessible and affordable for citizens and energy communities.

#### Roll-out of micro-photovoltaic power plants for balconies, gardens, carports, etc.<sup>24</sup>

In the German state of Mecklenburg-Vorpommern, the government supports the installation of *micro*-photovoltaic power plants. These are very small power plants that can be put on balconies, in gardens, on the roof of carports, etc. without the need for permits and with the aim of selfconsumption.<sup>25</sup> Together with the smart-meter roll-out and the development of smart grids, a dedicated micro-photovoltaic power program should be launched by the EU.



Work to enhance the economic feasibility of EC projects<sup>26</sup>

In the initial phase, public aid should be provided to help spark *engagement* in energy communities, as this initial phase is expensive. The financial incentives can vary: tax reductions, grants, reduced grid fees, preferential loans, subsidies for energy sold, etc. In the operational phase, feed-in tariffs for the ecosystems of REC technologies should be reformed to ensure their profitability. Since affordable, stable and long-term (10+ years) financing is needed for energy citizens and energy communities, the EU could provide funding for lighthouse citizens' projects.

<sup>22</sup> D 3.3 §§ 4.2.4 & 4.2.8.

- <sup>23</sup> Council of the European Union (2022). *Directive 2022/542*. Available <u>here</u>.
- <sup>24</sup> D 3.3 §§ 4.2.1 & 4.2.5.
- <sup>25</sup> See PV Magazine (2022). Mecklenburg-Vorpommern will Photovoltaik-Balkonkraftwerke fördern. Available here.
- <sup>26</sup> D 3.3 § 4.2 generally, especially §§ 4.2.3 & 4.2.2.





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# How to mainstream energy citizenship at the national level

Focus on improving legal frameworks (and public understanding thereof)

The concept of Energy Citizenship concerns rights and responsibilities for each citizen and is considered an important step towards energy transitions in a wider European energy policy context. As the third in a series of policy briefs for the EC<sup>2</sup> project, this brief attempts to provide an overview of shortcomings at the national level. It explores in further detail the kinds of actionable recommendations that can be made at this level to facilitate and accelerate a just and sustainable energy transition.

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#### The insights contained herein are based on the transdisciplinary research results of citizen engagement conducted as part of the EC<sup>2</sup> project.

Our approach incorporates economic, legal and psychological elements and perspectives (with policy brief #3 focusing primarily on legal recommendations). These scientific insights capture and synthesise the knowledge cocreated with citizens, energy communities, and municipalities in Spain, Poland, Italy and the Netherlands.<sup>1</sup>



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1. Informing citizens about the legal situation and the process of establishing an Energy Community through easily accessible, understandable, and reliable information, accompanied by an unambiguous and transparent legal framework, is crucial.

2. Specific legislative measures should be undertaken to reduce the complexity and opacity of the legal situation in Member States; it is important that legislators provide **model statutes and legal forms** that are specifically designed *for* energy communities.

**3.** Consent of a landlord or every co-owner should not be required for the installation of a generation plant on a building in which the person lives, or for participation in an energy community.

**4.** There should be more flexibility in ownership of generation plants; it should be possible for an energy community to operate more than one generation plant, or for more than one energy community to operate a single plant.

<sup>1</sup> D3.3 Catalogue of potential legal and economic barriers or facilitators of energy citizenship. Available here.

## Introduction

This policy brief argues that streamlining complex and/or unclear aspects of the EU directives RED II<sup>2</sup> and IMED<sup>3</sup> will facilitate citizen engagement in the energy and electricity market. This should be achieved at both EU and Member State level. While Regulations are directly applicable in Member States, Member States still need to transpose Directives into national law through legislative changes, as part of the transposition process.

The previous (second) EC<sup>2</sup> policy brief focused on strengthening energy citizenship by empowering energy citizenship and energy communities, through legal and economic recommendations at the *EU level.* For this purpose, it addressed the challenges and recommendations to bridge the gap between the authorities and the market actors that govern the energy systems, in order to facilitate citizens' participation in the market.

Yet the transposition of the EU framework into national law allows for significant *national* flexibility and certain national provisions on citizen- and renewable energy communities. It also encourages citizens to actively engage in the energy market, contributing to an increase in decentralised production and consumption of renewable energy. As part of the transposition process, it is necessary to make changes not only to energy law in the narrow sense, but also to other, broader, laws to effectively transpose the energy communities in national law. The national legislative measures required in the course of the implementation process concern in particular, but not only, housing law and planning law.





With this background, this policy brief aims at mainstreaming energy citizenship by addressing the challenges and actionable recommendations *at the national level*. Since the implementation of the EU Directives is most advanced in Austria, Austria has been taken as a case study in order to demonstrate various best practice actions and recommendations.

<sup>&</sup>lt;sup>2</sup> Directive (EU) 2018/2001 of the European Parliament and the Council of 11 December 2018 on the use of energy from renewable sources, OJ 21. 12. 2018 L 328/82.

<sup>&</sup>lt;sup>3</sup> Directive (EU) 2019/944 of the European Parliament and the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU, OJ 14.6.2019, L 158/125.

## Structure of legal framework

# **Example 1** Lack of implementation of the EU directives

The Internal Electricity Market Directive (IMED) and the Renewable Energy Directive (RED II) have not been implemented in all Member States studied. Therefore, citizens may not be able to take advantage of the possibilities that energy communities offer. In other cases, incomplete implementation can also result in legal ambiguity.



#### Unspecified legal form for energy community

Failure to commit to a specific legal form for Renewable Energy Communities (RECs) or citizen energy communities (CECs) can be a barrier for people who want to set up an energy community. The definitions of RECs and CECs in RED II and IMED, respectively, are very similar and do not specify a legal form, so the choice of which legal form is based on open and voluntary participation. This can be complex, costly, and time-consuming for those wishing to start an energy community. Since most people are not familiar with the law and the legal forms and costs involved in establishing an energy community, they will need expensive legal advice. This may ultimately discourage them from establishing new energy communities.



# Complexity of the legal framework and access to information for citizens



#### **Complexity of legal framework**

Due to the existence of federal and decentralised states with *regional* legislative competencies, energy communities may be subject to regulation by different levels of government. This can result in varying legal situations depending on the region one lives in, owing to differences in spatial planning rules and other regulations related to energy communities. Considering the inherent complexity of setting up an energy community, differing regional rules can make it even more difficult for citizens to become active (even though these rules may be more context-sensitive).



# Different rules on collective self-consumption and energy communities

Collective self-consumption<sup>4</sup> might be regulated differently from energy communities.<sup>5</sup> For citizens wanting to engage collectively, it can seem complicated to find out whether they should be organised under the umbrella of collective selfconsumption, as active customers acting together, or as an energy community (REC or CEC).

<sup>4</sup> For a definition of collective self-consumption, refer, e.g., to the meaning of "jointly acting renewables self-consumers" in Art 2 para 15 of RED II and to DECIDE project's Energy Community Monitor, page 3. Available <u>here</u> (although the EC<sup>2</sup> project did not rely on this definition).

<sup>5</sup> See Art 2 para 11, Art 15 para 3 and Art 16 IMED and Art 2 para 15 and 16, Art 21 and Art 22 RED II; a major difference is that collective self-consumption does not require a legal entity and the members are located in the same building or multi-apartment block, where as energy communities do require a legal entity and the membership is not limited to persons that are located in the same building or multi-apartment block.





