



# SOCIALRES

## Policy briefs for different stakeholder groups

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### Policy Recommendations

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The consortium involves 13 partners in 9 European Countries. The logos of the partners cooperating in this project are shown below and information about them is available in this report and at the website: [www.socialres.eu](http://www.socialres.eu)



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# 1. SOCIAL INNOVATIONS AS A CORE ELEMENT FOR A SUCCESSFUL ENERGY TRANSITION

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On the pathway towards a successful sustainable energy transition in Europe, the social dimension is becoming more and more important. The transformation of the energy system is dependent on broad public support due to the far-reaching changes that are associated with this shift. Therefore, technology-based solutions alone cannot be sufficient to reach the goals related to the European Green Deal. Hence, social innovations are important to ensure societal acceptance for a more sustainable energy system (see, among others: (European Commission, 2019a, 2019b)).

Social innovations can create support for the energy transition through citizen participation, both socially and financially. They support the achievement of social goals by empowering citizens, alleviating energy poverty, and increasing the general wellbeing of communities. In this way, social innovations in the energy sector have the potential to contribute to the low carbon energy transition (Hoppe and Vries, 2019).

Rather than viewing ‘social’ as an afterthought of technological innovation, the SocialRES project started from the perspective that energy system transitions are also driven by the changes in the multitude of interconnected relations and roles of actors and the different activities they engage in. These changes need to mobilise and empower citizens to make them the pivotal agents of sustainable energy production and consumption. To capture the diversity of possible social innovations, the project took a broad approach towards social innovation in energy and considered it as a new way of doing, thinking, and organizing energy.

In most instances, multi-actor collaborations open a wider variety of business activities than single actors alone can deliver. Energy communities (EC) are an influential tool in this transition while other novel social innovations such as crowdfunding initiatives and energy aggregators can arise outside this scope by taking a more systemic view for a multi-actor social innovation to foster the energy transition.

# 1.1 FRAMEWORK POLICY CONDITIONS AND RELATED BARRIERS FOR SOCIAL INNOVATIONS

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In the White Paper on Good Policy Practices<sup>1</sup>, developed within the SocialRES-Project, a number of general barriers for social innovations in the renewable energy sector have been identified and clustered in four categories:

## Administrative hurdles

Administrative and bureaucratic hurdles arise from the interconnectedness and number of actors involved in a renewable energy project. Social innovations need time and money to draw up contracts for their members or investors, they must receive construction permits from local authorities, obtain grid connections and form contractual relationships with other electricity market actors such as retailers and DSOs. While this may not pose challenges for large and experienced firms in the electricity market, in the case of ECs - which may not have any (or very few) full-time employees but voluntary staff - the amount of administration and bureaucracy can represent a major obstacle. In some cases, this can be overcome or mitigated by partnering with local authorities, which can help with and accelerate certain processes, however this is not always an option. Without the time, experience and resources to navigate complex administrative processes, social innovations often find themselves at a disadvantage compared to traditional firms.

## Lack of Awareness

Knowledge sharing and exchanging good practices is vital to the future survival of social innovations in the renewable energy sector. In the area of crowdfunding, the lack of clear Key Performance Indicators (KPIs) hinders investments and poses a barrier to acquiring new investors. For ECs, the adaptation to changing market structures is a difficult process and there is a need to establish an environment to allow feedback and exchange amongst them. It can be stated that people are often simply not aware of their investment options and possibilities to participate. Meanwhile, the issue of mistrust and financial illiteracy can also occur regularly.

## Financial Literacy / Barriers

Many barriers to social innovation in the renewable energy sector stem from misleading incentives set by the regulatory framework. For instance, many social innovators face financial barriers as funding is often only provided on a national level. Furthermore, there is often a strong focus on profitability of social innovations. Energy communities, for example, often need to participate in big projects to stay profitable. This goes against the DNA of ECs and it is not in line with their traditionally rather risk-averse attitude. In addition, the issue of mistrust and / or financial illiteracy amongst investors or people new to the crowdfunding business also hinder the uptake of renewable energy crowdfunding.

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<sup>1</sup> Available at <http://socialres.eu/wp-content/uploads/2021/05/SocialRES-White-Paper-on-Good-Policy-Practice.pdf>



## Competitive Framework

Policies designed to promote increases in renewable capacity often overlook smaller players, making market entry and competing difficult. Furthermore, markets are still largely organised hierarchically and not suitable for decentralised grids. The power lies with large generators, distributors and energy suppliers. Monopolies or oligopolies largely control the energy market, making proper competition very difficult for social innovators. Furthermore, the process of selling to the grid is very complex and available capacity is distributed competitively among all players in the market. This makes it very difficult for small players to gain a foothold in the market.

## Technological and digital infrastructure

The rollout of the technological infrastructure, which will facilitate the uptake of socially innovative business models is still slow in most EU countries. The main barrier in this case is still price and the perceived necessity of these technologies by the consumers. These technological changes, when mainstreamed, will first need to overcome a phase of societal resistance and prove themselves as safe, trustworthy and beneficial. In addition, privacy concerns have been raised regarding the widespread installation of smart meters as consumers are concerned that these can be used to infer personal household activity patterns.

