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EU Policy Scoping Study on Collective Prosumerism

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What's the aim of this study?

Collective Prosumerism (CP) captures the idea where individual entities transition from passive consumers within the energy system to collectively organized active customers in energy production and consumption. Prosumerism implies that citizens as well as private and public entities take a more active role in the energy system: they not only consume energy, but are also (at least indirectly) involved in the generation of the very energy they consume (Ritter and Mühlenhoff 2024; Ritter et al. 2023; Frieden et al. 2020). As this approach gains traction, so too does the legal framework defining the various formats CP may take on. **Our contribution explores the European Union (EU) legislative and policy environment relevant for CP.** We aim to gain a clear picture on key documents and regulations as well as terms, definitions and provisions that are set therein. The insights are based on a comprehensive literature analysis of existing EU regulations and policies relevant to urban solar penetration and CP. The study is a deliverable (D.1.2.1) of an ongoing project, **Solar4CE-Cities**[1] – a joint initiative of multiple research organisations, local public authorities, and service providers across three Central European cities, namely Budapest (HU), Maribor (SI) and Udine (IT).

What are relevant EU policy documents?

The **EU's legislative framework and policy environment for CP** has been highly dynamic, evolving notably over the last five years. It is mainly shaped by the following policies:

- EP (2018): Directive (EU) 2018/2001 (Renewable Energy Directive (RED) recast)[2]
- EP (2019): Directive (EU) 2019/944 (Electricity Market Directive 2019)
- EP (2024a): Directive (EU) 2024/1711 (Electricity Market Design Directive)
- EC (2022): EU Solar Energy Strategy incl. the EU Solar Rooftop Initiative

The first three documents are directives and therefore legally authoritative. They set the regulatory stage for CP at EU level, which is then translated into national law in all Member States (MS). The provisions of the recast of the **Renewable Energy Directive (RED)** can be considered the starting point of CP on EU level. It extended the notion of prosumerism from individual consumers to 'Jointly acting renewables self-consumers' (Art. 21) and introduced 'Renewable energy communities' (Art. 22). The **Electricity Market Directive 2019** follows and stipulates a definition of 'Active customers' (Art. 2, § 8), which includes jointly acting final customers as a type of CP. Additionally, it formulates the concept of 'Citizen energy communities' (Art. 16). The latter can be seen as an extension of 'Renewable energy communities' in terms of the geographical scope and type of energy supply, which is no more limited to renewable energy – as previously stipulated in the recast of the RED. Just recently, the **Electricity Market Design Directive** added to this the broader concept of 'Energy sharing'. It goes beyond defining organisational structures for CP but articulates an overarching format for CP as an activity. As such, it is also central for clarifying the interaction of different organisational forms of CP (e.g. energy communities) within energy sharing schemes. Article 3 of the Electricity Market Design Directive obliges the MS to transpose its requirements into national law, regulations, and administrative provisions by 17 January 2025.[3] Yet, an exception applies to requirements relating to Energy sharing: the deadline for transposition of Article 2, point 2 and point 5 is 17 July 2026.

[1] More information online: https://www.interreg-central.eu/projects/solar4ce-cities/

[2] Amendments made to the Directive as of 2023 show no relevant alterations on the topic of CP. Therefore, we refer to the recast of the directive as of 2018. The original and first version of the RED was established in 2009.

[3] According to the EU registry for National transposition, only three MSs succeeded to transpose the Directive within the given deadline (17th January 2025): Bulgaria, Lithuania and Finland.

The **EU Solar Energy Strategy**, published in 2022, differs in its type from the other documents listed as it is not a legally binding regulatory document itself. Yet it plays a crucial role in guiding future policies towards more enforceable commitments. The strategy formulates overarching goals with regard to solar expansion across Europe, which are then anchored e.g. in precise legislative provisions such as the directives above.

Central calls of the strategy are an accelerated deployment of solar PV, faster permitting procedures, strengthening the European skilled labour force in the area of solar PV and support of PV-associated industrial activities in Europe. It also lists prosumerism in general, as well as jointly organised prosumerism (i.e. CP) in particular, as a central component of its vision. To incentivise these forms, the EU Solar Energy Strategy advocates both **to create financial incentives and to adapt the existing regulatory framework to the characteristics of CP.** This is exactly what the Electricity Market Design Directive does, which was adopted after the EU Solar Energy Strategy and therefore represents part of its implementation.