# Obtaining information on energy communities

Currently people interested in setting up an energy community need to obtain information about the various aspects (permitting, generation plant installation, community establishment, legal issues, etc.) from various sources. Obtaining this information is often time-consuming and (in the case of legal advice) also costly. Too little information can be a problem, while an overabundance of information can overwhelm consumers. This barrier hinders citizens from establishing an energy community at both the EU level<sup>6</sup> as well as the national level.



# Providing information on (timely) grid access

The realisation of an energy community requires information on grid access. Energy communities rely on the public grid<sup>7</sup> for connection. If the grid operator fails to provide information or timely access, the establishment of an energy community can be protracted and slowed down. In some Member States this delay might be because the grid is not ready for the connection of so many small producers.



### Disproportionate rights for landlords or apartment owners

#### Challenging consent requirements under property law

In some Member states, like Austria and Germany, tenants who want to install a generation plant on the rented property often need the landlord's consent. This is likely to deter tenants from installing one, and makes energy communities as a whole less attractive. The landlord may also refuse the installation simply due to a lack of interest (no justifiable reason being required).

<sup>6</sup> See EC<sup>2</sup> 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 <u>here</u>.

- <sup>7</sup> In Austria, see § 16c (2) ElWOG 2010 and § 16d (6) ElWOG 2010.
- <sup>8</sup> E.g. Austria, Germany, Spain, and the Netherlands.

Moreover, the consent of all other co-owners is often required<sup>8</sup> if a condominium owner wants to install such a facility on or in the leased property. This can be time-consuming, especially in large properties, and particularly difficult or impossible if co-owners no longer live in the property.

In addition, residents in these Member States are faced with the issue that the generation plant (as a movable item) legally passes to the building owner. There are no or only case-specific regulations regarding the ownership of the generation plant, which leads to great legal uncertainty. No regulations have been passed at European level to solve this problem.

### Various administrative procedures and rules to set up an energy community and spatial planning law

# Different legal administrative steps to set up an energy community

Citizens who want to form a citizen energy community might have to undergo legal proceedings for creating their preferred legal form. They may also require administrative proceedings regarding the plants or installations they want to use as an energy community. Even if no administrative steps are necessary for the legal form, different administrative steps might be necessary for the establishment of a plant.



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# Specific laws and rules governing the construction of a plant

Spatial planning or construction laws and other administrative regulations contain rules, for example, regarding where generation plants can be built. These can significantly impede the construction of new plants.





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# RECOMMENDATIONS FOR CHANGES AT THE NATIONAL LEVEL:

#### "Providing a specific legal form for the energy community"/"Creation of model statues as legal form for energy community"

For energy communities, a new legal form could be created by official bodies, which is easily accessible for (potential) founders of energy communities. Additionally, *model* forms could be provided (both for this legal form and for pre-existing ones).



In Austria, for example, it is possible to establish an energy community in the form of an association.<sup>9</sup> This is a very low-threshold model - simple and inexpensive to set up and very easy to join or leave. Moreover, members can determine the organisational matters themselves and their personal liability is also limited. Associations are thus chosen by many energy community founders as the legal form.

#### "Facilitating rules on collective self-consumption and energy communities"

According to the new Dutch Energy Act the legal consequences depend on the capacity of the plants and not on the legal form. These consequences apply regardless of whether a certain plant is used for self-consumption, collective-self consumption or exchange of energy within an energy community. It is imperative that other member states take inspiration and implement similar systems<sup>10</sup> at the national level, to facilitate the collective engagement of citizens.

#### "Providing information to citizens on the legal situation, including at sub-national level"

Lawmakers in decentralised, regionalised and federal states should consider that the legal framework can be especially confusing for citizens. Therefore, providing information in easy and accessible language on a joint webpage could help to at least achieve a higher degree of legal certainty. This could, for instance, provide explanation of how competencies are distributed between the different levels of government, as well as providing links directing to the homepages of the competent regional and local authorities competent. Ideally this should be done at national level, based on regulations providing guidance at the EU level.<sup>11</sup>



<sup>9</sup> See <u>this example from Austria</u>, in the form of an association people can find out which forms are suitable for which model, from small energy communities between private individuals to large energy communities with businesses and municipalities.

- <sup>10</sup> Energiewet Draft, available <u>here</u>.
- <sup>11</sup> See EC<sup>2</sup> 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 <u>here</u>.

#### "Providing exemptions regarding the consent of the landlord or other condominium owners to the installation of a power generation system"

At the national level, a photovoltaic or similar renewable energy generation system could be installed on or at the condominium property without the landlord's consent requirement or only with a requirement of the consent of more than *half* of the other co-owners.

In Austria, for example, the law lists some cases in which the landlord *cannot* refuse consent, including if the change is considered a standard practice (i.e. regularly carried out in comparable rental properties), and serves an important interest of the tenant (such as reducing energy consumption). Consent is also deemed to have been given if the landlord does not oppose the proposed change within two months of the tenant's notification thereof. In addition, in cases where consent is required, the property management should nonetheless be obliged to provide the current addresses of the co-owners, in cases where a condominium owner needs them in order to make changes.

Finally consent of co-owners may be needed for the installation of photovoltaic systems on the condominium building. In such cases, following the example of Austria, there should be the possibility to replace such consent with a court order. Such legal proceedings are costly, but could still provide an effective last resort.



#### "Setting legal rules to facilitate grid access"

Legal rules should be in place to ensure transparent and affordable grid access, as well as easy and understandable access to grid information at national level. These legal rules should not only force grid operators to make access to the grid as easy as possible, but also set clear time limits for responding to requests for grid access. Ideally, such legal rules at national level should be based on regulations providing guidance at the EU level.<sup>12</sup>



#### "Further developing grids"

Governments should take steps towards strengthening the further development of the grid infrastructure (e.g. smart grids, decentralised grid system). It is critical for the development of energy communities that the energy system is more flexible and prepared to receive energy from many sources.

<sup>12</sup> Ibid.





#### "Allowing for treatment of generation plants as separate, moveable objects, even where affixed to multi-party houses'

Regulations should be enacted at European level, otherwise at national level for each Member State, to prevent ownership of the *generation plant* from being transferred to the building owner in multiapartment buildings, while still allowing for the possibility of transferring ownership of the *movable object* to the building owner. In Austria, for example, the photovoltaic plant is in many cases considered as an independent component of the building, in which case a separate ownership of the plant is possible.<sup>13</sup>

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"Allowing for generation facilities to be owned by a third party"

Regulations should be provided at national level to allow for the possibility of a generation facility being owned by a third party, despite the energy community continuing to exercise the power of operation and disposal over it.<sup>14</sup>

In Austria, for example, it is possible for the generation plant to be owned by a third party as long as the energy community has the actual power of operation and disposal over the plant. The operation and maintenance can also be taken over by third parties, provided that the energy community retains the power of operation and disposal.<sup>15</sup>

Ideally, such national regulations should be based on regulations providing guidance at the EU level,<sup>16</sup> since they guarantee a certain degree of uniformity within the EU.



# V

"Participation of several energy communities in one generation plant"

Regulations should be provided at national level to allow for the possibility of several energy communities to participate in the same generation plant. This would also lead to increased legal certainty.

Ideally, such national regulations should be based on regulations providing guidance at the EU level.<sup>17</sup>



<sup>13</sup> In other words, if the plant is an independent component of the building (as a movable object - actually and economically separated from the building), separate ownership of the plant should be possible and the building owner should not automatically become the owner of the plant.

