Citizens Energy Communities: Recommendations for a successful contribution to decarbonisation

Eurelectric position paper

May 2019

Eurelectric represents the interests of the electricity industry in Europe. Our work covers all major issues affecting our sector. Our members represent the electricity industry in over 30 European countries.

We cover the entire industry from electricity generation and markets to distribution networks and customer issues. We also have affiliates active on several other continents and business associates from a wide variety of sectors with a direct interest in the electricity industry.

We stand for

The vision of the European power sector is to enable and sustain:
- A vibrant competitive European economy, reliably powered by clean, carbon-neutral energy
- A smart, energy efficient and truly sustainable society for all citizens of Europe

We are committed to lead a cost-effective energy transition by:

investing in clean power generation and transition-enabling solutions, to reduce emissions and actively pursue efforts to become carbon-neutral well before mid-century, taking into account different starting points and commercial availability of key transition technologies;

transforming the energy system to make it more responsive, resilient and efficient. This includes increased use of renewable energy, digitalisation, demand side response and reinforcement of grids so they can function as platforms and enablers for customers, cities and communities;

accelerating the energy transition in other economic sectors by offering competitive electricity as a transformation tool for transport, heating and industry;

embedding sustainability in all parts of our value chain and take measures to support the transformation of existing assets towards a zero carbon society;

innovating to discover the cutting-edge business models and develop the breakthrough technologies that are indispensable to allow our industry to lead this transition.

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Recommendations for a successful contribution to decarbonisation

A Eurelectric position paper May 2019

KEY MESSAGES

- Citizens Energy Communities (CEC) should play a key role in electrification and decarbonisation of the society by providing flexibility and efficiency to the system.

- The general definitions given in the revised Electricity and Renewable Energy Directives should be further clarified to ensure consistency, namely by defining the types of interactions between existing and new entities, as well as among the already existing entities (REC, CEC…).

- CEC should endorse all related duties and responsibilities (especially balancing responsibility) when acting as a supplier, active customer or as any other market role already defined. Obligations and duties between distribution system operators (DSOs) and CEC should be detailed for every type of configuration that could be envisaged between them.

- The creation of a CEC should not change the status of the distribution system operator and its role in the ownership and management of the inner grid. Such configuration is the best option to contribute to both accelerating the development of CEC and supporting a cost-effective decarbonisation.

- Connection between a CEC and DSOs should be based on physical grid characteristics. The connection points between the CEC and the physically connecting DSO should be clearly defined in order to charge accordingly the CEC in a cost-reflective way, avoiding cross-subsidies.

- As far as network charges are concerned, the cost-reflectiveness principle should be applied as follows:
  - CEC shall be subject to an appropriate network tariff reflective of any use of the distribution grid.
  - Potential benefits and services brought by CEC in terms of flexibility to the main grid should also be adequately remunerated through a specific scheme in a clear, non-discriminatory and transparent way.

- Member States allowing CEC to own and manage distribution networks should ensure that they are subject to the same regulatory framework as the current DSO.

- Energy companies should be allowed to act as service-providers for CEC in order to facilitate its development and accelerate its contribution to decarbonisation and flexibility.

- Participation to an energy community should always be voluntary:
  - Individual rights and obligations for consumers within the community shall be fully respected, particularly regarding fair metering and billing, while ensuring they respect contractual agreements with the community in regard to payments of exit or termination fees.
  - Member States should consider and define guidelines to address situations where a consumer leaves the community and where the CEC comes to an end in order to ensure that consumers keep the same rights and obligations

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Introduction

With the evolution of the energy system towards a growing share of decentralised generation and growing demand for electricity due to electrification, an increasing number of households, enterprises, public authorities, cities and municipalities are ready to participate as active players in the energy transition. This trend is facilitated by growing awareness of customers (regarding energy prices, ecological footprint …) and technological developments in the area of renewable energy generation technologies, batteries, demand response technologies, electric vehicles, smart meters/grids, etc.

The Clean Energy Package takes stock of this dynamic by acknowledging more concretely the role of consumers and citizens in the energy transition. The different legislative proposals of the package, and more specifically the Electricity Directive and the Renewable Energy Directive (RES), have therefore endorsed "prosumers" as new actors in the system.

