A comparative analysis of the regulatory framework in Sun4All pilot cities

Report on the political and regulatory context for development of energy communities at EU, national and local levels

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Abbreviations and Acronyms

ACRONYM	DESCRIPTION
CEAAG	Guidelines on state aid for climate, environmental protection and energy
CEC	Citizen energy Community
DSO	Distribution system operator
EED	Energy efficiency directive
EIB	European investment bank
EMD	Electricity market directive
EPAH	European energy poverty advisory hub
EPBD	Energy performance of buildings directive
EU	European Union
NECP	National energy and climate plan
NGO	Non-governmental organisation
NRRP	National Recovery and Resilience Plan
PV	Photovoltaics
REC	Renewable energy community
RED	Renewable energy directive
RRF	Recovery and resilience facility
SME	Small and medium enterprises

1. Abstract

This report gives an overview of the political and regulatory context for the development of energy communities at European, national and local level. Based on the analysis of the existing legislation, review of the literature on energy communities, and interviews conducted with the Sun4All project partners, this study shows that legislation on energy communities is still in its infancy but is benefiting from a good political dynamic at all levels. Nevertheless, the sometimes-lacking legal certainty together with serious shortcomings on implementation of the existing legal framework are significantly hindering the development of energy communities. In addition, from a regulatory point of view, the contribution that energy communities could provide to reducing energy poverty, if properly supported, has remained largely underutilised.

2. Executive summary

The EU Clean Energy for all Europeans Package introduced very positive first steps in the legal recognition of energy communities. The EU is explicitly saying that it wants to recognise energy communities because it is a different kind of market player, whose main interest is not making profit. Yet, one can wonder how, in the absence of appropriate support, energy communities will be able to thrive in a market dominated by existing powerful energy players, while fulfilling additional tasks and obligations. Besides, vague and sometimes inconsistent language and provisions could bring several difficulties during the transposition and implementation phases, such as diverse interpretation at national and levels as well as the risk of bigger actors taking advantage of loopholes and grey areas at the expense of citizen-led projects.

The Fit for 55 and REPowerEU amendments proposed by the European Commission include relevant changes for energy communities. General provisions such as the introduction of an EU-wide definition of energy poverty and the increase of energy efficiency and renewable 2030 targets will impact all stakeholders, including energy communities. The acceleration of permitting processes for renewable deployment could favour the uptake of new renewable energy community projects, as would the possible introduction of a mandatory installation of solar panels on all public and commercial buildings, and new residential buildings. The Commission complemented the Fit for 55 package with additional communications such as the EU Solar Strategy that includes an indicative target to set up renewable energy communities in all municipalities of 10,000 inhabitants and higher, and announced new earmarked funding under the LIFE programme, although details are still lacking. Energy communities also may benefit EU financial or technical assistance, for instance through the Energy Communities Repository and Rural Energy Communities Advisory Hub. Many of these initiatives have been established in the past 3 to 4 years, which shows that energy communities are in their infancy, and are benefitting from a positive political dynamic at the EU level.

The impact of these upcoming changes on energy communities' deployment will still heavily rely on Member states implementation, since they are no specific binding targets or earmarked funding. However, so far, no country is fully aligned with EU legislation requirements on energy communities. Incomplete transposition and lack of clarification of EU rules when transposed at the national level might hinder energy communities' full potential. Best practices have been implemented, such as dedicated tender schemes in Ireland, but overall, Member states remain in the 'exploration phase' of energy communities' regulation, with a strong need for assessment, monitoring and likely fine-tuning of the policies in place.

In recent year, Spain, Portugal, Italy, and France, Sun4All pilot countries, all introduced different pieces of legislation on self-consumption and energy communities. Legislation has been very fast-changing at national level, reflecting the rise in self-consumption and renewable energies. But mostly, the development of a national regulatory framework on energy communities has been boosted by EU laws, especially the renewable energy directive and the internal market directive in 2018/2019. More recent national laws have continued to transpose EU provisions

(with already high transposition levels achieved in France and Italy) to better define some concepts that had previously only been copy-pasted by EU rules, and to slowly introduce or improve the enabling framework for energy communities. Italy, Spain, and Portugal have also fully taken advantage of the National Recovery and Resilience Plans in this regard.

While there are some shortcomings in the legislation of our four pilot countries, it is foremost the lack of implementation that results in lengthy and complex procedures. This is often exacerbated by a lack of cooperation and enforcement by energy utilities and DSOs. Furthermore, municipal rules have not yet been adapted to deal with these new types of partnerships. Such legal uncertainty is thus putting the brakes on many energy community projects. On top of purely regulatory issues, political commitment is necessary for municipalities to make headway on these topics, alongside adequate financial and human resources. The need for information, both towards citizens and municipalities, should also not be understated and Member states should make sure to include this in their enabling framework for energy communities. Lastly, no Member state has truly leveraged on the potential of energy communities to contribute to reducing energy poverty. A lot still needs to be done across all political levels if energy communities are to reach their full potential for the clean energy transition.

3. Introduction

The energy transition calls for a deep transformation of our energy system, from fossil-fuels dominated supply to renewables. While already well-underway, with already over 20% of EU energy from renewable sources,[1] putting the EU on the path to climate neutrality by 2050 requires at least doubling this share by 2030.[2] New geopolitical realities, with the war in Ukraine and Russian gas disruptions, only raise the stakes. The REPowerEU plan published by the European Commission in May 2022 to rapidly reduce dependence on Russian fossil fuels aims for higher renewable energy use. Meanwhile, distributional issues of the transition – who benefits and who bears the costs of the transition – are increasingly debated.

Energy communities, through which citizens can jointly own, democratically control, and self-consume local energy, increasingly emerge as an important tool to foster renewable energy deployment and address social acceptability issues. A more decentralised energy production, with wind and solar, is an opportunity to put energy back in the hands of people, and to build a new, more inclusive energy system in which fair access to energy is guaranteed. However, energy communities do not automatically have progressive and inclusive features. In the absence of appropriate public support, they can even exacerbate inequalities since their establishment requires technical, financial and time resources that are unevenly distributed in society.

To address the lack of access to renewable energy for energy-poor households, the EU Horizon Project Sun4All (2021 - 2024) proposes to replicate the New York State's scheme "Solar for all" in four European municipalities: Barcelona (Spain), Communauté de Communes Coeur de Savoie (France), Rome (Italy), Almada (Portugal). Sun4All projects will theoretically grant vulnerable consumers in the four pilots shares in solar energy installations. Beneficiaries would therefore become members of energy communities, and co-owners of a local PV plant. To understand the success factors of such a scheme, it is important to understand in which political and regulatory contexts the pilot cases are implemented, at all relevant levels of government.

At the EU-level, the development of energy communities has been steered actively for a couple of years only, with the first EU definitions introduced in 2018/2019 as part of the Clean energy for all Europeans package. The purpose of this report is to give an overview of the current political and regulatory context surrounding energy communities and energy poverty at the EU and national levels. It will first show that EU law draws a general framework whose ambition relies heavily on national implementation (I), then will explain the progress, remaining shortfalls and discrepancy in national levels frameworks (II) before turning to an assessment of the drivers and barriers to energy community projects at the national and local levels (III), with a special focus on the pilot countries and cities of the Sun4All

[1] 21.8% in 2021. Source: Eurostat (2023). Share of energy from renewable sources.
[2] European Commission (2023). European Green Deal: EU agrees stronger legislation to accelerate the rollout of renewable energy. *Press release*, 30 March.

project: Barcelona (Spain), Communauté de Communes Coeur de Savoie (France), Rome (Italy), Almada (Portugal).

4. EU level: a general framework to guide Member states and guarantee a set of basic rights to favour energy communities' market integration

This chapter provides an overview of the EU policies on energy communities. It focuses first on the existing regulatory framework introduced as part of the Clean energy for all Europeans package in 2018 and 2019, which is supposed to have been fully transposed since 2021 (1). It then reviews upcoming changes of the existing framework as part of the ongoing negotiations at EU level on this topic, in particular the Fit for 55 package and the REPowerEU plan (2), before looking at EU enabling framework (financing and technical assistance) relevant to energy communities (3).

4.1. Introducing energy communities in EU law: a positive and necessary first step, but much still needs to be clarified

While energy communities already existed in some Member states, the introduction of energy communities in EU law is recent. The adoption of the Clean energy for all Europeans package in 2018 and 2019 constituted the turning point for the regulation of energy communities at EU level. As part of the package, two directives on the promotion of the use of energy from renewable sources ((EU) 2018/2001)[3] – also known as REDII – and on common rules for the internal market for electricity ((EU) 2019/944)[4] – referred to as EMD in this paper – introduced at the EU level the concepts of **renewable energy communities** (RECs) and **citizen energy communities** (CECs) respectively. Member states had to transpose provisions on CECs by 31 December 2020 and provisions on RECs by 30 June 2021.

Energy communities are defined as a type of self-consumption scheme. Self-consumers are guaranteed the right in the EU to generate, consume, store, share and sell self-generated electricity. Collective self-consumption is a group of at least two self-consumers cooperating together and located either within the same building or apartment block (or within other premises if allowed by Member states).[5] To be considered an energy community according to the EU, a collective self-consumer scheme must be constituted as a legal entity, which

[3] European Parliament and Council. (2018a). Directive of 11 December 2018 on the promotion of the use of energy from renewable sources (recast). *Official Journal of the European Union,* December.
[4] European Parliament and Council (2019). Directive of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast). *Official Journal of the European Union,* June.
[5] Member states are allowed to implement different measures for individual and collective self-consumers as long as it is justified and proportionate.

allows to have a more formal existence with associated rights and obligations that will be developed in the following sections.

4.1.1. New EU rules facilitating the market participation of energy communities

The EMD and REDII aim at facilitating market integration and participation of energy communities. Such legal recognition at EU level allows energy communities to participate and compete in the energy market on a level playing field.

According to the European rules, Member states must guarantee that RECs and CECs are able to access all suitable energy markets, either directly or through aggregation, in a non-discriminatory manner. This includes for instance fair registration and licensing procedures.

Energy communities must also be subject to non-discriminatory and cost-reflective network charges when they consume from or feed electricity into the grid. This is a progress since in many countries, charges, in particular network charges, often discriminate disproportionately against the self-production of energy.[6]

However, it is up to the Member states to decide whether energy communities may act as distribution system operators (DSOs), which includes price setting capabilities. On top on this, while this is explicitly stated in the EMD,[7] REDII is less clear on the matter.[8] The role of RECs as DSOs should thus be better explained to ensure a smooth transposition and avoid any legal uncertainty. In any case, EU law now provides requirements to ease energy communities' relations with DSOs. Member states must at least ensure that DSOs cooperate and facilitate energy transfers within energy communities.

Lastly, the directives provide that all customers who are supplied energy by energy communities have the same rights as all other consumers in the energy market (e.g. right to connection, right to switch suppliers, access to information). Yet, because these rights mostly depend on national legislation, the level of protection might differ significantly from one country to another.[9] More worrying, however, is that there is a general lack of clarity on applying such consumer obligations for members of energy communities who might both be buying their energy from the energy community (as final consumers) and be

[6] Friends of the Earth Europe (2018). Unleashing the power of community renewable energy. *Booklet*, December.
[7] Article 16(4) EMD.
[8] It states that RECs must not be "*subject to discriminatory treatment with regard to their activities as final customers, producers, suppliers, distribution system operators or as other market participants*" Article 22(4) REDII.
[9] BEUC - the European Consumer Organisation (2019). The future of energy consumers. Bright or Burdensome?. October.

participating in the community as member or shareholder (as 'consumer-investors' or active consumers).[10]

4.1.2. Energy communities: new market players with specific rules regarding their activities and governance…

Citizen energy communities and renewable energy communities share a common core, but each possesses their own specificities (see Table 1)**.**

Table 1: Shared features and differences between RECs and CECs[11]

	Both CECs and RECs	Specific to CECs	Specific to RECs
Type of entity	Legal entity		
Activities	Generation/production, consumption, sharing, storage, sale, distribution, and aggregation	Engage in energy efficiency services or charging services for electric vehicles or to provide other energy services to members or shareholders	
Purpose	Providing environmental, economic, or social community benefits rather than financial profits		
Energy sources		Electricity from renewable and non-renewable sources	Renewable-based heating and electricity
Participation	Voluntary and open participation	Any entity	Natural persons, SMEs or local authorities, including municipalities For private undertakings, their participation must not constitute their primary

[10] Ibid.
[11] European Parliament and Council, (2018a). op. cit. European Parliament and Council (2019). op. cit.

			commercial or professional activity.
	Both CECs and RECs	**Specific to CECs**	**Specific to RECs**
Governance	Effectively controlled by members or shareholders	Effective control allowed for: natural persons, small enterprises, local authorities, including municipalities	Same eligibility for effective control than for participation: natural persons, SMEs or local authorities, including municipalities Requirement of proximity (see 'Geographical scope') Requirement of autonomy
Geographical scope		No geographical limit	Shareholders and members with effective control must be located in the proximity of the renewable energy projects that are owned and developed by that legal entity

The most obvious difference between RECs and CECs is the energy sources and technology they may use. RECs operate on renewable-energy-based heating and electricity, whereas CECs are allowed to also operate on non-renewable energy sources. However, CECs are, for now, limited to the electricity sector. RECs and CECs can, either directly or through aggregation, produce, consume, store, share within the community, and sell[12] energy (renewable-based energy for RECs, and electricity for CECs). The directives also allow energy communities to offer other energy services but there is no further clarification on this in the texts. CECs are explicitly allowed to provide energy efficiency services as well as charging services for electric vehicles. It is possible that these services could also be offered by RECs as they might fall under '*other energy services*'.[13]

[12] Frieden D., Tuerk A., Neumann C., d'Herbemont S., Roberts J. (2020). Collective self-consumption and energy communities: Trends and challenges in the transposition of the EU framework. *Compile, Working paper*, December.

[13] Recital (67) of the REDII considers that "*empowering jointly acting renewables self-consumers also provides opportunities for renewable energy communities to advance energy efficiency at household level*".

CECs and RECs both need to exist as a legal entity, but EU legislation gives complete flexibility with regards to the choice of organisation. However, it is unclear whether this flexibility is meant to give Member states more freedom in the transposition or if it should benefit energy communities directly, meaning that energy communities would be free to choose business model according to what exists within national legislation. Member states might indeed prefer to either restrict the legal forms energy communities may take. This might be a double-edge sword. For example, by selecting only non-profit models to mitigate the risk of corporate capture, Member states might also jeopardise the development of certain energy communities that require a more business-like approach to operate (e.g. for accounting reasons, to have access to private financing, because the knowledge and expertise that members or shareholders possess is more business-oriented).

