

Confrontations Europe's minutes | Seminar

SELF-CONSUMPTION IN THE HANDS OF EUROPEAN CITIZENS: THE CHALLENGES TO BE MET

23.09.2019 | 2 pm – 5 pm | European Economic and Social Committee

“The participation of local citizens and local authorities in renewable energy projects through renewable energy communities has resulted in substantial added value in terms of local acceptance of renewable energy and access to additional private capital which results in local investment, more choice for consumers and greater participation by citizens in the energy transition. Such local involvement is all the more crucial in a context of increasing renewable energy capacity.”¹

Welcome speech:

Mr. Pierre-Jean COULON, President of the TEN section of the EESC

Panelists:

Mr. Jean-Baptiste GALLAND, Strategy Director, Enedis

Mr. Josh ROBERTS, Advocacy Officer, RESCoop.eu

Mr. Claes SOMMANSON, Head of Projects, Johanneberg Science Park

Mr. Dirk VAN EVERCOOREN, Director Markets at VREG – Flemish Regulator of Electricity and Gas Markets, CEER

Moderator:

Mr. Michel CRUCIANI, Senior adviser on climate and energy issues, Confrontations Europe

At the end of 2018, the European Union finalised the adoption of the *Clean Energy for All Europeans* Package which revised the European energy policy. It supports the EU climate action plan aiming to cut substantially its greenhouse gas emissions. The Clean Energy Package's provisions induces major changes in the whole electric system, among which the acknowledgement and support of the citizens' involvement in the energy transition. Indeed, while they had never been mentioned before in European legislation energy communities are now defined in two revised directives. It offers therefore a new opportunity for citizens to engage themselves in the energy transition. Collective self-consumption and energy sharing are currently drawing interest.

The seminar provided the opportunity for a panel of experts and attendees to debate further on the opportunities and challenges induced by the Clean Energy Package's provisions related to this brand new Europe-wide level playing field for energy citizen initiatives.

¹ [Renewable Energy Directive \(2018/2001\)](#)

Key definitions:

The Clean Energy Package introduces two types of energy communities. The directive on the promotion of the use of energy from renewable sources² acknowledges the existence of “renewable energy communities” (REC) while the electricity market directive³ defines the “citizens’ energy communities” (CEC).

“‘Citizen energy community’ means a legal entity that: (a) is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises; (b) 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 (c) 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;” Electricity Market Directive (2019/944)

“‘Renewable energy community’ means a legal entity: (a) which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is 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;

(b) the shareholders or members of which are natural persons, SMEs or local authorities, including municipalities; (c) 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;” Renewable Energy Directive (2018/2001)

As a reminder, for a directive to take effect at national level, Member States must adopt a law to transpose it. This national measure must achieve the objectives set by the directive. Transposition must take place by the deadline set when the directive is adopted (generally within 2 years). The deadlines for the transposition of the renewable energy directive and the electricity market directive are respectively January 2021 and July 2021.

REC and CEC are both groups of citizens, coming together for an energy project, aiming to produce, store and consume the energy they have produced. There are different legal forms of community ownership of renewables such as partnerships, cooperatives, community trusts, housing associations, charities, social enterprises and public utilities. Consumers should not be forced into a sharing scheme or community and, conversely, consumers should not be prevented from joining a sharing scheme or community.

² [Ibid.](#)