Several new entities are thus created in this perspective:

<table>
<tr><th>Electricity Directive</th><th>Renewable Directive</th></tr>
<tr><td rowspan="2">Active consumers (Article 2/15)</td><td>Renewable self-consumers (Article 2/21)</td></tr>
<tr><td>Jointly acting renewable self-consumers (Article 2)</td></tr>
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Eurelectric recognises the development of Citizens Energy Communities using renewable generation at local scale as a key driver for decarbonisation and consumer's empowerment. They may indeed represent an important added-value for the system:

- They have significant potential for both demand-side flexibility and storage in times of abundant renewable generation through the development of renewable self-generators, electric vehicles and stationary batteries.

- They also can help to lower investments overall on decarbonisation and electrification: when acting as self-consumers, active consumers or self-generators, Citizens Energy Communities can contribute to reducing grid losses at local level and to improving grid capacity and local flexibility.

With this report, Eurelectric provides recommendations to ease the national implementation of both directives, by 1) analysing the text and highlighting elements which would require further clarification and 2) putting forward high-level principles which should be followed by member states and NRAs. Eurelectric believes that if member states stick to those principles, the Clean Energy Package will become a real success for Citizens Energy Communities and all European market participants. In annex, the report also includes an overview of Energy Communities or similar structure currently existing across Europe.

Recommendations for Implementation

Based on the analysis of existing national models and provisions of Electricity and RES Directives, Eurelectric would like to highlight the following guiding principles for national implementation:

⇨ **General definitions:**

These new articles represent a valuable clarification of the existing models across the EU, particularly regarding the existing cooperatives and public investment instruments whose missions are similar. They also allow those new actors to interact directly with the market for the participation in energy services schemes, for example flexibility, aggregation and storage.

However, the CEP is a missed opportunity to define a fully clear and transparent regulatory framework. Indeed, there remain a couple of uncertainties in the different texts:

- While Renewable Citizens Energy Communities could be understood as a subset of Citizens Energy Communities, the concrete link between the two entities is not clear.

- It is unclear in the directives how existing cooperatives should be handled. Quite a number of different cooperatives exist across Europe and general guidelines for transfer into new national framework should be foreseen.

- There is no specific provision on the geographical scope of a CEC which could lead to uncertainties on the roles and responsibilities of each stakeholder.

Recommendations for the implementation

- The clear links between the different definitions included in the texts (e.g. the relationship between Citizens and Renewables Communities and between active and renewable customers) should be specified by Member States. National implementation text should define the types of interactions the new structures should have with the existing entities, if relevant.

- Member States should also provide guidance on what is defined as “social, environmental, economic benefits” (Article 2.7)

- Member States should consider introducing a geographical scope for the CEC in order to clarify the responsibilities of each market player and foremost in the area where the DSO operates and interacts with the CEC.

- Existing Cooperatives should transfer into new national framework for CEC over a period.

- The Electricity Directive introduces the notion of compensation for the DSO when realising energy transfers within a CEC. A clarification of the legal concept of the energy transfer and the remit of such activity would be useful.

⇨ **On governance and participation provisions:**

The definitions of Citizens Energy Communities in both the Electricity Directive and the Renewable Energy Directive coincide to the extent that effective control may only be exercised by natural persons, local authorities including municipalities and SMEs. While membership in Citizens Energy Communities is open to all categories of entities, it seems to be excluded that larger enterprises or utilities participate in the decision making (see also recital 30a Electricity Directive). Moreover the text stresses that assets could be owned by the energy community itself and leaves the possibility for the leasing of those assets. The latter should be further clarified during the implementing phase.

While these provisions do not prevent utilities and other enterprises from acting as a service provider to Citizens Energy Communities, they might however place unnecessary restrictions on business models (e.g. based on leasing of assets or Power Purchase Agreements - PPAs). This could weaken the economics of the projects and hamper the development of the CECs. Allowing a more active role for energy companies, as it is already the case in several Member States (e.g. through PPAs or the installation of renewable assets at a commercial or industrial site in the neighbourhood where the energy could be shared within the CEC) could significantly improve the economics of the projects, accelerate their development and contribution to the system or even make them possible at all.

Recommendations for the implementation

- National transposition should allow energy companies to play a third-party service providers role in the different tasks of those communities, for example :
  - Physical set-up: installation of remote systems control to manage flexibility, renewable generation assets, distributed storage;
  - Physical operation : management of distributed assets (e.g. chargers) to ensure implicit flexibility to lower energy sourcing costs and or that the connection capacity is respected, operation and maintenance of distributed assets;
  - Energy Management: external energy sourcing, trading, risk management, selling explicit flexibility;
  - Commercial operation: invoicing, contractual duties and obligations, local incentives;
  - Micro-grid management and financial services (e.g. investment).