## 1.2 GENERAL RECOMMENDATIONS FOR THE DISSEMINATION OF SOCIAL INNOVATIONS

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Apart from the general barriers, our research within the SocialRES-project also showcased a number of general recommendations for the dissemination of social innovations in the renewable energy sector which are outlined hereafter.

### Supporting Decentralisation and Prosumership

Prosumership is a central element in accelerating the energy transition. It is an important foundation for citizen involvement and can act as a catalyst for further involvement in the RE market such as through the social innovations discussed here. Prosumption gives people a personal stake in the renewable energy system and thus the energy transition, which through personal time and money invested can become an emotional interest. Moreover, the transformation from passive to active consumers shifts the focus of the energy model from the electricity supplier to the consumer. Consumers become more aware of the amount of energy they consume and what is needed to produce it. Prosumership can also play an important role in diversifying and decentralising the energy market. While household renewable energy systems are not accessible to everyone due to price barriers, the presence of prosumers in a community can raise awareness of renewable energy and increase enthusiasm to get involved. This is where social innovations like ECs and crowdfunding platforms can play an important role as they allow people to invest or buy in with shares and have a similar feeling of ownership and personal stake without needing to make an equally large investment.

### Providing tailor-made policies

An important element is the implementation of clear tailor-made policies which are simple and easy to understand. For example, Feed-in-tariffs and premiums are very promising approaches. In conjunction with eased regulations for the initiation of projects (i.e. energy communities) and regulation targeted on participation and citizen ownership in the energy sector, this can significantly boost SIE development.

### Providing Financial Incentives

The financial component in social innovation in the renewable energy sector is often overlooked. Citizens cannot be expected to engage themselves in renewable energies just for the good cause alone, it must also be profitable for them. Mechanisms like profit-sharing, state-subsidies or green bonds can be enablers to make the renewable energy sector more profitable. Moreover, new ideas will only start-off with financial support. Financial instruments can stimulate the demand for renewable energies and be used as a driver to engage house owners in renovation or PV installations. Crowdfunding platforms can also be a financial instrument to support new ideas, especially because they reach new actors who were formerly not engaged in social innovation.

### Ensuring municipal involvement

Many social innovation projects in the renewable energy sector are local in scale and often initiated by a group of neighbours or peers. These projects often target areas (roofs, fields etc.) that belong to the community. Thus, municipalities must be willing to cooperate with the social innovators and support such projects. Further, municipalities can play a central role in initiating cooperation between big players like municipal utilities and small players like energy communities. Cooperation between these stakeholders will uncover synergies and enable a more effective transition to green and sustainable energy.

### Using different instruments for raising awareness

Improving communication to the general public about beneficial outcomes (e.g. reducing costs, saving energy, building community trust, sustainable living, etc.), and positive past experience of investors in community energy projects, can help to tap into this potential. For instance, launching public campaigns targeting social innovators and potential members in a user-friendly way, and using simple, non-technical language that also explains regulatory frameworks and its implications and reaches out on an eye-to-eye level.

### Investing in capacity-building for the evaluation of impacts

For example, developing quantitative and qualitative indicator measurements, as well as human resources for regional networks and umbrella organizations, thereby increasing the capacity to engage in evaluation of social innovations impacts, especially over the long term.

## 2. POLICY BRIEFS

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This set of policy briefs was compiled to inform and give tailored advice to regional, national and EU- authorities on policy development in the field of sustainable energy transition and energy democracy in Europe. In particular, it **aims at supporting cooperatives, aggregators of renewable energy and crowdfunding platforms**. These three main actors not only offer an alternative to a centralised market which is dominated by a few actors and give citizens the opportunity for participating directly in the renewable energy market, but also play an important role in the EU energy transition and can further strengthen energy democracy.

The set is comprised of three policy briefs, categorized by the three actors 1) cooperatives, 2) aggregators of renewable energy and 3) crowdfunding platforms active in the field of renewable energy.

Energy communities are membership-based organisations, most commonly in the form of **cooperatives**, with a local geographic scope. They are usually comprised of a group of natural persons, yet SMEs (whose primary activity is not energy related) and local authorities may become members as well. A key aspect of cooperatives is the collective ownership and management of the related asset(s). To qualify as a cooperative, no single member can hold a voting majority, ensuring that the community works for the benefit of all members (Lowitzsch, Hoicka and van Tulder, 2020).

**Aggregators** serve as a broker for transactions between energy suppliers and several houses. These aggregators can be utility companies, commercial aggregators, commercial aggregators, or community groups who enable prosumers and customers to participate and transact in blockchain market scheme and platform. Indeed, they are considered as validators for efficient use of DERs and prosumers while acting as a single entity. In blockchain scheme, it is possible that either DERs act individually or through aggregators in the market.