Participation in an energy community must be open and voluntary. Any type of organisation may participate in a CEC, whereas RECs exclude large companies (>250 employees) from participating. For both types of communities, Member states may also allow cross-border participation. This is in line with the idea of a decentralised system that goes beyond national boundaries. How this type of cross-border cooperation might work on the ground remains to be examined, especially considering the large administrative barriers that might exist.

Governance rules provide relatively strong safeguards against corporate capture, such as 'effective control', although more stringent for RECs than for CECs. In the directives, the main governance criteria is 'effective control', which is defined in the EMD as the "*rights, contracts or other means which [...] confer the possibility of exercising decisive influence on an undertaking*" in particular when it comes to the ownership or use of assets and to influencing composition, voting or decisions of the undertaking.[14] In the case of CECs, medium and large enterprises (> 50 employees) are excluded from effective control despite the fact they can be participants in a CEC. Any participant of a REC may be in control (which excludes large companies) provided they are located in the proximity of the renewable energy project. Member states are to define themselves what 'proximity' means. In addition, the participation of private undertakings in a REC must not constitute their primary commercial or professional activity.[15] This shows that the risk of corporate capture is addressed more stringently for RECs than for CECs.

'Effective control' is complemented by the autonomy (from individuals or traditional market actors) principle for RECs, which remains vague but could be relevant for CECs too. Being autonomous is a requirement RECs have to fulfil, and that CECs do not. The EU only clarifies this principle in the recitals, which hold no legal obligation. It states that RECs "*should be capable of remaining autonomous from individual members and other traditional market actors that participate in the community as members or shareholders, or who cooperate*

[14] Article 2(56) EMD.
[15] Such provision is also included in the EMD, but only in Recital 44, which does not make it legally binding.

through other means such as investment".[16] This can be seen as another stronger safeguard against corporate capture and to foster renewable projects that are truly led by citizens. However, this is entirely up to the Member states to interpret and define in more precise terms. Being autonomous can be understood as a means to avoid abuse and ensure broad participation. Considering this, applying such a principle to CECs as well might seem wise.

4.1.3. … and a social mission

The primary purpose of CECs and RECs is not to yield profit but to provide environmental, (local) economic or social community benefits. This draws a clear line between energy communities and traditional actors like energy suppliers or distribution system operators (DSOs). This also distinguishes collective self-consumption schemes from energy communities, since collective self-consumers do not have this kind of obligation attached to them and can engage in collective self-consumption purely for economic reasons.

Nevertheless, this broad social role beyond being 'simple' competitive market players is bound to bring some tension during the implementation process at national level. National governments will "*need to find a balance between integrating energy communities in a liberalised market setting and enabling them to achieve wider goals"*.[17]

To support energy communities' market integration, Member states are required to establish dedicated enabling frameworks. Under the Governance Regulation (2018/1999), they are required to include REC's enabling frameworks in their National Energy and Climate Plans (NECPs) and the associated progress reports due by 15 March 2023.[18] For CECs, the enabling frameworks mostly include rights and obligations related to creating a level playing field in the market for energy communities. For RECs, the enabling framework goes beyond this objective as it strives to further facilitate and promote their development. This more advantageous enabling framework for RECs is notably due to the fact that they have stricter governance and participation requirements than CECs.[19] Concretely, Member states must establish instruments to make access to finance and information easier, design a customised support scheme for RECs, assess and remove unjustified barriers,[20] and provide regulatory and capacity-building support to public authorities to set up or participate directly in a REC.[21]

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[16] Recital 17, REDII.
[17] Swens, J. and Diesterlmeier, L. (2022). Developing a legal framework for energy communities beyond energy law. In Löbbe S., et al. (Eds), *Energy Communities: Customer-centered, market-driven, welfare-enhancing?* (pp59-71). Academic Press.
[18] European Parliament and Council of the EU. (2018b). Regulation of 11 December 2018 on the Governance of the Energy Union and Climate Action. *Official Journal of the European Union.*
[19] Hannoset, A. (2022), Local solutions to the energy crisis: empowering through renewable energy communities [Video]. European Sustainable Energy Week 2022. September.
[20] Article 59 of the EMD states that the regulatory authority shall monitor the removal of unjustified obstacles to and restrictions on the development of consumption of self generated electricity and citizen energy communities.
[21] Article 22 REDII.

4.1.4. Preliminary policy assessment of the EU framework of energy communities as a tool to increase public participation in the energy transition and fight energy poverty

Despite significant progress, the EU legislation should better define what the broader objectives of energy communities (beyond profit) precisely mean. Member states may interpret these objectives differently. For instance, '*providing social community benefits*' could mean ensuring inclusivity in terms of membership, an obligation to provide affordable energy, or to distribute part of the profit, the energy produced, or other resources (e.g., knowledge) to vulnerable citizens that are not members of the energy community. Although not legally binding in any way, recitals can sometimes offer some guidance or clarification of certain provisions from a legal text. In this case, recitals in the EMD and REDII seem to assign a long list of roles to energy communities, even beyond what was mentioned before, from lowering energy consumption, to fighting energy poverty and increasing the acceptability of renewable energy projects. The only tangible specification on this issue can be found in REDII, which explicitly requires Member states to ensure that participation in RECs is accessible to all consumers, including those in low-income or vulnerable households.

In addition, Member states decide who are vulnerable or energy-poor households, which could result in different levels of coverage at national level without a clear EU framework. A first EU-wide definition of energy poverty was proposed and agreed upon in the negotiations of the revised Energy Efficiency Directive (EED).[22] However, several indicators coexist, such as the inability to afford to keep one's home adequately warm, the inability to pay utility bills ('arrears'), having a high share of energy expenditure in relation to the income or having abnormally low energy expenditures.[23] Therefore, more discussions will follow to determine which indicator(s) ought to be used to measure and monitor energy poverty, and how to combine them, which could prove a lengthy process (see 4.2.1). In the meantime, it is thus crucial that Member states develop a publicly available definition of energy poverty as recommended by the European Commission.[24]

Energy communities actively contributing to energy justice remain the exception.[25] Referring to energy communities as inherent equity-enhancing is misguided, often rooted in the idea that 'local' and 'citizen-led' initiatives are synonymous with diversity, inclusion and social justice. In practice, energy community membership is not easily accessible to vulnerable groups. Energy

[22] As of 21 March 2023, an agreement was found in trilogue negotiations. It now needs to be approved by the Council and the European Parliament respectively.
[23] Abnormally low energy expenditure can mean that households are restricting their energy consumption below what is necessary due to the inability to pay their energy bills. Source: Chlechowitz, M. and Reuter, M. (2021). Energy poverty in the EU. *Odyssee-Mure, Policy brief*, July.
[24] Magdalinski, E., Delair, M. and Pellerin-Carlin, T. (2021). Europe needs a political strategy to end energy poverty. *Jacques Delors Institute*. Policy paper 259.
[25] Hanke, F., et al. (2021). Do renewable energy communities deliver energy justice? Exploring insights from 71 European cases. *Energy Research & Social Science,* 80(102244), October.

communities' members are generally homeowners with high enough income levels to afford the membership fees and other investments in energy efficiency.[26] Only about a quarter of energy communities offers lower membership fees and even fewer targets underrepresented groups directly.[27] In addition, in most cases (65%), being a member of an energy community does not result in lower energy prices compared to market prices. [28] Some energy communities might thus choose to help energy-poor households that are not part of their community. However only 18% of energy communities report engaging in such activities.[29]

To fulfil such a social role, energy communities need to be adequately supported. They need more financial resources to be able to offer lower participation fees. They need the human resources to be able to engage in energy justice activities and to collaborate with partners to better understand energy poverty and to reach vulnerable households.[30]

The EU legislation does not include specific provision or support dedicated to Member states or to the communities directly to reach this objective. At the very least, the EU should require Member states to elaborate on how they plan to support energy communities to this end, for instance in the framework of the update of their National Energy and Climate Plans[31] in June 2024 (first draft June 2023).[32] Member states should also make sure that energy communities are granted certain advantages or benefits when they engage in energy justice activities.[33] This should be part of the enabling framework Member states need to design for energy communities. The EU should also condition any future dedicated funding to energy communities to the redistribution of social and local benefits by the community.

Importantly, the role of energy communities to empower vulnerable consumers to participate in a liberalised energy market and help reduce energy poverty at household level should not be overstated. There is first of all a risk to overload energy communities with responsibilities and to exploit volunteer labour.[34] There are also concerns that issues of inclusiveness, citizen participation and poverty reduction could be seen as individual- or household-level issues and that the role, and support, given to energy communities on these matters, could be used as an excuse for state withdrawal or disengagement. Therefore, the social role that energy communities can play must be clarified – and as mentioned before, incentivised – but it should be made clear that this in no way

[26] Arnauld, J. and Quiroz, D. (2022) Energy communities in the EU - Fulfilling consumer rights and protections, *Profundo,* December.
[27] Hanke, F., et al. (2021). op. cit.
[28] Ibid.
[29] Ibid.
[30] Ibid.
[31] Which must already include an assessment of households in energy poverty.
[32] Schockaert H., et. al. (2022), Report on the European legal and regulatory environment for energy communities and energy poverty, *CEES*, European Commission Grant Agreement No. 101026972.
[33] Hanke, F., et al. (2021). op. cit.
[34] Debourdeau, A. et al. (2022). PESTEL Analysis of the EU Context, *EnergyPROSPECTS*, Deliverable 5.1, European Commission Grant Agreement No. 101022492.

replaces structural efforts and policies from European, national and local policy makers to tackle (energy) poverty and to foster consumer empowerment and democratic participation in energy-related matters.

Conclusion of section 4.1.

In a nutshell, the EU Clean energy for all Europeans package (with the RED and EMD) introduces positive first steps in the legal recognition of energy communities. New provisions were supposed to be transposed by 31 December 2020 (CECs) and 30 June 2021 (RECs) by Member states. Chapter 5 will deal in greater detail on the state of implementation at the national level. Analysis of the existing legislation shows that there is a risk of diverse interpretations at the national and local level due to vague and sometimes inconsistent language and provisions. In some cases, there is a threat to citizen-led communities in favour of bigger actors that might take advantage of loopholes and grey areas. Besides, the EU is explicitly saying that it wants to recognise energy communities because it is a different kind of market player, whose main interest is not making profit. However, one can wonder how, in the absence of appropriate support, energy communities will be able to thrive in a market dominated by existing powerful energy players, while fulfilling additional tasks and obligations, such as vaguely defined 'social community benefits'.

4.2. Upcoming changes: Fit for 55 and REPowerEU

The **Fit for 55 package**, presented in July and December 2021, is a set of legislative proposals to align EU energy and climate laws with the European Green Deal and to realise the European Climate Law objectives: a 55% reduction of net greenhouse gas emissions by 2030[35] and climate neutrality by 2050. Less than a year later, in May 2022, the European Commission presented the **REPowerEU plan** in response to the disruptions caused on the energy markets by the war in Ukraine. The goal was to phase out Russian gas dependency and accelerate the energy transition through fuel diversification, energy savings and the scale up of renewable energies. Importantly, most proposals under the Fit for 55 package and the REPowerEU plan are still under negotiations at the time this report is being written.

[35] Compared with 1990 levels.

4.2.1. Some small but positive steps for energy communities in the building sector

The Energy Efficiency Directive (EED): introducing an EU-wide definition on energy poverty and acknowledging energy communities' contributions to energy efficiency efforts

In July 2021 the European Commission proposed a recast of the directive on energy efficiency, which aimed at raising the level of ambition of the EU energy efficiency target and making it binding. To do so, the proposal required EU countries to collectively ensure a reduction of energy consumption of 9% by 2030 compared to the 2020 reference scenario projections. This level of ambition was once again raised as part of the REPowerEU Plan, with plans from the European Commission to increase the binding EU energy efficiency target to 13%. On 10 March 2023, trilogue negotiations on the text resulted in a decrease of the overall target to 11.7% by 2030, binding at the EU-level for final energy consumption and indicative for primary energy consumption. The Parliament did not manage to make the target binding at the national level too. The Council and the Parliament still need to approve the final deal.

Importantly, the directive proposes a definition of energy poverty where there was no recognised EU-wide definition thus far. This comes notably from the fact that energy poverty is a multidimensional phenomenon resulting from low levels of income, high energy expenditure, low energy efficiency and a broad range of other issues linked with general poverty, the housing system and energy market prices.[36] The inclusion of such a definition is thus very relevant in the framework of new provisions on energy efficiency but also in a context of soaring energy prices, which resulted in at least 10 million additional people suffering from energy poverty according to estimates.[37]

The new definition could help ensure a more consistent level of coverage when Member states design policies to help people suffering from energy poverty. This would also be relevant for energy communities, although as highlighted earlier, their role in fighting energy poverty still needs to be clarified. In addition, despite this common definition, precise indicators and measures would still need to be agreed upon to be used concretely by Member states' social services – for instance in the framework of their cooperation with energy communities to identify energy-poor households. While dedicated discussions are happening at EU level (within the social protection committee), this is likely to take significant time.

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[36] Widuto, A. (2022). Energy poverty in the EU. *European Parliament Research Service*, Briefing, July.
[37] "Among AROP individuals, the fraction of individuals with a residential energy budget share of at least 10% (all other things equal) increased by around 19pp, as a result of price development between June 2021 and June 2022, which amounts to over 10 million persons." Source: Directorate-General Employment, Social Affairs and Inclusion's and Joint Research Centre's GD-AMEDI and AMEDI+ projects. Fulvimari, A. (2023). Presentation on energy poverty. Exchange of views with civil society organisations on priorities for the European Semester 2023 against the background of the energy crisis. 16 February.

The proposal offers two small but welcome additions for energy communities, but it will be up to Member states to raise the level of ambition and guarantee effective implementation. First, Member states would have to design energy efficiency measures taking into account energy communities and their contribution to implement such measures.[38] In addition, the proposal aims to ensure that information on energy efficiency measures is made available to all relevant market actors, including energy communities, and calls to increase multilateral dialogue among relevant public and social actors, including once again energy communities, when it comes to split incentives between building owners and tenants.

The Energy Performance of Buildings Directive (EPBD): recognising energy communities an actor able to cover building's energy needs and boosting rooftop solar

The Commission's proposal to revise the directive on the energy performance of buildings published in December 2021 aims to accelerate building renovation and promote the uptake of renewable energy in buildings.[39] It importantly proposes to make "zero-emission buildings" the new standard for new buildings in the EU, strengthening the existing standard of "nearly zero-energy building".