- Larger non-energy companies (e.g. super markets or shopping centres/malls) should also not be excluded from being (voting) members as they might be the ones that have the sites and financial means available to make the investment

⇨ **On roles and responsibilities on the market:**

The provisions of the CEP provide a very welcome clarification by stating that Citizens Energy Communities should be able to act on a level playing field with other market actors, regardless of the roles that they are executing (final customers, generators, suppliers, DSOs). Derogations to this balancing responsibility may be provided by member states within the framework defined by Article 4 of the Electricity Regulation (i.e. demonstration projects, small RES installations < 400 kW etc.). Consequently, Eurelectric approves the Electricity Directive provisions stating explicitly that CEC are subject to balancing responsibilities and to cost-reflective network tariffs and levies ensuring that they contribute in an adequate and balanced way to the overall cost sharing of the system.

Recommendation for the implementation

- When acting as a supplier, active customer or as any other market role already defined, CEC should endorse all related duties and responsibilities (especially balancing responsibility) attached to them.

⇨ **On interaction with grid operators and network charges, taxes and levies:**

Regarding the ownership of the grid, the text leaves room for two main configurations:

- Member states are given the possibility to grant CEC with the right to manage a distribution network within a limited area. Eurelectric welcomes that the text is very clear on the point that in such cases, Citizens Energy Communities will face the same responsibilities and obligations (such as metering, connection, billing and licensing) as other DSOs.
- Member States can also choose to preserve DSO's ownership of the network. This option is beneficial for both the system and the CEC, as it creates new synergies by 1) allowing the CEC to rely on the same quality of grid services (grid infrastructure and metering services) and 2) by providing flexibility services to the grid in return. This could thus contribute to accelerate the development of CECs and encourage their contribution to cost-effective decarbonisation.

In most cases, CEC will be still connected to the main grid and use it for back-up energy supply. This network availability has a cost and needs to be paid for even if it's not used all the time. When a CEC is connected to the grid and use their services, it should contribute to its costs, encompassing distribution costs, policy costs, taxes and levies as any other customer of similar size in energy consumption or connection capacity.

- Regarding network charges, the Electricity and Renewable Directives clarify that network charges, tariffs and levies should apply only in a situation where the electricity is shared within the CEC. It is not clearly mentioned for other types of configurations: Where a CEC is managing the grid, network charges are applied at the connection points between the community network and the outside grid, charges are also applied within the CEC, based on the cost-reflectiveness principle.
- Where a CEC is acting as self-consumer within the community premises, network charges should account separately (fed into the grid/consumed from the grid).

In both cases, it should be made very clear that network charges include related network costs, policy costs and levies but also liabilities in case of damages caused to the grid. It is key that customers of

CEC do not receive exemption from taxes and levies which are paid by all other customers connected to public networks, as recalled in article 16 2b (c).

The Electricity Directive states also that CEC may be subject to the same exemptions as the Closed Distributed Systems (CDS). Keeping in mind that closed distributed systems and Citizens Energy Communities are different in nature and scope, exemptions should be clearly specified to avoid any confusion between the two concepts. Implications on tariffs, taxes and levies should be further investigated and should ensure that no positive discrimination is granted to any market actor or entity, including CECs.

Recommendations for the implementation

- The obligations for the Citizens Energy Communities acting as DSO or CDS will be decided at member state's level. Therefore, the creation of a CEC should not change the status of the DSO and its role in the ownership and management of the inner grid.

- Connections between a CEC and DSO should be based on physical grid characteristics. In general physical connection for all network users can create flexibility on the grid as a measure to handle capacity restrictions.

- A connection point between the CEC and the physically connecting DSO should be defined in order to charge the CEC in a cost-reflective way.

- Obligations and duties between DSOs and CEC should be detailed for every type of configuration between a CEC and DSOs that are expected to occur.

- The creation of a new grid by a CEC, or the transfer of ownership of an existing grid after parties agreement, should be closely examined by member states and NRA (as per article 16.2.b) taking into account the following principles:
    - The same regulatory framework as the current DSOs should apply, including non-discriminatory access to the distribution network, quality of service and economic regulation. This will ensure that all customers benefit from the same standards and avoid any deterioration of distribution quality and efficiency.
    - Member States should make sure that interoperability of the metering equipment's used within a CEC and the equipment outside the CEC is ensured and comply with applicable metering rules, as defined in the EU legislation.
    - The duplication of networks should be avoided to prevent the creation of low-cost network not respecting the recognised standards of design, operation and security. The remit of the cost benefit analysis related to any investment in a parallel grid should take into account not only the costs and benefits of the CEC but of the system as a whole.
    - Member States should pay attention to the continuity of universal service obligation, in case a CEC operating as a DSO ceases its activity.

