



What's the impact of regulation on energy communities? Belgium's case

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EUROPEAN LEGISLATIVE FRAMEWORK

Clean Energy for all Europeans Package > *The concepts of 'local energy communities' and 'renewable energy communities' have been introduced to ensure a “role for the citizen in the energy transition, where citizens take ownership of the energy transition, benefit from new technologies to reduce their bills, and participate actively in the market.”*

DIRECTIVE (EU) 2018/2001 - Art. 21.6 « Member States shall put in place an enabling framework to promote and facilitate the development of renewables self-consumption [...]. That enabling framework shall, inter alia:

*(a) address accessibility of renewables self-consumption to all final customers, including those in low-income or **vulnerable households**;*

[...]

*(d) address incentives to building owners to create opportunities for renewables self-consumption, including for **tenants**; »*

BRUSSELS REGION

23 July 2018 Ordinance

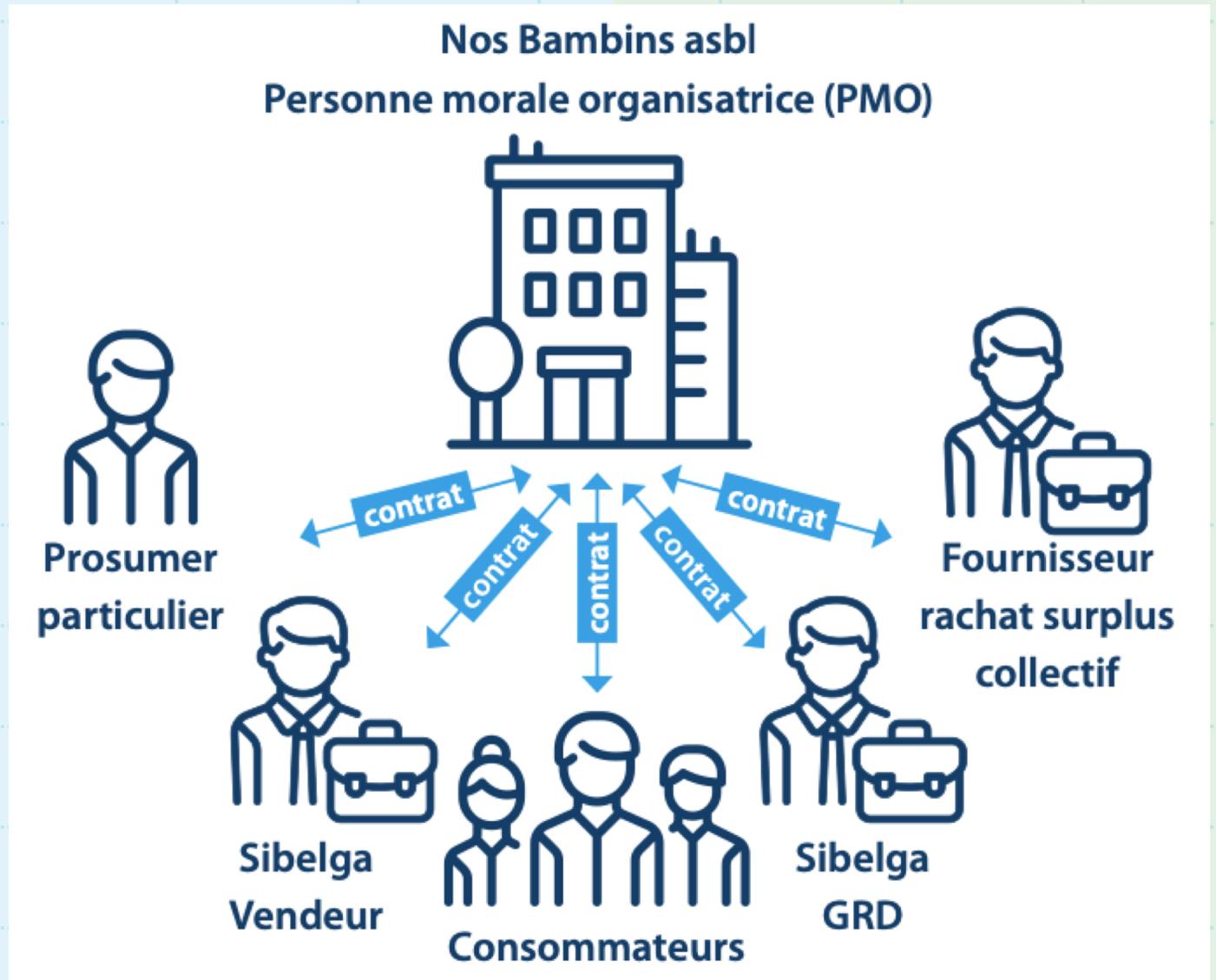
Art. 89. Self-consumption is collective when the supply of electricity is carried out between one or more producers and one or more final consumers forming a legal entity and whose extraction and injection points are located downstream of the same public MV and LV electricity transformation station

Art. 90. Brugel has the possibility to adopt, for a limited time, specific market and tariff rules for defined geographical or electrical areas. These zones are specifically developed through the implementation of innovative pilot projects [...]