The proposal fully recognises energy communities as an option to cover buildings' energy needs. The previous definition of "nearly zero-energy" did not refer to energy communities. In the proposed revision however, a "zero-emission building" is defined as a building with a very high energy performance where the rest of energy required is fully covered by renewable energy generated either on-site, from a REC or from a district heating and cooling system.[40] Member states would now also be required to include the policies they have implemented to promote citizen-led and REC-led renovation programs in their National Building Renovation Plans.[41]

The amendments brought to the EPBD revision proposal as part of the REPowerEU would help mainstream solar energy installations on buildings and foster a more decentralised solar energy production system. The new EPBD would make the installation of rooftop solar energy compulsory for all public and commercial buildings with useful floor area larger than 250m2 by 2028 (by 2027 for new ones) and on all new residential buildings by 2030 (although with some possible exemptions to be decided by Member states).[42] If properly

[38] Article 8(3) EED.
[39] European Commission, (2021a). Proposal for a Directive of the European Parliament and of the Council on the energy performance of buildings. COM (2021) 802 final.
[40] Ibid.
[41] Ibid.
[42] (a) by 31 December 2026, on all new public and commercial buildings with useful floor area larger than 250 square metres; (b) by 31 December 2027, on all existing public and commercial buildings with useful floor area larger than 250 square metres; and (c) by 31 December 2029, on all new residential buildings.

implemented, this would create a huge boost for individual self-consumption. Collective self-consumption schemes and energy communities could also benefit from these new obligations by creating partnerships, between self-consumers in the residential sectors, but also with municipalities, associations, and industrial actors with available roof spaces or with sufficient installed capacity to share the energy they produce with the local community.

4.2.2. New EU provisions on energy communities in the gas sector

In December 2021 as part of the Fit for 55 package, the European Commission proposed to revise its gas market rules[43] to ensure that they contribute to reaching the EU energy and climate objectives. The proposed regulation and directive aim at enabling the shift from fossil natural gas to renewable and low-carbon gases, in particular biomethane and hydrogen, and strengthening the resilience of the gas system.

Currently, CECs can only operate in the electricity sector, but the updated gas market directive would enable them to participate in the renewable gas market. There are however several concerns associated with the proposed change.

Allowing CECs to operate on the renewable gas market could create a risk of abuse or "citizen-washing".[44] Renewable energy communities are already allowed to operate on the renewable gas market since renewable gas is considered a renewable energy in EU legislation. However, CECs governance requirements are less strict than RECs. This means that big renewable gas market players could take advantage of the CEC framework to the detriment of citizens as well as more local or smaller players.

The new directive could favour non-renewable gas. According to the proposal, if Member states grant CECs the right to manage distribution networks, CECs would be allowed to transport non-renewable gas for non-CEC members or where such gas is necessary for secure system operation.

The EU also has ambitions to integrate the numerous small, decentralised biogas plants operating in rural areas in the overall renewable energy mix using both farmers' cooperatives and energy communities. This is part of the EU Biomethane Action Plan published in the framework of REPowerEU. However, this remains a working document of the European Commission without any legal power, but with possible insights on what the Commission is planning for the future.

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[43] European Commission (2021b). Proposal for a directive of the European Parliament and of the Council on common rules for the internal markets in renewable and natural gases and in hydrogen. COM(2021) 803 final. 15 December.

[44] REScoop (2021a). With gas energy communities, Commission risks opening up energy democratisation to corporate capture. 15 December.

4.2.3. Permitting, a game changer for energy communities

The Renewable Energy Directive (REDIII and RED IV): renewable go-to areas and binding permitting timeframes

In July 2021, the European Commission proposed another revision of the directive on the promotion of the use of energy from renewable sources to accelerate the deployment of renewables in the EU. The amending directive[45] raises the objective of the share of energy from renewable sources in the EU gross final energy consumption in 2030 from 32% to 40% and mainstreams renewable energy in industry, buildings (heating and cooling) and transport. A year later, the Commission proposed to further increase this target to 45% in the framework of the REPowerEU plan. The new changes would also limit the legal ground to object to renewable energy projects by considering that the production of renewable energy is of overriding public interest.

In 2021, the European Commission did not alter nor add significant provisions on energy communities, likely wanting to focus on the transposition at the national level (especially given that the introduction of these concepts is very recent).

However, the acceleration of permitting for renewable projects proposed as part of the REPowerEU plan[46] could benefit renewable energy communities, in particular solar installations. Concretely, Member states would be required to designate dedicated go-to areas with shortened and simplified permitting processes. The permitting-granting process should not exceed one year for projects in renewables go-to areas, and 6 months for the repowering of plants and for new installations with an electrical capacity of less than 150 kW,[47] compared to two years and one year and respectively for projects outside of go-to-areas.[48] For the installation of solar energy equipment on existing or future artificial structures (e.g. rooftops, parking areas, roads, railways), permit-granting procedures are shortened to three months as they do not typically raise concerns about the environmental impact and competing use of space.[49] In addition, Member states should make sure to set up one contact point for these processes, carry out procedures in electronic format and provide applicants with transparent information. This could truly facilitate the implementation phase for energy

[45] European Commission (2021c). Proposal for a directive of the European Parliament and of the Council, amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652. COM (2021) 557 final. 14 July.
[46] Amendment to the directive on the promotion of the use of energy from renewable sources (RED). Source: European Commission (2022a). Proposal for a directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Directive 2010/31/EU on the energy performance of buildings and Directive 2012/27/EU on energy efficiency. COM(2022) 222 final, May.
[47] Also for co-located energy storage facilities as well as their grid connection.
[48] European Commission (2022a). op. cit.
[49] Ibid. Art. 16c, Recital 21.

communities, especially those led by citizens who do not have the time and knowledge to manage lengthy and complicated administrative procedures.

Providing they are well implemented at national level, including by giving the competent authorities the proper financial and human resources,[50] these permitting provisions would create more legal certainty for energy communities and unload them from the high level of administrative burden they face.

Additional guidance on permitting procedures for Member states

As part of REPowerEU and in addition to the RED amendments mentioned above, the European Commission tabled a proposal for a recommendation as well as a guidance document to address the issue of slow or difficult permitting procedures, which can hamper the development of energy communities and the take up of renewable energies.[51]

The recommendation proposed by the European Commission promotes the participation of energy communities in renewable energy projects and encourages Member states to implement simplified permit-granting procedures RECs. This would concern their connection to the grid as well as production licensing procedures (including for renewable self-consumers). The recommendation also encourages Member states to implement measures to stimulate the involvement of low- and middle-income households in such projects.[52] While these provisions are welcome, they do not represent any legal obligation for Member states.

The guidance document accompanying the recommendation highlights some good practices for energy communities that could easily be used by municipalities, citizens or other actors wishing to set up or join an energy community. This is especially useful as the lack of previous examples and reference points often represents a barrier for energy communities today, with the feeling for project leader to be paving the way for future initiatives in their territories (see 6.). The guidance document for instance underlines good practices found for instance in Greece, where energy communities are prioritised when they apply for grid connection and production licensing, as well as in Portugal and Ireland where energy communities undergo simplified authorisation procedures. It also highlights the need to provide support for energy communities to develop single information points and recommends that Member states set out regulatory

[50] Improving national administrative capacity to handle shorter permitting timelines will be key for the successful acceleration of renewable projects without undermining environmental obligations. Source: European Environmental Bureau (2022). At full speed: Policy brief on the EU emergency regulation to accelerate renewable energy. *EEB Policy brief*, December.
[51] European Commission (2022b). Commission Recommendation on speeding up permit-granting procedures for renewable energy projects and facilitating Power Purchase Agreements. C(2022) 3219 final. 18 May.
[52] Ibid.

conditions to allow energy communities to sell excess energy through renewable purchase agreements.

4.2.4. The EU Solar Strategy: a momentum for energy communities at the local level

The EU Solar Strategy adopted in May 2022 by the European Commission as part of the REPowerEU, while not legally binding, demonstrates the commitment of the EU to promote smaller decentralised and citizen-owned solar energy production systems.

The new strategy sets a target for energy communities: Member states must set up at least one renewables-based energy community in every municipality with a population larger than 10,000 by 2025. To support this, they are called to fully implement the REDII and EMD. To contribute to the enabling framework for energy communities, the European Commission recommends that Member states establish a 3-step 'learn-plan-do' programme at national level that would "*help energy communities build technical expertise and secure access to financing*".[53] Member states are also reminded of the necessity to help energy poor and vulnerable consumers access solar energy e.g. through energy communities, in particular by supporting "*partnerships between local authorities, energy communities and social housing managers*"[54] – including through pre-financing shares in energy communities.

It also announces new EU funding for energy communities, without specifics. The set up of an Energy Communities Facility under the LIFE programme would provide funding to energy community projects in the EU according to the EU Solar Strategy.[55] This is only included in the Annex of the Strategy as of yet, with no details on the funding envelope, the timeframe, or any eligibility criteria to access such a fund.

[53] European Commission (2022c). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Solar Energy Strategy. COM(2022) 221 final, 18 May.
[54] Ibid.
[55] Ibid.

Conclusion of section 4.2.

The Fit for 55 and REPowerEU amendments proposed by the European Commission include several relevant changes for energy communities. General provisions such as the introduction of an EU-wide definition of energy poverty and the increase of energy efficiency and renewable 2030 targets will impact all stakeholders, including energy communities. The acceleration of permitting processes for renewable deployment could favour the uptake of new renewable energy community projects. Specific provisions on energy communities will further promote their integration in the energy system. In the building sector, energy communities will soon be formally acknowledged as contributors to energy efficiency and renewable deployment efforts, and be included as part of the relevant market actors to be involved in multilateral dialogues between public and social actors regarding renovation barriers like the split incentive. The possibility to introduce a mandatory installation of solar panels on all public and commercial buildings, as well as new residential buildings, could boost self-consumption and energy sharing within local communities. The Commission complemented the Fit for 55 package with additional communications that encourage Member states to support energy communities with simplified administrative processes, and highlight good practices. The EU Solar Strategy communication includes an indicative target to set up renewable energy communities in all municipalities of 10,000 inhabitants and above, and announces new earmarked funding under the LIFE programme, although details are still lacking. The impact of these upcoming changes on energy communities' deployment will still heavily rely on Member states implementation, with no specific binding targets or funding.

4.3. European enabling framework to support the development of energy communities

4.3.1. Revised European state aid rules: some progress for energy communities

The revised EU rules make it easier for energy communities to access state aid. To align state aid rules with its green agenda, the EU revised the guidelines on state aid for climate, environmental protection and energy (CEAAG) in February 2022. Under the revised rules, RECs with an installed capacity or maximum demand of 6 MW (18 MW for wind generation projects) can be exempt from mandatory competitive bidding processes for aid allocation. The new CEAAG also allow Member states to design special tenders, for instance for energy communities, "*when it is clear that offering a single process would create an unbalanced playing field*".[56] In

[56] European Commission (2022d). Communication from the Commission Guidelines on State aid for climate, environmental protection and energy 2022. *Official Journal of the European Union*, 18 February.

addition, Member states may "*include non-price-based criteria in tenders such as other policy-based objectives*",[57] such as local socio-economic benefit, citizen and community engagement, etc. Such criteria, however, must not account for more than 30% when weighting all the selection criteria. How this can be assessed in practice remains to be clarified.

The new rules also provide more flexibility to combine different types of aid. The new guidelines make it possible to accumulate investment aids, which is the support that a REC receives to develop the project, and operational aids, which a REC might receive when exporting energy to the grid and to make their project profitable and attract investors.[58] Combining investment and operational support is allowed provided that there is no overcompensation. This new rule constitutes great progress as energy communities need these different types of support at different development stages.[59]

4.3.2. Possibilities to leverage EU funding for energy communities, but no dedicated EU support yet

The Recovery and Resilience Facility (RRF) can be used to finance energy community projects. The facility must include at least 37% of expenditures dedicated to climate investment and reform. Reforms planned by several Member states in their National Recovery and Resilience Plans (NRRPs) include measures to foster the development of energy communities. For example, the Lithuanian plan supports energy communities in the acquisition and installation of onshore solar and wind power plants.[60] In addition, Member states applying for additional funding under the RRF through an amended NRRP must include energy measures aligned with REPowerEU. 20 additional billion euros grants are made available to this end (from the ETS and the Innovation fund).[61]

Many other types of EU funds could in theory be used to support energy communities (structural funds, the Just Transition Fund, the EU renewable energy financing mechanism, municipal framework loans from the EIB, etc).[62] Yet, it must be noted that funding to support energy communities in reaching vulnerable households and tackling energy poverty is not included in the Commission's proposal for a Social Climate Fund.[63]

However, because of the many competing priorities at EU level in the climate field and the lack of specific earmarking of EU funds towards energy communities,

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[57] REScoop (2022a). How can the State aid guidelines help energy communities address the energy crisis?. 23 December.
[58] For example, feed-in tariffs.
[59] REScoop (2022a). op. cit.
[60] European Commission, (2021d). Recovery and resilience scoreboard. Thematic analysis: Clean power. December.
[61] European Parliament (2023), REPowerEU: Energy measures to be added to national recovery plans. Press release. 14 February.
[62] Covenant of Mayors Europe, Financing Opportunities. *European Commission.*
[63] Schockaert H., et. al. (2022), op.cit.

whether energy communities will in the end have access to these funds remains unsure. The EU should therefore assess the accessibility of these funds to support energy communities.

As mentioned above, the establishment of an EU Energy Community Facility under REPowerEU will likely contribute to facilitating direct access to funding for energy communities – alongside technical assistance under the Energy Community Repository and the Rural Energy Community Advisory Hub. However, the scope, conditions and accessibility of this facility will need to be specified.

4.3.3. The EU provides technical support to energy communities

Energy Communities Repository and Rural Energy Communities Advisory Hub

In 2022, the EU launched the **Energy Communities Repository** to foster the development of energy community projects in European urban areas.[64] Along with it, the European Commission launched the **Rural Energy Communities Advisory Hub**,[65] dedicated to rural communities. In addition to providing data collection and analysis services (incl. a mapping of energy communities) and sharing best practices (e.g., guidance materials), the two initiatives are to provide direct and tailored technical assistance to energy communities in the EU. The Energy Communities Repository aims to provide support to at least 150 communities overall (through direct technical assistance to at least 25 energy communities and national capacity building targeted to at least 80 communities in selected countries). For the Rural Energy Communities Advisory Hub, technical assistance will be granted based on applications. No target or objective is set as of yet. Neither initiative provides direct funding.

Council Recommendation on ensuring a fair transition towards climate neutrality

Adopted on 7 June 2022, the recommendation on ensuring a fair transition towards climate neutrality, while not legally binding, encourages Member states to empower consumers by developing energy self-consumption arrangements as well as energy communities. The recommendation underlines the importance to focus on vulnerable households as well as those living in rural and remote areas.[66]

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[64] European Commission, Energy Community Repository.
[65] European Commission, Rural Energy Community Advisory Hub.
[66] Council of the European Union (2022). Council Recommendation on ensuring a fair transition towards climate neutrality. 7 June.