At the heart of **crowdfunding** lies the idea of pooling resources of individuals in a collective effort to support an idea or project (Alonso, 2017). Nowadays, crowdfunding activities take place primarily via online platforms. Projects and ideas are presented on the internet and money is collected via an online platform (Candelise, 2016). Crowdfunding initiatives can take two forms; The first is the equity-based model, where investors have ownership in the projects they invest in and share in the profits. The second is the loan-based model, where investors receive interest payments on their investment.

## 2.1 POLICY BRIEF: RES COOPERATIVES

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### Provide a clear legislative framework for the development of RES cooperatives

The Renewable Energy Directive (REDII) still represents the most relevant regulation for renewable energy communities. By setting out the activities that RECs may carry out, it contributes to an EU-wide standardization of citizen energy and its consolidation in the European energy market (Schneller *et al.*, 2021).

Since Member States have a margin of action for the concrete design of a legal form of RECs, **EU policymakers** should give better guidance to Member States on the transposition of the revised RED II into national law. This could be done by providing a guiding document that navigates through the most relevant articles for RECs and gives advice on the national transposition. Additionally, expert workshops are a suitable tool to bring together relevant EU stakeholders with national authorities, researchers and other experts from the field. The discussion in such workshops should be on concrete steps to implement the Directive and the question on how it can fill the gaps in the national policy framework on RECs. The currently ongoing triologue negotiations with the European Council and the European Parliament on the reform of the Directive should therefore increase the ambition for renewable energy shares and maintain the strong position of RECs in local energy transitions (Rescoop.eu, 2022).

**National policymakers** should assure the transposition of the Revision of the Renewable Energy Directive (REDII) into national law. Especially the articles 2 (16) and 22 of REDII, but also article 16 of the Directive 2019/944 are relevant for enabling RECs in energy markets since they can replace or guide national legal definitions for energy cooperatives. This can also prevent legal fragmentations within a state due to non-uniform legislations between regions. As a concrete example, in the case of Spain the implementation of REDII and the Directive 2019/944 could counterbalance the legal differences that exist in the different regional legislations.

Furthermore, **national policymakers** should demand for more guidance in this process of transposition. This support can be provided by players at the European level, e.g. the European Commission, the European Committee of the Regions, or European networks for energy communities. For instance, expert workshops or stakeholder consultations can provide useful insights for the establishment of a legal framework on prosumership and decentralised energy production.

### Create a competitive framework for RECs

In the REDII Directive, the EU calls Member States to create an energy market that is non-discriminatory for RECs, especially in article 2 (16) and article 22. Nevertheless, in many European States, energy markets are still dominated by big players and oligopolies. Due to their citizen-driven and decentralized character, many RECs act on a rather small scale and have little financial resources in comparison to bigger energy companies. In this sense, RECs face severe competition through big players. This is the case because the rules in the national and European energy markets have initially been created for a little number of companies.

**EU policymakers** should develop guidelines for a competitive framework that is organised more horizontally and enables decentralised grids, including small energy production initiatives and non-profit business models such as citizen energy. As part of this, decisionmakers in tender assessments on the **regional and municipal level** should not only base on cost criteria, but also consider non-financial benefits for communities, such as social and environmental improvements provided by energy cooperatives.

Since many RECs have no or few full-time employees, administrative and bureaucratic burdens can easily become a major obstacle for the acquisition of new projects. This is the case especially for smaller players of citizen energy in the market. To strengthen the position of small RECs in the competition with larger energy companies, **national and regional policymakers** should create alternatives to tenders for large capacities. Regulations on mandatory tenders for renewable energy projects above specific thresholds should be removed since the payment of project planning steps represents a significant financial burden for energy cooperatives (Fjornes, Anger and Wagner, 2022). This concerns for instance the case of Germany where the obligation to tender for PV plants with a capacity over 750 kWp makes it difficult for small cooperatives to be competitive with bigger energy companies (Fjornes, Anger and Wagner, 2022). Regarding small scale energy communities such as “plug-and-play” projects in neighbourhoods and buildings, flexible regimes should be introduced that allow for unbureaucratic integration into the electricity grid (Crowdfundres, 2017).

#### Mitigate administrative barriers for the foundation and integration of RES cooperatives in the energy market

RES cooperatives face different administrative barriers in their process of foundation and integration in the energy market. Depending on the country context, technical and administrative barriers have negatively affected the trust of citizens as potential investors and participants in RECs. **EU policymakers** have the possibility to provide overall guidelines that enable citizens to gather in energy communities and to actively participate in the energy transition as prosumers. Therefore, **EU policy authorities** should provide more flexibility for the foundation of energy communities and support national and regional decisionmakers to remove standards such as minimum financial resources or minimum thresholds for the feed-in of produced energy. Bureaucratic and legal complexities for the creation of energy communities should also be removed, whereas the lending of money through banks should be facilitated.