The regional regulatory authority (BRUGEL) has so far authorised 2 pilot projects :

- ✓ “**Nos Bambins**” (July 2020) = It aims to share with ± 15 households the energy of the photovoltaic panels installed by the project leader Bruxelles Environnement on the roof of “Les Bambins” school (34,777 kWp) and a private installation (2.4 kWp)
- ✓ “**Greenbizz.energy**” (February 2021) = It aims to share the photovoltaic electricity (240.5 kWp) produced on the roof of the Greenbizz incubator with the 19 companies occupying its workshops

THE CONTRACTUAL SIDE



PMO

- ❖ Is in charge of all administrative and communication tasks necessary for the operation of the PMO ;
- ❖ Acts as an intermediary between the PMO participants and organizes the operating rules of the PMO ;
- ❖ Drafts, concludes and manages the agreements between the PMO participants ;
- ❖ Takes care of the annual invoicing towards the consumers ;
- ❖ Assures the protection of the personal data of the PMO participants ;
- ❖ Buys surplus electricity from the producer(s) ;
- ❖ Determines the allocation method of surplus electricity production

PRODUCER(S)

- ❖ Is a member and participates in the PMO governance ;
- ❖ Has and maintains a separate electricity supply contract ;
- ❖ Sells its excess of electricity production first and foremost to the PMO, within the limits of the volumes needed by the consumers ;
- ❖ Is responsible for issuing and sending annual invoices to the PMO for the excess of electricity production made available ;
- ❖ Is responsible for any injection costs charged by the DSO

CONSUMER(S)

Is a member and participates in the PMO governance ;

Pays for self-consumed electricity, grid tariffs, PMO management costs and VAT ;

Receives self-consumed electricity according to the « cascade »-type allocation key ;

Has and maintains a separate electricity supply contract

DSO

Provides the PMO with the necessary information for a clear and transparent invoicing ;

Treats all participants to the project in a non-discriminatory way ;

Maintains network security at all times

Allocation method of surplus electricity production



The **cascade-type** allocation of surplus production takes place in several rounds for each quarter of an hour of the year.

In each round the surplus production:

- is divided by the number of consumers; and
- the quantities of electricity received by each consumer and the amount of electricity still needed to satisfy their consumption are calculated.

The distribution stops when all the consumers have had their consumption covered by the electricity made available by the producers and/or when there is no more electricity to be distributed.

THE PRICE

The price charged to the consumer is x cents/KWh less than the price paid to the electricity supplier at the time of signing the agreement.

The price can then no longer rise or fall as a result of the price paid to the supplier.

The PMO may, in the event of an upward or downward change in taxes or network fees, pass this change on the price of electricity sold to the consumer.

The price of the electricity paid to the producer is equal to the average price at which the producer would have valued it through partial compensation.

NEXT STEPS

A more comprehensive legal framework will have to be put in place, for ex. by providing a tariff that would be :

- ❖ variable according to hours and consumption profiles (consumer load curves and adapted tariffs);
- ❖ intended as remuneration for DSOs; and
- ❖ coupled with storage in order to reduce peaks in electricity extraction

WALLONIA

Regional policy declaration 2019-2024

*"As regards electricity, the Government will develop as quickly as possible the production of electricity from renewable sources [...]. To this end, the Government will rely on pilot projects for **collective self-consumption** of renewable energy, involving network managers. It will also pay particular attention to the finalisation and concrete implementation of the legislation surrounding the development of renewable energy communities, while respecting the **general interest** and the objective of **energy transition**."*

LEGAL FRAMEWORK

2 May 2019 Decree

The specific purpose of a renewable energy community is to produce, consume, store or sell renewable electricity for the environmental, social and economic benefit of participants at the local level using the public network or a private grid.

Renewable energy communities can also contribute to balancing the consumption and production flux on the grid.

Several entities (natural or legal persons) within a local perimeter can agree to share and store their production/consumption of electricity (exclusively produced from renewable sources or high-quality cogeneration).