Technical Support Instrument

The Technical Support Instrument (formerly Structural Reform Support Programme), part of the Multiannual Financial Framework and of the recovery Plan for Europe, provides technical support to reforms in EU Member States, following requests by national authorities. This can be mobilised to support the development of energy communities. For instance, in 2021 Denmark received support in the framework of a 'Citizens driven energy transition' reform project.[67] The project focuses on building the capacity of 19 municipalities to translate climate targets into realistic local investments for projects supported by the local community, citizens and other relevant stakeholders. In this framework, municipalities will obtain training and support for an effective community engagement process in energy development.[68]

Citizen-led renovation support service

On 24 April 2023, the European Commission launched the 'Citizen-Led Renovation' initiative, which aims to provide tailored support to energy communities in order to help them deliver citizen-led energy renovations and renewable energy installations to their members.[69] The selected pilot projects will benefit from assistance between June 2023 and November 2024 to prepare investment plans and technical designs, implement administrative procedures and support citizen engagement and mutual learning. They will be expected to deliver additional works for at least 0.5 million euro in building renovations, and 0.5 million euro in renewable energy projects on or in the vicinity of the renovation project(s), with an objective of 30% improvement in the energy performance of the building.[70] While this remains a small-scale initiative (only 3 pilots are to be selected), the Citizen-led renovation initiative shows that the EU recognises and supports the role of energy communities in building renovation.

[67] European Commission (2021e). List of approved technical support requests under the Technical Support Instrument. March.
[68] European Commission (2021f). Citizens driven energy transition - Denmark. *Technical Support Instrument.*
[69] European Commission (2023a). Launch of the Citizen-Led Renovation project and open call for participation. 24 April.
[70] European Commission (2023b). Citizen-led renovation. Explanatory document on the support service. April.

Conclusion of section 4.3.

Energy communities benefit from EU state aid exemptions. The Recovery and Resilience Facility can also be used to support energy communities, and several Member states decided to do so. The main EU financial tools are open to energy communities, but, without proper earmarking, citizen energy competes with many other energy and climate priorities, and social inclusion cannot be guaranteed. The recently set up Energy Communities Repository and Rural Energy Communities Advisory Hub offer direct technical assistance to energy communities and share best practices, while the Technical Support Instrument can support national governments in their efforts to support energy communities deployment. Many of these initiatives have been established in the past 3 to 4 years, which shows that energy communities still are in their infancy, but nonetheless benefit from a positive political dynamic at the EU level.

5. Overview of the national regulatory frameworks on energy communities

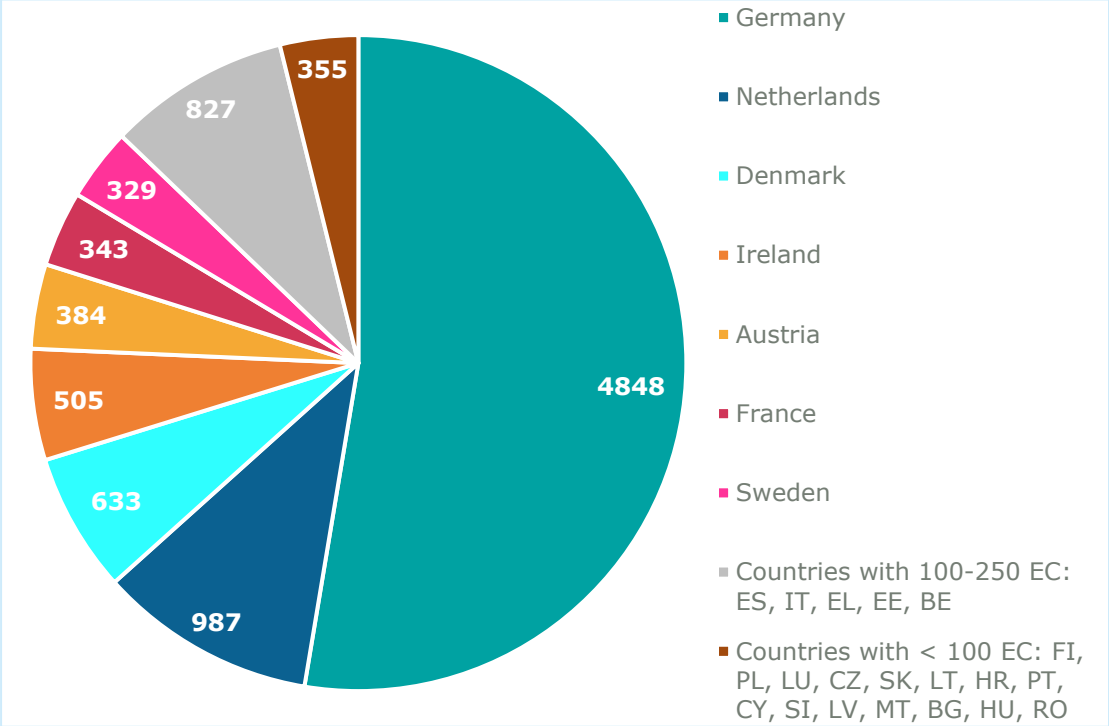
As shown in Chapter 4, the legal framework at the EU-level for energy communities is heavily reliant on national implementation. The chapter provides an overview of energy communities in EU Member states and how they are regulated (5.1), before delving into the political and regulatory contexts of the four countries of the Sun4All project, namely Spain, Italy, Portugal, and France (5.2).

5.1. General state of play of energy communities in EU Member states

Energy communities are overrepresented in some regions in Northern and Western Europe whereas they remain scarce or virtually non-existent in the rest of the EU. According to the EU energy communities map,[71] there are around 9200 energy communities in the European Union (EU27). More than half of energy communities are located in Germany. The Netherlands and Denmark follow as the countries with the most energy communities (see Figure 1). When taking the size of the population into account, Denmark, Luxembourg, Ireland, and Estonia take the lead (see Figure 2).

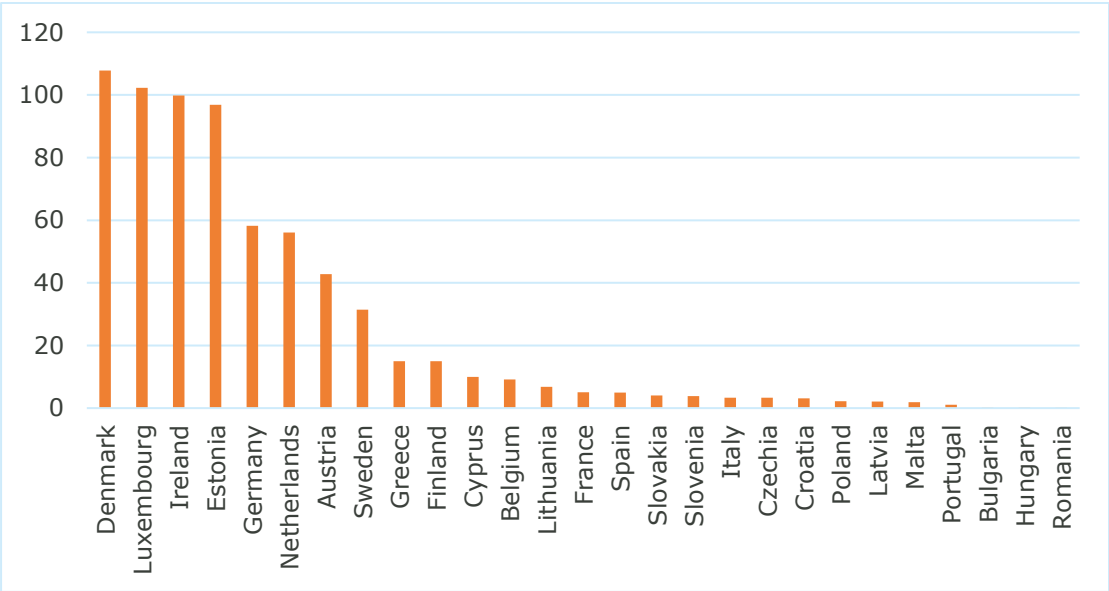
[71]Energy Communities Repository, Energy communities map, based on: Wierling, A. et al. (2023). A Europe-wide inventory of citizen-led energy action with data from 29 countries and over 10000 initiatives. *Scientific Data*, 10(9). 4 January.

Figure 1: Number of energy communities per Member state or groups of Member states



Source: Own elaboration, based on EU energy community map (data extracted 24 February 2023)

Figure 2: Number of energy communities per Member state, per 1 million inhabitants



Sources: Own elaboration, based on EU energy community map (data extracted 24 February 2023) and Eurostat (TPS00001, data updated on 1 December 2022)

Various traditions on citizen-led energy initiatives across EU Member States, rooted in different histories and economic environments, help explain this uneven geographical distribution. For instance, both Denmark

and Germany have managed to maintain a long history of energy communities, in particular through favourable financial and regulatory advantages for the participation of smaller actors (like cooperatives) in the energy sector. In southern EU countries, the centralisation of the electricity production has affected energy community initiatives more significantly. They have only recently started to catch up, as the liberalisation of the sector, the political momentum to deploy renewable energy, in particular solar energy, and the new EU provisions have created new regulatory avenues for citizen-led projects.[72] Finally, there are almost no energy communities in Eastern Europe. In post-communist countries, like Bulgaria, cooperatives and citizen-led initiatives can still today evoke memories of forced collectivization.[73] There is thus a strong stigma against creating energy communities in these countries, even beyond the country's unfavourable legislation and socioeconomic situation (such as households' low disposable income levels in Bulgaria, which leave less space for community investment).

Some Member States already had relevant legislation on self-consumption and/or energy communities before the introduction of EU requirements. Denmark offered tax-free grants for individuals and cooperatives in 1979. The country also recognised a long-term perspective for communal wind energy projects in 1981 and even introduced a mandatory 20% ownership share for people living close to new wind energy installations in 2009.[74] Estonia has also been testing the concept of energy associations since 2013, which strongly overlaps with the concept of RECs.[75] In 2018, Greece introduced a law on energy communities with a strong emphasis on their social role – although the government has now backtracked on several of the favourable provisions that were in place for energy communities.[76]. **Still, for most Member states, EU provisions on CECs and RECs constituted a starting point to regulate and boost the development of self-consumption and energy communities in their own legislation.**

The levels of transposition of EU legislation on energy communities differ greatly across Member states. Relying on the assessment of the REScoop transition tracker,[77] we see that **no country has yet aligned comprehensively with EU legislation regarding the definitions of CECs and RECs and even less with the enabling framework.** Ireland and Italy stand out with high transposition, but on the other end of the spectrum, Bulgaria, Czechia, Poland and Sweden have not made any progress so far on the transposition. Annex 1 provides

[72] Azevedo, I., (2021) Renewable Energy Communities: Will they have room to grow in Portugal?. *INEGI*, 6 October.
[73] In the 1960s, the communist party took control of the governance of cooperatives, which lost their independence and autonomous governance structure. Source: Couture, T.D. and Stoyanova, T. (2022). Establishing energy communities in post-communist states: the case of Bulgaria. In: Löbbe S., et al. (Eds), op.cit. (pp419-433).
[74] Benedettini, S. and Stagnaro, C. (2022), Energy communities in Europe: a review of the Danish and German experiences. In Löbbe S., et al. (Eds), op. cit. (pp363-384).
[75] Energy Communities Hub. Estonian Regulatory Framework.
[76] Schockaert, H. (2021). Greek energy communities at risk: urgent action needed, REScoop, 4 February.
[77] REScoop, Transposition tracker. Retrieved in February 2023.

an overview of the score of each Member state as of February 2023 according to this tracker.

Overall, national laws transposing EU rules provide few details and clarifications beyond the EU provisions, which can create uncertainty for existing and future energy communities and could thus hinder their development.

Still, some best practices on energy communities' legislation can be identified in some Member states. Among them, a separate tender scheme set up by the Irish government exclusively supports community-led projects to facilitate access to funding for these initiatives. This is very useful as regular tenders often require professional and administrative input, often excluding citizen-led and smaller-scale projects.[78] Germany exempted energy communities from the tendering process[79] and integrated new citizen participation requirements[80] – e.g. at least 51% of the voting rights must be held by natural persons residing in the projects' town or region – to prevent corporate capture and abuse. Yet, despite this, German legislation "*does not put any restriction on the origin of the investment capital, allowing larger companies to redefine themselves as citizen energy projects*".[81] Greek legislation makes it possible for energy communities to provide electricity for free to energy-poor consumers, including non-members, thanks to virtual net metering. However, this remains largely underexploited in the country as most energy communities in Greece are for-profit communities (around 800 MW of installed capacity), while public benefit energy communities only account for 3.2 MW as of November 2022.[82] In addition, half of virtual net-metering requests are getting rejected by the national DSO due to poor grid availability.[83]

[78] European Environment Agency (2022). Energy prosumers in Europe. Citizen participation in the energy transition. EEA Report No 01/2022.
[79] Up to a certain installed capacity threshold depending on the type of renewable energy.
[80] An energy community in the EEG 2021 must have at least 10 natural persons as members. At least 51 % of the voting rights must be held by natural persons who have registered their place of residence in the town or region of the planned project at least one-year prior submission. No member must hold more than 10 % of the shares. Source: European Commission, Energy communities, energy cooperatives, energy clusters.
[81] European Environment Agency (2022), op cit.
[82] Todorovic, I. (2023). Energy communities in Greece boost installed capacity by 71.4% year over year. *Balkan Green Energy News.*
[83] Ibid.

Conclusion of section 5.1.

Energy communities are unevenly distributed in the EU, due to uneven traditions, barriers and support for citizen energy. Some Northern and Western European countries display relatively high representation of energy communities, while virtually non-existent in post-communist Member states, where a strong stigma is associated with collective ownership of infrastructure.

Yet, no country has fully aligned with EU legislation requirements on CECs and RECs. Incomplete transposition and lack of clarification of EU rules when transposed at the national level might hinder energy communities' full potential. Best practices have been implemented, such as dedicated tender schemes in Ireland. Overall, Member states remain in the 'exploration phase' of energy communities' regulation, with a strong need for assessment, monitoring and likely fine-tuning of the policies in place.

5.2. Focus on the national legislation in the 4 pilot countries

5.2.1. Spain: good political dynamic with many planned support measures that still needs to deliver on the ground

Regulatory framework

Spain recently improved its regulatory framework for collective self-consumption (CSC). The notorious *impuesto al sol*,[84] or sun tax, introduced in 2015 by Rajoy's conservative government was abolished in 2018. Under this law, solar PV producers had to pay both a tax on the energy they self-consumed and the transmission and distribution fees they would have paid for a similar amount of electricity purchased from the grid.[85] In addition, small PV owners were prohibited from selling excess electricity and had to release it to the grid for free.

