Regulating the energy transition and the emergence of Energy Communities

Maria-Eleni Delenta

Head of International Affairs and Energy Policy Dept.

CYPRUS ENERGY REGULATORY AUTHORITY

ρυθμιστική αρχή ενέργειας κύπρου
cyprus energy regulatory authority

Outline

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Introduction

What's good?

- Most importantly, a new definition of 'Citizens Energy Communities (CEC)' is clearly aimed at supporting European citizens, small businesses and local authorities.
- CEC will have a right to a level playing field and proportionate regulations so they can have fair access to all areas of the electricity market.
- CEC will also be able to share energy, providing opportunities for innovation and local renewable energy supply. CEC can get their renewable energy into the market by keeping priority dispatch for small renewables installations.

Introduction

What's bad?

- The Electricity Directive seems to have some inconsistencies with rules on renewable energy communities under the Renewables Directive.
- Eligibility requirements, and more importantly the rules for the internal governance of energy communities, will be more relaxed for citizens energy communities compared to renewable energy communities.
- These inconsistencies will create legal uncertainty for energy communities therefore a compromise solution might needed to be given during the transposition of certain provisions of the directives into national law.

General Assessment (1)

The recast of the Electricity Directive provides:

- Compulsory elements of the regulatory framework dedicated to CEC
- Optional elements of the regulatory framework dedicated to CEC
- Applicability of electricity sector rules to CEC
- Distribution aspects

General Assessment (2)

Compulsory Elements:

- participation in a Citizens' Energy Community (CEC) is open and voluntary;
- shareholders or members of a CEC are permitted to leave the community;
- shareholders or members of a CEC do not lose their rights and obligations as household customers or active customers;
- subject to fair compensation as assessed by the NRA, relevant DSOs, cooperate with CEC to facilitate electricity transfers within CEC;
- CEC are subject to non-discriminatory, fair, proportionate and transparent procedures and charges, including with respect to registration and licensing, and to transparent , non-discriminatory and cost- reflective network charges in accordance with Article 16 of Regulation (EU) 2019/… ensuring that they contribute in an adequate and balanced way to the overall cost of the system.

General Assessment (3)

Optional Elements:

- CECs are open to cross-border participation;
- MS may decide whether the CEC can own, establish, purchase or lease distribution networks and to autonomously manage the network;
- If MS allow CEC to manage the network, the CEC can become a DSO under the general regime or they can also provide the CEC with the 'closed DSO' solution, which exempts them from the ordinary tariff regime.

General Assessment (4)

For the MS that decide to grant the right to manage distribution networks, a minimum set of obligations are provided:

- CEC might contract a DSO to operate their network (keeping the management right)
- CEC must be subject to all rules applicable to the DSO
- The rights of system users that are not community members must be safeguarded

General Assessment (5)

Applicability of electricity sector rules to energy communities

- are permitted to access all electricity markets, either directly or through aggregation, in a non-discriminatory manner;
- are treated in a non-discriminatory and proportionate manner with regard to their activities, rights and obligations as final customers, producers, suppliers, distribution system operators or market participants engaged in aggregation;
- Are financially responsible for the imbalances they cause in the electricity system.; to that extent they shall be balance responsible parties or shall delegate their balance responsibility in accordance with Article 4 of Regulation (EU) 2019/...±;
- with regard to self-consumption, CEC are treated like active customers in accordance with Article 15(2)e;
- are permitted to arrange within the community the sharing of electricity that is produced by the production units owned by the community, subject to this Article and subject to the community members retaining their rights and obligations as final customers.

Some relevant Examples of ‘CECs’ in the EU (1)

- In most Member States there is no legal definition of a ‘citizens' energy communities, ’‘local energy community’, ‘energy cooperative’ or related concepts. The most relevant definitions that exist refer to self-consumptions and sometimes to prosumption/prosumers. So far only Poland and Greece appear to have defined energy communities or cooperatives in their legislation.
- In **Poland**, 2016 amendments to the RES Law introduced a definition of ‘energy cooperative’ that refers to cooperative generation activities from RE installations up to 10MW (for electricity), up to 30MW (for heat) and biogas installations up to 40 million m^3.
- In **Greece**, the recently adopted energy communities law defines ‘energy community’ as a ‘cooperative solely aiming at promoting social and solidarity-based economy and innovation in the energy sector, addressing energy poverty and promoting energy sustainability, generation, storage, selfconsumption, distribution and supply of energy as well as improving end-use energy efficiency at local and regional level’
- There are a growing number of energy cooperatives in the EU, notably in countries like **Belgium, Denmark, Germany, France and Spain** but increasingly also in other Member States. They perform different activities and provide a variety of services across the energy sector such as: self-production and consumption; production of renewable energy for export to the grid and retail supply; ownership or operation of storage facilities, micro-grids and other distribution infrastructure for electricity and district heating networks; provision of energy efficiency and other services; aggregate demand response and distributed generation of RE to provide flexibility services.