Any natural person, local authority or small or medium company located in a local perimeter can participate.

The government has the right to review the list of **eligible participants**. Companies are free to participate if this participation does not constitute their social object nor their primary professional or commercial activity.

Local perimeter = a grid segment whose connection points are located downstream of one or more public MV and LV electricity transformation stations. Local perimeters can have differing extents, considering the technical constraints of the network. The specific conditions for local perimeters are still to be defined

The REC can delegate the management of its activities to a third party.

The REC is subjected to CWaPE and DSO **individual authorisation**. This is provided for a specific period of time and can be renewed.

The REC does not require a **supplier licence**, except in case of mandate by the participants to sell the surplus energy outside of the local perimeter. The law provides “**network managers**” that implement the technical, administrative and contractual preconditions necessary according to the regulated tariffs

The DSO can be mandated by the REC to manage its distribution network. The grid tariffs for RECs are still to be defined; the law states that tariff methodology should contribute to their development

The law also aims at ensuring the **balance** between the interest in participating in a REC and the solidary coverage of networks costs and contribution to taxes, surcharges and other regulated costs

Grid tariffs will be determined by CWaPE, considering the benefits (avoided costs, avoided investment and renewable energy deployment) generated by the REC.

While RECs in Wallonia will benefit from local grid tariffs, the participation in a REC prevents self-producers to benefit from the net-metering regime accessible to private self-consumers for production under 10 kW (compensation scheme)

CHALLENGES

1. Access Conditions : The Government should define specific access conditions for each local perimeter and provide a series of REC models better corresponding to certain profiles (residential, commercial, industrial, social, etc.);

2. State Aid framework: Compared to the EU Directive, the Walloon decree seems to allow for a certain flexibility, being more inclusive towards companies participation.

Particular attention should be paid to the Commission's notion of « selective advantages » and the risks of revising the advantages that would have been granted to companies located in a certain geographical area through future extension of the mechanism to other areas (acquired rights vs. law of change)

3. Compensation and special grid tariffs : Since the compensation scheme is not possible for REC participants, the success of RECs relies on the advantages granted through special grid tariffs (approved by CWaPE) ;

4. Smart Metering : Each REC participant must be equipped with a smart meter capable of recording the load curves every quarter-hourly period. It is thus mandatory for the Government to proceed to the widespread deployment of smart meters as fast as possible.

CWaPE recommended that renewable energy communities have to :

- ❖ have a **legal personality** ;
- ❖ its members must each conclude an **agreement** with the CER ;
- ❖ any natural person, local authority or SME/PME located within the same local area may participate in a REC. However, participation may not constitute the main commercial or professional activity of the enterprises ;
- ❖ the **compensation** scheme is not compatible with participation in a REC ;
- ❖ REC is not subject to the granting of a **supply licence** for collectively self-consumed electricity;
- ❖ the notion of "**local perimeter**" has yet to be determined by the Government, within the limits of the decree ;
- ❖ be subject to the granting of an **individual authorisation** by CWaPE, which will set the threshold for collective self-consumption to be respected in order to benefit from a specific tariff.

Renewable energy communities and collective self-consumption should facilitate:

- ❖ **better integration of renewable energies**, since local consumption requires less grid balancing ;
- ❖ **low cost development and reinforcement of the distribution grid** ;
- ❖ **economic advantages** for REC participants ;
- ❖ **smart-metering deployment**, allowing consumers to better adapt their energy consumption patterns

The **main beneficiaries** are certainly the **consumers** who will benefit from more attractive tariffs and a better valorisation of their renewable production.