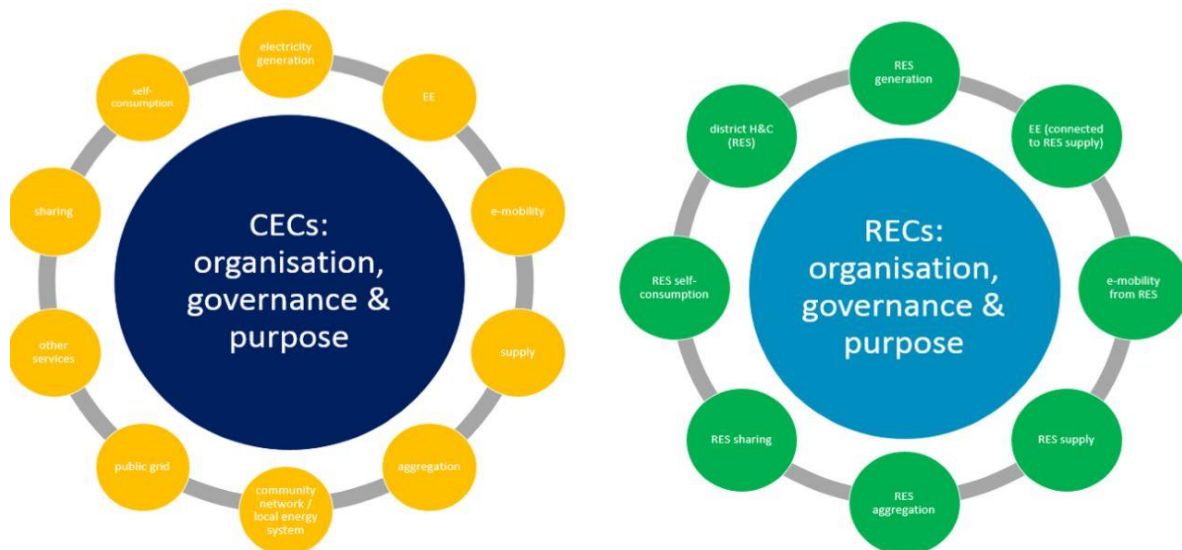
³ [Electricity Market Directive \(2019/944\)](#)

At first glance, they are quite similar; the truth is that REC can generally be seen as a subset of CEC.

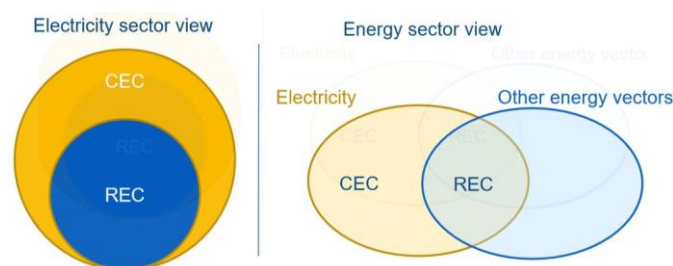
	Activities	Geographic scope	Governance	Regulatory treatment	Grid
Citizen Energy Community	Supply, consumption, storage, aggregation and distribution of electricity , other energy services	No explicit geographical limitation	Citizens, SME, public authorities - Effectively controlled by members or shareholders	Aim to create a level playing field for communities	Member State may allow CEC to have DSO status Possibility to give them the advantages of "closed networks"
Renewable Energy Community	Production, consumption, storage and selling of renewable energy	Members to be located "in proximity" of community renewable energy projects	Exclusively citizens, SMEs or local authorities. - Effectively controlled by local members or shareholders	Instrument to promote and facilitate the development of RE - Elimination of barriers	Grids excluded from RECs

Source: CEER PPT presentation

CEC can for instance own a simple generation assets or propose direct services to the local community (e.g. advice on energy efficiency or initiatives to help reducing energy poverty).



Source: REScoop.eu PPT presentation



Source: CEER PPT presentation

Comparing eligibility criteria: Renewable Energy Communities & Citizen Energy Communities

	in the Renewables Directive Renewable Energy Communities	in the Electricity Directive Citizen Energy Communities
ELIGIBILITY 	Members/shareholders that are: <ul style="list-style-type: none"> • Natural persons. • Local authorities (including municipalities). • Micro-, small and medium enterprises (SMEs) 	Members/shareholders that are: <ul style="list-style-type: none"> • Natural persons. • Local authorities (including municipalities). • Micro- and small enterprises • Medium and large enterprises.
COMMUNITY/ NON-COMMERCIAL PURPOSE alternative to for-profit 	Primary purpose: Environmental, economic, social community benefits for members or local areas of operation rather than financial profits.	Primary purpose: Environmental, economic, social community benefits for members or local areas of operation rather than financial profits.
OPEN & VOLUNTARY MEMBERSHIP 	<ul style="list-style-type: none"> • Participation must be voluntary. • Participation in renewable energy generation projects should be open to all potential local members based on non-discriminatory criteria. 	<ul style="list-style-type: none"> • Participation must be voluntary. • Participation should be open to all potential members based on non-discriminatory criteria.
DEMOCRATIC GOVERNANCE & OWNERSHIP 	<ul style="list-style-type: none"> • Must be autonomous - no disproportionate control by individual members/outside partners in decision-making. • Effective control by members/shareholders that are in 'proximity' to RES projects. 	<ul style="list-style-type: none"> • No autonomy principle, but decision-making powers should be limited to members not involved in large scale commercial activity and where the energy sector does not constitute a primary area of economic activity. • Effective control by members/shareholders that are natural persons, local authorities (including municipalities) and small and micro-enterprises.