- The application of the cost-reflectiveness principle should be as follow:
    - As defined in the Electricity Directive (Article 16.2.b) CEC shall be subject to an appropriate network tariff reflective of any use of the distribution grid.
    - For the operation of the network beyond the connection point, the DSO should be allowed to offer a competitive price to the CEC that may be below the cost that the CEC would pay if operated by the CEC.
    - Potential benefits and services brought by CEC in terms of flexibility to the main grid should also be adequately remunerated through a specific scheme in a clear, non-discriminatory and transparent way. This remuneration shall not result in a lower network tarification, and shall be done through the general remuneration scheme for flexibility applied by the DSO. CEC network charges as for any other type of customers should reflect grid cost and incentivise an efficient use of the network.
    - DSO may be given new obligations for making data infrastructure available for registration and facilitation of energy exchange. Expenses for such tasks should be secured in the national regulatory framework.

⇨ **On consumer's rights:**

The provisions of the articles related to Citizens Energy Communities in the Electricity Directive specify that consumers who are part of such structures should be entitled to maintaining their rights and obligations as final consumers. More specifically, the text requires that members are allowed to leave the community and that they shall not lose their rights and obligations as consumers when entering such. This provision is essential in order to guarantee a real, non-discriminatory involvement of consumers in the new energy market, which should be based on free choice of supplier and transparency.

However, the safeguarding of consumer's rights should be made compatible with the financial balance of the community itself. In particular, a consumer unilaterally leaving a community or switching supplier could result in strong operational impact or large-scale refunding of investments for the community.

Recommendation for the implementation

- In line with the main objective of the Electricity Directive to empower consumers, participation in an energy community should always be voluntary. However depending on the configuration of the CEC and the investment to be made, the participation in a Community can bring certain obligations. This must be made clear and transparent in a contractual agreement from the very beginning. In this regard, "cherry-picking" must be avoided and customers should also respect contractual agreements with the community regarding cost-reflective payments of exit or termination fees.

- When a CEC acts as a CDS or DSO, it is unclear how a consumer may leave the community while being serviced by another DSO and supplier. It implies arrangements for the DSO and the supplier that should be taken into account. Member States should consider and define guidelines to address the situation and ensure that ordinary consumers keep the same rights and obligations as active consumers.

- Member States should consider the situation when a CEC terminates and draft guidelines on duties and responsibilities for DSOs, suppliers and members of CECs.

Annex 1: Existing local energy organisations in the different Member states: a state of play

The detailed analysis of the existing provisions in member states establishes several different models having been set up on the basis of national specificities. Those models all refer to forms of local organisations, all dealing with energy management, generation, distribution and supply at local scale. If they do not correspond as such to the definitions given in the CEP, they somehow represent a type of organisation that should be taken into account when trying to have a comprehensive view of the diversity of current structures.

- Integrated operators : operators acting in the whole value chain (generation, distribution, supply…) and in several sectors (energy, water, waste…) (e.g.: German "StadtWerke")

- Energy cooperatives: Citizens can purchase a cooperative share and become member or co-owner of local RES and energy efficiency projects. Members of the cooperative share the profits and often are given the opportunity to buy the electricity at a fair price. In addition, Members can actively participate in investment and other decisions. (e.g. .: EcoPower in Belgium)

- Public investment instruments : structures acting both for the development of local projects and for the provision of technical assistance (e.g.: French "Société Publique Locale d'Efficacité Energétique » or other regional operators)

- Local Energy Suppliers: Municipal and local initiatives for local energy offers, sometimes combined with energy generation projects.

- Distribution System Operators: Model dedicated to the management of distribution networks (France, Czech Republic).

In order to understand better the existing models implemented in the different member states, Eurelectric has worked on a detailed questionnaire assessing the applicable provisions on 5 different elements:

- Role of local organisations;
- Objective;
- Ownership structure;
- Network tariffs;
- Balancing responsibilities;
- Individual rights for consumers.

Results of this work show the existence of a high variety of different models across the EU[1]. Member states have in fact chosen to set up their own framework for the promotion of local energy organisations. Please find below some case studies illustrating the diversity of models existing at national level:

[1] Detailed answers from members are included in Annex 2.