In 2019, a complementary decree[86] allowed for collective self-consumption and the sharing of energy among consumers that do not necessarily need to live in the same building. Surplus energy may be shared with nearby customers or fed into the grid – in the latter case, generators receive a monthly compensation thanks to simplified rules. In addition, no grid fees are charged for electricity exchanges within the scheme. Collective self-consumption using the public grid was however limited to a maximum distance of 500 metres between the generation and consumption sites and to the low voltage distribution

[84] Royal Decree-Law 15/2018, on Urgent Measures for the Energy Transition and the Protection of Consumers Spain.
[85] Frontis Energy (2020). Royal Decree 900 2015. March 30.
[86] Royal Decree no 244/2019

network. This 500-metre radius has since then been expanded to 2 km. In November 2021, Spain also put forward a legislative proposal that would make it possible to adjust power-sharing to users' demand during the day or the year, which could "*improve the process of matching generation with demand and, therefore, increase the self-consumption rates*".[87]

Collective self-consumption in Spain can be seen as a hybrid model between the European definition of collective self-consumption and energy communities.[88] The main differences with the latter are the extent of activities possible (limited to generation, consumption, sharing, storage and sale of surplus), the organisational structure and associated governance requirements, as collective self-consumers in Spain do not need to form a legal entity, and finally the main purpose, which, contrary to the EU definition of CECs/RECs, can be solely financial gain.

One factor that can support their creation in Spain is the existing framework on cooperatives. Spanish law states that "*a cooperative is a society set up by people who associate to conduct business activities directed at meeting their economic and social needs and aspirations, on the basis of freedom to join and to leave voluntarily, and with a democratic structure and operating democratically*".[89] This is very suitable for energy communities for different reasons, including the possibility for municipal governments[90] to participate and for these cooperatives to operate distributed energy resources and manage citizen/end-user consumption.[91]

Following the adoption of the two EU directives establishing CECs and RECs, Spain introduced the concept of renewable energy communities in its legislation.[92] The piece of legislation stuck to the EU definition (governance, purpose, activities, etc.), but provided no additional detail on concepts like 'autonomy' and 'effective control' (see the discussion in part 4.1.3).

Enabling framework

The Spanish legislation offers some favourable incentives to energy communities but lags behind in terms of overall enabling framework. Spanish law does establish that the particularities of RECs must be taken into account in competitive procedures to ensure "*they can compete for access to the remuneration framework on an equal basis with other participants*".[93] In addition, energy sharing is available to RECs through the self-consumption rules described

[87] Burgos, A. M. et al. (2021), Local Energy Communities in Spain: Economic Implications of the New Tariff and Variable Coefficients, Sustainability, 13(10555), September.
[88] Frieden, D. et al. (2020), op. cit.
[89] Spanish law 27/1999. Source: Fajardo-García, G. (2018). *Spain. Principles of European Cooperative Law.* Cambridge University Press, 22 September.
[90] Robinson, D. and del Guayo, I. (2022), Alignment of energy community incentives with electricity system benefits in Spain. In Löbbe S., et al. (Eds), op. cit. (pp73-93).
[91] Frieden, D. et al. (2020), op cit.
[92] Through Royal Decree-Law 23/2020.
[93] REScoop, Transposition Tracker - Spain. Retrieved in March 2023.

above, which include very favourable incentives like no taxes or grid fees that have helped the development of energy communities in Spain. Spain also took some steps to align with other EU obligations such as launching a public consultation on the matter in 2020[94] to identify some of the barriers and drivers of RECs in Spain, and by establishing a guide for the development of energy communities.[95] Beyond these, the enabling framework for RECs in the Spanish legislation is however largely missing.

The Spanish government took full advantage of its National Recovery and Resilience Plan[96] and the National Energy and Climate Plan[97] to announce enabling measures for energy communities. Both plans include dedicated measures on energy communities, such as the development of guidelines and documentation, the provision of capacity-building and training, in particular to help fund REC projects (up to 60% of the costs). In its NECP, Spain also envisaged reserving an annual quota for participatory citizen projects in energy tenders or to design tender to favour projects that take into account social elements.

Spain granted important financing for energy communities, but other support measures are still pending. Over the course of one year – between February 2022 and February 2023 – the Spanish government launched four calls to fund REC pilot programmes as part of its NRRP.[98] Two calls were directed at smaller projects (with investments under €1 million) and two at medium and large projects (with investments exceeding €1 million). Importantly, the criteria included the social, gender and local impact of the project.[99] The other measures included in the NRRP and NECP are yet to be implemented or would require more in-depth evaluation, such as the provision of training courses, capacity building and technical assistance to public entities, individuals and associations.

5.2.2. Portugal: remaining policy shortcomings partly addressed through NECPs and NRRPs

Regulatory framework

In 2019 and 2022 Portugal introduced a legal framework for individual and collective self-consumption and renewable energy communities, which transposes EU provisions on RECS and CECs.[100] Before this, Portugal had only legislated on individual self-consumption from renewable sources.[101] This new regime is enshrined in the idea of combining centralised and decentralised

[94] Spain's recovery and resilience plan. Component 7.
[95] Standal, A., Aakre, S. (2021). Assessment report on technical, legal, institutional and policy conditions. *COME RES*, Deliverable 2.1, European Commission Grant Agreement No. 953040.
[96] Spain's recovery and resilience plan.
[97] Spain (2020). Integrated national energy and climate plan 2021-2030. 20 January.
[98] IDAE (2022). Incentive Program for Energy communities pilot projects (CE IMPLEMENTA), December.
[99] Ibid.
[100] Decree-Law No 162/2019 repealed by Decree-Law No 15/2022.
[101] International Energy Agency (2020). Law on Self-consumption Decree-Law No. 153/2014. IEA/IRENA Renewables Policies Database.

instruments, to promote clean energy and reinforcing social and territorial cohesion. Portugal has indeed adopted the objective to increase the installed capacity of decentralised solar energy to 2.3 GW in 2030 and 13 GW in 2050, with households and other small producers accounting for more than 20% of total electricity production.[102]

The Portuguese legislation mostly aligns with the EU definitions but offers stricter provisions on effective control and eligibility. The proximity requirement applies to all members of a REC, not just those in effective control. The 2022 decree clarified this concept of proximity, foreseeing a maximum distance of 2 km between the generation and distribution sites for installation connected to low-voltage, 4 km for medium voltage, 10 km for high voltage and 20 km for very high voltage. The decree also "*opens the door to a case-by-case assessment of proximity, which must be determined by the DGEG (Direção-Geral de Energia e Geologia) in the light of energy optimization and the provision of basic public services*".[103] This flexible definition of proximity will likely suit the different needs of energy communities, but there still needs to be enough support and transparency during the registration process.[104]

There is a need to better differentiate or clarify the differences between collective renewable self-consumption. Under the Portuguese legislation, collective renewable self-consumption schemes must appoint a managing entity responsible for the sharing of energy, commercial relationships in case of surplus, connection to the grid, contract with the DSO, etc.[105] These schemes are also required to approve internal regulations on memberships and have other governance obligations like the need for a majority to pass resolutions.[106] It is thus quite similar to energy communities and further explanations would be useful to ensure citizens and actors chose the model that is the most suitable to them and to improve policy coherence more broadly.

Provisions to mitigate the threat of corporate capture are uneven. On the one hand, the Portuguese legislation allows REC projects to be owned not just by the community, but also by third parties as long as it benefits the energy community. This increases considerably the threat of co-optation by vested interests.[107] Besides, large companies cannot participate in CECs in Portugal (that is not the case in the EU definition), but SMEs are allowed to effectively control CECs (only small enterprises in EU law).

Enabling framework

The enabling framework for energy communities in Portugal is only available to RECs and remains incomplete. Pursuant to EU rules, it includes

[102] Decree-Law No. 85/2019: Portugal's Roadmap to Carbon Neutrality.
[103] The Legal 500 (2022). Portugal: Decree-Law No. 15/2022 of 14 January on Self-Consumption.
[104] Frieden, D. et al. (2020), op cit.
[105] Ibid.
[106] The Legal 500 (2022). op. cit.
[107] REScoop, *Transposition tracker - Portugal*. Retrieved in March 2023.

supplier obligations for shared electricity and the right to access all energy markets including through aggregation.[108] In theory, registration procedures are also well in place for all collective renewable self-consumption initiatives, with different requirement levels depending on the installed capacity.[109] A regular assessment of the barriers faced by RECs is also planned in the legislation, but so far, no such evaluation has been conducted.[110] National measures to support the social roles of energy communities and to access support schemes are missing in Portugal.[111] This might come from the fact that in the country, "*regulations for energy communities have been framed primarily around PV and energy sharing only, significantly limiting the ability of energy communities to exercise their rights more broadly across the energy sector*".[112]

Rules on tariffs for self-consumption and energy communities are likely to continue to evolve. Tariffs for using the public grid depend on the tension level used.[113] In addition, Portugal gave projects registered until 2021 a seven-year exemption on payment of 50% of some of the network charges,[114] for individual self-consumption and 100% for collective self-consumption including RECs.[115] Partial or total deduction of these grid access tariffs is decided annually by a government order, or by the regulatory authority in the absence of such order. Future decisions on tariffs for renewable self-consumption and energy community initiatives will align with the results of a cost-benefit analysis regarding decentralised energy projects.

The Portuguese government addressed some of these policy shortcomings in the framework of its National Recovery and Resilience Plan and even more in its National Energy and Climate Plans. The Portuguese NRRP sets the target of 93 MW of capacity for self-consumption and/or renewable energy communities to be installed in the residential, services and public administration sector by 2025.[116] In its NECP from December 2019, Portugal foresees several dedicated measures for energy communities, such as providing technical assistance including guidance to obtain funding for municipalities, reinforcing the current registration system, and creating an electronic information portal on self-generation and energy communities to inform customers and facilitate the installation process. For the European Commission, the Portuguese NECP presents "*substantial progress on measures for simplifying administrative procedures and*

[108] Ibid.
[109] Chambers and partners. (2022). Portugal: Decree-Law No. 15/2022 of 14 January on Self-Consumption.
[110] REScoop, *Transposition tracker - Portugal*. Retrieved in March 2023.
[111] Schockaert H., et. al. (2022), op.cit.
[112] REScoop, *Transposition tracker - Portugal*. Retrieved in March 2023.
[113] Regulation No. 266/2020 further specified the conditions for self-consumption of renewable electricity. Source: Frieden, D. et al. (2020), op cit. Directive No 1/2021 established specific tariff levels. Source: Energy Communities Hub. Portuguese Regulatory Framework.
[114] Energy Communities Hub. Portugal Regulatory Framework.
[115] International Energy Agency. (2021a). Portugal 2021. Energy Policy Review. *IEA Publications.*
[116] Portugal (2021). National Recovery and Resilience Plan. 21 April. p. 331.

on promotion of self-consumption and renewable communities".[117] However, implementation of most of these measures seems to be pending.

Lastly, the Portuguese government recently launched a call financed through the NRRP to support collective renewable self-consumption and REC initiatives. This programme dedicates €30 million to help finance the investment associated with the installation of renewable electricity generation systems in services, residential buildings and public buildings, up to €500,000 per community initiatives and €200,000 per generation unit.[118] The criteria to receive funding include the number of participants, the ratio between investment and energy savings, the share of the total electricity consumption ensured by self-generation and the sharing arrangements. The call was however very short and only adapted to already up and running energy community projects. This also remains ad hoc support rather than a regular call on which energy communities could rely on.

5.2.3. Italy: a rather comprehensive and inclusive framework but administrative barriers still need to be lifted

Regulatory framework

The concept of energy communities appeared rather early in the Italian legislation compared to some EU countries. Italy had previously mostly legislated only on individual self-consumption but in 2017 it mentioned energy communities in its Energy Strategy – albeit without any kind of dedicated or legally binding measures. Worth noting is also the pioneering legislative initiative dedicated to energy communities that was implemented by the Piedmont region in 2018.[119] At the national level, the *Milleproroghe* decree in 2019 (made into law in 2020)[120] introduced the concepts of collective self-consumption of renewable energy and renewable energy communities. A pilot programme for energy communities was launched in parallel following a consultation paper by the Italian Energy Authority and a call by RSE, a public company conducting research on the energy system.[121]

Two new decrees in 2021 guaranteed a high level of transposition of the definition of RECs and CECs in the Italian legislative framework.[122] For RECs, compared to the previous legislation, the cap on capacity limiting each REC's plant from 200 kW was increased to 1 MW. This is a positive development, but it

[117] European Commission (2020). Assessment of the final national energy and climate plan of Portugal. *Commission Staff Working Document*. SWD(2020)921 final, 14 October.
[118] Portuguese Ministry of Environment and Climate Action. *Support for the implementation of renewable energy communities and collective self-consumption*. Environmental Fund. Retrieved in March 2023.
[119] Candelise, C. and Ruggieri, G. (2020). Status and Evolution of the Community Energy Sector in Italy. Energies, 13(8).
[120] Krug, M. (2022). Comparative assessment of enabling frameworks for RECs and support scheme designs. *COME RES*, European Commission Grant Agreement No. 953040.
[121] Candelise, C. and Ruggieri, G. (2020). op. cit.
[122] Legislative decree 199/2021 for RECs and legislative decree 210/2021 for CECs.

