



Mobilising European Citizens to Invest in Sustainable Energy

CLEAN ENERGY FOR ALL EUROPEANS

FINAL RESULTS ORIENTED REPORT
OF THE RESCOOP MECISE HORIZON 2020 PROJECT



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REScoop MECISE is a project development assistance or PDA-project launched by the Belgian renewable energy cooperative Ecopower with as its partners: REScoop.eu, the Federation of groups and cooperatives of citizens for renewable energy in Europe, and 4 other of its members: Courant d'Air (BE), Enercoop (FR), Energy4All (UK) and SomEnergia (ES). The project had support from the Horizon 2020 Program of the European Commission.

This publication is edited and partly written by me, Dirk Vansintjan, board member of the Belgian REScoop Ecopower and for Ecopower president of REScoop.eu.

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Dirk Vansintjan

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PREFACE

At the beginning of 2019 Europe had more than 3400 renewable energy cooperatives or, as defined in the recent EU-directives, ‘citizen energy communities’. More than a million Europeans are united in these REScoops to jointly invest in the energy transition from fossil and nuclear fuels to renewable energy and energy efficiency. There are many more Europeans at home who are also committed to reaching this goal in their daily lives. They are investing in insulation, solar water heaters, in photovoltaic panels (PV panels), electrical mobility, ...

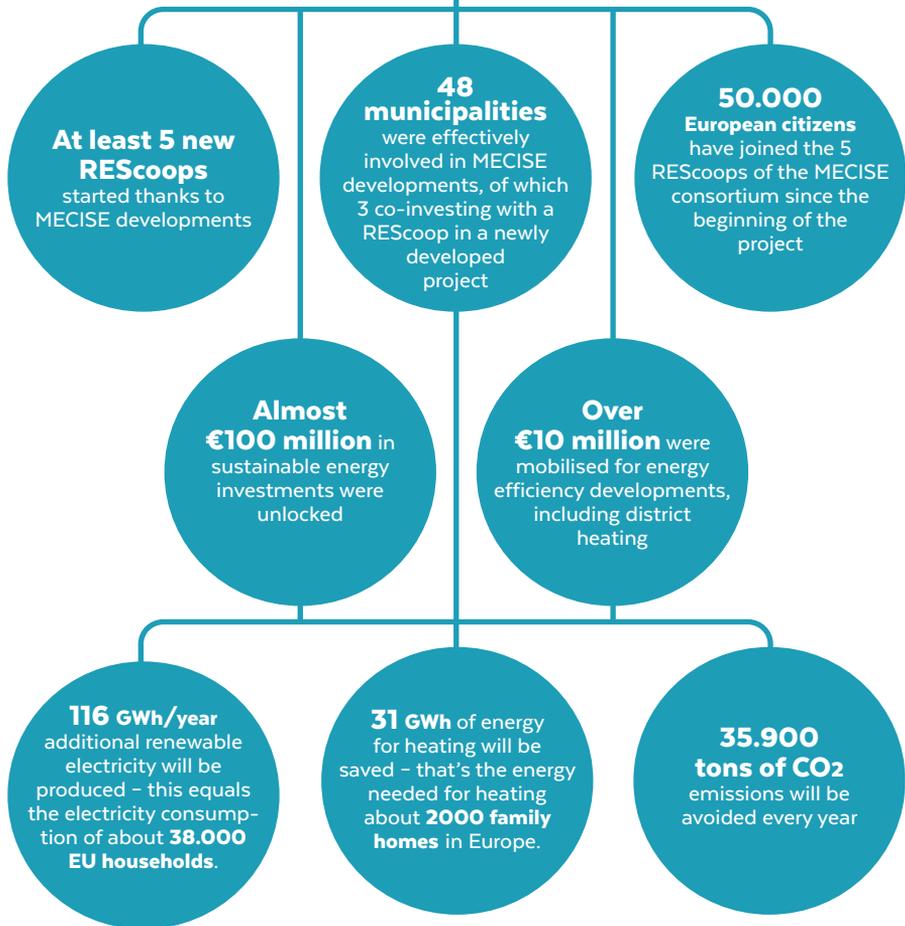
Five REScoops from four countries teamed up with their European federation REScoop.eu in the framework of the European Union’s Horizon 2020 programme. Between December 2015 and February 2019 they achieved the goals set in their Project Development Assistance (PDA) project as shown in this illustration and created tools for themselves and other groups of citizens to accelerate the energy transition.