SOM ENERGIA / SPAIN

Non-profit green energy consumption cooperative that develops its activities in the Spanish territory (except for Ceuta and Melilla), especially in Catalonia. At present the cooperative counts 53.523 members and its main purpose is promoting the change of the energy model to a 100% renewable, efficient and citizenship oriented model.

The cooperative has a democratic functioning and its members are geographically organised in local groups – these groups decide themselves their internal organisation and functioning and can include one or more neighbouring municipalities. The cooperative is open to individuals, enterprises, associations and public administration bodies that share the cooperative's objectives.

Som Energia is involved in the supply and production of electricity from renewable sources. Production of renewable electricity is carried out in installations owned by the cooperative, financed with:

- cooperative members' voluntary investment – through participations that had a return of 5% and which are no longer available;
- voluntary contributions to the social capital that have a variable economic return – fixed every year at the General Assembly;
- or 25-year free loans, that members give to the cooperative in the framework of the self-production project "Generation KWh" have a return of the capital of 0% but give investors the right to consume electricity at cost value for the next 25 years, which is translated into an annual return of 3-6%.

The supply business carried out by Som Energia consists in offering cooperative members 100% renewable electricity that comes from the installations owned by Som Energia or that is bought in the wholesale market (only energy with a certificate of origin). Electricity supply is, in principle, available only to cooperative members, but every member can be in charge of up to 5 energy contracts of non-member customers. Profits obtained through the supply business are reinvested in the cooperative.

In addition, the cooperative develops other activities such as providing information to members on key topics, organizing events, signing collaboration agreements with other associations, social or green enterprises, etc.

ITALY

There is a long tradition of energy cooperatives in Northern Italy, and in South Tyrol in particular – a very isolated area in the Alps annexed to Italy after the First World War.

Back in the 1920s farmers, craftsmen, merchants and entrepreneurs joined together to provide with independently produced electricity the isolated areas of that region.

In 1921 the first co-operative hydropower plants were connected to the grid, exploiting the great potential of hydropower.

Today, 92% of electricity in South Tyrol is still generated via hydropower, mainly managed through local companies operating approximately 1000 power plants.

In the distribution business, it is noteworthy to mention that out of 140 DSOs in Italy, over 50 are located in South Tyrol. The majority of them are organised either as co-operatives, consortia, limited partnership companies or they belong to municipalities.

In recent years, new forms of energy cooperatives of different types have emerged e.g. shared investment in RES plants, energy buying centres and sometimes those new cooperatives offer as well as electricity supply other energy services such as energy efficiency consulting, district heating, etc.

Nowadays, Italy has then set up a regulatory framework built upon 3 different entities :

- Historical cooperatives, which are public and private companies that act as generators and suppliers for their members. Moreover, they can also own and manage their own distribution network.

- Historical consortium: entities established for the production of renewable electricity and for the supply of industrial sites that can also operate their own distribution network.

- Internal consumption network (RIU): distribution systems realised before the coming into force of the Italian Law 99/09 (i.e. 15th August 2009) in a delimited industrial or commercial site), with more than one generation unit and more than one final customer. The generation units have to be "essential" for the industrial process of the final customers. Moreover, to be classified as a RIU, the presence of at least one interconnection point with voltage level not lower than 120 kV is mandatory; However, due to the prescription of the abovementioned Italian Law 99/09, since the 15th August 2009 it is no longer possible to establish new RIU.

All those entities are exclusively open to industrial or commercial consumers located in a geographically limited area.

Regarding balancing responsibilities, each consumption and production Unit that belongs to the community is responsible for its imbalance. The netting of imbalance between production and consumption unit is not foreseen in the actual regulation.

RIU and Consortia/Cooperatives have been partially exempted from general system and network charges, whose burden is thus transferred to the rest of consumers not belonging to such networks. Moreover, as a result of a law from 2017, the variable parts and network components of the tariff are applied only to electricity withdrawn from public networks with third-party connection obligations. As a result of this decision, consortia, historical cooperatives that own a network and RIU continue not paying variable part of the system charge for the self-produced electricity.

The existing provisions in Italy also foresees that members of cooperatives and of RIU have the same prerogatives as any other customer. They therefore have the right to choose a supplier different from the one already supplying the cooperative or the RIU.