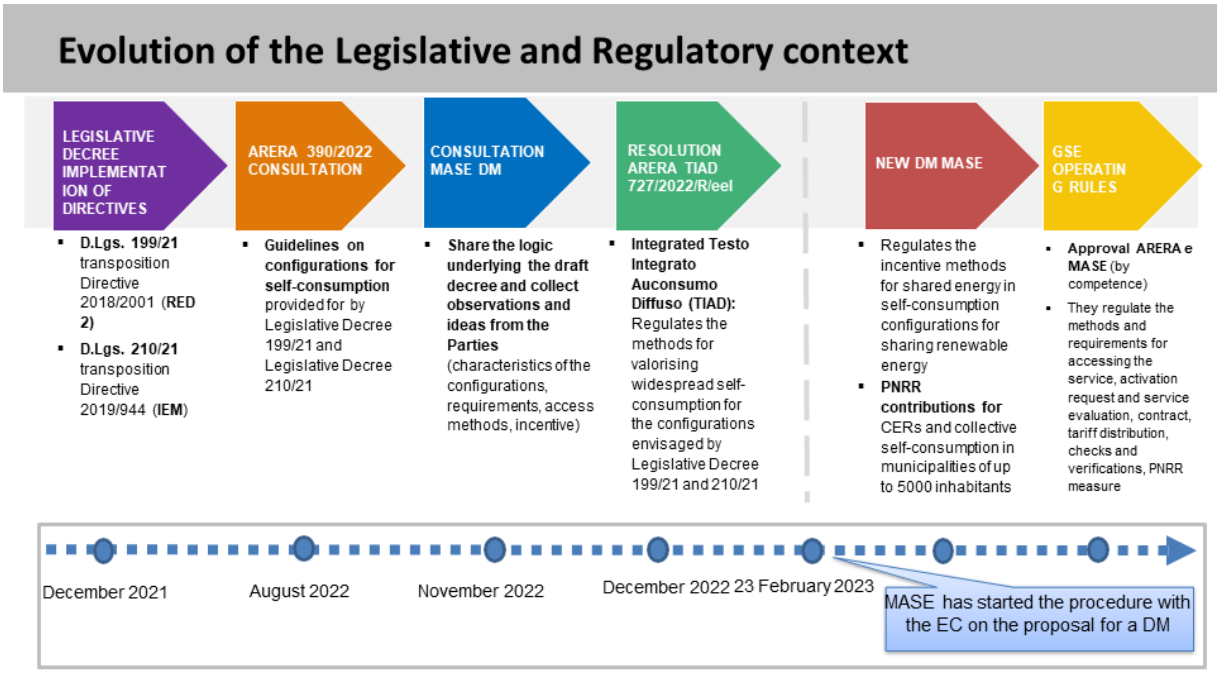
can still prevent the engagement of a larger number of citizens and small and medium enterprises.[123] The Italian legislation also extended the list of actors eligible for effective control, adding research and training entities, religious entities, third sector and environmental protection associations as well as some local administrations. It also explicitly mentions the need to ensure that participation is open to low-income or vulnerable households.[124] In addition, proximity is now fulfilled when members belong to the same medium or high voltage station. Identifying eligible users was however very difficult. Energy communities had to file a formal request to the DSO to check each connection point. A major risk for them was to involve people in the project when they might end up not being eligible to participate after all. However, the Italian Regulatory Authority for Energy, Networks and Environment (ARERA) has recently simplified the process for DSOs, and DSOs released maps available to the public with the relevant information early 2023.[125]

In the Italian legislation, the support schemes and economic incentives available – which can often be combined – are favourable to the development of RECs. Several decrees and regulations from ARERA in 2020 defined the regulatory model and tariff components for RECs.[126] Today, this means that for each kWh of electricity shared within the REC, an incentive premium rate of €110/MWh and a unit fee are recognised for a period of 20 years. In addition, refunds of certain grid components are available to RECs.[127] RECs can also be financially supported thanks to a support scheme for renewable heating,[128] through public loans without interest rates or through a dedicated funding programme under the Italian Recovery Plan (see after).[129]

The following figure highlights the legislative evolution relating to REC in Italy to date.

[123] Krug, M. (2022). op. cit.
[124] REScoop, *Transposition tracker - Italy*. Retrieved in March 2023.
[125] Candelise, C. and Ruggieri, G. (2020). op. cit.
[126] ARERA Resolution 318/2020 and Ministerial Decree of 16 September 2020. Source: Tatti, A. et al. (2023). The Emerging Trends of Renewable Energy Communities' Development in Italy. *Sustainability*, 15(6792).
[127] Tatti, A. et al. (2023). op. cit.
[128] Provided that their production is not supported elsewhere according to Article 10 of the D.Lgs. 199/2021. Source: REScoop. *Transposition tracker - Italy*. Retrieved in March 2023.
[129] REScoop, *Transposition tracker - Italy*. Retrieved in March 2023.

Figure 3: Evolution of the legislative and regulatory context for energy communities in Italy



Source: Daniela Simari (2023. Gestore Servizi Energetici.

Enabling framework

Italy has advanced on its enabling framework for energy communities even beyond financing. Authorisation procedures for the installation of PV plants have been simplified.[130] New provisions have been adopted to improve the cooperation between DSOs and energy communities and facilitate energy sharing.[131] Finally, a dedicated body – the Energy System Manager (GSE) – is in charge of providing information and guidance to citizens in their projects to engage in renewable energy projects like RECs.

However, some barriers have not yet been addressed, in particular regarding registration. Indeed, the administrative procedure to register a REC on the dedicated web portal is very complex, requiring a lot of data which might be difficult to collect for RECs members.[132] In addition, "*there are no fixed maximum days to receive formal approval from the Energy System Manager to sign the contract*" which creates a lot of uncertainty and delays for RECs.[133] Italy also has yet to conduct a formal assessment of the obstacles and possible drivers for the development of energy communities as required by the EMD and REDII.

Italy has set the bar high for energy communities in its National Recovery and Resilience Plan. It foresees allocating €2.2 billion in the coming years to

[130] Krug, M. (2022). op. cit.
[131] Decrees n°199/2021 and 210/2021.
[132] REScoop, *Transposition tracker - Italy*. Retrieved in March 2023.
[133] Ibid

secure the resources needed to establish RECs in towns with fewer than 5,000 inhabitants. It also sets a target of installing about 2,000 MW of new capacity through both RECs and collective self-consumption schemes.[134] For the Italian government, this will not only help to scale up the development of renewable energies, but this will also support the economy of small municipalities, which face a serious threat of depopulation in Italy, and strengthen social cohesion. However, the smaller municipalities targeted by the NRRP funds are also the one suffering the most from a lack of technical expertise and human resources to set up RECs.[135] In addition, the high level of territorial fragmentation in Italy might lead to an inconsistent implementation across the country.[136]

In its National Energy and Climate Plan, Italy commits itself to extensive monitoring of existing energy community initiatives and to explore ways that energy communities can support energy-poor households, in particular through indirect intervention.[137] Results from the different studies, including from the European Commission's Structural Reform Support Service,[138] are expected to help improve facilitation and support measures for energy communities.

5.2.4. France: a profusion of measures to be monitored

Regulatory framework

As early as 2015, The French Energy Transition Act prompted the development of energy communities in the country. The law simplified the legal conditions to create citizen- or municipality-led renewable energy production projects and launched an incentive scheme to promote such initiatives.[139] It also mandated all new buildings built in commercial zones to either be partially covered with either solar PV or vegetation.[140] But despite these important legal provisions, many administrative barriers are ultimately slowing down progress on the ground.[141]

Further pieces of legislation flourished from this point on. In 2017, French legislated on individual and collective self-consumption, reducing the connection costs for smaller renewable energy generation plants for instance. Interestingly, in France, collective self-consumption needs to be organised through a legal entity, in charge of establishing a contract with the DSO especially regarding the sharing arrangements between consumers. The DSO is also supposed to

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[134] Component M2C2.1. Italian National Recovery and Resilience Plan.
[135] Tatti, A. et al. (2023). op. cit.
[136] Ibid.
[137] Italian Ministry of Economic Development, Ministry of the Environment and Protection of Natural Resources and the Sea and Ministry of Infrastructure and Transport. (2019). Integrated National Energy and Climate Plan.
[138] Ibid. p.79.
[139] Schockaert H., et. al. (2022), op.cit.
[140] International Energy Agency. (2021b). France 2021. Energy Policy Review. *IEA Publications.*
[141] Ibid.

facilitate collective self-consumption schemes by equipping them with net metering.

In 2019, the Energy and Climate Law constituted a first step in transposing REDII with the introduction of RECs. The law also extended the distance between the injection and consumption points to 2 km for installations below 3 MW with an exceptional increase to 20 km for projects in areas of low population density.[142] However, it only provided a copy-paste of the EU definition and "*the process was criticised for being too hasty and lacking sufficient consultation of stakeholders*".[143]

In 2021, new pieces of legislation completed the French legislation on energy communities, notably introducing the concept of CECs and setting tariffs.[144] When it comes to incentives, France offers 20-year feed-in-tariffs for solar PV on rooftops for installations up to 500 kWp (since 2023).[145] In addition, small-scale PV installations can also benefit from a 5-year investment premium (degressive depending on the installation's power and automatically paid to producers) as well as tax exemption for the smallest installations (<3 kWp).[146]

Overall, France managed a high level of transposition of the EU provisions on energy communities. The definitions largely match the EU ones and France also provided additional details on several concepts. Effective control is defined in detail and encompasses i) minimum ownership thresholds for different types of stakeholders, ii) a maximum holding of 40% of shares or voting rights for individual members; iii) minimum voting rights for members eligible for effective control, and iv) limitations on holdings of companies that participate in more than one energy community.[147] The French legislation also sets a ceiling of ownership of an energy community's voting rights (either directly or indirectly) to a maximum of 40% for each partner or shareholder. Moreover, for RECs, the autonomy requirement is fulfilled when "*at least two different categories of eligible members exercise 'effective control' over the REC […] or where it is effectively controlled directly by at least 20 citizens*."[148]

Enabling framework

France has also taken important steps to establish an enabling framework for CECs and RECs, especially through the adoption of an action plan to

[142] Frieden, D. et al. (2020), op cit.
[143] Schockaert H., et. al. (2022), op.cit.
[144] Publication in March 2021 of an Ordinance dedicated to energy communities and self-consumption, and in October 2021 of a draft Application Decree to clarify the scope of action of energy communities and the conditions for their development.
[145] French Ministry of Ecological Transition. (2023). Order of 8 February 2023 amending the order of 6 October 2021 setting the conditions for the purchase of electricity produced by installations on buildings using solar photovoltaic energy. *Official journal of the French Republic*.
[146] Small self-consumers (< 3 kW) are also exempted from balancing responsibility for the surplus fed into the grid. Sources: International Energy Agency. (2021b), op. cit.; French Ministry for Economy, finances and industrial and digital sovereignty (2022). Installation of solar panels: you are entitled to government support. *Bercy Infos*, 14 February.
[147] REScoop. *Transposition tracker - France*. Retrieved in March 2023.
[148] Ibid.

promote the development of locally governed renewable energy projects in November 2021.[149] Local and regional governments as well as the main stakeholders dealing with energy citizenship in France and other relevant players (e.g. banks) contributed actively to this action plan – and a permanent working group has now been established to continue working on these issues. The Action Plan encompasses 10 measures around three objectives: accelerating the development of local projects; better supporting projects and informing citizens; simplifying procedures and funding. It also set the **objective of 1000 new locally governed renewable energy projects involving communities and citizens by 2028**.[150] All ten measures are summarised in the table below (Table 2).

Table 2: Summary of the French Action Plan to promote citizen-led renewable energy projects

1- 1000 new locally governed renewable energy projects by 2028	2- Translate this Action Plan into the next multi-annual energy programming
3- Publish the Application Decree on CECs and RECs	4- Encourage locally governed projects in the national support schemes for renewable energies
5- Increase the number of advisors for local projects in the regions by 50%	6- Launch a national communication campaign and support local representatives
7- Create an observatory of locally governed renewable energy projects and launch a study of the impact on local ownership and take-up of renewable energy	8- Removing financial barriers for locally governed projects
9- Reduce the cost to use the public electricity networks for small projects	10- Pursue working group's activities on strategic issues requiring regulatory and/or legislative changes

In 2022, France established a participatory bonus for locally governed projects in national calls for tender (Measure 4). In line with this, the French government reviewed the rules of the *guichet ouvert* (general national support scheme for the development of renewable energies) for wind projects, restricting eligibility criteria in favour of RECs, cooperatives and local/regional authorities, as well as private entities in which at least 51% of the voting rights and 51% of the equity are held by at least 50 natural persons, one or several local/regional authorities or a REC.[151] Those are positive steps but France could have gone further by exempting energy communities from tenders and by creating a dedicated support scheme for RECs.

[149] Friends of the Earth Europe, REScoop and Energy Cities. (2021). Citizen energy. Municipalities and local authorities: ideal partners.
[150] French Ministry of Ecological Transition. (2021). 10 measures in favour of citizen renewable energies. November.
[151] Gouty, F. (2022). Éolien : le guichet ouvert se referme. *Actu-environnement*.

In addition, **the French government significantly lowered grid connection fees (Measure 9)**,[152] covering up to 60% of the cost for all renewable electricity installations under a certain capacity (500 kW).[153] Further measures should now address grid access procedures.[154]

However, the effective implementation of many of these measures will need to be monitored. This concerns for instance the doubling the number of local governance advisors in each French region, the creation of an observatory for citizen-led renewable projects with a launch of a first study on the impact on local ownership and take-up of renewable energy (Measure 7). Importantly, under the Roadmap, the French government committed to clarifying the articulation between national and regional support schemes (Measure 9). Indeed, the French legislation clearly states that "*producers may not cumulate for the same installation the premiums and tariffs [...] with any other public financial support for the production of electricity from a local, regional, national or European Union aid scheme*."[155] This constitutes an important limitation for projects with little starting capital.

There are still missing pieces in the legislative puzzle. France has not put forward any kind of measure to increase accessibility to community energy projects for energy poor and vulnerable consumers as required under REDII. An enabling framework for CECs has also yet to be developed. The continuation of the working group (Measure 10) could be a driver to tackle barriers that have not been addressed yet, such as investment possibilities, access to bank financing, etc.

Lastly, several elements could put the brakes on this good dynamic for energy communities in France. First, there are important concerns in the country about the threat that self-consumption may pose to national solidarity in the pricing of the use of the public grid.[156] This fear is also reflected within some state organisations in France, as well as among top administrations of France's main distribution grid operator, Enedis.[157] This could be worrying for energy communities that rely heavily on government's subsidies – which is very much the case in France.[158] Second, the law to accelerate the deployment of renewable energy adopted in March 2023 did not live up to the expectations as it did not bring any improvement to the existing framework on energy communities. Worst, the law brought additional barriers for energy communities, with a new obligation granted a new authorization to be able sell energy to final consumers. This raises concerns about France's future ambitions for these initiatives, and whether new measures and funds will be put on the table to support energy communities.

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[152] Government order of 26 March 2022.
[153] French Ministry of Ecological Transition (2022). Order of 22 March 2022 regarding the bearing of the costs of connecting renewable electricity generation installations to the public grid. *Official journal of the French Republic.*
[154] REScoop. *Transposition tracker - France*. Retrieved in March 2023.
[155] Article 13 of Government order of 21 October 2021. Source: Hespul (2023). Current tariff order. *Photovoltaïque.info*. Retrieved March 2023.
[156] Draft National Energy and Climate Plan for France. (2019).
[157] Sebi. C., and Vernay. A. (2020). Community renewable energy in France: The state of development and the way forward. *Energy Policy*, 147(111874), December.
[158] Ibid.

Conclusion of section 5.2.