Moreover, **national and regional policymakers** should create a level playing field for RECs in the energy market through a stable and predictable regulatory framework for citizens as investors (Schneller *et al.*, 2021). If a continuous development of the regulatory framework for renewable energies is ensured in the long term, more renewable energy projects can establish in the energy market. Market structures should be designed in a way that allows for predictable developments and investments. Particularly small players such as RECs need to be considered for their market entry.

Explicit legislation on social innovations in citizen energy can substantially reinforce the participation and ownership of RECs in the energy transition. The legal framework should also enhance the de-bureaucratization of the foundation process of RECs and provide flexibility regarding the allocation of permissions for RES projects, as our research

revealed particularly for the case of France (Fjornes, Anger and Wagner, 2022). **EU decisionmakers** should support national and regional policymakers in these processes to shape appropriate policies.

### Enhance the involvement of municipal and regional authorities

The municipal and regional level are crucial for the enhancement of social innovations in the energy transition. Due to their proximity to citizens and their knowledge on specific local conditions, municipal and regional authorities have the capacity to accompany energy projects and to increase public support for new infrastructure developments.

**EU policies** should therefore directly address municipalities and regional authorities and provide adapted capacity-building on participatory energy transitions, e.g. through funding programmes. These policies should especially raise awareness on the crucial role of RECs and citizen participation and point out the advantages of this form of energy production (COMETS *et al.*, 2022).

The involvement of municipalities and regional governments in the promotion of citizen energy is a way to improve the direct communication and trust between communities and national institutions. In this sense, **national and regional policymakers** need to recognize the crucial role of the regional and local level for the promotion of social innovations in decentralised energy transitions. They should build a legal framework that grants autonomy to municipalities and regions in their exchange with and support of energy cooperatives. To this end, municipalities also need a stable financial endowment from the national level to ensure that they can establish an exchange with citizens.

To further support the decentralisation of the energy production, sub-national and local authorities should also be enabled to provide subsidies to specific RES projects. Especially the involvement of municipal authorities can help identify potential citizen energy projects that need political and financial support and enhance the building of partnerships. Economic support policies for RECs should be designed in an accessible manner and avoid additional administrative barriers for the retrieval of funds. Legislative barriers that restrict municipal and regional economic support for energy communities should therefore be removed. This concerns - among others - France, where regulations should be revised which prohibit sub-national authorities from providing subsidies to RES projects already benefiting from feed-in-tariffs.

Due to their proximity to citizens, regional and municipal authorities are also capable of addressing issues like energy poverty, social diversity and gender balance in energy communities (Schneller *et al.*, 2021). The inclusion of marginalized communities such as low-income households in energy cooperatives could be achieved through subsidy schemes provided by the municipalities. Since RECs should be made accessible to all citizens in the energy transition, **both EU and national policymakers** should also help RECs consider dimensions of energy poverty and social diversity (Schneller *et al.*, 2021). Especially **EU authorities** could create and share guidelines on how municipalities can effectively contribute to the diversification of energy cooperatives' target groups.

## Strengthen awareness-raising and capacity-building measures

Overall, **EU, national and regional policymakers** should raise awareness among citizens to promote prosumership and alternative forms of energy provision. Nowadays, social innovations in the field of energy production are less known amongst many citizens, especially outside environmental communities and high-income households. For example, information campaigns and awareness-raising events at different levels help spread knowledge about energy cooperatives among citizens. Municipalities play a crucial role in the dissemination of such awareness campaign material. The awareness-raising measures can considerably improve the reputation of energy communities particularly in countries and regions where cooperatives are often associated with a socialist past, e.g. in Romania or Croatia but also Eastern Germany (Capellán-Pérez *et al.*, 2020; Yildiz *et al.*, 2015). Through clear legal and administrative regulations on citizen inclusion and participation, **national and regional policymakers** can assure an improved communication between citizens and institutions. Locally implemented projects can also help contact citizens directly and assure the inclusion of low-income households in energy cooperatives, thereby addressing energy poverty (Fjornes, Anger and Wagner, 2022).

In addition, capacity-building for the municipal and regional level authorities on the assessment of the impacts that social innovations (such as RECs) have, can provide valuable information on qualitative and quantitative outcomes of citizen energy. Data-driven impact assessments especially cover the social, environmental and economic levels (such as job creation or the quantity of supplied households through an energy project). Such impact assessments can ease the decision-making processes for local authorities and can contribute to the adaptation of energy policies to local circumstances (Fjornes *et al.*, 2022). As a positive outcome, the direct communication between RECs and sub-national institutions will increase citizens' trust in political participation. **EU policymakers** should accompany this positive relationship and diversify funding opportunities for RES cooperatives and local authorities for a collaborative capacity-building (Fjornes, Anger and Wagner, 2022), for instance through the European Regional Development Fund (ERDF) or the Just Transition Fund, or further offers of the Energy Community Repository's Technical assistance<sup>2</sup>.

**National and regional policymakers** should also develop indicators and objectives for the evaluation of citizen energy advancements. The introduction of national and regional citizen ownership targets can help provide concrete political ambitions and policy steps for the promotion of social innovations. Scotland, Wales, and the Netherlands can provide useful insights in this field as best practice cases (Bolle, 2019).