This project ran in parallel with the process of designing new EU-directives on energy: the Clean Energy for All Europeans package. This recognises EU citizens and their collective projects are essential stakeholders in tackling climate change. This booklet also highlights how the project partners responded to this.



Karel Derveaux, for Ecopower, REScoop MECISE project coordinator,
January 22, 2019

REScoop MECISE



Celebration opening Westmill Wind Farm ©Energy4all



INTRODUCTION: THE RESCOOP MECISE HORIZON 2020 PROJECT (2015-2019)

by Dirk Vansintjan

REScoop MECISE stands for ‘Renewable Energy Cooperatives Mobilising European Citizens to Invest in Sustainable Energy’ and refers to a Horizon 2020 project funded by the European Commission through EASME. Five renewable energy co-ops from four EU member states linked renewable energy projects to energy efficiency, fostered collaborations with cities and municipalities and set up a financial tool to help other REScoops overcome initial financing obstacles. Besides the five renewable energy coops – Ecopower (BE), Courant d’Air (BE), Enercoop (FR), Energy4All (UK) and Som Energia (ES) – the European federation REScoop.eu was also an active partner for the communication about the project, the dissemination of its results among its members, municipalities and European citizens in general and the advocacy about citizen energy communities towards the European Commission, the European Parliament and EU member states.

The main ambitions of REScoop MECISE as a Project Development Assistance project were met:

- an investment portfolio was created, leading to almost €110 million investments in renewable energy projects (wind, photovoltaics, biomass, hydro) and energy efficiency, and over 50.000 extra EU citizens joining the REScoops involved;
- 48 local municipalities were supported in implementing their sustainable energy action plans (SEAPs) by taking energy efficiency measures in public buildings, by helping them to accelerate the energy transition;
- a service to help citizens implement energy efficiency investments in their homes was set up, tested and is operational now;
- a dedicated financing tool to help local energy cooperatives finance their renewable energy sources (RES) and energy efficiency (EE) projects was created and is operational now: REScoop MECISE sce.

In addition to these formal objectives, the partners actively contributed to advocacy so that in the new Renewable Energy Directive and Energy Market Directive active citizens and their renewable energy communities get a definition and the right to take up an active role in the energy transition as demonstrated in the REScoop MECISE project.

As a result the project allowed the partner-REScoops not only to accelerate their efforts in renewable energy and to link these projects to energy efficiency but also to provide citizens, community energy initiatives and local authorities with good practices, permanent tools and a legal EU framework to allow them to accelerate the energy transition and help to keep climate change under control from bottom up.

CONTEXT OF THE RESCOOP MECISE HORIZON 2020 PROJECT

WHAT DID LIBERALISATION OF THE ENERGY MARKET BRING?

by Dirk Vansintjan

Europe's energy sector has been undergoing a steady process of profound transformation over the past three decades. At the heart of this transformation has been market opening and liberalisation, leading to the separation of activities (generation, supply, distribution and transmission) across the energy value chain. Liberalisation has been sold as a solution to promote competition, cost-efficiency and, ultimately, lower prices and consumer choice. Indeed, liberalisation and technological advances in clean energy technologies have allowed for the entry of new actors, including citizen energy communities that want to prioritise renewables and the energy transition.

And yet, the energy system is still heavily skewed towards dirty and inflexible fossil fuel and nuclear energy resources. These technologies are controlled by powerful incumbents that are ready to fight to the death in order to protect their market share and pass on hidden costs to society, consumers and the environment. Furthermore, it is clear that distributional burdens, in particular 'who' pays for the energy transition, are heavily bent against households and SMEs, who pay way more in terms of energy system costs than larger industrial consumers.

With the EU's new 'Clean Energy for All Europeans' legislative package, new and positive changes – particularly for citizens that want to invest and benefit from the energy transition – are on their way. Nevertheless, some of the most challenging issues still remain outstanding. Until issues such as coal and nuclear phase outs, and fairness/distributional issues are dealt with, we can only say that liberalisation is still an ongoing experimental process.