One element of the EU Solar Energy Strategy is the **EU Rooftop Initiative**. It defines targets for an EU-wide PV obligation on the roofs of new and existing public and commercial buildings. These targets are for their part transposed into regulation in the recast of the European Performance of Buildings (EP (2024b): Directive (EU) 2024/1275) which sets out mandatory targets for obligatory rooftop PV expansion (Article 10). Besides calling for a compulsory installation of rooftop solar energy on specific buildings, the EU Rooftop Initiative also lays down objectives specific to CP, namely:

- Set up at least one renewables-based energy community in every municipality with a population higher than 10 000 by 2025.
- Ensure that energy-poor and vulnerable consumers have access to solar energy including through CP such as energy communities.

To achieve a detailed understanding of the EU policy environment for CP, this scoping primarily addresses the provisions that are set out in the implementing documents of the EU Solar Energy Strategy. As mentioned above, these are regulatory documents such as the Electricity Market Design Directive, which is at the centre of our report.

Why Collective Prosumerism?

CP enables the integration of a variety of actors as active participants in the energy system: its key idea is to empower a wider group of consumers that do not otherwise have the option of active participation due to financial or spatial constraints (Electricity Market Design Directive, § 22 and 23; Electricity Directive 2019, § 43; RED (recast), § 67). As such, across all forms and activities of CP, EU policy explicitly stipulates that participation shall not constitute the primary commercial or professional activity. CP formats thereby create opportunities that are oriented towards the objective of economic, environmental and social benefits of their participants.

Key motivational drivers[4] for CP in EU policy include:

Inclusive options for participation, including for vulnerable and energy-poor households: CP incentivizes participation of various actors on different levels, namely financial, emotional and procedural participation.

[4] Based on Ritter and Mühlenhoff (2024). The publication refers primarily to energy sharing. However, as this is an overarching concept potentially integrating multiple CP formats, the motivations overlap and are analogously defined throughout the EU policy landscape analysed here.

- **Financial**: Consumers can benefit from lower electricity costs compared to fixed or dynamic pricing models of wholesale energy suppliers. This is particularly relevant for vulnerable and energy-poor consumers, for whom CP schemes actively seek to establish an inclusive environment.
- **Emotional**: Joining a CP format can fulfil an intrinsic desire to contribute to climate change initiatives and utilise self-generated or locally sourced energy. This active participation can enhance social acceptance of the energy transition.
- **Procedural**: By participating in a CP scheme, citizens can take an active role in implementing the energy transition, fostering a sense of involvement and responsibility in the process.

Expanding renewable capacities: Participation-based business models in CP formats can drive private investment in new renewable installations, enhancing social acceptance and ensuring additional capacity beyond existing plants.

Easing grid use: Most of the CP formats stipulate that consumers are located in proximity to the production plants. By this, CP can reduce the need for (costly) grid expansion. Furthermore, CP – and especially the new provisions on Energy sharing - allows for a flexible allocation and pricing of energy. With the integration of appropriate price signals and storage facilities, electricity sharing may help to tap into the flexibility potential of smaller consumers. This, in turn, may alleviate pressure on the grid as peak use may be reduced.

How is Collective Prosumerism addressed in EU policy?

The following table illustrates main formats that EU policy currently holds for CP. The different types of CP are largely conditioned by the ownership structure of production facilities, the geographical scope of electricity production, the type of energy source, involved participants and further entities, and whether grid use is involved. The first three columns describe **organisational structures for CP** (Jointly acting renewables self-consumers and energy communities); the two columns on the right provide details on **Energy sharing as an overarching activity**. This means that these two domains are not mutually exclusive but interlinked: energy communities can be part of Energy sharing schemes. However, they are distinct to other organisational structures such as Jointly acting self-consumers. Further detailed information on the individual formats and their interaction is provided in the sections below.