Some relevant Examples of 'CECs' in the EU (2)

- Production of renewable energy

Middelgrunden Wind Turbine Cooperative, Denmark

One of most famous examples of energy cooperatives is the Danish Middelgrunden Wind Turbine Cooperative[115], formed in 1997. The cooperative partnered with the Copenhagen municipal utility to build 20 wind turbines (2MW capacity each), off the shore of Copenhagen that started operating in 2000. The cooperative owns half of the turbines, while the other 10 are owned by DONG Energy – the private energy company that evolved from the original municipal energy utility. The Middelgrunden Wind Turbine Cooperative has over 8,500 members who mostly live in or around Copenhagen and own the 40,500 shares of the cooperative. The cooperative is organised as a partnership where each partner has one vote, regardless of the number of shares. There is also one wind turbine called the 'children's wind turbine' for which shareholders' children vote on their behalf and learn about the cooperative decision-making process. In addition, the cooperative receives support from the Danish association of owners of wind turbines ('Danmarks Vindmølleforening'). This association has successfully lobbied the national government to create favorable conditions for the expansion of wind energy[116].

Combrailles Durables, France

Combrailles Dubrailles cooperative in France has 170 members, it began as an association to promote renewable energy before it grew to own several PV installations and explore the opportunities for installing a wind energy project. At the start, the cooperative collaborated with the municipality to put a PV installation on the roof of a municipal school. The cooperative then used the knowledge and experience from this first project to install further PV capacity in a neighbouring village. In the course of its projects the cooperative learnt that involving the local community, including by offering shares, enhanced the support for the RES projects and tapped into the expertise and professional networks of the members. In addition, by starting with a smaller project the cooperative had an opportunity to gain knowledge and expertise before embarking on a larger project[117].

*source: Models of Local Energy Ownership and the Role of Local Energy Communities in Energy Transition in Europe- Commission for the Environment, Climate Change and Energy

Some relevant Examples of ‘CECs’ in the EU (3)

Som Energia, Spain

Founded in 2010, Som Energia is the first RE cooperative in Spain, which grew quickly and gained over 6,000 members in only two years. An important success factor for the cooperative is its financial sustainability secured through a simple business model at the beginning and the participation of volunteers. The cooperative started by selling RE sourced from third parties to its members using a low-cost web-based system for its operations. Even though obtaining a permit to operate and sell on the public energy system was not very costly, it was time consuming and complicated. Over time, the cooperative obtained some RE projects that had already secured feed-in tariffs and invested in its own RE capacity, usually small-scale projects close to their members[118].

- Provision of district heating

Bioenergy village (Bioenergiedorf) Heubach, Germany

In the village of Heubach, the local ‘bioenergy village’ cooperative owns a biomass CHP generator (gasifier) that supplies 70 houses with their heat. The energy is produced through an innovative wood gasification technology that supplies the base load of the local heating systems and feeds bio-electricity into the power grid. The 86 members of the cooperative, which include a local kindergarten, town hall and apartment buildings, are also its customers. The project benefitted from a loan provided by the regional branch of the national development bank (KfW), subsidies from the local government and the EU. In addition, steady cash flows are ensured thanks to a 20-year guaranteed price for the electricity and the sale of power and heat to the local consumers[120].

*source: Models of Local Energy Ownership and the Role of Local Energy Communities in Energy Transition in Europe- Commission for the Environment, Climate Change and Energy

Some relevant Examples of ‘CECs’ in the EU (4)

- Operation of distribution networks

ElektrizitatsWerke Schonau (EWS), Germany

EWS Schonau was set up by a local energy cooperative in order to purchase the local grid in 1991 before the energy market was liberalised. Even though the organisation faced different obstacles, such as a strong and influential incumbent company, some local opposition and insufficient financial resources, EWS managed to raise enough finance after a public fund-raising campaign and finalised the purchase of the grid in 1997. At a time when there were no support mechanisms for RE or prosumers, EWS sought to provide its customers not only with energy but also with the opportunity to sell their electricity on the grid with guaranteed access and feed-in tariffs. With time, EWS grew and now owns also the gas network of Schonau and Wimbach, the grids in eight neighbouring villages and some generation capacity. EWS supplies the electricity for about 137,000 people and the gas for around 8,500 people[122].