BELGIUM

In Belgium, local energy initiatives exist already for several decades in the shape of renewable energy cooperatives (REScoops), where citizens jointly participate in renewable energy projects. REScoops do not necessarily have the legal status of a cooperative but they rather distinguish themselves by the way they do business. All citizens are eligible to join a REScoop on a voluntary basis. After purchasing a cooperative share and becoming a member or co-owner of local renewable energy and energy efficiency projects, members share the profits and often are given the opportunity to buy the electricity at a fair price. In addition, members can actively participate in the cooperative: they can decide in what and where the REScoop should invest, and are consulted when setting the energy price.

One of the largest REScoops in Europe is Ecopower, located in the region of Flanders. Founded in 1999, they started producing hydro-power from restored and modernised historical watermills and have invested and expanded their activities since then. Today, Ecopower counts more than 50 000 members owning a diversified portfolio of renewable installations including wind parks, solar and hydro as well as their own factory for sustainable wood pellets and briquettes to produce renewable heat. Ecopower is also active as energy supplier in Flanders and offers energy efficiency services. As supplier, Ecopower is subject to the same rules and obligations as other suppliers. However, Ecopower delivers energy exclusively to its members, against a fixed price per kWh (no subscription fee). This way they want to ensure that their clients are supplied based on their own renewable assets. [2]

Apart from the classical cooperative model, several studies and pilot projects that look into other forms of Citizens Energy Communities are ongoing. For instance, a pilot project for local Citizens Energy Communities was launched recently in the city of Mechelen. This project will set up a local energy community in the business area of Mechelen Noord. Recently the feasibility study was finalised and now the demonstration project is being set up. In the Walloon region for example the project 'MeryGrid" is ongoing in the town of Esneux, on the industrial site Méry.

In the Flanders region a new general project, grouping most of the existing local energy community demonstration projects, has been set up by Flux50. The project, called "ROLECS" (Roll out of Local Citizens Energy Communities) is a cooperative research project and has the objective to create input for a legislative framework for Citizens Energy Communities in Flanders, taking into account the European Clean Energy Package. The Walloon region is already now in the process of adopting its regulatory framework to foster renewable Citizens Energy Communities.

[2] Source: REScoop.com, ecopower.be/+ annual report

GERMANY
The high level of political decentralisation in Germany has found concrete application in the energy sector with the existence of “StadtWerke”. The implementation of the “Energie Wende” (Energy transition) in 2010 has helped building a very efficient regulatory framework in support of the development of RES at local scale. Our survey thus shows that Energy community in Germany can encompass quite extensive responsibilities. Structures such as “Kundenanlage” (customer plant) are quite close to the concept of an energy community, as they are allowed to act both in generation (particularly through wind generation), distribution and supply of electricity. New innovative structures are also being implemented with the development of virtual power plants and virtual storage, allowing small consumers to sell their energy as one single power plant on the market and thus contributing to a better integration of RES at local level. The German law doesn’t give any specification related to ownership of the community, and Kundenlange are therefore open to any type of customers. Restrictions are however made in the setup of such communities, as they need to be restricted to a defined area that is not divided by a public road. The community must also be connected to a DSO and shall not exceed 100 sub meters. The high level of public support towards energy community in Germany also relies on several exemptions from which they directly benefit: when acting as DSOs, operators of Kundenlagen are exempted from most of the rules normally applicable to such actors. Moreover, they pay no grid fees and related taxes and levies on self-produced energy. Members of Citizens Energy Communities are also allowed to choose a third party supplier, who will get into contact with the local DSO. As there is no established obligatory procedures for the switching process, the DSOs mostly manages the switching through a manual process.

GREECE
Contrary to other countries, Greece has not been historically involved in energy decentralisation. Relevant legislation was only established at the beginning of 2018 through a bill that both defines the responsibilities of Citizens Energy Communities at local scale and gives specific competences of consumers in the energy sector. The provisions adopted in Greece thus give to CEC a wide range of different competences, going from energy generation, distribution and supply to new innovative energy services in aggregation and storage. New provisions also allow for virtual power sharing investments. The community ownership is open to both natural and legal persons (private or public), as well as local authorities such as municipalities or prefectures. Special provisions to define the minimum number of members are also included[3], and at least 50% plus one of the members of the local energy community must be related to the location where local energy community is situated. Although the legal framework cannot be considered complete, with future legislation pending, the aforementioned law contains certain provisions allowing preferential treatment of local Citizens Energy Communities, compared to other participants of the electricity market. The new regulatory frame also gives the possibility of virtual metering. Since the bill was adopted, different municipalities have already decided to set up Citizens Energy Communities in their territories.