Source: RESCoop.eu PPT presentation

In a perspective of energy transition, energy communities present many advantages: reduced energy consumption through efficiency and conservation and in the case of REC less CO2 emissions by switching from fossil fuels to renewable energy. They could also be connected to or be managed as a smart grid where information flows. Motivations for citizens to take part in an energy community is benefiting from fair and affordable access to local, and in the case of REC, clean renewable energy sources.

Challenges

One of the cornerstones of the Clean Energy Package is the right for citizens to use shared energy on top of traditional supply from the supplier. Therefore, there is an impact on the customer load profile as customers may consume less energy from outside suppliers. Concerns are rising as predictability of customer consumption will be reduced, leading thus to a higher balancing risk and cost.

Concerning suppliers' obligation, if they are obliged to offer customers within an energy community the same conditions that apply to any other customer, there is no risk of discrimination of customers belonging to an energy community. However, in terms of negative impacts, there is a risk of free riding and cross-subsidisation. Indeed, the extra costs associated to the higher imbalance risk and, possibly, higher average cost of energy from the grid will in the end be borne by all customers. Correct fees should therefore apply if public grid is used and any savings for customers must reflect a benefit for the grid.

The transposition on national level will be critical to energy communities' proliferation and viability throughout the European Union. To prevent energy communities from causing perverse effects on the whole energy system network and to ensure their success, our panellists made some key recommendations. First of all, consumer engagement models need to be accessible to all consumers. Consumer engagement should be facilitated by innovative services such as apps; moreover, the framework for new models needs to leave space for innovative technology to facilitate market activity.

Consumers have the right to access relevant information, including those related about financial risks. As stated in both directives, Member States should ensure that participation in new models is truly voluntary and open to all. Unnecessary daunting administrative barriers should be avoided, while ensuring transparency and responsibility towards the market. In addition, Member States have to guarantee the free choice of supplier for consumers.

Regarding old and new energy actors, responsibilities have to be clear: new actors taking on a particular market role need to have the same rights, responsibilities and obligations as an equivalent conventional market actor. Furthermore, where several actors interact with the same connection point (e.g. sharing community, aggregator, etc.), responsibilities need to be clearly assigned.

The energy communities' prosperity will depend on their ability to improve the user experience and comfort. Many consumer engagement initiatives aim at unleashing the consumer's flexibility potential; however, these initiatives should also aim to ensure that flexibility is used where it brings most value for the electric system. Indeed, local consumption and production matching is one option, but not necessarily ideal from the system perspective. «Communities» and «active consumers» are energy actors and therefore part of flexibility markets. This is why they raise the same opportunities and challenges such as actors like aggregators.

In the light of what have been said above, it appears that the Clean Energy package has introduced a more formal framework for active consumers and citizen energy projects. Both directives leave a lot of flexibility to Member States to adapt to the national specificities and existing situations. From CEER's perspective, the priorities are to avoid the free-rider phenomenon (i.e. energy communities are used to circumvent existing regulation (supplier/DSO obligations, network charges etc.)), safeguard consumer rights and, at last but not least, ensure that all actors operate on a level playing field and unleash their potential for the energy transition.

Example of an energy community in the European Union: Fossil-free energy districts (FED) in the city of Gothenburg

FED is a European project financed by EU-program Urban Innovative Actions (UIA). It aims to support the EU to drastically decrease the use of fossil based energy and increase the security of supply as well as avoid fossil energy peaks. The strategy adopted is to set up a local market place for electricity, heating and cooling which could be easily replicated all over Europe. Its objective is also to propose cost-effective energy improvement solutions, whilst avoiding higher rental cost for economically disadvantaged citizens. One of the energy challenges in Sweden is to replace old nuclear plants with new renewables; projects as such FED will demonstrate the feasibility of fossil-free district without nuclear energy. The Swedish target is to totally get rid of natural gas and oil by 2030.