## Strengthen European and national networks in the field of social innovations

National and European networks between RECs, energy agencies and civil society organizations in the field of RES play a major role in the dissemination of best practices for bottom-up energy transitions. Even if legal frameworks for RECs differ between Member States, RECs face comparable challenges in the implementation of their social innovation projects (COMETS *et al.*, 2022).

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<sup>2</sup> Available at [https://energy-communities-repository.ec.europa.eu/support/technical-assistance\\_en](https://energy-communities-repository.ec.europa.eu/support/technical-assistance_en)



**Policymakers at the EU level** should further support the networking between RECs and other crucial players in the field to enhance the cross-border exchange of solutions and approaches that aim to include citizens in the production of renewable energies. Especially through funding opportunities such as Horizon Europe, but also through common capacity-building, transnational networks on citizen energy can be fostered substantially.

**National and regional policymakers** should also facilitate the networking between RECs, local authorities and civil society actors from the field of energy and environment, e.g. crowdfunding platforms or local NGOs. Alliances between these multiple players can further raise awareness on social innovations and energy democracy and help adapting energy policy frameworks to local circumstances. At the end of the day, this collaboration may also increase the social acceptability in specific renewable energy projects.

### Create financial mechanisms and incentives for the inclusion of energy communities

The regulatory framework for RECs on the **national and the regional level** should introduce target-oriented financial incentives that foster the further expansion of energy communities. These benefits should be directed at cooperatives themselves as well as their members. **EU policymakers** should therefore accompany and support national and regional stakeholders to shape financial incentives for energy communities that are in line with EU law.

Foremost, **EU and national policymakers** should ensure stability in the energy market to attract citizen investment in energy cooperatives. This especially concerns volatile prices, but also the supply of materials needed to develop new solar or wind energy projects driven by citizens. The general inflation and the increase in interest rates of bank loans represent additional obstacles for the development of citizen energy projects. For this reason, policymakers need to create an economic regulatory framework in which citizen energy projects can be embedded and established.

In concrete terms, mechanisms such as higher feed-in-tariffs can significantly increase the cooperatives' profits. Therefore, such policy mechanisms should be either put in place or be renewed (e.g. in Germany the feed-in tariffs will be raised again starting in 2023). Moreover, reduced grid costs for RECs would make citizen energy more financially attractive for households, especially for vulnerable ones. Finally, tax reductions and other fiscal incentives for RECs are a way to support energy communities in their competition with large energy companies and to reduce financial hurdles, especially in the start-up phase.

As a best practice example, France has acknowledged the crucial role of sub-national authorities and introduced a *Bonus Participatif* in 2016. It helped to promote the financial involvement of local stakeholders in renewable energy projects since citizen projects could benefit from financial subsidies if they had applied participatory financing or investment (Fjornes *et al.*, 2022; Hoffmann *et al.*, 2021). This financial bonus has been replaced by a bonus in the scoring for projects for selection in the tenders of the Ministry of Ecological Transition (Ministère de la Transition écologique et de la Cohésion des territoires and Ministère de la Transition énergétique, 2021).

## 2.2 POLICY BRIEF: RES AGGREGATORS

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### Increase awareness for energy aggregators and prosumer potential

Our research shows that energy aggregators still remain widely unknown by citizens and local governments (Fjornes *et al.*, 2022; Lizarralde, Abi Akle and Hamwi, 2020; Schneller *et al.*, 2021). Since there is such low awareness among citizens about energy aggregators, they also cannot grasp the opportunities offered by initiating or joining an aggregator. One important condition to ensure that and join an aggregator effectively is the ability to track one's own energy consumption (and production) and the energy prices. Most consumers pay regular fees for electricity. Typically, only large industrial consumers are exposed to the volatile prices on the electricity market. Hence, only industrial consumers are incentivized to optimize their energy consumption during the day. To improve the business case for aggregators and to increase households' awareness and knowledge about their energy consumption (and production) smart meters are an important precondition also to allow controlled flexible household consumption and to enable better demand response (Schneller *et al.*, 2021). Especially for algorithm-based intra-day and day-ahead electricity trading smart meters are a necessity. Also, battery systems or electric vehicles which can be charged and discharge according to electricity demand and prices are important enabling technologies. But the rollout of smart meters in European countries is too slow due to various reasons based in policy, energy agents and households. Regarding the household-based reasons, consumers are concerned to forfeit control of certain activities to external actors and computer algorithms as this goes against the internalized idea of managing their own household (*ibid.*).

To tackle this barrier, the **European policy level** should increase efforts to promote the smart meter rollout - also in the states where the cost-benefit analysis has not indicated a mandatory rollout. To this end, the EU could provide improved respective guidance to Member States through supporting informational material, expert workshops and trainings. Moreover, the EU should promote energy aggregation and the installation of smart meters in its respective campaigns. Our research suggests that these promotional efforts should not only focus on communicating the multiple benefits of aggregation and smart meters (the value of respective benefits can be challenged or mistrusted) for individuals and the community, but also on the effect of their participation in the energy transition, ownership, and energy security to address people's sense of belonging, self-esteem and ownership (Fjornes *et al.*, 2022; Lizarralde, Abi Akle and Hamwi, 2020) - which aligns with findings of earlier studies (Mathisen *et al.*, 2019). This way, the data privacy concerns of consumers regarding smart meters can also be addressed.