[3] The minimum number of members of a local energy community are:

- 5, if the members are legal persons governed by public law (other than local authorities) or legal persons governed by private law or natural persons
- 3, if the members are legal persons governed by private or public law or natural persons, out of which at least 2 are local authorities
- 2, if the members are only local authorities of the 1st degree (municipalities) located in islands with a population of less than 3,100 people.

Annex 2: Local Energy Organisation in the EU- Results of the Eurelectric internal survey

As a contribution to the current debate on the new definitions of Citizens Energy Communities and Customers given by the Clean Energy Package, Eurelectric has worked on a detailed state of play of the provisions applicable in different Member-States before the adoption of the CEP.

This work is based on a questionnaire sent to our members.

⇨ **What role can Citizens Energy Communities endorse?**

The provisions of the Clean Energy Package give EC the right to engage in electricity generation, distribution and supply, consumption, aggregation, storage or energy efficiency services.

- **Today, Citizens Energy Communities in the EU are mainly involved in electricity generation** (mostly RES) **and supply at local scale**.
- **In a few countries such as Germany, Greece, Czech Republic or Scandinavian states (Denmark), Citizens Energy Communities are also engaged in the operation of distribution networks**. Different contractual schemes have been defined :
    - In Portugal, small DSO with grid concession agreements can purchase energy from suppliers at medium voltage and resell it to their consumers in low voltage; or can also choose to act directly as market suppliers.
    - In the Netherlands, other forms of "energy cooperatives" are only involved in production and supply (often teamed up with a regular supplier for security of supply), without any specific network responsibility.
- **Scandinavian countries such as Denmark also have developed specific models of energy groups owning both generation, retail and network companies.** These structures often take the form of associations of local wind turbine owners (mostly households), each of which owns a part of a joint wind turbine project in the form of one or more electricity producing common mills.
- **Other countries have developed models of cooperatives allowing for more advanced forms of Citizens Energy Communities, mostly in the form of pilot projects**.

    - Finland has thus developed structures of apartment buildings piloting self-generation and consumption models within the building.
    - In Belgium, the Brussels region has also developed specific regulatory models for innovative projects of decentralised generation, providing energy efficiency and other energy services.
    - Forms of "virtual power plants" are also being developed in **Germany and the Czech Republic**.

⇨ **What is the main objective of energy community?**

The Clean Energy Package explicitly foresees that the primary purpose of any energy community must be to provide environmental, economic or social community benefits rather than financial profits.

The will of Member States to encourage the role of prosumers on the market has led to a clear support of non-profit entities.

- **In line with the objective to promote a citizen-based development of Citizens Energy Communities, several countries have in fact privileged a consumer approach as a basis of the regulatory framework and therefore limited the possibility for operators to develop commercial activity within an EC.** In countries from Northern Europe (Denmark, Finland) or Western Europe (Belgium, Netherlands), the objective of energy community is therefore explicitly restricted to a non-profit objective benefiting households as part of public services at local scale, thus corresponding to the ambition of the CEP.

- **However, other countries such as France, Germany or Italy allow Citizens Energy Communities in their countries to have either a non-profit or commercial objective**. In a large majority of those situations industrial consumers take part in a closed distribution system[4], gathering several entities a single network. In Italy or Czech Republic, different models of "Internal Consumption Network / Historical Consortium" (IT) or "Local Distribution System" (CZ) have thus been developed specifically for industrial or commercial sites. In the Czech case, the possibility to connect to a LDS being in a close proximity to connect is also given to households.

⇨ **What is the ownership structure of Citizens Energy Communities?**

The Clean Energy Package allow for natural persons, local authorities, including municipalities or SMEs at local level to become shareholders or members of any energy community.

Apart from a few exceptions, the participation in Citizens Energy Communities in the different member states is open both to private and public stakeholders, in line with the provisions of the CEP. There again, the explicit ambition is to promote the participation of all stakeholders willing to get involved in any energy community being installed in their local area. When trying to understand the different forms having been developed in Member States, several models can be found.

[4] Defined as a network that distributes electricity within a geographically confined industrial, commercial or shared services site, for which :

- For specific technical or safety reasons the operations or the production process of the users of that system are integrated
- That system distributes electricity primarily to the owner or operator of the network or their related undertakings.