<sup>14</sup> In other words, a third party can make the generation facility available to the energy community and take over its operation and maintenance as long as the energy community exercises effective control and disposal over it.

<sup>15</sup> Explanatory remarks to the government bill of the Renewable Energy Expansion Act Package (ErIRV 733 BIgNR 27. GP 19).

<sup>16</sup> See EC<sup>2</sup> 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 <u>here</u>.

<sup>17</sup> Ibid

#### "Integrate several generation plants into one energy community"

Regulations should be provided at national level to allow for the possibility of bringing several generation plants into one energy community. This would also lead to increased legal certainty. Moreover, to compensate for the seasonal and time-of-day fluctuations, it can make sense to combine several generation plants with each other. This will also help take into account the fact that participants in an energy community have different levels of energy consumption depending on the time of day.

The ideal should be for such national regulations to be based on regulations providing guidance at the EU level.<sup>18</sup>

# "Establishing a one-stop shop for energy communities or an official information point for setting up an energy community"

This would require installing a one-stop shop (including at least all administrative issues) for energy communities, as well as providing an

official point of information that guides people through the process of setting up an energy community.



A free state-funded universal assistant for energy communities and a checklist should be made available to all citizens. This should focus on aspects like the necessary steps to take, differing options in each step, and the various positive and negative aspects of each option.

This should ideally be done at national level, based on regulations providing guidance at the EU level.<sup>19</sup>



 $\checkmark$ 

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"Providing exemptions in the laws on the construction of a plant"

At national level, the law can stipulate certain rules or exemptions for the construction of power plants, for instance, in the case of small plants. Moreover, power plants can even be foreseen in the construction of certain new buildings. For example, the *Bauordnung für Wien*, which stipulates (for certain buildings) a duty to put solar panels on new buildings.<sup>20</sup>

<sup>18</sup> See EC<sup>2</sup> 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 <u>here</u>.
<sup>19</sup> Ibid

<sup>20</sup> Bauordnung für Wien, § 118 para 3b and 3c, available here.



This is the third 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 EC<sup>2</sup> 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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## **Policy Brief #4**

# Furthering energy citizenship in coal regions

The importance of sensitive, place-based transition processes

The concept of Energy Citizenship concerns rights and responsibilities for each citizen and is considered an important step towards energy transitions in a wider European energy policy context. As the fourth in a series of policy briefs for the EC<sup>2</sup> project, this brief attempts to provide an overview of shortcomings at the regional level, exploring in further detail the kinds of actionable recommendations that can be made at this level to facilitate and accelerate a just and sustainable energy transition within coal regions.

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#### The insights contained herein are based on the transdisciplinary research results of the citizen engagement conducted as part of the EC<sup>2</sup> 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 and the Netherlands<sup>1</sup>.



\* This policy brief uses Poland as a coal regions case study \*<sup>2</sup>



**1.** The regeneration of coal regions requires the acknowledgement of each individual region's specific local context, in terms of factors such as heritage, infrastructure and culture.

**KEY CONCLUSIONS** 

**2.** Co-creation practices respecting regional identity can support more sustainable and durable change processes, creating a sense of shared ownership in the process.

**3.** Women are particularly endangered by energy poverty and job losses in the transformation of coal regions. Gender inclusion must be at the heart of all regeneration plans.



<sup>1</sup> D3.3 Catalogue of potential legal and economic barriers or facilitators of energy citizenship. Available <u>here</u>.

<sup>2</sup> Primarily focusing on the hard coal region of Silesia, but also the lignite areas of Bełchatów and Turów.

## Introduction

Coal is a major contributor to greenhouse gas emissions, particularly carbon dioxide - the primary driver of climate change at the global scale. At the local scale, the mining and use of coal can also create numerous environmental and health problems, negatively affect ecosystems, and endanger access to water. Yet for many years it was also responsible for building the economy<sup>3</sup> and culture of coal regions<sup>4</sup>.

The world is witnessing a shift towards cleaner renewable energy sources. Coal regions need to adapt to this changing energy landscape to become sustainable, thriving and healthy places to live. Coal regions have a strong identity and valuable cultural and industrial heritage. History and heritage evoke sentiment among the inhabitants. Changes of the energy transformation ought to respect the heritage of these regions.



Existing renewable energy technology has made great advancements in recent years. This creates an opportunity to change the energy systems of these regions. Yet the energy transition is complex, requiring social and economic changes in addition to technical ones. Cooperation between the European Union, governments, local communities, NGOs and other stakeholders is crucial to the success of transforming coal regions towards a sustainable and renewable energy future. Including citizens, particularly a proper representation of women, minorities and those endangered by energy poverty, is essential. Transforming to a post-carbon economy requires shifting from coal towards sustainable energy sources involving citizens and acknowledging local contexts. This requires investment not only in renewable energy sources, enabling energy efficiency and creating and developing alternative economic sectors. Cultural and social aspects are also relevant, given the longstanding coal dependency. The culture built on the coal mining history of each region must be repurposed and redirected to new sectors and new values. Cocreation mechanisms can empower effective communication and dialogue with local communities in order to gain their support and involvement in the energy transformation. The transition from coal to renewables requires social support, acceptance and co-creation of the transformation plan. In coal regions, there is often a strong emotional bond with the coal industry and these changes can be met with social resistance.

Cooperative movements have a long history in coal regions. The development of cooperatives first took place in Silesia and other coal mining regions in the nineteenth century, when industry was developing and a new working class was emerging. Currently, cooperatives have various fields of activity, such as trade, services, production and housing. Although the shortcomings of the cooperative movement and their significance to the energy transformation are widely discussed among scholars, the cooperatives are nonetheless a proven formula for engaging and bringing together citizens. The long history and scope of operation of the movement is a good sign for the further development of civic energy in the form of cooperatives. They benefit from an existing organisational structure, professional management, and large scale of operation. To further a sustainable energy transition, social, economic and environmental factors have to be treated as a multilayer co-dependent matrix. This shift towards sustainable energy should thus be based on new paradigms - namely, inclusivity, equality, polycentricity and co-creation.

<sup>3</sup> Hard coal in million tonnes (Poland - 53, Czech Republic - 2) and lignite (Germany - 131, Poland 55, Bulgaria 36, Czech Republic 33,

Romania 18, Greece 14, Hungary 5, Slovenia 2, Slovakia 1). See EURACOAL *Coal in Europe 2022*. Read more <u>here</u>.

<sup>&</sup>lt;sup>4</sup> There are several regions in Europe known for significant coal mining (hard coal: Upper Silesia in Poland, Moravia-Silesia in Czech; lignite: Lusatian, Central German and Rhineland in Germany, Greater Poland and Lower Silesia in Poland, Ustecki and Karlovarsky in Czech).

# Background / Status quo

#### **Energy poverty**

Energy poverty is a situation in which either low earnings do not allow you to pay high energy bills, or the condition of flats or houses nonetheless does not allow for basic comfort and warmth. Energy poverty affects around 11% of the EU population, or 54 million Europeans. Energy poverty disproportionately affects women and female-headed households as a result of wage and pension gaps and longer life expectancy.5 Female-headed households in Poland are, for instance, nearly twice as likely to be affected by energy poverty.<sup>6</sup> Yet, not all regions are equally affected by energy poverty. Hard coal regions such as Silesia, usually well developed and urbanised, are less exposed to energy poverty for women due to higher average earnings. Rural and peripheral areas where lignite is mined are more at risk of energy poverty.