	Organisational structures			Activity	
	Jointly acting renewables self-consumers	**Renewable energy communities**	**Citizen energy communities**	**Energy sharing without grid use**	**Energy sharing with grid use**
Key regulatory provisions	Renewable Energy Directive (recast)	Renewable Energy Directive (recast)	Electricity Market Directive 2019	Electricity Market Design Directive	Electricity Market Design Directive
Structure or activity	Individual renewable self-consumers	Legal entity that is effectively controlled by shareholders or members		Activity	
Ownership of production plants	Consumers own the production plants	Energy community owns the production plants		Consumers do not necessarily own production plants	
Grid use	No[5]	Possible	Possible	No	Yes
Geographical scope	Within the same building/multi-apartment building	In the proximity of the RE projects that are owned and developed by the RE community	Within the boundaries of one MS	Within the same building/multi-apartment building	Within the same bidding zone or a more limited geographical area (determined by the MS)
Type of energy source	Electricity and heat from renewables	Electricity and heat from renewables	Electricity from renewables and conventional sources (fossil, nuclear)	Electricity and heat from renewables	Electricity and heat from renewables
Participants ***(further description below)***	Individual renewable self-consumers within the same building	Natural persons, SMEs and local authorities, including municipalities	Natural persons, SMEs and local authorities, including municipalities	Active customers	Active customers
Further involved entities	Third-party may own or manage RE installations	-	-	Energy sharing organiser	

[5] Answer valid for self-consumed electricity.

Exemplary constellations	Several residents of a house join together to operate a generation system (without establishing the legal entity of an energy community). They consume the electricity generated by this system individually.	A group of citizens establishes an energy community as a legal entity. The energy community is formed by the citizens who collectively invest in renewable energy installations. The electricity produced is shared amongst the members or shareholders of the energy community. Those members or shareholders may either be located in proximity of the installations (condition for Renewable energy Community) or further away (condition for Citizen energy Community).	Energy sharing between different active customers injecting into the public grid. The customers using the shared electricity may - but do not have to - be directly or indirectly involved in electricity generation. One active customer could be an energy community who would be allowed to share their electricity not only with the members or shareholders of the community, but also with other consumers, e.g. within the same multi-appartment building (no grid use) or a small local company located in the same bidding zone (with grid use).

Jointly acting renewables self-consumers

In Article 2, §15, the recast of the RED sets out the notion of 'Jointly acting renewable self-consumers' as an expansion of individually acting prosumers. This effort can be seen as one of the first and at the same time the most stringent form of a regulatory definition for CP.

The definition is restricted to groups of renewable self-consumers who are located in the same building or multi-apartment block and, therefore, does not explicitly allow MSs to extend the geographic scope. These groups are characterised as collectively acting prosumers, meaning they operate the renewable energy (RE) installations, of which they source energy from, themselves (Art. 2, § 15, RED (recast)). Consequently, they are energy producers in their own right. These self-suppliers are allowed to "arrange sharing of RE that is produced on their site or sites between themselves" (Art. 21, §4, RED (recast)) locally. This allows both a) the constellation that multiple individual self-consumers within the same building share the electricity generated by their respective systems, b) it also includes the constellation that several residents of a house join together to operate a generation system and consume the electricity generated by this system individually (UBA 2023).

Renewable energy communities, Citizen energy communities

Furthermore, the recast of the RED defines the concept of RE communities in regulatory terms for the first time (Art. 2, §16). **This concept extends beyond several individual prosumers and involves a new legal entity**. This rationale also underpins the similar concept of Citizen energy (CE) communities as defined in the Electricity Market Directive 2019 (Art. 2, § 11).

Precisely, what's novel of the concept of RE or CE communities: **the generation plants are operated by the community formed as distinct legal entities, separate from the individual members**. The RE or CE community must be under the effective control of shareholders or members. The collectively generated energy is jointly consumed within the community, including both the legal entity (i.e. the community) and its members or shareholders. In other words, the energy is shared internally, yet limited to the realms of the established community.

The difference between the two concepts – RE and CE communities - lies in the 1) eligible types of energy and 2) their geographical scope. Firstly, while in RE communities - as the name suggests – the energy to be shared shall only be of renewable origin. CE communities allow for the sharing of energy from all types of sources, including fossil fuels. Secondly, members or shareholders of RE communities must be located in the proximity of the communities' RE installations. However, what exactly constitutes 'in proximity' is not further defined and is left to the national legislation of each MS. In contrast, there are no geographical restrictions for CE communities as defined under the Electricity Market Directive 2019. The sole prerequisite for participation in a CE community is therefore that the member or shareholder consuming electricity is located within the same national border.