E-Werk Prad Genossenschaft, Italy

Founded in 1926 in the municipality of Prato allo Stelvio in Bolzano-Bozen Italy, the E-Werk Prad cooperative wanted to supply the local area with electricity. The cooperative raised a bank load to build their first hydropower plant. Over time, the cooperative expanded its activities and now produces power from hydro-energy, wind, solar and biogas and owns a district heating network to transport the heat from the biogas. The cooperative supplies power and heat to around 1,200 members. In addition, the cooperative buys energy from local citizens who own RE installations. To deal with the growing share of PV in the energy mix, E-Werk Prad is exploring different storage options and a control network based on a smart grid system[123].

*source: Models of Local Energy Ownership and the Role of Local Energy Communities in Energy Transition in Europe- Commission for the Environment, Climate Change and Energy

Some relevant Examples of ‘CECs’ in the EU (5)

- Provision of energy efficiency or other energy services

Coopem, Belgium

As a part of its Covenant of Mayors commitments, the Belgian city of Mouscron set up a cooperative together with its citizens called ‘Coopem’ (Cooperative Energy of Mouscron). The majority of the cooperative is owned by the citizens while the city has a 15% share. The cooperative aims to provide attractive solar energy investment opportunities to its inhabitants. It helps households install solar PV on their roofs by advancing the payment of regional solar energy subsidies, which are otherwise paid over five years, and handling the technical and administrative process of installation. The cooperative also targets local businesses by offering them a leasing plan for solar PV panels and selling green certificates to finance the initial investments[126].

Repowering London, UK

Repowering London is a not-for-profit organisation that supplies renewable energy while also financing energy efficiency measures and combating energy poverty among its customers. Through solar energy projects in social housing in Brixton, the organisation feeds part of its electricity to the grid benefitting from feed-in tariffs. The rest of the electricity is provided to the housing estates at discount prices in order to address the energy poverty of the inhabitants. In addition, 20% of the total net profits are invested in the Community Energy Efficiency Fund (CEEF), which promotes and finances low-cost energy efficiency measures[127].

*source: Models of Local Energy Ownership and the Role of Local Energy Communities in Energy Transition in Europe- Commission for the Environment, Climate Change and Energy

CERA's initial views (1)

CERA welcomes the possibility of creating CECs:

- as a way to empower prosumers by enabling them to engage in collective energy initiatives.
- In a CEC, engaged citizens can lead to the creation of a local market, fostering local optimisation of supply and demand.
- This may further facilitate the integration of renewables, and may enable cost-effective grid expansion or operation which represents a positive development.
- Collective self-prosumers can also become important enablers of the energy transition by promoting the uptake of electro-mobility and energy savings.

CERA's initial views (2)

- **CEC acting as DSOs, and taking into account the exemptions they might be given, must be in principle subject to the same rights and obligations, including an adequate regulatory supervision.**
  - The implementation and development of CEC shall be supervised and controlled by the NRAs in order to safeguard the public interest, and ensure that network developments can be managed in an efficient way.
  - CEC should be accountable for certain obligations and responsibilities relating to the planning and the operation of distribution networks, affecting areas such as Operation & Maintenance, Metering & Billing, Quality of Service, Customer Service, Information and data exchanges with suppliers and other stakeholders etc.
  - Although CEC could reach agreements to delegate or outsource some of the above tasks to relevant TSOs or DSOs, they must take responsibility for their quality and delivery.

CERA's initial views (3)

- **Avoid discrimination between CEC members and other systems users in terms of network charges.**

  - The regulatory framework for the new entities should be based on the principles of fair condition for participation for all customers.
  - The NRAs should establish the necessary mechanisms that guarantee CEC are subject to non-discriminatory, fair, proportionate and transparent procedures and charges, including with respect to registration and licensing, and to transparent non-discriminatory and cost-reflective network charges ensuring that they contribute in an adequate and balanced way to the overall cost of the system.
  - Inefficient duplication of network investments should be avoided.

CERA's initial views (4)

- **The creation of CEC is a big challenge for DSOs**

  - As stated in the recast Electricity Directive, grid related services may be contracted by CECs, but always on a voluntary basis, not in a mandatory one.
  - This represents an opportunity for both DSOs that would be acting as contractors for CECs aw well as CECs, to innovate and to deliver better services to customers, promoting an active involvement of European citizens' initiatives.

Next Steps

- Preparation of the legislative framework (revision of the primary Law and relevant secondary legislation)
- Preparation of the necessary regulatory framework for the introduction of the CEC in the market (e.g. revision of Market Rules & TSR)

Thank you for your attention

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