Energy poverty particularly affects single women, but it can affect families too. The transformation process should focus on women who can lose jobs<sup>7</sup> in the coal and coal-related sectors due to the transformation processes. The layoffs can affect men on a great scale too, leaving the household with one income or none. Protective measures, education, training, reorientation and vocational counselling should be a response to the threat of structural unemployment.

#### Particular needs of coal regions

The largest resource of coal regions is not coal, but people: local communities, social organisations, activists, religious groups, local governments, trade unions and entrepreneurs. A socially just transition should aim, above all, at creating a platform for these people to share their visions and have a say in the transformation of their region. Otherwise, there is the risk of communities losing their sense of responsibility for their common fate - the strong social capital of these regions will be lost.



# A broad versus narrow conception of energy communities

The EU defines energy communities narrowly, in a way that would exclude broader forms of civic energy, such as energy co-operatives and energy clusters. Nevertheless, this brief does not advocate for one particular legal form of energy community - seeing a broad and expansive understanding of the concept as supporting energy citizenship most effectively.<sup>8</sup> It therefore considers energy clusters and energy cooperatives as interesting potential forms within the diversity of entities in the civic energy movement ecosystem.

<sup>5</sup> A Polish study in the spring of 2022 found that an increasing share of energy bills were being paid by women, rather than men, and that single women (particularly single mothers) were more likely than other groups to have difficulties paying their energy bills. See Janikowska, O., & Kulczycka, J. (2021). Just transition as a tool for preventing energy poverty among women in mining areas—A case study of the Silesia region, Poland. *Energies, 14*(12), 3372. Available <u>here</u>.

<sup>6</sup> In 2021, this was 12% as compared to 7% for male-headed households. See previous footnote.

<sup>7</sup> In mining areas, historically women played more traditional roles and were less educated. There were also fewer jobs available to women.
 <sup>8</sup> See Hinsch, A. *Enabling energy communities A toolkit for just transition regions*. Available <u>here</u>. Pages 4-5 & 8 provide further discussion on this topic.



#### FURTHER CHALLENGES FOR A JUST ENERGY TRANSITION

(POLAND AS A CASE STUDY)



Here, Poland is chosen as a case study, owing to the authors' experience of this context, as well as its status as home to some of the major coal regions in Europe.



# Legislative barriers slowing shift from coal-dependency to renewables

Legislative barriers can hold back the energy transformation. Switching to wind energy could be an attractive option for enhancing renewable energy production. However in Poland, development of the wind farm industry is hampered by the 700 m rule of the **Distance Act**, which in practice effectively prevents the development of almost all new wind farm investments. Without changing the 700m rule,<sup>9</sup> new investments in the onshore industry in Poland will not be made.

Another significant impediment to the development of new wind farms is the limited connection possibilities of the national power system for community energy projects. At present, the trend is instead towards centralisation and implementation of projects by big energy corporations, including those owned by the Polish state. They have priority access to land held by public resources and to connection capacities issued by entities related to the state. As the grid remains underdeveloped and other energy industries like the photovoltaic industry thrive, a significant percentage of applications for connection to the national energy grid are being rejected by operators, further undermining the growth of renewable energy.



#### Lack of access to finance the sustainable energy transformation

Investments in renewable energy sources and the development of energy communities can require significant financial resources. Coal regions may encounter difficulties in obtaining funding for transformation initiatives. It is important that the European Union, governments, regional entities, financial institutions and international organisations support coal regions and its citizens through grants, preferential loans or other financial instruments for renewable energy systems.



# Considerations specifically for lignite mining regions

Lignite is mined near the surface in rural areas, and significantly contributes to the devastation of the surrounding environment, even more than regular 'deep' coal mining. Lignite mines are socially and environmentally inherently unsustainable, being destructive to both the natural environment and cultural heritage. The area of historical Lusatia, inhabited by the Lusatian minority, is located in both Germany and Poland, is particularly affected by intensive lignite mining. Both the Sorbian language and the historic half-timbered houses are at risk. According to representatives of the Lusatian Citizens' Parliament in Germany, 130 historical villages in Lusatia have been demolished as a result of the operation of coal mines and power plants. What is needed is the necessary transformation of the existing energy infrastructure for renewable energy production.

<sup>9</sup> The minimum distance between farms and buildings in the case of residential buildings must be 700 meters. Read more here.

Yet in many instances these needs continue to go ignored. For instance, plans to expand a lignite open pit threatens the existence of the town of Opolno-Zdrói (Poland) and its historic architecture. In such cases, the mining industry and public authorities fail to adequately engage with local communities to obtain consent for increased mining, citing the public interest such as financial benefits.

What is more, even if a shift to renewables in lignite areas were to increase, huge areas of agricultural and forest land in lignite mining areas have been turned into open pits and heaps. As a result, the local population cannot return to work in agriculture. Novel employment opportunities will need to be found.<sup>10</sup>



#### Too few energy co-operatives in coal regions (including Poland)

Energy communities should be viewed as an effective means of addressing social and economic deprivation in coal-intensive regions.<sup>11</sup> The European Commission's own research indicates that in the majority of EU coal regions, the clean energy transition can create more jobs than currently exist in the coal sector.<sup>12</sup> To the extent that renewables are being developed in transitioning coal regions, to date only a fraction of this capacity is owned and/or controlled by residents.<sup>13</sup>

The creation of energy cooperatives may meet resistance or lack of social acceptance, especially if (significant parts of) local communities associate themselves strongly with the culture and material heritage of the coal sector. Open and transparent communication with residents, education about the benefits and opportunities related to renewable energy sources, and involvement of local communities in the decision-making process will be required to enhance public support for the transformation.

As in other countries, setting up energy cooperatives in Poland requires knowledge project management, renewable energy in technologies, financial management and legal issues of establishing and running the cooperative. As elsewhere, citizens from coal regions may face difficulties in gaining this knowledge and experience. In particular, knowledge and methods in the field of change management may be helpful to initiate these transformations.



#### Gender issues in energy cooperatives

The energy sector is predominantly maledominated in terms of energy decision-making and representation in managerial position; therefore it often excludes a diversity of perspectives of women, minorities and vulnerable and disadvantaged persons<sup>14</sup>. For example, the majority of women in energy cooperatives have volunteer roles limited to administration, with little or no influence on decision-making<sup>15</sup>. The energy democracy movement aims at opposing mechanisms of oppression, including racism and sexism,<sup>16</sup> and promotes inclusive practices from within<sup>17</sup>.



<sup>&</sup>lt;sup>10</sup> Although there have been some positive developments in this regard in Silesia. See University of Economics in Katowice (2023). Support for the EU's Just Transition Platform. Available here; See discussion of Silesian energy co-operatives (in Polish), in BoMiasto (2023). Energy cooperatives in Poland. Available here (in Polish).

<sup>12</sup> Joint Research Centre (2023). Energy transition can provide alternative for jobs at risk in coal regions. Available here.

<sup>&</sup>lt;sup>11</sup> CINTRAN (2022). Inventory of coping strategies: Energy communities. Available here.

<sup>&</sup>lt;sup>13</sup> See Hinsch, A. footnote 8, above.