Spain, Portugal, Italy and France have all introduced in recent years different pieces of legislation on self-consumption and energy communities. Legislation has been very fast changing at national level, reflecting the rise in self-consumption and renewable energies. But mostly, the development of a national regulatory framework on energy communities has been boosted by EU laws, especially the EMD and REDII in 2018/2019. More recent national laws have continued to transpose EU provisions (with already high transposition levels achieved in France and Italy) to better define some concepts that had previously only been copy-pasted by EU rules, and to slowly introduce or complete the enabling framework for energy communities. Italy, Spain and Portugal have also fully taken advantage of the National Recovery and Resilience Plans in this regard. However, how this new regulatory framework is designed in theory and how it is actually operationalised and perceived in the ground by the people directly involved in energy community projects may lead to two very different assessments. Chapter 6 carries out this second assessment.

6. Drivers and barriers to energy community projects at national and local levels

Building on Chapter 5, the next chapter is mostly based on interviews conducted with partners of the Sun4All projects, with some references to the existing literature when relevant. It aims at identifying the regulatory barriers and drivers that energy communities still face at national and local levels and offers some preliminary recommendations.

6.1. Improving legislation at national level

Improving legislative provisions on energy communities is necessary as the concept remains vague and unclear. As we saw earlier in this report, the transposition of EU directives is often not providing the necessary clarifications given the important leeway that Member states possess to adapt the EU rules to their national context. Thus, when transposing provisions on energy communities, policymakers need to consider several issues.

Legal requirements for energy communities often remain too complex. In France for instance, establishing a legal entity for collective self-consumption schemes (called *Personne Morale Organisatrice* or PMO) is a very complex process.[159] Social housing services and municipalities may be exempt from this

[159] Vernay, A. and Sebi, C. (2023). Energy community business models and their impact on the energy transition: Lessons learnt from France. *Energy Policy*, 175(113473), April.

obligation, but a PMO is necessary to gather people and actors with different status. This can often deter instigators from energy community projects or limit the scope and the range of stakeholders involved. In Italy, an energy community's legal statute also needs to include very specific information on the operation, administration and parameters for the distribution of benefits. This requires technical and legal skills that are not adapted to more bottom-up, citizen-led and non-professional projects.[160]

When transposing the provisions on energy communities, Member states need to define proximity in a flexible way. At first, some Member states defined proximity too narrowly, like France and Spain, potentially to address capacity concerns of grid operators.[161] Some improvements in the legislation were made, especially in Spain and France where the distance was extended to 2 km and even up to 20 km in France in some cases. This is extremely useful to promote installations in the countryside and to connect more diverse consumers (e.g. industrial zones with nearby residential neighbourhoods, schools and public spaces with citizens, etc.) and investors. Still, the 2 km threshold might not be adapted for installations with higher generation capacity, especially in rural areas with lower energy demand, or projects involving more than one renewable energy source. As a result, some energy community projects could be excluded from the legal scope of RECs or CECs, preventing them from accessing funding or sharing energy with members.[162] Even more problematic, such provisions make economies of scale difficult to achieve and limits possibilities to increase self-consumption levels including through energy communities by aggregating diverse consumers.[163] Therefore, a case-by-case approach, like in the Portuguese legislation,[164] seems more adapted than a threshold value, or at least, making sure that the threshold varies depending on the capacity of the installation and on geographical and demographic specificities. In any case, these criteria must be as transparent as possible to facilitate the application process.

Legislation should encourage complementarity among renewable energy and allow for RE clusters. In Italy, to limit the risk of cross-subsidies, installations already in operation before March 2020 cannot qualify as RECs. Not only does this deny incentives and support to older energy communities projects – putting them at a disadvantage and at risk of failure – but this prohibits at the same time new RECs projects to include older installations that would complement the new plants.[165] Such legislation fails to exploit the benefits of complementarity, such as grid stability, increased network capacity to integrate variable renewable power, and reduced system costs for energy storage.[166]

[160] Tatti, A. et al. (2023). op. cit.
[161] Hoicka, C.E. et al. (2021), op. cit.
[162] Ibid.
[163] Vernay, A. and Sebi, C. (2023), op. cit.
[164] Decree-law No. 162/2019 of 25 October 2019.
[165] Hoicka, C.E. et al. (2021), op. cit.
[166] Ibid.

Legislation needs to mitigate the risk of co-optation by incumbent interests. As the development of energy communities may bring about a shift in electricity market ownership, energy communities are likely to face either pushbacks from the main private or public generation companies or to see their model exploited to reap financial and technical benefits.[167] This tangible threat was highlighted during our interviews. Restricting the possible organisational form of energy communities to only non-profit organisations could potentially hinder the implementation of energy communities on a broader scale.

Stricter enforcement and monitoring would help mitigate this risk, by controlling that the purpose of the energy community is not mainly to make a profit, as required by EU law, and by ensuring that incumbents are not restricting the operation of energy communities. Indeed, not only do incumbents own the technical and institutional knowledge to ensure the smooth functioning of the energy system but they also thus have a strong influence in setting some operational rules that may be detrimental to RECs (e.g. claiming grid capacity constraints to limit penetration of energy communities).[168] Legislators must be aware and proactive on this matter, by closely monitoring and where needed investigating unfair practices by incumbents and impose stricter enforcement rules (see 6.2 on implementation).

Another solution would be to significantly reward energy communities that purposefully act to create social and local benefits for their members and society at large. However, as we saw in section 4.1.4, these benefits are very broadly defined in EU law. Thus, should Member states choose to put such a reward mechanism in place, they should also provide additional guidance and ensure transparency regarding what these social and local benefits entail.

National legislation on net metering is a driver for energy communities. Smart metering is an electronic system that is capable of measuring electricity fed into the grid or electricity consumed from the grid. It provides more information than conventional metre systems and can also transmit and receive data for monitoring and control purposes.[169] It is thus indispensable in order to participate in the energy market, and thus be part of an energy community as a prosumer. In Portugal, the installation of smart metres by DSO, now for free, was explicitly identified in our interviews as a driver for collective self-consumption and energy communities. On the contrary, the lack of smart metres in Italy is considered an obstacle to the development of citizen-led energy communities in the country.[170] Member states should thus implement the necessary measures to achieve a wide scale rollout of electricity smart metres.

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[167] Ibid
[168] Ibid
[169] European Commission (2019). Directive of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast). Directive (EU) 2019/944.
[170] Tatti, A. et al. (2023), op. cit.

Energy communities face regulatory barriers beyond energy market regulation. In terms of housing law, getting the consent from the landlord or from all co-owners to install a generation plant on or at the least property can easily prevent people from engaging in self-consumption.[171] There are also risks that the ownership of a generation plant installation by residents in a multi-apartment building is transferred to the building owner. Tax laws and social welfare rules may also impact people's decision to join or set up an energy community, for instance for threat of losing tax or social benefits due to the installation of a generation plant or to owning assets.[172]

6.2. A dire need for effective implementation

Despite deficiencies in the legislative framework, the crux of the issue remains implementation.

Energy communities are often faced with time-consuming procedures or a lack of proper procedures. DSOs, utilities and licensing bodies are making it difficult for energy communities to begin their operation, aka getting their self-consumption scheme approved and their self-consumption point activated. This lack of effort may be linked, among other things, to utilities' own interest in keeping investment capacity in the sector and owning electricity in a centralised way. For instance, in Spain, utilities sometimes ask energy communities to provide more documents than what is in theory required by the legislation. In addition, since there is no formal process in place, procedures may vary significantly from one utility to another. In Portugal, the lack of visibility over which document to provide and when, who is responsible for what, can result in lengthy back-and-forth that can considerably delay the start of operations. In addition, there is a lack of proper communication channel and associated human resources (e.g. a helpline that connects you with staff from the national licensing institution) to support municipalities and energy communities during this process. The Portuguese online registration platform is also currently only working properly for individual self-consumption, and thus needs to be adapted to collective self-consumption schemes and energy communities (e.g. by adding a members management feature). In France, getting connected to the electricity network is also a lengthy and bureaucratic process. During one of our interviews, one partner for instance mentioned that the DSO deleted and relaunched their grid connection request that had been filed over a year before, resulting in a complete redo of all the procedures already carried out, along with a new contact person. The unofficial reason for this was to improve the official processing times, in other words, the performance statistics, of the DSO, but at some costs (human, financial) for the municipality.

Long, bureaucratic procedures are tremendously hindering energy communities' capacity to convince people, especially in vulnerable

[171] Bertel, M. et al. (2022). Catalogue of potential legal and economic barriers and facilitators of energy citizenship. *Energy Citizenship and Energy Communities for a Clean Energy Transition*.
[172] European Environment Agency (2022). op.cit. Hoicka, C.E. et al. (2021), op. cit.

environments, to join an initiative. This results either in very small, more manageable projects, or energy communities that need to be professionalised, with working hours either paid through subsidies or through actors like municipalities or established cooperatives.

There are several solutions to remedy this. First, DSOs and utilities need to set up direct communication channels, or even a network, with energy communities and especially with municipalities, as well as with national actors like licensing bodies. The participation of citizens and other actors in the energy system should not be seen as a threat to utilities and bigger public companies since both types of stakeholders have their own role to play to meet the EU's climate goals.[173] They should instead strive for close cooperation. Second, processes may be facilitated through an electronic platform adapted to collective self-consumption schemes and energy communities, but sufficient human resources nonetheless need to be allocated at national level to help energy communities navigate the administrative procedures. Third, Member states should adopt a more restrictive approach towards utilities and DSOs that do not comply with the legislation or that hinder consciously and considerably the development of self-consumption and energy communities, for instance through financial sanctions.

This analysis strongly echoes recent European Commission's proposed amendments in REDIV to shorten and streamline permitting processes, which should lead Member states to provide much-needed additional administrative capacities.

6.3. Municipal law: a source of many barriers and uncertainties for energy communities

Municipal law can affect not only the development of energy communities within a territory, but also the capacity of municipalities to take part themselves in energy communities.

Barriers and drivers for energy communities from the municipal legislation

Simplified procedures in urban planning set at municipal level are an important driver for energy communities. In Barcelona for instance, installing any photovoltaic structure required the approval of an urban municipal architect. Now, a simpler registration procedure has been set at national level making it much easier for renewable self-consumers and energy communities. In Rome, renewable

[173] European Environment Agency (2022), op cit.

energy generation plants with a capacity up to 1 MW are now subject to a simplified authorization procedure.[174]

However, the installation of renewable energy plants is often seen as a threat to heritage conservation. This results in the overprotection of urban and landscape heritage zones by urban planners and architects. In France, such projects in municipalities are subject to the prior authorization of the architects of the Buildings of France, among whom there is still a lot of prejudice and lack of information about renewable installations like solar panels. Interestingly, in Rome, the installation of solar panels in areas of historical importance can since 2022 be done through the simplified approval procedure,[175] which could indicate a shift regarding these issues in some countries. However, implementation on the ground and the willingness of actors remain to be seen.

Difficulties for municipalities to take part in energy communities

Since municipalities are not allowed to earn money, the selling and sharing of electricity through self-consumption arrangements is made very difficult. In Spain, when the municipality offers a service, it must set the price perfectly so as not to earn money. This was reported to be very difficult in a context of volatile prices. In France, the need to have an auxiliary budget, different from the main budget, for any solar installation established by a local authority on its own property or assets is burdening the financial management of photovoltaic projects very significantly.[176] French municipalities have to switch and constantly transfer money onto the main budget and the auxiliary one. In addition, the principle of non-allocation of public revenues makes it difficult in the case of energy communities to transform revenues from the sale of solar energy into subsidies for households for instance. More generally, there can be very strict rules to spend money to buy equipment and services, which impacts solar panel projects significantly, as is the case in Portugal.

There is a lot of legal uncertainty about the possibility for municipalities to associate themselves with private bodies, associations and individuals. European and national public procurement rules are sometimes responsible for hampering this type of collaboration.[177] In addition, local authorities often lack clarity over these rules due to a lack of financial and human resources. This uncertainty was fully reflected in our interviews. In France, even the cooperation

[174] Simplified Authorisation Procedure (*Procedura Abilitativa Semplificata*) based on Decree-law of 28/03/2011 (Article 6). Source: Rome city. Authorisation for the construction and operation of production plants powered by renewable energy sources.
[175] Law 34/2022, applied by the Municipality of Rome.
[176] In France the administrative framework applying to photovoltaic installations developed by local authorities is sometimes that of an asset promotion activity, and sometimes that of an industrial and commercial public service. In the latter case, the municipality needs to create either a public utility company or an annexed budget.
[177] REScoop (2022b). The EED Trilogues: How to support the role of energy communities in energy savings. 24 October.

with other energy communities under the status of cooperatives was deemed difficult because they are private entities.

In the face of legal uncertainty and the fear of the associated legal consequences, municipalities thus often resort to extreme caution. In Spain for instance, civil servants in charge of these legal issues can be held directly responsible should legal action be taken against the municipality, which has a tremendous impact on the decisions taken.

Clarifying the legislation and providing legal certainty to municipal staff is the only way to overcome this barrier. The European Commission should for instance introduce green public procurement criteria to allow for the cooperation of local authorities with other local actors such as energy communities.[178] A national public procurement guide addressing the collaboration with energy communities should be created in each Member state as well as a direct contact channel with national civil servants specialised on the topic. More broadly, municipalities should be granted the proper financial resources to recruit sufficient and qualified staff to deal with energy-related issues.

6.4. The political dimension: a maker or breaker for energy communities

The political willingness or unwillingness at local level regarding renewable energy and decentralised energy can make or break energy projects. All four municipalities have had strong local ambitions when it comes to renewable energy and to a lesser extent energy communities. In France for instance, the *Communauté de communes Coeur de Savoie* (regrouping of municipalities in the Savoy region) has adopted a detailed action plan for energy and climate action, with the production of renewable energy at its heart. The plan also includes supporting local and citizen-led renewable energy generation initiatives including through partnerships.[179] The Rome municipal council set up an intersectoral working group "Energy communities and solar systems» to promote and encourage the installation of photovoltaic panels to support the RECs.

Ambition does not equal immediate implementation. In Savoy for instance, only 4 of the 41 municipalities that make up the *Communauté de communes* are in line with the urban planning rules. Often, mayors are opposed to renewable energy projects, for reasons ranging from unattractiveness and lack of visual appeal, to recycling issues. In addition, revising local development plans requires considerable human resources that may be lacking.

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[178] REScoop (2021b). Bringing the energy transition home: energy communities and the EPBD?. 23 November.
[179] *Communauté de communes Cœur de Savoie* (2020). Detailed territorial climate-air-energy action plan.