Energy sharing (without grid use, with grid use)

In its Electricity Market Design Directive, the EU Commission stipulates the most recent definition of Energy sharing (Art. 2, § 1). **This definition is key as it helps to draw a clear regulatory distinction between Energy sharing as an activity on the one hand and organisational structures for CP,** such as energy communities, on the other. With this, it also clarifies the potential role of energy communities within Energy sharing and opens up Energy sharing activities to further stakeholders.

According to the Directive, **Energy sharing is an activity whereby a group of citizens, public bodies and small or medium-sized enterprises (SMEs) can directly share electricity from individually or jointly owned and operated generation units with each other as active customers**. This broadens the scope of Energy sharing to the extent that the final energy consumers do not necessarily have to be directly or indirectly involved in energy generation. It thereby opens the floor for further groups to benefit from Energy sharing such as, for instance, citizens that do not have the financial means to invest into RE installations within the context of an energy community.

The sole prerequisite for participating in Energy sharing is being a so-called 'Active customer': this includes any eligible individual, group or business that has been granted the right to use the shared energy within a specific Energy sharing scheme, either for a fee or free of charge (further information on active customer, see following chapter). Thus, a potential Energy sharing constellation could involve an energy community (may it be an RE or CE community) as one Active customer amongst others. This allows the community to share its self-generated energy not only with the members of the community, but also with other consumers such as a small local company with the status of an Active customer. **Active customers can either share the energy directly or appoint a so-called Energy sharing organiser.** The latter may provide support with, for example, communication with other relevant entities (e.g. suppliers), for contracting and billing or for installation and operation of the RE facilities. As such, the Energy sharing organiser can – but does not necessarily have to – own or manage the RE assets, without being considered an active customer.

As broad as the options for Energy sharing constellations are, so too is the geographical scope of Energy sharing activities: consumption does not have to take place where the energy – i.e. renewable electricity or heat - is generated. All Active customers taking part in the Energy sharing activity are to be located either "within the same bidding zone or a more limited geographical area, as determined by the MS" (Art. 2, § 5). This gives national legislation considerable leeway to articulate 'a more limited geographical area' more precisely. Moreover, it facilitates two fundamental scenarios: on the one hand, Energy sharing behind a single connection point, i.e. without using the grid, as is the case within a multi-apartment building. On the other hand, Energy sharing involving grid use is equally possible.

The who, what and how of CP

Focussing on Energy sharing

Who can be part of CP schemes and who is in charge of which tasks depends on the type of CP configuration. This automatically conditions the requirements for technical configurations that are needed to enable those interactions. The latest definition of Energy sharing as an activity according to the revised Electricity Market Design Directive (Directive (EU) 2024/1711) offers the broadest scope for different participants and constellations of CP**. The following chapters therefore focus on these latest provisions, tackling the questions of:**

- Who can take part in Energy sharing?
- Who takes on which tasks in Energy sharing?
- What provisions are made for underpinning technical configurations?

Who can take part?

One key concept of the recent Electricity Market Design Directive is the so-called **active customer.** We therefore aim to understand who may be eligible under this term to participate in Energy sharing. Also new is the concept of an **Energy sharing organiser**, which we highlight in more detail. Moreover, we look at how **vulnerable or energy-poor customers** are specifically addressed in EU policy for CP schemes.

Active customers

The definition of active customer originates from the Electricity Directive 2019, Art. 2, § 8. The recent Electricity Market Design Directive amended this definition by a small but important detail and now states the following:

> **Article 2 (1a):** "active customer" means a final customer, or a group of jointly acting final customers,
> - who consumes or stores electricity generated within its premises located within confined boundaries, or
> - who **consumes or stores** self-generated or **shared electricity** within other premises, or
> - who sells self-generated electricity or participates in flexibility or energy efficiency schemes,
>
> provided that those activities do not constitute its primary commercial or professional activity.

The key addition is the word shared electricity alongside self-generated electricity. This definition thus also includes those participants as Active customers who merely consume shared electricity from other active customers, which they may not have generated themselves or as part of an energy community. In general, active customers may be all eligible households, SMEs, public bodies and, where a MS has so decided, other categories of final customer.

Those Active customers within the Energy sharing scheme who *do own, lease, or rent* a storage or renewable generation facility have the right to share the RE and/or excess production for a price or free of charge to other consumers**.** In this case, **supplier obligations** apply, with exemptions for small households (see below). The obligations of energy suppliers in the EU are governed by various regulations and directives. Central to the latter are the Electricity Market Design Directive amending the Electricity Market Directive 2019 as well as the RED or the Energy Efficiency Directive (EU) 2018/2002, amongst others. Taken together, they aim at ensuring a competitive, transparent, and sustainable energy market across the EU.