<sup>&</sup>lt;sup>14</sup> R. Pearl-Martinez and J. C. Stephens (2016). 'Toward a Gender Diverse Workforce in the Renewable Energy Transition' Sustainability: Science, Practice and Policy 12(1). Available here.

<sup>&</sup>lt;sup>15</sup> Łapniewska, Z. (2019). 'Energy, equality and sustainability? European electricity cooperatives from a gender perspective.' *Energy* Research & Social Science, 57, 101247. Available here. Although there are exceptions to this, including Zklaster - see footnote 35, below. <sup>16</sup> Stephens, J. C. (2019). 'Energy democracy: Redistributing power to the people through renewable transformation.' Environment: Science and Policy for Sustainable Development, 61(2), 4-13. Available here. <sup>17</sup> Ibid.



# SPECIFIC RECOMMENDATIONS FOR COAL REGIONS:

#### Recommendations for regenerating coal regions (Poland as a case study)

The region's cultural heritage and identity must be safeguarded. Existing mine infrastructure should be preserved and reused. Old coal mines can be used as tourist attractions<sup>18</sup> or for renewable energy installations (solar power plants, wind parks), pumped storage power plants, or pressure towers for energy storage. In the Silesian Voivodeship there are several dozen inactive coal shafts that can also be used for energy storage. Depending on the depth of the shaft, it is possible to store between 50-100MWh, while the cost of storage is 10 times lower than battery storage. Pilot projects in this area are being implemented in the Czech Republic, Great Britain, Australia and Poland.

Since hard coal mining areas are located in densely populated urban areas, community energy could be based on housing cooperatives. Housing cooperatives or housing associations are a widely socially accepted way for residents to work together. Although they are created to meet the housing needs of their members, our research indicates their capacity for implementing renewable energy projects and meeting the collective demand for energy.

# Energy Communities RES installations on the reclaimed post-coal industry areas.

In the Silesian Voivodeship coal region approximately 5,000 ha of land are degraded and devastated,<sup>19</sup> mostly by heavy industry related to the hard coal industry. This land requires restoration. One solution could be to build photovoltaic farms using a system<sup>20</sup>. Such a system should be co-implemented by energy communities. This should include households at risk of energy poverty and residents of those buildings where it is not possible to install a PV installation on the roof. Installations of this capacity enable the production of 3.3 GWh of electricity per year<sup>21</sup>. This amount of energy would be sufficient<sup>22</sup> for the needs of 1.1 million citizens (25% of the region).



- <sup>18</sup> For example, the Stara Kopalnia museum in Silesia. Available here.
- <sup>19</sup> Statistical Yearbook of Śląskie Voivodeship, Katowice (2022), p.12. Available here.
- <sup>20</sup> A virtual prosumer is a person/entity generating electricity exclusively from renewable energy sources for his own needs in a renewable energy source installation connected to the electricity distribution network in a place other than the place where electricity is supplied to this prosumer.
- <sup>21</sup> The average annual production of electricity from 1 kWp of a photovoltaic installation in Poland is 950 kWh. See <u>here</u>.
- <sup>22</sup> Using a heat pump with an average COP of 2.





# Recommendations - co-creation strategies in coal regions (including three examples from Poland)

**Regional transition strategies** are an essential element of a just transition. They can guide choices and actions in the transition process and provide planning security to workers, industries, investors and communities. Dialogue and participation should be key elements in the process of strategy development. The transition of coal regions is a multi-level and multi-actor governance process. Silesia's Territorial Just Transition Plan<sup>23</sup> is one such example.

#### Examples of co-creation in Coal Region Cities.

The design of the new centre of Dąbrowa Górnicza (Factory Full of Life)<sup>24</sup> was created on the site of the former machine tool factory and the surrounding areas. This centre can serve as a meeting hall for public consultations. The entire development process involved public co-creation. Attention was drawn to the fact that there are many residents who will never come to a meeting - especially one that is too far from their place of residence. Therefore, it was decided that consultation opportunities should be brought to the people. Thanks to this approach, discussion panels and workshops were held not only on the premises of the former factory, but in all districts of Dabrowa Górnicza. Consulting tools included: mobile consultation points, research walks and backyard debates.

Program Rybnik 360.<sup>25</sup> Rybnik is a city situated in the heart of Silesia, the largest coal-producing region in the European Union. The project is involving residents in planning a new city strategy and designing changes in a systematic way. Examples include initiatives to empower local entrepreneurs, finding new ways to attract new types of investors (other industries, renewable energy sources, business process outsourcing, medical or IT sectors), or developing new strategies to enhance public health - i.e. fighting smog.

<sup>23</sup> See Silesia's Territorial Just Transition Plan <u>here</u> (in Polish).

- <sup>24</sup> Visit the Factory Full of Life website <u>here</u>.
- <sup>25</sup> EIT Climate KIC (2023). Just transition within reach for Polish coal city Rybnik. Available here.

<sup>26</sup> See European Commission (2019). Information platform for post-industrial and degraded areas in Silesia (OPI-TPP). Available here.

<sup>27</sup> Cooptech Hub (2023). Cooperative transformation: Operationalising of a just transition for coal regions in Poland. Available here (in Polish).
 <sup>28</sup> See Polish Ministry of Development and Technology (2023). Call for applications regarding renewable energy installations implemented by energy communities - investment B2.2.2 investment support. Available here (in Polish). These will be eligible for up to 91% funding (up to a maximum of PLN 50 million) to implement infrastructure projects in the field of renewable energy sources. See Gramwzielone (2023). Financing for energy clusters and cooperatives. Available here (in Polish).

Information platform for post-industrial and degraded areas in Silesia, Poland (OPI-TPP) The Marshal's Office of Silesia Voivodeship has worked in partnership with the Polish Central Mining Institute (Główny Instytut Górnictwa-GIG) to collect data on abandoned industrial sites - the Information Platform for post-industrial and degraded areas in Silesia (OPI-TPP). The aim of this initiative is to help new companies to find a good location to settle in, by providing information on available sites.<sup>26</sup>

The recent publication of CoopTech Hub's manual for founders of energy cooperatives in Poland. This proposes a model of cooperative transformation based on employment guarantees, development cooperatives, participation, green and digital innovations.<sup>27</sup> The Polish Minister of Development and Technology recently approved the regulations for the selection of investment support for ten existing energy clusters, energy cooperatives, or civic energy communities under this model.<sup>28</sup>





The following recommendations apply to energy poverty in general. Yet as has been discussed above, rural and peripheral coal regions are particularly affected by (and at risk of) energy poverty.

Funds obtained by national budgets from the sale of CO2 emission rights should be used to support investment in RES technologies for citizens endangered by energy poverty<sup>29</sup>.

Greece is an example of an EU member state that has included active measures for tackling energy poverty in its transposition of the Clean Energy Package<sup>30</sup>. These include:

- Listing energy poverty reduction as a specific objective of Energy Communities;<sup>31</sup> and
- Allowing the possibility for an energy community to provide electricity for free to energy poor individuals in virtual net metering projects, even if these individuals are not members of the energy community<sup>32</sup>.

Community energy projects have the potential to be an effective antidote to energy poverty supporting the development of energy projects at the local level, such as the installation of photovoltaic panels on residential buildings, local wind farms or shared energy systems. Involving local communities in the co-creation, management and use of these projects can bring economic and social benefits, as well as aid energy poverty risk. Attention should be paid to the risk of energy poverty, in particular for women. Plans for a just transition need to include a clear idea for the future place of women in the new emerging energy job market generally and in coal regions in particular. In Poland, single unemployed women are currently the most vulnerable to energy poverty. Thus, a hub for women should be created ensuring education, training, psychological support, and a collaboration platform. This could include promotion of a sustainable development approach, assistance and programs to educators, industry, and for local government to create a supportive environment for women.