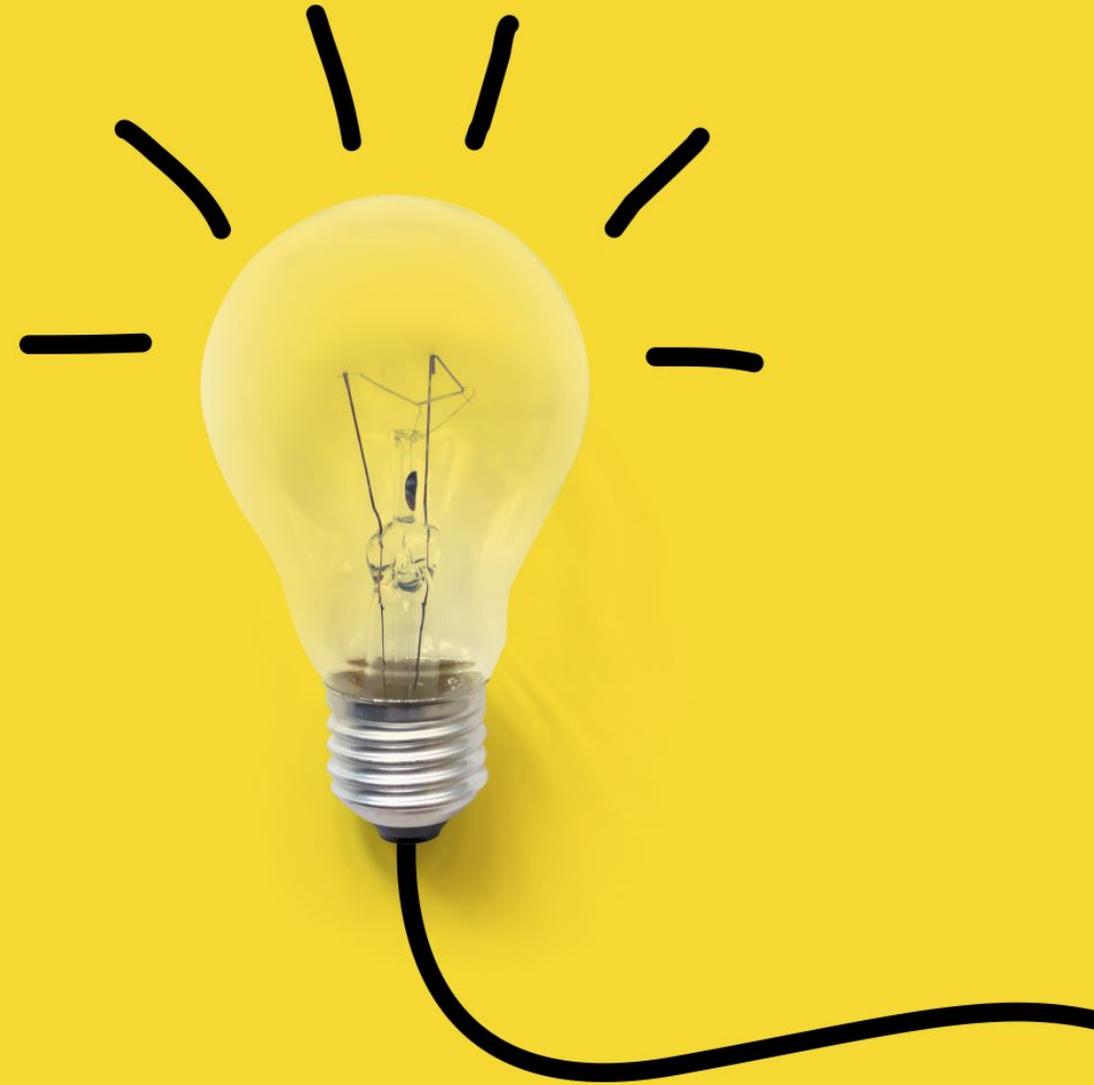
NEXT STEPS

Further details are to be defined and implemented by the Government regulation (AGW), now in process of parliamentary adoption..

The regulator's input on the **third-party investor mechanism**, the guidelines on **self-production** and the rules applicable to **professional closed grids** should be particularly taken into account.

PILOT PROJECTS

- E-CLOUD
- Merygrid
- SunHorizon
- CoLéCo



E-CLOUD

Initiated by ORES and IDETA, E-Cloud was launched in the Tournai Ouest business park in July 2019.

For a year time period, 12 companies consumed and shared energy from solar panels with an output of 400 KWh and a wind turbine with an output of 2.2 MWh.

During a year 6.450 MWh were produced by the installations and made available to the participating companies. 61% of the energy produced was self-consumed and covered 39% of the electricity needs of the companies.

This system enabled most of the participants to achieve savings of 4 - 8%

Merygrid

In Mery (Esneux), three companies produce, consume and exchange their own energy.

Thanks to the collaboration between Nethys, ULiège, Wallonia, CE+T, Sirris and the SPI, a network allowing a better use of energy while avoiding its waste has been created. The first energy storage battery available to companies and artificial intelligence allowing to manage and optimize energy flows has been set up on the site.

Estimated energy savings up to 15%

SunHorizon

The installation of hybrid solar panels on the Verviers swimming pool building and the Ensival sports hall will be the site for both heat and electricity production, involving gas-powered heat pumps and stratified storage tanks, which store energy in the form of hot water.

The project, still formally under way, has suffered a setback following the Covid-19 crisis.