Supplier obligations cover i.a. the following aspects:

- **Consumer rights and protections**, e.g. granting the consumers the right to freely choose or switch their supplier without charges, providing transparent information about tariffs, terms and conditions or protecting vulnerable consumers from electricity disconnections;
- **Market competition,** e.g. guaranteeing a universal service to customers, meaning a guaranteed supply at competitive and non-discriminatory prices;
- **Reporting obligations, e.g.** notifying the relevant regulatory bodies before commencing supply operations or providing data on energy supply and consumption to regulatory bodies;
- **Energy efficiency, e.g.** supporting energy efficiency measures, including demand-side management and energy-saving incentives;
- **Renewable energy integration and environmental compliance, e.g.** facilitating the integration of RE in their portfolios; complying with Guarantees of Origin to certify the renewable nature of electricity;
- **Security of supply,** e.g. limiting the risk of supply failure.

Active customers may settle payments for sharing excess energy production either directly between them or facilitated through a so-called Energy sharing organiser, such as an automated peer-to-peer trading platform. Energy sharing arrangements may either rely on private contractual agreements between the participating customers or be organised through another legal entity, also acting as an Energy sharing organiser (described in the following section).

Provisions for large-scale customers: There are few limits to participation constellations in Energy sharing concepts. However, for large-scale customers there is a clear one: if these are larger than SMEs, the installed capacity of the **production facilities involved in the Energy sharing scheme must not exceed 6 Megawatt**. Also, Energy sharing is then to take place within a local or limited geographical area – defined by the specific MS.

Exemptions of supplier obligations for self-consumption in households and multi-apartment building (CP type – Energy sharing without grid use): Supplier obligations do not apply to **households with an installed capacity up to 10,8 kW for single households and up to 50 kW for multi-apartment blocks**.[6] MSs are able to adjust those thresholds to reflect national circumstances, up to 30 kW for single households and to between 40 kW and 100 kW for multi-apartment blocks.

Energy sharing organiser

Above mentioned are just some of the tasks that active customers can delegate to **Energy sharing organisers** (defined in Electricity Market Desing Directive, Art. 4, § 5). The latter **act as third-party facilitators, helping to streamline processes and to reduce complexity for supplying active customers.** Energy sharing organisers can be, for instance, energy trading platforms, third-party providers implementing demand-response programs or flexibility management platforms. An example is the Dutch peer-to-peer energy trading platform Powerpeers[7] that allows users to buy and sell renewable energy directly from one another. The Energy sharing organiser or another third party may also own or manage a storage or RE installation (up to 6 Megawatt) without being considered an active customer. More information on the tasks of an Energy sharing organiser is detailed in the following chapter.

[6] MSs are able and encouraged to adjust those thresholds to reflect national circumstances. Set limits are up to 30 kW for single households and between 40 kW and 100 kW for multi-apartment blocks.

[7] https://powerpeers.nl/

Vulnerable or energy-poor consumers

One motivation behind CP is to decrease dependencies of high wholesale market prices, which can significantly impact consumers' energy bills. In concrete terms, this may be achieved if consumers receive the shared energy at lower costs (e.g. via grid tariff reductions in the event that CP moves generation and consumption spatially closer together and reduces grid use).[8] By empowering a broader group of consumers — especially those facing financial or spatial limitations — CP schemes aim to create inclusive opportunities for active participation in the energy market. As such, the overarching EU Solar Energy Strategy emphasises to leverage the potentials for CP in order to counter energy poverty and vulnerability. **Particular attention shall thereby be put to (most) remote regions, which often face higher limitations.**

In this line, Article 2, § 7 of the Electricity Market Design Directive calls on MSs to implement "appropriate and non-discriminatory measures to ensure that vulnerable customers and customers affected by energy poverty can access Energy sharing schemes. Those measures may include financial support measures or production allocation quota." This is translated into concrete terms for Energy sharing schemes that are implemented by public authorities: in this case, **the directive mandates a minimum of 10% of the shared energy to be made available to vulnerable or energy-poor active customers.**

Who takes on which tasks?

