

# STRENGTHENING THE ROLE OF AGGREGATORS IN THE ENERGY TRANSITION | *Policy Brief*

## INTRODUCTION

This policy brief 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 renewable energy (RE)**

**aggregators.** Aggregators serve as a broker for transactions between energy suppliers and households and can enable community groups, focussing on prosumership. They also play a central role in the EU energy transition and can further strengthen energy democracy.



This policy brief was compiled by adelphi based on the research work done within the context of the SocialRES project. The SocialRES project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 837758.

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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 [1; 2; 3] 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 [3]. 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 [3].

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 [1; 2] – which aligns with findings of earlier studies [4]. 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 [3] 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 [1].

#### **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 [1;3].

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 [3]. 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 [3]. 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 [3]. 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 [5] 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 [1]. 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.

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Suggested citation: Anger, Kathrin; Jan Fjornes, Andreas Schneller and Philipp Wagner 2023: Strengthening the role of aggregators in the energy transition. Berlin: adelphi research gGmbH.

Publisher: adelphi research gemeinnützige GmbH  
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