CoLéCo

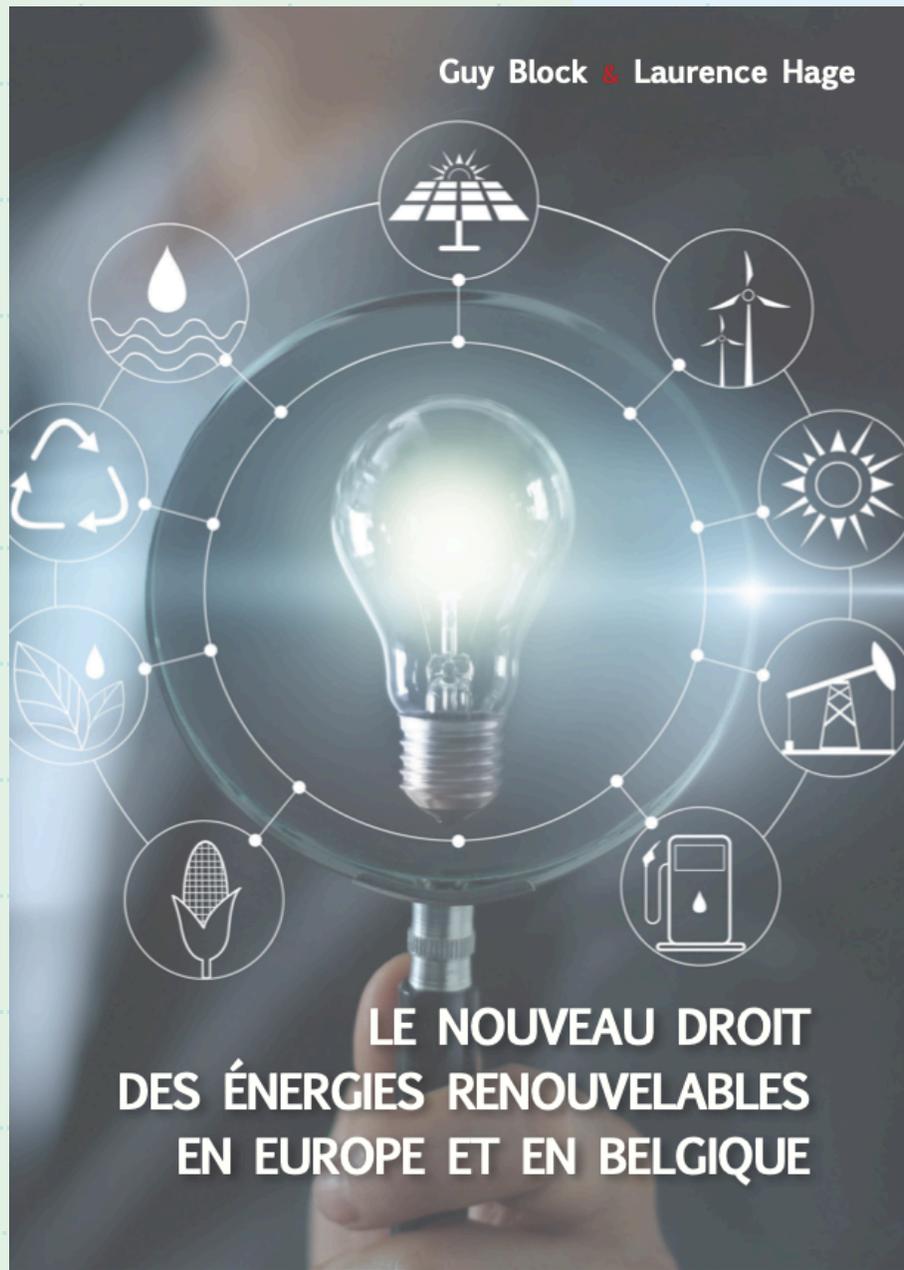
By 2021, 7 micro-grids in business parks and, by 2025, a hundred local RECs will be created in Wallonia Picardy. The first site will be the Saint-Exupéry school, where up to 100 kWhc of PV can be installed, covering the school's annual consumption and about 20% of the annual needs in electricity of the district's inhabitants.

New billing software, specially designed for consumers in a collective energy community, will also be tested.

OPPORTUNITIES

Worldwide, more than **400 projects** (\pm 3.2 GWh of electricity production) are under development or already operational. This number is expected to quadruple in the next years.

More than a market opportunity, this is a **real revolution** in the energy and infrastructures sector, with very concrete opportunities for Walloon public and private actors .



Guy BLOCK & Laurence
HAGE

“Le nouveau droit des
énergies renouvelables
en Europe et en
Belgique”

**Thank you for your
attention!**