At the **national level**, governments should remain analogous to the European aim for promotional campaigns including the support of best practice pilot projects that show functionality and feasibility of this model in the national context. Thereby, municipal governments should be targeted as multipliers and capacitated to be facilitators of energy aggregators on the local level.

To increase awareness of municipal governments and other local actors of the benefits of energy aggregators the SocialRES framework for analyzing the multiple impacts of social innovations (Hoffmann *et al.*, 2021) could be used as supporting tool. Moreover, analogous

to the efforts on the European level, national governments should promote energy aggregators in narratives of participation in the energy transition, ownership, and energy security. Additionally, national governments should work together with the EU to facilitate regional, national and transnational networks as discussed above.

### Implement a clear legal framework for energy aggregation and prosumership

Even though the European Union engaged in legal definition of energy aggregators recently (RED II, IMED) national governments are lagging behind in transposing European directives into national law. This makes establishing and running an energy aggregator very difficult. Even if potential initiators know the business model, the mandate and scope of energy aggregators remain unclear.

Hence, **the EU Commission** should increase efforts to promote the transposition of the RED II and IEMD (especially Art. 1). The promotion of energy aggregators should be headed by European citizen participation targets that national governments have to transpose.

**National governments** should accelerate their transposition processes, possibly demanding help by the EU in order to do so. This support can be in forms of guidelines for the transposition as well as expert workshops or stakeholder consultations.

Moreover, harmonized legal frameworks across an entire state can offer the benefit of providing a single clear framework. According to the experts consulted during the project, this outweighs the benefits of regional frameworks that compete with each other over good governance and support for social innovations such as energy aggregators (Fjornes *et al.*, 2022).

### Reduce administrative hurdles for small power installations, smart meters and the establishment of energy aggregators

Establishers and members of energy aggregators have to face several administrative hurdles both in setting up a respective company and in installing smart meters and PV panels or wind power plants (Fjornes *et al.*, 2022; Schneller *et al.*, 2021).

On its supranational level the **EU Commission** should moreover introduce a consistent and stable policy framework for easing the establishment of energy aggregators, making establishment requirements adequately low-threshold. Parallely, European funding for household PVs should be increased and access eased.

On the **national level** most countries have some sort of financing support for PVs in place. However, the design of these finance mechanisms is crucial. The case of Croatia shows how the grants provided by the Environmental Protection and Energy Fund indeed enable households to invest in PVs, but with a size so high that it increased PV prices nationally and disincentivized installation without funding (Schneller *et al.*, 2021). Moreover, the grant is only given out once a year, making the time where installations are unattractive for households relatively long. Consequently, financial support should be provided in an adequate manner and in frequencies that provide steady incentives to invest in PVs. This can, for example, be achieved through subsidised loans as provided by the German Federal Investment Bank KfW.

In addition to the funding issue, PV installations and smart meters are in many countries complicated due to bureaucratic filing and alignment processes. These hurdles are mostly country-specific should be eased by **national governments**. Even though some countries are decentrally organised, like Germany with 16 federated states, bureaucratic processes should be nationally aligned so as to provide consistency. Regarding smart meters, we appreciate the forthcoming of the new law to restart the digitization of the energy transition in Germany (“Gesetz zum Neustart der Digitalisierung der Energiewende”) that addresses administrative hurdles of the smart meter rollout in the country.

Since local governments are closer to the citizens they should be targeted by both the **EU and the national level** as multipliers and facilitators for the local establishment of energy aggregators. To this end, the EU and national governments should promote national and transnational networks for citizens, investors and local governments that exchange on business ideas, best practices, and how to navigate through the administrative and legal frameworks.

### Provide financial incentives for attractive business cases of energy aggregators

Another issue our research shows is that while prosumership generally is economically incentivized in most countries in some way, the incentives mainly target self-consumption, not the production of surplus energy that can be sold on the market. This mostly relies to the fact that the return for excess capacity is very low in most countries, especially in Romania and Croatia (Schneller *et al.*, 2021). This was true, however, until the energy crisis. How the current energy price spikes affect the attractiveness of engaging in surplus production remains unclear within the research of SocialRES. While higher energy prices indeed incentivize investments in renewable energy production, the crisis imposes a high burden of costs and uncertainty on households, decreasing their willingness and capacity to invest.