The participation of women in decision-making in energy projects is significantly lower than that of men. Therefore it is crucial to ensure that women have a full right to participate in the structures and decision-making process of energy communities, to guarantee that their perspective and needs are taken into account.

Facilitating networking and collaboration opportunities for women in the energy sector and community energy initiatives can enable them to be better represented. A collective support system can boost knowledge sharing and empower women making the sustainable energy transformation more equal.



#### <sup>29</sup> D 3.3 §§ 4.2.8

<sup>&</sup>lt;sup>30</sup> For a general overview of measures, see POWERPOOR (2022). Deliverable 5.9: EU Policy Recommendations & National Roadmaps to Mitigate Energy Poverty pp. 125-130. Available <u>here</u>.

<sup>&</sup>lt;sup>31</sup> Law 4513/2018, which defines Energy Communities (ECs) as civil co-operatives exclusively active in the energy sector with the aim of promoting social and solidarity-based economy and innovation in the energy sector, addressing energy poverty, and promoting energy sustainability, production, storage, self-consumption, distribution, and energy supply, enhancing energy self-sufficiency/security in island municipalities as well as improving energy efficiency in end-use at a local and regional level. Read more here.
<sup>32</sup> RESCoop (2023). Transposition Tracker: Greece - Enabling frameworks and support schemes. Available here.

# Recommendations - Create RES installations by energy communities in the areas of former lignite excavations

As we have seen, it will be difficult for local populations in lignite regions to return to traditional work in agriculture. Hence, it is important to create alternative jobs in rural areas and small towns. The advantage of the lignite regions is that they have access to energy infrastructure (high-voltage networks) that could be re-used for renewable technologies. Therefore funds intended for creating jobs for former employees of the lignite



coal sector<sup>33</sup> should be directed into the creation of wind and photovoltaic installations by citizens and energy communities in post-mining areas. In addition, local Energy Communities should have opportunities to create RES installations<sup>34</sup> in the areas of reclaimed lignite excavations. RES installations in these areas should be based on the form of a virtual prosumer. Hence, local energy communities could produce electricity for other energy communities. This would create additional jobs for people from rural regions where agricultural areas were used for lignite mining. A good example is the project of a pumped-storage power plant prepared by the energy cluster Zklaster in a lignite excavation in Lower Silesia in Poland.<sup>35</sup>

Such energy clusters' status as renewable energy communities is controversial as they do not meet the EU definition.<sup>36</sup> Nevertheless, as discussed earlier, this brief argues for a broad and expansive understanding of the concept to support energy citizenship.<sup>37</sup>

# Recommendations - Replace old fossil fuel technology factories with renewable technology factories in coal regions

In order to ensure a just transition in coal regions, it is necessary to create conditions for RES technology factories to be built on the premises of old fossil fuel technology factories, which will operate in accordance with the circular economy model.

For example, by creating alternative jobs in the field of RES technology according to the circular economy model (PV modules, Inverters, wind turbines, hydro technologies), the regenerative economy model in fossil fuel post-industrial, post-hard coal areas. The EU plans to reach 600GWp of solar power by 2030, and 1,400GWp by 2050 in photovoltaic installations (three times more than at the end of 2022). To reach these goals, it is necessary to enhance the EU's production capacity in the field of PV modules. Some of the factories producing PV modules, inverters and other accompanying devices could operate in coal regions, where there is already a high technical culture and abandoned post-industrial areas readily available.



<sup>33</sup> See Terytorialny Plan Sprawiedliwej Transformacji Wielkopolski Wschodniej (Territorial Plan for a Just Transition of Eastern Greater Poland, December 2022). Available <u>here</u> (in Polish).

<sup>34</sup> E.g. Agro-hydro PV farms - due to the restoration of biodiversity, and pumped-storage hydroelectricity and hydrogen production.

<sup>35</sup> Visit the Zklaster website <u>here</u>.

<sup>36</sup> Since they are not a legal entity (they are based on a civil law contract) and large enterprises are able to become a member. See Hinsch, A. footnote 8, above.

<sup>37</sup> See Hinsch, A. above for further discussion on this topic.

•	This is the fourth in a series of Policy Briefs aimed at exploring the concept of Energy Citizenship
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**Policy Brief #5** 

# 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.<sup>1</sup> As the fifth in a series of policy briefs for the EC<sup>2</sup> 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.

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#### The insights contained in this policy brief are based on the transdisciplinary research results of the citizen engagement conducted as part of the EC<sup>2</sup> 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.<sup>2</sup>





### 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 inclusivness.

**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.

<sup>1</sup> EC<sup>2</sup> project (2022). Policy Brief #1 Energy Citizenship: A missing piece to the energy transition puzzle? Available <u>here</u>.

<sup>2</sup> See EC<sup>2</sup> 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 poverty<sup>3</sup> and 9.3% of energy poverty<sup>4</sup>, 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.



<sup>3</sup> Eurostat (2023). Living conditions in Europe - poverty and social exclusion - Statistics Explained. Available <u>here</u>.
 <sup>4</sup> European Commission (2023). Commission publishes recommendations to tackle energy poverty across the EU. Available <u>here</u>.

### **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 zeroenergy 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.



#### 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.<sup>5</sup>

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.<sup>6</sup>

# 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.





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.

<sup>5</sup> See EC<sup>2</sup> project (2023). Policy Brief #3 How to mainstream energy citizenship at the national level. Available <u>here</u>.
 <sup>6</sup> See EC<sup>2</sup> 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 <u>here</u>.



# 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.<sup>7</sup> 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.<sup>8</sup> 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 EC<sup>2</sup> policy brief #3, tenants are effectively excluded from many opportunities to participate in energy communities.<sup>9</sup> 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.

<sup>8</sup> 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 ElWOG 2010 § 16c (2). Available <u>here</u>.

<sup>9</sup> See EC<sup>2</sup> 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.<sup>10</sup>

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 selfconsumers.

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.

<sup>10</sup> See EC<sup>2</sup> 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, EC<sup>2</sup> found that engaging local government units in creating structures that integrate energy communities in partnership with citizens, SMEs, and scientific entities is crucial.<sup>11</sup> 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, EC<sup>2</sup> 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.<sup>12</sup>

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#### 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.

<sup>11</sup> 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 EC<sup>2</sup> website <u>here</u>.
 <sup>12</sup> Ibid.





Local authorities should make municipal infrastructure and buildings available to civic communities for energy production<sup>13</sup>.

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.

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# 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.

<sup>13</sup> Examples here can be found on the *Erneuerbare Energien Rottenburg eG* <u>website</u>. See examples of PV installation on local schools <u>here</u> and <u>here</u>.





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## **Policy Brief #6**

# Recommendations for inclusive and empowered energy communities

How policy makers and initiative takers can foster public support for and involvement in energy communities

This is the sixth in a series of policy briefs for the EC<sup>2</sup> project, and it provides an overview of whether and how the set-up of ECs (Energy Communities) fosters or hinders people's acceptance of and involvement in energy communities. It explores actionable recommendations to facilitate and accelerate a just and sustainable energy transition.