Energy sharing schemes are often a complex endeavour. This is where it helps to assign tasks and duties clearly to different stakeholders. And this is precisely what the Energy Market Design Directive does for Energy sharing activities. It furthermore provides options for involving actors with relevant know-how to support processes such as billing or metering, which may go beyond the capabilities of public authorities, businesses, or citizens. In the following, **we outline the responsibilities that the directive establishes for Energy sharing organisers as well as Transmission System Operators (TSO) and Distribution System Operators (DSO).**

Tasks of an Energy sharing organiser

A novelty in the Electricity Market Design Directive is the concept of the Energy sharing organiser. It is a third-party entity that active customers can appoint and assign to perform different tasks. The idea is that active customers may have the option to externalise tasks to entities or platforms offering expertise specialised in the respective processes, e.g. billing or contracting. **This helps to reduce the (administrative) strain on active customers, ultimately lowering the hurdles and complexity of participation in Energy sharing schemes and streamlining processes**. As articulated in Art. 2, § 5 in the directive, Energy sharing organisers may be appointed with the following tasks:

- Communicating about the Energy sharing arrangements with other relevant entities, such as suppliers and network operators, including on aspects related to the applicable tariffs and charges, taxes or levies;
- Providing support for managing and balancing behind-the-meter flexible loads, distributed renewable energy generation and storage facilities that are part of the relevant Energy sharing arrangement;

[8] As the EU Solar Energy Strategy points out, at the same time, such cost-reflective tariffs should not lead to discrimination against those who do not have access to self-consumption.

- Contracting and billing active customers that participate in Energy sharing;
- Installation and operation, including metering and maintenance, of the RE generation or storage facility.

For all the potential tasks that an Energy sharing organiser can take on, the directive prompts that the latter provides non-discriminatory services and transparent prices, tariffs, and terms of services.

Tasks of TSOs and DSOs

Transmission system operators (TSOs) and distribution system operators (DSOs) function as a key interface in the electricity supply chain, as they are responsible for transporting electricity from the generation sources to the consumers. **They are of particular relevance in Energy sharing schemes involving grid use**. By facilitating the connection of local Energy sharing initiatives to the grid, they ensure that energy can be shared effectively (and potentially also flexibly) between active customers. Yet, their responsibilities, according to the Energy Market Design Directive (Art. 2, § 5), go beyond this and include:

- Monitoring, collecting, validating and communicating metering data related to the shared electricity at least every month, and, for that purpose, put in place the appropriate IT systems;
- Providing a relevant contact point to
  - Register Energy sharing arrangements;
  - make available practical information for Energy sharing;
  - receive information on relevant metering points, changes in location and participation; and
  - where applicable, validate calculation methods in a clear, transparent, and timely manner.

What are underpinning technical configurations?

Appropriate IT infrastructure

According to the Electricity Market Design Directive, the **MSs should enable an IT infrastructure that can adequately measure and calculate the shared energy production and consumption of customers taking part in Energy sharing schemes** (§ 24). This is a basic condition for settling metered supply in the bill, i.e., to subtract this amount of energy from the customers' total supply. The goal is to lower the customer's bill by the amount of energy sourced locally, i.e., self-generated or shared, through Energy sharing and/or other CP schemes. Who is responsible for calculating the share of local energy supply varies and may lie with a central data hub, the supplier, or an energy community (EC 2024). Under the definition of Energy sharing, support on metering and calculation methods can also be provided by an Energy sharing organiser (see above).

As one integral part, **the Electricity Market Design Directive calls for IT infrastructure which allows customers to have multiple metering and billing points connected to a single connection point for their premises.** This enables different appliances to be measured and supplied separately, i.e., partly by energy supplied in a sharing scheme and partly by energy from the whole-sale electricity market. Each metering point should be clearly identifiable.

A key enabler is the use of smart metering systems: some smart metering systems can manage multiple metering points simultaneously, allowing customers to have more than one electricity supply contract or Energy sharing agreement at the same time. A timely and reliable roll-out of such systems is thus decisive – and lies largely within the responsibility of Distributed System Operators (DSOs). In some MSs, DSOs are obliged to upgrade their IT infrastructure within a set timeframe, e.g., within six months. However, a survey of the European Commission amongst energy communities across various MSs revealed significant delays in the development of this IT infrastructure, including the introduction of smart meters (EC 2024). Concrete deadlines for the roll out of IT infrastructure help to tackle this issue. For instance, in Austria consumers have a right to have a smart meter installed within two months upon request.