Across Europe there are several **national approaches** to financially incentivize the establishment and running of energy aggregators. In France prosumers pay a reduced VAT rate for household PV installations, including the purchasing of equipment, services and delivery. And in Romania prosumership is promoted through an exemption of prosumers that produce up to 400kW annually from the green certificate tax and the income tax on energy sales. This strengthens the business case of prosumership and also energy aggregation. Regarding the profitability of presumption or running/ participating in an aggregator, Germany, France, the UK and Portugal all relied on feed-in-tariffs to spur household investments in PVs in the past. However, all of them withdrew or confined the tariffs in the last years to cope with increasing energy prices (Schneller *et al.*, 2021). France and Germany turned to tendering systems instead. However, in Germany for instance feed-in-tariffs are still in place, even though the guaranteed tariffs declined heavily in the past, to an extent where the tariff was lower than the market price at the beginning of 2022. After a reform in summer 2022, tariffs are higher again and the tariff system differs between households that sell all produced electricity and households only sell what they do not self-consume. Higher tariffs are paid for full feeds, in order to incentivize feed-ins where purchasing electricity at the current market price levels is less appealing for households and they prefer self-consumption. While feed-in-tariffs are a promising instrument providing planning security and risk minimization for households (COMETS *et al.*, 2022) the tariff systems in Europe are or were so far mostly coarse-

grained, homogenous throughout the respective countries, not differing by geographical (considering e.g. sun hours) or infrastructural circumstances. Energy experts thus call for flexible tariffs, that also take grid loads and demand into account (Fjornes *et al.*, 2022). This could be achieved through guaranteed price corridors instead of fixed price levels.

### Overcome market constraints and entry barriers

Lastly, energy markets are mostly centralized and organized hierarchically, thus not suited for decentralized prosumption and grids. In countries like Spain, monopolies or oligopolies largely control the energy market, making levelled competition difficult for energy aggregators. In Romania the coexistence of multiple trading platforms is discouraged and market access for aggregators is very costly. The latter issue is true in many national electricity markets, as the process of selling to the grid is commonly very complex and available capacity is distributed competitively among all players in the market. Aggregators thus have difficulties to prosper in the market.

**EU policymakers** should develop guidelines for a competitive framework that is organised more horizontally and enables decentralised grids, while national governments should aim to implement such a framework and allow for multiple trading platform. Moreover, they should produce guidelines and starting help for aggregators to join the market and sell electricity. Also, this approach can be headed by citizen participation targets for the electricity market.

## 2.3 POLICY BRIEF: CROWDFUNDING PLATFORMS

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### Setting the stage for Crowdfunding in Europe: The Regulation on European Crowdfunding Service Providers (ECSPR)

In the past, the regulations on crowdfunding had been fragmented across Europe, with a range of national particularities. With the [Regulation on European Crowdfunding Service Providers \(ECSP\) for business](#) the first harmonized legislative framework for Crowdfunding Services in the EU was set up in 2021. It applies directly across all EU Member States.

This pan-European legislation was long awaited by the crowdfunding industry, yet the application of this new regulation remains challenging in some European countries. Our research shows, that the challenges comprise administrative and financial efforts for both the crowdfunding service providers and the national regulatory bodies. In order for the crowdfunding service providers to be able to apply for a licence with their national Financial Supervisory Authority (i.e. the National Financial Supervisory Authority, such as BaFin<sup>3</sup> in Germany or AMF in France<sup>4</sup>) according to Art. 12 ECSPR, changes in national law and in the administrative and bureaucratic processes of these agencies will be necessary (Osborne Clarke, 2022). Hence, if not already executed<sup>5</sup>, the national legislators and regulators are well advised to proceed with the necessary changes to be able to continuously give crowdfunding service providers the possibility to operate (ECSPR).

The EU allows for a transitional period until the new legislation enters into force on national level. This means that crowdfunding service providers regulated under national laws prior to November 2021 are exempted from ECSPR for a two-year period of time and can still operate under national law until 10th November 2023 (Council of the European Union, 2022). After that date, currently exempted crowdfunding platforms can only continue to operate, if they receive a license under this new legislative framework. Hence, existing crowdfunding service providers that have not received authorisation to operate by 10th November 2023 will have to stop their operations temporarily until a license is granted under ECSPR (EUROCROWD, 2022). For some of the European countries with a well-established renewable energy crowdfunding industry (such as the Netherlands or France) this could imply economic disadvantages. Under ECSPR crowdfunding service providers operating are free to choose the location of their licensing regime. For some of the providers, choosing a different state other than the home state might be more advantageous (e.g. in terms of taxation) (EUROCROWD, 2022). Accordingly, crowdfunding service providers need to assess their options carefully until the end of the transitional period (10th November 2023) and apply for their licence according to ECSPR with their National Financial Supervisory Authority.