Evidence-based arguments are needed to convince decision makers within municipalities to invest in energy communities. In Almada, due to the fact that very few studies on these issues already exist (if any), municipal staff need to start from scratch, surveying stakeholders, setting up financial plans, conducting impact assessments, evaluating the capacity of public buildings to integrate solar panels, designing legislative and financial measures to promote energy communities, etc. The lack of reference model can also be exacerbated by different governance systems, like in the case of Spanish autonomous communities. Finally, the energy price crisis has also been seen as an eye-opener for some municipalities as they expect to see their energy bills skyrocket.

Political uncertainty can impact the development of renewables and RECs. In Spain, uneven and changing legislation over the years has made investors, especially within the private sector, wary. In this sense, the setting of minimum standards at EU-level is very helpful in this regard. The new EU target to set up at least 1 REC per municipality above 10,000 inhabitants by 2025 could provide some drive and certainty for all the actors involved. At the same time, it could put pressure on already overstretched local governments, hence the need to provide municipalities with financial and technical assistance.[180]

6.5. Information, a key issue for citizens and municipalities alike

The legislative framework on energy communities has developed faster than awareness among citizens. As we mentioned earlier, energy community initiatives predated legislative action by states. However, due to their local nature and to the development of a more centralised energy system in the four countries addressed in this study, energy communities had in many cases not yet made their way as a mainstream activity or form of organisation. Overall, there is thus a significant lack of knowledge on this topic among the population.

European legislation has had a direct impact on the design of national rules on energy communities but has not managed to reach citizens directly. Since their participation is at the heart of community energies, many municipalities view this as a major barrier.

The first step to promote collective self-consumption and energy communities is to inform people about individual self-consumption. The *Communauté de Communes Coeur de Savoie* has developed a solar register, an online tool which displays the energy potential of roofs in the municipalities, and which can be then used to assess whether a building is suited to the installation of solar panels.[181] Despite initial scepticism, not only are the data getting more

[180] Pradeep, K. and Tsekeris, D. (2022). Redistributing power: How can renewable energy communities relieve energy poverty?. *Friends of the Earth Europe.*
[181] Communauté de communes Cœur de Savoie. *Solar register of the Savoy community of communes*. Retrieved March 2023.

precise, but more and more people are accessing and using the tool. However, this kind of mapping demands significant human and financial commitment from municipalities. Regional or national support should thus be made available in this regard.

Finding existing collective projects that people can relate to and that were successful is paramount to get people on board, but they remain scarce and many of the current initiatives are mostly seen as a testing ground. This can hinder tremendously the participation of citizens in energy communities, and especially of vulnerable households who need to be secure if their finances or basic needs like energy are involved.

Member states should rapidly set up a user-friendly electronic information portal to inform citizens about self-consumption and energy communities. This was for instance one of the measures announced in the Portuguese NECP. However, this does not exist as of yet, despite many requests on the ground.

In addition, municipalities, supported by the state, should each set up a one-stop-shop for citizens regarding self-consumption and energy communities. In Spain, funding has been made available to boost the energy community sector (see next section for more details), with one line of subsidies dedicated to support public administration in opening one stop shops with this purpose. Municipalities should take advantage of already existing and known contact points with citizens, such as the *12 Energy Advice Points (PAE)* across the city of Barcelona, which have been providing information and support for people to exercise their energy rights, or the *Local Energy Information Hubs* in Savoy as part of the national initiative *Espace Conseil France Renov'*.[182]

Beyond citizens, municipalities themselves often face difficulties to access information from the regional and national levels. In Barcelona, the energy agency is seen as the one-stop-shop for energy communities, but they themselves lack a reliable and consistent contact person at regional or federal level to support them. Often, information is very inconsistent between municipalities and depends on the staff and how informed they are on these topics.

Municipalities thus need to also have access to a one-stop-shop at regional or national level and to receive adequate training. Member states must make sure that a designated national authority, along with regional contact points, are providing reliable information, training and capacity building to municipalities when it comes to self-consumption and energy communities. ADENE, the Portuguese energy agency, has recently begun to publish guidance documents for municipalities to navigate the country's legislation on these issues.[183]

Member states should also set up networking or platforms for municipalities to share experiences about getting involved in energy

[182] *France Rénov' : comment ça marche ?*. Retrieved March 2023.
[183] ADENE (2022). *Digital legislative guide 'Self-consumption and renewable energy community'*. Retrieved in March 2023.

communities. This could mirror the European Energy Community Repository and the Rural Energy Communities Advisory Hub, but at national level. This could build on already existing networks too, making sure to involve local civil servants from all levels of administration, not just higher management. European technical assistance initiatives, such as the European Energy Poverty Advisory Hub (EPAH) or the EU Technical Support Instrument, are also seen as helpful spaces for collaboration and to receive reliable information and support.

More broadly, there is a need for large-scale information campaigns directed at all the possible people that could be involved in community energy projects. These include local and national decision-makers, municipal staff dealing with energy issues but also social affairs, energy utilities, DSOs, energy agencies, businesses, NGOs and other community actors, etc. Besides, while we have insisted on their role as participants or even instigators of energy communities, municipalities should also be informed on how they can play a more passive role in these initiatives, such as by providing roof spaces or land to energy communities or by simply making projects more visible. This is very important as many municipalities do not yet feel confident to act on these topics.[184]

6.6. Need for human and financial resources and/or incentives directed at municipalities and energy communities

Most municipalities are lacking human resources to participate in and/or to support the development of energy communities. In Almada, only three people are working on this topic, which is not sufficient to manage the technical, legal and operational aspects of these initiatives. In Barcelona, the lack of human resources is directly correlated to limited capacity to access funding.

Funding directed to municipalities regarding energy communities does not exist or is not easily accessible. In Spain, accessing federal funding can sometimes be seen as difficult due to a lack of communication. In Portugal, a federal call was published to support the involvement of different stakeholders in energy communities, including public administration.[185] However, the call was only open for one month and was too specific, meaning that only initiatives that were already in the works could apply. Interestingly, some local actors see EU funding as a more likely source of funding, despite the additional bureaucracy involved.

Most financial incentives from municipalities to citizens regarding energy production are focused on individual self-consumption. This is however a very good steppingstone as it can relatively be extended to collective self-consumption initiatives like energy communities. Barcelona is a great example of this as it offers significant tax reductions for private citizens to install solar panels, or to engage in energy efficiency renovation. It is estimated that these tax

[184] Vernay, A. and Sebi, C. (2023), op. cit.
[185] Portuguese Ministry of Environment and Climate Action. Environmental Fund. *op. cit.*

incentives are lowering the return on investment to only one or two years. This system also applies for collective self-consumption and energy communities alike.

Nonetheless, some municipalities are beginning to provide financial support from their budget to energy communities. Early 2023, the Lazio region, of which Rome is the capital, published a call for the establishment of renewable energy communities in the region. The tender was worth €1 million and aimed to finance the technical-economic feasibility studies of RECs with grants ranging from €6,000 to 13,000. Interestingly, the call excluded RECs set up by private entities, and projects had to respect social criteria such as the participation of households facing economic difficulties, suffering from a disability, or under 35 years old.[186]

Newly introduced national funds to support energy communities remain ad hoc support rather than regular support that would bring more stability to energy communities projects. In Portugal, as we discussed earlier, a call from the environmental fund was launched recently. It was addressed to public administration, associations and private entities and would support 30% of the costs of energy community projects. However, in addition to the issues raised regarding the duration of the call, energy communities cannot rely on this fund for regular support. In Spain, €100 million have been allocated to boost the energy community sector in the framework of Spain's Plan for Recovery, Transformation, and Resilience. The fund is meant to support the implementation of energy communities directly, and also help public administrations to open one-stop-shops for citizens. At this stage, applications are still being reviewed (with no indication on timing). An ex-ante evaluation of this line of funding would need to be conducted.

Energy communities face multiple challenges to access funding. In Portugal, funds to buy solar panels do exist but are not made available to energy communities. In France, energy communities are prohibited from accumulating subsidies (to help implement and run the project) and price incentives (when selling electricity back to the grid). The French Rhône Alpes region even had to discontinue one of its support schemes to energy communities on this basis. Italian legislation is also debating whether to allow the combination of the feed-in premium tariff with other regional and national financial support.[187]

Energy from self-consumption arrangements that is sold back to the grid can be paid less than market prices. This is the case in both Spain and Portugal. In Portugal this is almost four times less than the normal price. Uncertainty remains on whether and how energy communities may set a higher price. In addition, this implies that the return on investment for installing solar panels takes a very long time.

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[186] Regione Lazio (2022). *Public notice for the realisation of technical-economic feasibility studies of the renewable energy communities in Lazio*. Lazio Innova. Retrieved in March 2023.
[187] Tatti, A. et al. (2023), op. cit.

Lastly, local governments are often not able to commit funds over long periods of time. This means that they cannot engage in long-term agreements or power purchase agreements and thus consume the energy produced by the energy community they contribute to.[188] Procedures for public calls for tenders should be adapted accordingly.

6.7. Partnerships with other stakeholders: a tremendous asset for energy communities

Other energy communities and citizen-led projects can support newer energy community projects. In Portugal, Copernico, the country's first renewable energy cooperative that is also an electricity retailer for its members, plays the role of an energy mentor in diagnosing energy poverty and establishing energy communities. In France, the *Centrales Villageoises* energy communities are very dynamic in some regions and can help citizens and other local actors to get involved in the energy community movement.

Energy communities could also benefit from existing networks, such as sports or cultural associations. This would make the concept of energy communities better-known, allowing them to reach a more diverse audience and to be rooted in the local community.

National and local measures should exploit cooperation avenues with companies provided there is a fair distribution of the benefits. Industrial buildings, offices or spaces hold a great potential to install generation plants. With upcoming regulations on mandatory solar installations on roof surfaces, this potential should be realised sooner than later. Municipalities should make sure to capitalise on these local resources and integrate themselves and their citizens in these energy loops. Creating strong links between local companies, municipalities and citizens is also a great way to strengthen the social fabric and cohesion of a territory.

6.8. Energy justice needs to be more than an afterthought

The energy justice dimension is mostly absent from measures and support directed towards energy communities at national and local levels. This might come from the fact that national and local governments have been focusing on transposition and operationalisation of the concepts of CECs and RECs rather than their enabling framework, which includes supporting the social role of energy communities, especially RECs.

[188] Vernay, A. and Sebi, C. (2023), op. cit.

However, not linking energy communities with energy justice from the get-go might greatly harm the energy community movement and fail to achieve the expected social benefits. As highlighted in Chapter 4, energy communities might end up burdened with additional responsibilities without any support to achieve these additional goals of social justice, while being expected to compete on the market as another market player. Moreover, it is likely that without dedicated measures to help energy communities engage in social justice, the energy communities that do emerge and succeed are likely to be made up of individuals with higher-socio-economic status and more capital at their disposal, to the detriment of lower-income households and women.[189]

Policymakers need to quickly rise to the challenge. National law can for instance recognise social housing projects as RECs to accelerate the participation of residents, which the 2019 French law on energy and climate paved the way for.[190] As mentioned earlier in this paper, energy communities that either include vulnerable groups or distribute their benefits should be rewarded with dedicated support or incentives. Subsidies could also be created to pay for the participation fees of energy-poor people. Member states should also make sure to exempt ownership in an energy community from the application process for social transfers.[191]

Conclusion of Chapter 6.

While there are some shortcomings in the Portuguese, Spanish, Italian and French laws defining energy communities, there is first and foremost a lack of implementation in all countries that results in very lengthy and complex procedures. This is exacerbated by a lack of cooperation and enforcement by energy utilities and DSOs. Municipal rules have also not been adapted to deal with these new types of partnerships. Such legal uncertainty is thus putting the brakes on many energy community projects. On top of purely regulatory issues, political commitment is necessary for municipalities to make ways on these topics, alongside adequate financial and human resources. The need for information, both towards citizens and municipalities, should also not be understated and Member states should make sure to include this in their enabling framework for energy communities. Lastly, no Member state has truly leveraged on the potential of energy communities to contribute to reducing energy poverty.

[189] Hoicka, C.E. et al. (2021), op. cit.
[190] Ibid.
[191] Ibid.

7. Conclusion

To sum up, we are still in the infancy of the regulation of energy communities. The introduction of RECs and CECs in the Clean energy for all Europeans package as well as the new targets and provisions in the REPowerEU strategy are creating momentum for Member states to take ownership of these new concepts. But, faced with the significant and fast developments happening in the EU legislation, transposition into national law is crucial. However, national legislation has not yet managed to fully fulfil the need for clear and ambitious requirements giving flesh to the EU general framework, as well as to provide both legal certainty and an enabling environment for projects on the ground. This directly affects municipalities' capacity to set up, participate in and promote local energy community projects.

In addition, as the local level is becoming increasingly relevant for energy and environment-related topics that are being dealt with at EU level, **there is a need to increase municipalities' capacity for action and rethink avenues of cooperation between the EU, national and local levels**. Incumbents also need to understand the complementary nature of energy communities within the energy system and fully collaborate with them without abusing their power. At the same time, policymakers need to closely monitor and restrict if needed private involvement in this sector.

Energy communities are showing that the decentralisation of the energy sector can foster new forms of governance and of consumers' involvement in the energy system. But to make this happen increasingly requires stronger coordination between all levels of government, from the EU to the local level, hence strengthening the multi-governance processes. Meanwhile, appropriate financial, technical, and capacity building support measures should be made easily accessible to public authorities and citizens.

Like the EU Green Deal, energy communities must leave no one behind. However, right now, the overarching goals of territorial cohesion and energy poverty alleviation that have been ascribed to energy communities do not reflect the support they are being given. Only with tailored, dedicated and significant financial tools, human resources and policy measures can energy communities truly become new actors of energy justice and can inclusive citizen-led initiatives emerge. Without these, there is a risk that energy communities remain clubs for the happy few, ultimately excluding more vulnerable citizens.[192]

[192] Weghmann, V. (2019). Going Public: A Decarbonised, Affordable and Democratic Energy System for Europe. The failure of energy liberalisation. *European Public Service Union,* July.

8. Annexes

Annex 1: Transposition grading scale for RECs and CECs in EU Member states

Definition (horizontal) Enabling framework (vertical)	**Very low**	**Low**	**Medium**	**High**	**Very high**
Very high					
High		Austria	Netherlands	Ireland, **Italy**	
Medium		Luxembourg, **Portugal**	**Spain**, Greece, Latvia	Belgium, **France**, Germany	
Low		Croatia, Romania, Hungary, Malta, Slovakia	Cyprus, Slovenia	Denmark	
Very low	Bulgaria, Czechia, Poland, Sweden	Finland, Estonia	Lithuania		

Source: Rescoop transposition tracker, Data extracted on 22 February 2023

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