Dynamic price contracts & allocation of flexible loads

Energy sharing harbours high potentials to tap into the flexibility potential of smaller consumers. For this to occur, appropriate price signals as well as storage and flexible allocation options need to be possible and made available. To this end, the Energy Market Design Directive calls on responsible authorities (i.e. energy suppliers) to **provide a variety of contractual offers to citizens – including dynamic price contracts** (§ 8 and § 17). Dynamic price contracts are agreements in the energy sector that allow the price of electricity to fluctuate based on market conditions. This means that consumers may pay different rates for electricity at different times, depending on demand and supply dynamics (Agora EW and Forschungsstelle für Energiewirtschaft e.V. 2023). These contracts are designed to encourage consumers to adjust their energy usage according to price changes, potentially leading to cost savings during off-peak hours when prices are lower or, the other way round, cost increases during peak hours.

In this line, **the directive allows – and encourages – the allocation of shared energy to be flexible, where possible and feasible** (Energy Market Design Directive, § 24). Which active customer is allocated how much shall depend on the overall consumption profiles of each active customer who disposes of appliances with flexible, controllable loads. To facilitate such flexible allocation processes, it is essential that appropriate infrastructure (see above) is in place allowing, e.g. for variable or dynamic calculation methods of each customers energy consumption and allocation needs. As such, **Art. 2, § 12 prompts the regulatory authority to monitor the removal of obstacles to the connection of flexible distributed energy generation for active customers involved in CP schemes.**

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Glossary

Term	Definition	Reference
Active customer	Final customer, or a group of jointly acting final customers, · who consumes or stores electricity generated within its premises located within confined boundaries, or · who consumes or stores self-generated or shared electricity within other premises, or · who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity.	Directive (EU) 2024/1711 *Electricity Market Design Directive*
Collective Prosumerism	Concept where individual entities transition from passive consumers within the energy system to collectively organized active customers in energy production and consumption.	Own definition
Citizen energy community	A legal entity that · is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises; · has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and · may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders.	Directive (EU) 2019/944 *Electricity Market Directive 2019*
Directive	Legally authoritative documents. They set the regulatory stage for policies at EU level, which are then translated into national law in all Member States (MS).	Own definition
Energy sharing	Activity whereby a group of citizens, public bodies and small or medium-sized enterprises (SMEs) can directly share electricity from individually or jointly owned and operated generation units with each other as active customers.	Directive (EU) 2024/1711 *Electricity Market Design Directive*

Energy sharing organiser	Third-party facilitators, helping to streamline processes and to reduce complexity for supplying active customers. Energy sharing organisers can be, for instance, energy trading platforms, third-party providers implementing demand-response programs or flexibility management platforms.	Directive (EU) 2024/1711 *Electricity Market Design Directive*
Jointly acting renewables self-consumers	A group of at least two jointly acting renewables self-consumers who are located in the same building or multi-apartment block. Renewables self-consumers are final customers who generate renewable electricity for their own consumption, and who may store or sell self-generated renewable electricity. The provision is that those activities do not constitute its primary commercial or professional activity.	Directive (EU) 2018/2001 *RED (recast) 2018*
Legal entity	A legal or social entity is one whose existence is recognized by law or society independently of the persons or other entities that may own or control it.	Eurostat Glossary
Prosumerism	Constellation where citizens as well as private and public entities take a more active role in the energy system: they not only consume energy, but are also (at least indirectly) involved in the generation of the very energy they procure.	Own definition based on [i.a.] Ritter and Mühlenhoff 2024; Ritter et al. 2023; Frieden et al. 2020
Renewable energy community	A legal entity · which is autonomous, and effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity; · the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities; · the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits.	Directive (EU) 2018/2001 *RED (recast) 2018*
Vulnerable and energy-poor consumers	Certain groups of consumers that can be particularly vulnerable and need specific safeguards. The vulnerability of consumers can be driven by social circumstances or because of particular characteristics of individual consumers or groups of consumers, such as their age, gender, health, digital literacy, numeracy or financial situation. Energy poor households are unable to afford their basic energy services due to a combination of low income, high expenditure on energy and poor energy efficiency of their homes.	· Briefing of the European Parliament on "Vulnerable Consumers" · Directive (EU) 2019/944 (Recital 59) *Electricity Market Directive 2019*