FED demonstrates solutions for:

- Energy efficiency and smart energy management in public infrastructure and housing sector;
- Low carbon energy production and moderating the demand for heating and cooling;
- Deployment of innovative, renewable-based solutions to heat/cool buildings and neighbourhoods.

The demonstration site is a campus with about 15 000 end-users with its own ecosystem of property owners, energy infrastructure, users -including citizens who produce their own electricity, different buildings usage profiles. Generation of energy, storage, distribution and use are optimized. The "FED system solution" includes intermediate storage as well as heating/cooling storage in the building's structure, geothermal heat pumps and batteries for electricity. A local energy market has also been

established to enhance energy exchange and cooperation between several stakeholders. It will lead “to new business and revenues for the real-estate owners and users, utility companies, and 3rd party suppliers”⁴.



Source: FED project PPT presentation

How does a DSO such as ENEDIS support energy communities?

Enedis is the French National Distribution System Operator (DSO). It has developed a customized system to support the development of collective self-consumption in France. Under the geographical proximity criterion (law PACTE), Enedis can set contracts with energy communities since they are market actors.

The cornerstones are the following: open access to local electricity generation, guarantee electricity supply even in the absence of local production, allow evacuation and recovery of local production not consumed, guarantee the quality of the electricity (stability in voltage and frequency), produce reliable and certified metering data, leave free choice of complementary electricity supplier (no consumer to be forced) and support different types of collective self-consumption⁵.

The data generated by collective self-consumption are crucial to ensure the stability and the flexibility of the grid. They are collected via smart meters named “Linky”. The Linky smart meters communicate with data concentrators through power line carrier technology. It enables Enedis to anticipate the possible consequence of the community and to operate the grid in near real-time. The data are also used to bill the electricity transit through the network as well as the residual electricity supplied. In addition, they are used to apply taxes and contributions and to implement the balancing mechanism.

⁴ [FED - Fossil Free Energy Districts](#)

Enedis is currently calling for improvement in existing regulation, particularly with regard to tariff structure (rebalancing power and energy prices). Any tariff saving for customers should reflect a benefit for the grid.

Discussion points

- Energy communities are expected to use more and more platforms (e.g. cloud services) to share their data related to energy production and consumption. The big tech companies such as Ericsson, Google, Amazon... will probably seize the opportunity to be involved in those communities. However, energy communities should not be commercially-driven even if commercial players are involved;
- Before the Clean Energy Package, citizens were not mentioned in the EU policy energy at all; it is a big step forward to involve more citizens in the energy transition and also to enhance the social acceptability of using more and more renewables;
- There is no “standard profile” or sociological profiles of citizens who take part in a REC or CEC;
- Energy communities’ capacities to monitor themselves are often limited; DSOs and actors such as REScoop.EU have a key role to play in supporting them;
- Member States should set incentives to allow the thrive of REC. Perverse effects of incentives that might dissuade citizens from establishing energy communities should be seriously taken into consideration.
- Two definitions for energy communities (renewable energy communities and citizen energy communities) in two directives can be confusing for both neophyte and experienced energy actors. This arises from the EU negotiations that took place within the different institutions during several months.

Relevant documentation on collective self-consumption and energy communities

- [Implementing Technology that Benefits Consumers in the Clean Energy for All Europeans Package](#), CEER, July 22nd 2019
- [Collective self-consumption and energy communities: Overview of emerging regulatory approaches in Europe Working paper, COMPILER](#), June 2019
- [Mobilising European Citizens to Invest in Sustainable Energy, MECISE, REScoop.EU](#), February 2019
- [Prosumer Energy and Prosumer Power Cooperatives: Opportunities and challenges in the EU countries, Janusz PIETKIEWICZ, EESC](#), October 19th 2016

Websites

- Council of European Energy Regulators : <https://www.ceer.eu/web/portal/welcome>
- ENEDIS : <https://www.enedis.fr/autoconsommation-collective>
- European Economic and Social Committee : <https://www.eesc.europa.eu/en>
- FED - Fossil Free Energy Districts : <https://www.uia-initiative.eu/fr/uia-cities/gothenburg>
- REScoop.eu : <https://www.rescoop.eu/>