- **Forms of purely municipal ownership have therefore been developed in member states such as Denmark or Germany**, where the "StadtWerke" model has given very strong responsibilities to local authorities.
- **Other forms of Citizens Energy Communities led by public entities can be found in France or in the Spain,** where municipalities can also play a role in energy at local level, either ones active in both in supply and distribution activities (e.g. Eléctrica de Cádiz) and the others only in the supply (e.g. Barcelona Energia). **Citizens Energy Communities in the form of cooperatives are also being developed at local scale in certain member states:**

    - **In the Netherlands or Italy** both private and public entities are given the possibility to purchase a cooperative share and thus become a co-owner of local projects.
    - **In Poland**, forms of "energy clusters" are created by municipalities, scientific institutions, commercial customers, entities with generation energy sources in the area of cluster.
    - **Greece** has also recently voted new legislation for the development of self-consumption in which allowed members of local Citizens Energy Communities are both natural persons, legal persons governed by private or public law (other than local authorities), as well as other local authorities (municipalities and prefectures respectively).

- **Other models such as the one developed in France do not define any specific rules for ownership** and only require that producers and consumers be represented by *a "group of people authorised to act as a single entity"* (association, commercial company, public organisation…).

⇨ **Are Citizens Energy Communities considered balancing responsible parties?**

The Electricity Directive requires that energy community contribute to network costs and that they remain financially responsibility for imbalances caused in the system.

Member-states have defined very different regulatory frameworks when dealing with balancing responsibilities of Citizens Energy Communities.

- **Several countries have therefore explicitly exempted EC from their responsibility on the network**:
    - For example, in France, the energy community is not considered balancing responsible and each of its members (consumer and producer) is responsible through the suppliers with whom he has contracted to provide him electricity from the network in addition to self-consumption.
    - The situation is identical in Germany, Italy or Greece where the supplier for the delivery of the residual electricity normally is the balancing responsible party.

- **Other countries such as Czech Republic have chosen not to apply any form of positive discrimination to the market and to submit them to balancing responsibility. This also applies to** Member states such **as Spain, Poland, Norway or Denmark.** However, they usually give as a general principle the possibility to transfer their obligation to a third party such as supplier or a trader.

⇨ **Are Citizens Energy Communities subject to specific tariffs for access to network?**

The Electricity Directive requires that energy community contribute to network costs and that they remain financially responsibility for imbalances caused in the system.

Member states have also defined very different regulatory frameworks when dealing with network tariffs.

- It can also be observed that **countries having exempted Citizens Energy Communities from their balancing responsibilities are also the one where specific tariffs have been defined for their access to network**. In this regard, the French Energy Regulatory Commission establishes specific tariffs for the use of public electricity distribution networks for consumers participating in self-consumption operations, when the installed capacity of the generating facility supplying them is less than 100 kW.

- **In member states where EC are allowed to operate their own network, such as Italy or the Czech Republic, the EC have to set up their own network tariffs to cover costs.**

- In **Germany**, models of "Kundenanlage" are exempt from grid regulation and any customer who is part of the EC is automatically connected to its network and will only get connected to the DSO network (though virtually and not physically, as there will be no parallel grid), if he chooses a third supplier.

- **Italy, Greece or Finland** have also decided to apply specific network tariffs for EC in their countries.

- Several countries such as Sweden (an exception to the previous rule), **Spain, Poland, Norway or Denmark** are part of countries where no special tariffs have been defined. In those cases, the DSO tariff system is the same for all customers, whether they belong to a local initiative or not.

- The duplication of networks, prohibited in the Clean Energy Package, is also not possible in several Member States (Denmark or Spain). Other countries such as Italy, Czech Republic or Germany, do give a theoretical possibility of duplication network grids, but this option is usually not considered an efficient solution.

⇨ **Are individual consumers free to leave the community or to switch supplier?**

Provisions of the Clean Energy Package foresees that rights and obligations of any members of an energy community should be fully respected.

- All member states, where Citizens Energy Communities exist, have been very keen to respect the fundamental rights of consumers when defining their place and role within an energy community, in particular regarding rights to leave the community or to switch supplier.
- In this perspective, in the majority of cases, several member states chose not to define any specific rules in this regard and the standard provisions are therefore fully applicable. As a consequence, consumers are thus allowed to contract with a different supplier from the one already supplying the cooperative; and any market participant (e.g. suppliers, aggregators etc.) can make commercial offers to the customer connected to such a community network without being a member.

- The respect paid to consumer's fundamental rights is made without prejudice to its responsibilities towards the community, particularly in regard to other contractual financial liabilities he/she may have (e.g. he/she might have to sell their shares in order to be released from an obligation to pay their part of the community's costs).

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