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#### The insights contained herein are based on interdisciplinary empirical research conducted as part of the EC<sup>2</sup> project.

Our approach incorporates economic, legal and psychological elements and perspectives. These scientific insights capture and synthesise the knowledge derived from various psychological experiments as conducted in the EC<sup>2</sup> project within Spain, Poland, Italy, Germany, Austria and the Netherlands.<sup>1</sup> The energy community setups considered were based on the key legal and economic set-ups identified in deliverable D3.3<sup>2</sup>, and derived from D2.1<sup>3</sup>, as being relevant from a social and environmental psychological viewpoint.



#### **KEY CONCLUSIONS**

1. Energy community set-ups influence the public's support and willingness to be involved. Such set-ups may range from bottom-up to top-down, from homogeneous to diverse, and from focused on the energy community to being invested in the wider local community.

2. Energy communities formed fully from the bottom-up or in collaboration with municipalities get more public support and increase people's willingness to join than ones formed by a municipality alone.

**3.** There is an imbalance with regard to socio-demographics in energy communities. Especially women and low-income groups seem to remain underrepresented. Supporting these groups is key when designing effective strategies for engagement in energy communities.

<sup>1</sup> For more insights about the theoretical background, data used and the experiments conducted, and their results see forthcoming publications: D4.1 *Report on experimental studies on energy communities*; D4.2 *Report on experimental lab studies on energy citizenship*; & D4.3 *Longitudinal study report* on the EC<sup>2</sup> website <u>here</u>.

<sup>2</sup> See EC<sup>2</sup> project Deliverable 3.3: Catalogue of potential legal and economic barriers or facilitators of energy citizenship (2022). (Hereafter, 'D 3.3). Available <u>here</u>.

<sup>3</sup> See EC<sup>2</sup> project Deliverable 2.1: Interdisciplinary understanding of energy citizenship (2022). (Hereafter 'D2.1'). Available here.

### Introduction

For a sustainable energy transition, we need not only technological advancement, but societal change and the support and involvement of citizens. Energy communities are increasingly recognised by policymakers as a way to actively involve citizens and foster sustainable and just energy transitions. Importantly, for a just energy transition, different groups of people from society need to participate. Yet so far, only a marginal number of people are aware of and involved in energy communities in Europe, and they tend to be led by resourceful, well-educated and older men.

Thus, involving active and diverse citizens in the energy transition is key. To do so, we need to know which factors increase the likelihood of citizens supporting energy communities and becoming active energy citizens.



Environmental psychology studies the interplay between individuals and their environment. It examines the influence of the environment on human experiences, behaviour and well-being, as well as factors influencing how people affect the environment (e.g., pro-environmental behaviour<sup>4</sup>). Psychological theories aim to explain how people's perceptions, emotions, and behaviour form, by taking individual, group processes, and contextual factors into account.

# What facilitates and hampers citizens' support of, and involvement in, energy communities?

How to overcome psychological and contextual barriers that hinder people from actively engaging in the energy transition? Without careful consideration of what motivates different people to participate in energy communities, there is the risk that the sustainable energy transition further increases inequalities in society. From a psychological perspective, the extent to which people support and want to join energy communities depends on different factors, such as:

- 1) personal motivation,
- 2) collective group processes and
- 3) the contextual set-ups of energy communities.1



<sup>4</sup> De Groot, J. I., Environmental psychology: An introduction (2019).

# Factors influencing citizen involvement in energy communities

motivations Personal (e.g., environmental values, self-identity) have been important for understanding sustainable energy behaviours, including involvement in energy communities. Yet, citizens' involvement entails more than just a specific pro-environmental behaviour, as energy communities provide the opportunity for collective action and collaboration towards achieving a common goal. Previous research suggests that people do not only want to get involved because of their pro-environmental motives (wanting to protect the environment), but also because they are, or want to be, part of their community (communal motives), whereas financial motives do not seem to be related to initiative involvement.<sup>1</sup>



**Collective group processes** are important for increasing the motivation to participate in the energy transition and in energy communities. Relevant collective group processes are: 1) social identity, 2) collective agency, and 3) social norms <sup>1,2</sup>.

Social identity can strengthen environmental behaviour: if an individual identifies with a collective advocating pro-environmental behaviour, this can in turn foster the individuals' own pro-environmental behaviour. Moreover, if an energy community is perceived as representing and benefiting "us" as a local community beyond the energy community (identity leadership), this increases people's willingness to join it. Collective agency is a concept that includes three relevant indicators for people's motivation to act collectively in a group. These three indicators describe whether a group is perceived to 1) have collective aims that they determined themselves (self-determined collective aims). 2) act jointly and in a coordinated fashion (collective goal-directed action), 3) be effective in achieving their aims (collective efficacy beliefs). These indicators can be fostered by specific practices or characteristics of energy communities. For example, engaging people in envisioning a sustainable future can increase efficacy beliefs and intentions to become collectively involved in the energy transition. Social norms signal which behaviours are most common and which behaviours other people approve or disapprove. Therefore, if the above mentioned collective processes are successful in increasing environmental behaviour, this could additionally lead to a positive ripple effect: the more people are perceived to act jointly towards the goal of a just energy transition (i.e. increasing pro-environmental social norms), the more people will be motivated to contribute to this transition.

#### How energy communities are set-up and organised

is central to people's motivation to support them, and their willingness to get involved. We define *energy community set-ups* as a combination of different features or characteristics of energy communities, for example the legal framework, economic characteristics, its social embeddedness or locality of an energy community. These set ups vary substantially across the EU. Accordingly, our studies focused on several characteristics and examined how they foster or hinder support for and participation in energy communities via the above mentioned psychological processes. Based on the EC<sup>2</sup> research<sup>1, 2</sup>, we identified the following set-ups that are effective in increasing support for and willingness to join in energy communities.



#### Financial support:

People are more willing to support state-funded energy communities and communities in which new members are not required to make substantial financial investments. Energy communities that are funded by the state are likely to have more tangible (financial) resources, which may serve as a motivational factor and additionally it signals societal approval by the state.



#### Legal frameworks:

Energy communities are more attractive if they are situated in countries with clear legal frameworks and if they offer legally binding contracts between members. This is because clear legal bases signal encouraging social norms that emphasise appropriate behaviour. Moreover, a contract may foster people's own and perceived commitment of other members.





# Involvement of citizens and municipalities:

Although bottom-up involvement of citizens in energy communities is one of the key features of energy communities, they are often initiated in cooperation with external institutions such as a local government. Municipality involvement may help energy communities to reach their sustainability goals. Yet, support is higher for communities that are owned and led by citizens alone or in cooperation with the government compared to energy communities that are solely owned and run by the (local) government. When community members are involved, this increases the perception that the energy initiative was able to advance a sustainable energy transition (collective efficacy) and that the initiative represents the local community as a whole (identity leadership).

# The community's pro-environmental and social justice values:

Energy communities gain more support - when they focus on collective self-determined aims, such as environmental protection and social justice, as opposed to external aims, such as financial benefits or energy security [D 4.2]. Yet an overemphasis on environmental morals of the energy community might create an exclusive social identity, which separates those involved from those not involved. By additionally emphasising the energy community's investment in the overarching local community and not only in the energy community, the perception of two different groups changes from an "us. vs. them" to a "we" [D 4.1].