In our research, we conducted group discussions bringing together relevant **regional policy makers** and actors from the crowdfunding industry from different nations across Europe. Such dialogues foster peer-learning and can consequently contribute to the uptake of

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<sup>3</sup> [https://www.bafin.de/DE/Startseite/startseite\\_node.html](https://www.bafin.de/DE/Startseite/startseite_node.html)

<sup>4</sup> <https://www.amf-france.org/en>

<sup>5</sup> With regard to the seven target countries considered for this policy paper (Portugal, Croatia, Germany, France, Romania, Spain, UK,) Portugal is the only European country that has not yet applied ECSPR.

renewable energy crowdfunding. Hence, the **EU Commission** can support this development by facilitating dialogues such as expert workshops, by addressing not only the new legislative framework under ECSPR, but also by fostering peer-learning through renewable energy crowdfunding best practices in particular. As a concrete example, the French *Bonus Participatif* introduced in 2015 helps to promote the financial involvement of municipalities in local community renewable energy projects (Fjornes *et al.*, 2022; Hoffmann *et al.*, 2021). This has driven the growth of the renewable energy crowdfunding market in France.

With the ECSP regulation the EU Commission sets the stage for common rules on crowdfunding in Europe. The European crowdfunding industry is in favour of this harmonized set of rules and sees it as a positive development for the uptake of their innovative financing model. Nevertheless, the EU Commission could further improve its efforts on raising awareness about the concept of crowdfunding as a viable tool of financing renewable energy projects. Accordingly, it should continue to consider crowdfunding research and capacity building measures in their funding programmes such as Horizon Europe and others. This way, relevant actors across Europe can conduct joint research and in turn foster the uptake of and the knowledge about RES crowdfunding.

The current energy crisis shows the urgency to accelerate the clean energy transition. Therefore, the support of innovative financing models such as renewable energy crowdfunding (and energy cooperatives alike) will need to move higher up on the EU and in particular on the national agenda.

### Awareness-raising and capacity building measures

Experts recognize that there still appears to be little awareness of the existence of RES Crowdfunding among the general public and in particular amongst potential supporters in most of EU countries (e.g. in Croatia). With the ECSPR the EU Commission set up a harmonized framework for Crowdfunding after decades of different national laws. This is a sign of support and can strengthen the industry. Nonetheless, there is still a lack of awareness raising measures on EU and on **national or regional level**. In particular, stakeholder dialogues between banks, municipalities and renewable energy project developers seeking capital should be established to further increase the awareness of renewable energy crowdfunding. This can strengthen the **role of municipalities** as a potential cooperation partner and it can bring together the community (potential investors) with renewable energy crowdfunding projects. Additionally, the lack of financial literacy is continuously stressed by experts: the relevant actors, such as crowdfunding platforms, municipalities and local energy agencies, need to make citizens aware of the different financial instruments (lending or equity crowdfunding) that they can invest in and benefit from.

### Municipal involvement

Overall, municipal involvement in terms of (financial) support and cooperation provides reliability and can build trust in the concept of crowdfunding and in RES projects in particular. Our research shows that one reason for the absence of good-quality renewable energy crowdfunding service providers is the lack of **municipal support** (e.g. in Croatia and Portugal) (Schneller *et al.*, 2021). Creating more awareness amongst the municipalities is one key factor for the uptake of renewable energy crowdfunding.

Platforms should improve their efforts in engaging with municipalities by promoting the importance of their innovative measure to finance relevant energy projects in times of the ongoing energy crisis.

As **local authorities** themselves can engage directly in crowdfunding projects (civic crowdfunding) or even be supported by crowdfunding (see the innovative model of the UK platform Abundance) their involvement helps to encourage citizen participation and promotes crowdfunding as a viable tool of financing renewable energy projects at the same time. Our research found that the involvement of local authorities on municipal level are essential for providing reliability and at the same time promoting renewable energy crowdfunding amongst the local community (Schneller *et al.*, 2021).

### Financial Incentives on the national level

Research shows, that progressive crowdfunding regulations on national level and tax reliefs correlate with high volumes (i.e. funds collected through crowdfunding) in the industry (Cicchiello, Battaglia and Monferrà, 2019). Therefore, well designed support schemes at national level are key to foster the uptake of renewable energy crowdfunding. Such support schemes should include two main aspects: 1) tax benefits for citizens to foster their participation in RE crowdfunding projects and 2) municipal involvement (monetary and non-monetary) to increase visibility, acceptance of RE projects and financial stability of the projects.

The outcome of our dialogues with relevant stakeholders also show that tax incentives for investors (e.g. tax exemptions for capital investments in renewable energy projects) are one way to boost crowdfunding investments and can consequently contribute to the growth of the renewable crowdfunding market (as seen in the UK, Belgium and France for instance) (Cicchiello, Battaglia and Monferrà, 2019). In Portugal crowdfunding investments are taxed similarly to traditional bank products and the national incentive framework mostly benefits large renewable energy projects. This in turn hinders the uptake of crowdfunding in Portugal, as our experts stated (Fjornes, Anger and Wagner, 2022).

With regard to financial participation of the local communities, France serves as a good example. The country has implemented a concrete measure called “bonus participatif” that fosters the financial involvement of municipalities in renewable energy crowdfunding projects. After its introduction in 2015, the French crowdfunding market experienced an enormous growth from 167 million Euros of funds collected through crowdfunding (2015) to 1880 million (2021) (Statista, 2022).



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