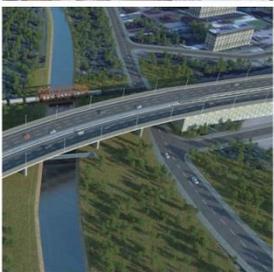




European
Commission



Zero-Energy Communities

Joint CAs, Barcelona, 30 January 2020



Legal basis for (nearly) Zero-Energy Communities

- ❑ (Nearly) zero-energy community is not defined in the current legislation. There are however many instruments in the Clean Energy Package, in particular REDII, EPBD, EED, that can help citizens, local communities and national authorities to develop such communities.
- ❑ The Green Deal places a great focus on citizens and communities: e.g. Climate Pact, Renovation Wave
- ❑ These communities can facilitate for Member States to achieve their RES, EE and GHG targets, while facilitating financing, citizen empowerment, sector integration, reduced costs and increased ownership of energy transition, alleviating the stress on energy infrastructures and creating many more benefits.

Closely linked elements of REDII, EED and EPBD: buildings

- ❖ EPBD: minimum energy performance of buildings (Art. 4), NZEB (Art. 9), long-term renovation strategies (Art. 2a), technical building systems (Art.8), including financing (Art. 2a.3, 10)
- ❖ EED: energy saving obligations (Art. 7, 7a, 7b), including financing (Art. 20), EE target* (Art. 3) primary energy (weighting) factor/coefficient (Annex IV), promotion of high-efficiency cogeneration and efficient district heating & cooling (Art. 14, Annex VIII, IX)
- ❖ RED II: RES target (Art.3), RES HC target (Art. 23), RES DHC target (Art. 24), RES self-consumption (Art. 21), RE communities (Art. 22)

Possible components: EPBD (1)

Long-term building renovation strategies

- Goal: Transformation of existing buildings into nearly zero-energy buildings – Art. 2a.2
- Financing: aggregation of projects by investment platforms or groups, and by consortia of SMEs, to mobilise investments into renovation and enable investor access, as well as packaged solutions – Art.2a.3
- *„The Commission shall collect and disseminate, at least to public authorities, ... information on schemes for the **aggregation of small-scale energy efficiency renovation projects** ... best practices on financial incentives to renovate from a consumer perspective” – Art.2a.4*

Possible components: EPBD (2)

Renovation is not just about building envelopes. It is also about technical building systems

- ❑ *„It is important to ensure that measures to improve the energy performance of buildings do not focus only on the building envelope, but include all relevant elements and technical systems in a building ...” (EPBD Recital 15)*
- ❑ *New definition of technical building systems: technical equipment for space heating, space cooling, ventilation, domestic hot water, built-in lighting, building automation and control, on-site electricity generation, or a combination of thereof, including those systems using energy from renewable energy sources, of a building or a building unit (EPBD Art.2.3)*
- ❑ *The feasibility of high-efficiency alternative systems to be considered for new construction and major renovation of buildings (EPBD Art. 6, 7)*

* According to Annex V.2.e of EED (revised) measures promoting the installation of small scale RES on or in buildings may be eligible to fulfil the energy saving obligation provided they produce verifiable and measurable or estimable savings.

Possible components: EPBD (3)

Towards district, neighbourhood approach:

*„As part of the review [of the EPBD by 1 January 2026], the Commission assessed by the Committee ... shall examine in what manner Member States could applied **integrated district or neighbourhood approaches** in Union building and energy efficiency policy, while ensuring that **each building meets the minimum energy performance requirements**, for example by means of **overall renovation schemes applying to a number of buildings in a spatial context instead of a single building**.*

The Commission shall in particular assess the need for further improvement of energy performance certificates ...” EPBD Art.19 new

Possible components: EPBD (3)

Calculation of energy performance (Annex I)

- ❖ The energy performance of buildings shall be expressed by a numeric indicator of primary energy use in kWh/m²/y for the purpose of both energy performance certification and compliance with minimum energy performance requirements” (point 1)
- ❖ The calculation of primary energy shall be based on primary energy factors or weighting factors per energy carriers ... (point 2)
- ❖ In the calculation of primary energy factors for the purpose of calculating the energy performance of buildings Member States may take into account renewable energy sources supplied through the energy carrier and renewable energy sources that are generated and used on-site ...” (point 2)
- ❖ For the purposes of expressing the energy performance of buildings, Member States may define additional numeric indicators of total, non-renewable and renewable primary energy use, and of greenhouse gas emission produced in kgCO₂eq/m²/year. (point 2a)

Possible components: REDII (4)

Renewable Energy Community - definition

Renewable energy community means a legal entity:

- (a) which ... 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 are natural persons, SMEs or local authorities, including municipalities
- (c) the primary purpose 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 – Art. 2(6)

Possible components: REDII (5)

Renewable Energy Community – rights and obligations

„Member States shall ensure that final customers in particular household customers are entitled to participate in renewable energy community while maintaining their rights or obligation as final customers ... provided that for private undertakings, their participation does not constitute their primary commercial or professional activity” – Art. 22(1)

Possible components: REDII (6)

Renewable Energy Community – rights and obligations (cont.)

- a) Produce, consume, store and sell renewable energy, including through power purchase agreements
- b) Share, within the renewable energy community, renewable energy that is produced by the production units owned by that renewable energy community ... and to maintain the rights and obligations of the renewable energy community members as customers
- c) Access all suitable markets both directly or through aggregation in a non-discriminatory manner

Conclusions: (nearly) zero-energy communities' possible components

Energy Performance:

- **NZEB applied to all buildings in the community**
- **Renewable energy production for HC, T, E, DHW**
- **Energy performance calculation according to EPBD**
- **Satisfying min. level of RES in buildings according to RED II**

Organisation and realisation by:

- **Renewable Energy Communities according to REDII**
- **Can be part of L-T Building Renovation Strategies**
- **Can be part of updated NECPs**

Financing:

- **EPBD Art. 10, 20 : aggregation, innovative financing**
- **EED, Art. 7 & 20: financing schemes, Energy Efficiency Funds, etc.**

Enabling Framework - to be included in NECP update:

- **RED II Art. 22(4): cooperation with DSOs, licensing and network charges, access to finance and information, etc.**



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