# Social embeddedness of the energy community:

Energy communities are more attractive if members are interacting and spending time together – as long as there is no obligation to do so. Motivation to join was higher when energy communities were non-anonymous and strongly connected, for example through a shared identity. Moreover, people preferred locally-based energy communities, ensuring that members are not dispersed across the country, and fostering active networks with other energy communities.





# Diversity and inclusion in energy communities:

Establishing inclusivity of energy communities by increasing awareness of how socioeconomic, gender, sociocultural, and socio-political factors impact involvement in energy communities is a key aspect of the EC<sup>2</sup> project. Ideally, citizens from different social groups - such as different genders, income levels, and educational attainment - are equally likely to get involved in energy communities. Yet men seem to be more aware of and involved in energy communities compared to women, and low-income individuals remain underrepresented in energy communities. Interestingly, and different from what is often assumed, we found higher pro-environmental motivation among women compared to men, but women seem to feel less able to join. Merely including a message stating that diversity is valued by the energy community, nor the representation of women per se, effectively changed these perceptions. Yet, we found that generally people were more willing to support more diverse energy communities.



## MAIN CHALLENGES:

To achieve a just and sustainable energy transition the following challenges stand out for policy makers and leaders of energy communities:

- Lack of awareness of and involvement in energy communities.
  - Limited inclusion and representation of citizens from various social groups in energy communities.
  - The need to set up energy communities in ways that create favourable conditions for people to get involved.

The following recommendations address these challenges.



# **RECOMMENDATIONS** FOR POLICY MAKERS:

# Provide energy communities with financial support

People are more willing to support an energy community if it receives financial support from the state – meaning it could benefit from public funding and reduced tax rates, access cheaper loans, and enjoy lower fees for using the electricity grid. These efforts not only help the energy community from a financial standpoint but also from a motivational one.

Moreover, more people support an energy community if they don't have to make significant financial investments to become a member. Thus, it is important to create financially inclusive energy communities without high entry barriers.

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# Create clear legal frameworks for energy communities

People are more inclined to support energy communities if they are situated in a country with clear regulations and transparent legal frameworks.

Furthermore, people prefer energy communities that are official and formal associations based on legally binding contracts, to which all members agree - instead of unofficial organisations with only informal agreements <sup>5</sup>.

Clear frameworks and guidance are important both from a legal and a psychological point of view.

# Strengthen citizens' involvement in setting up and organising energy communities

Energy communities that are owned and led by community members either with or without the cooperation of the government are more likely to gain people's support. In comparison, energy communities that are solely owned by the government or an enterprise have lower support. They increase the perception that the energy community is able to help advance both a sustainable energy transition and the community. Thus, citizens' agency in organising and managing their own energy communities, or in cooperation with the government, is essential.

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#### Recruitment strategies need to address barriers experienced by underrepresented groups

Policies are needed to support the membership of underrepresented groups, such as women and people with a low income.

For example, as women feel less able to join, they seem to encounter barriers that hinder their involvement in energy communities. Thus, comprehensive strategies and programs are needed to address these specific barriers rather than merely adjusting the message portrayed within already existing energy communities.

<sup>5</sup> See for example the recommendation on one-stop-shops in the forthcoming Policy Brief #5 *Localised support for establishing & joining energy communities*, on the EC<sup>2</sup> website <u>here</u>.





#### Prioritise locally based energy communities that are integrated in larger networks

Locally-based energy communities that are integrated in larger networks with other energy communities could be promoted due to their ability to motivate new members.

In fact, people are more willing to support locally based energy communities instead of energy communities whose members are spread all over the country or Europe.

Active networks of energy communities can be fostered through networking platforms or funded conferences.



#### Create opportunities for citizen's participation in envisioning energy futures

Envisioning positive energy futures can increase people's intention to collectively engage in the energy transition, at least for people who enjoy such visioning tasks. Therefore, it may be useful if policymakers sketch large visions of the energy transition and let people who are interested in it, think about and contribute with their own visionary ideas. Citizen councils and co-creation processes may be suitable means for such visioning interventions. This can motivate people to collectively engage in the energy transition.



#### Communicate positive norms and trends about the engagement of citizens in the energy transition

Policymakers may benefit from identifying positive behaviour trends of sustainable energy production and communicating these to the public. Such trends could be about the number of Europeans engaging in behaviour that promotes carbon trading, energy efficiency and energy communities, and about Europeans sharing the goal of the energy transition. When individuals read texts about such positive trends, they reported increased collective energy citizenship. Additionally, reading about many Europeans approving the energy transition, rather than debates and conflicts about whether the energy transition was an appropriate goal, also strengthened collective energy citizenship. Collective energy citizenship is people's belief that they as collectives have rights and responsibilities for a just and sustainable energy transition, and their motivation to act upon those rights and responsibilities. Energy citizenship may be an essential step for getting people involved in energy communities.





## RECOMMENDATIONS FOR ENERGY COMMUNITIES LEADERS/MEMBERS:



# Transform energy communities into social communities

People are more willing to support an energy community if members are interacting and spending a lot of time together. Understanding themselves as social communities makes energy communities more attractive. Thus, they might benefit from offering social events that allow members to get to know each other and form friendships.

However, spending a lot of time together shouldn't be an obligation as people are less willing to support an energy community if they have to invest a lot of time. Ideally, members are free to decide whether they want to participate regularly in meetings and activities or not. And tasks that arise can, but do not have to, be taken on.

Moreover, the interaction between different energy communities also has a positive impact on people's support: Large and active networks increase the attractiveness for potential new members.

#### Create positive visions with members and interested parties

Envisioning a fair and successful energy transition in Europe can motivate people to collectively engage in the energy transition. This seems to be especially true for those people who are already acquainted with visionary thinking.

For energy communities, this finding suggests that they may benefit from giving potentially new members the time to develop their own visions and, if possible, integrate these in the existing visions of the energy community.



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# Communicate the focus on environmental sustainability and social justice

To motivate new members, an energy community's communication can focus on self-determined values of environmental sustainability and social justice. People are less likely to support an energy community if it emphasises financial benefits or energy security.

Thus, when presenting themselves in public (e.g. on their website, on flyers or in talks), energy communities can gain more support if they communicate their focus on environmental sustainability and social justice.

Importantly, energy communities can combine such pro-environmental motivation

with a clear connection to the wider local community in order to avoid being seen as morally superior to non-members. They can do so either in terms of their identification with, or in terms of benefits provided for the wider local community.

#### Recruit new members via social activities in the community to attract more diverse members

It is important that energy communities are aware of and understand potential (existing) inequalities among members and non-members, in order to become more accessible to people with less privilege and resource-bound commitments.<sup>6</sup>

Initiators run the risk of primarily attracting similar community members as people generally associate with others with whom they share similar characteristics. To avoid this, they could focus on recruiting new members via various social (and potentially non-energy related) activities in the local community. In addition, initiators could actively look for representatives and new members with diverse social connections in the community and with different socio-demographic backgrounds.

<sup>&</sup>lt;sup>6</sup> For more tools on how to improve the diversity and inclusion of an energy community, see forthcoming Toolkit: D6.1 *Energy Citizenship Empowerment Kit* on the EC<sup>2</sup> website <u>here</u>

This is the sixth in a series of Policy Briefs aimed at examining support for and involvement in energy communities. The series shares key insights on how different set-ups of energy communities can be used as an effective tool for accelerating the renewable energy transition, together with citizens. The EC<sup>2</sup> 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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