In 2015, when we published 'The energy transition to energy democracy'¹ it was still too early to conclude whether the liberalisation was an overall success. The question remained whether the private consumer, the citizen, is better off thanks to liberalisation. At this point, we can now state that at the very least, he definitely perceives he is not.

A SHORT PEOPLE'S HISTORY OF ENERGY PRIVATISATION AND LIBERALISATION IN EUROPE

by Josh Roberts

European cooperation has energy issues at its roots. In 1951, the Treaty establishing the European Coal and Steel Community (ECSC) was concluded, signalling the beginning of European integration.² The ECSC was wound up in 2002, with functions being taken over by the EU.

In 1957 the European Atomic Energy Community (EURATOM) was established to promote peaceful use of nuclear energy, along with the European Economic Community (EEC), which was based on the core principle of freedom of movement of goods.

During this time, national priorities focused on securing reliable and constant supply of energy, consumer protection and economic competitiveness through big state-owned monopolies. In the 1960s and 1970s nuclear energy was widely accepted as the energy source of the future that would provide us with secure energy virtually free of charge. Some countries such as France, Belgium, the UK and Germany bet heavily on the technology. Coal also proved a cheap and readily available resource that could power national economies.

By the 1980s, the perception emerged that monopolies intertwined with state control were no longer fit for purpose. It was thought that liberalisation (at this time it meant privatising and breaking up of government monopolies) and privatisation would lead to greater competition and lower prices. Initiation of inter-state trade due to surpluses in production capacity (e.g. France with its overinvestment in nuclear) also started to increase.

Changes at national level precipitated attempts by the European Commission to begin a process of introducing a common set of rules to strengthen competition, and create a true European internal energy market. This has included, since the late 1990s, three legislative packages that have progressively forced the opening of the market to new actors, and the separation (or unbundling) of different activities (e.g. of supply, generation, distribution and transmission) of 'vertically integrated' energy companies. This has resulted in a further breakup of state monopolies and in partial or full privatisation in a number of countries.

The process of liberalisation in Europe – the first two energy packages

The ‘First package of liberalisation directives’ was adopted in 1996 (electricity) and 1998 (gas). The ‘Second package of liberalisation directives’ was adopted in 2003 (EU legislation applicable to the electricity and gas markets)³. In particular, these packages aimed to:

- distinguish clearly between competitive parts of the industry (e.g. supply to customers) and non-competitive parts (e.g. operation of the networks);
- oblige operators of networks and other infrastructure to grant third parties non-discriminatory access to the infrastructure;
- free up the supply side of the market (e.g. remove barriers preventing alternative suppliers from importing or producing energy);
- gradually remove any restrictions on customers from changing their supplier, while still treating them largely as a passive consumer;
- introduce independent regulators to monitor the sector.

This resulted in the progressive opening of the market to new players. However, competition was slow to take off. Markets remained largely national and highly concentrated with relatively little cross-border trade. To strengthen competition in the electricity and gas markets, the Commission brought forward a ‘Third package of legislative proposals’⁴ in 2007.

The Third energy package and Europe’s 2020 climate and energy objectives

The aim of the ‘Third energy package’⁴ (adopted July 2009) was to make competition in the energy market fully effective and to create a single EU gas and electricity market. This would keep prices as low as possible and increase standards of service and security of supply. In particular, this was supposed to result in:

- **Unbundling:** Effective unbundling of energy production and supply interests from the network to prevent network operators from favouring their own energy production and supply companies.
- **A strengthened consumer focus:** Increased transparency of retail markets and strengthening of consumer protection rules, including the right to freely switch supplier, the right to have access to consumption data, and rules on information on energy bills and contracts. A 2010 study⁵ showed that although EU consumers could on average save €100/year if they switched to the cheapest electricity offer available to them, only 12% had actually done so.

- **Stronger regulatory oversight:** More effective market oversight by independent national regulatory authorities.
- **Institutionalised EU level energy market governance:** Establishment of the Agency for the Cooperation of Energy Regulators (ACER) to ensure effective cooperation between national regulatory authorities and to take decisions on cross-border issues, and a new European Network for Transmission System Operators (ENTSO) to bring together EU electricity and gas grid operators to cooperate and develop common commercial and technical codes and security standards.⁶

Importantly, in the same year the Third energy package was decided, the EU adopted a ‘Climate and Energy Package’⁷ in order to implement the EU’s three ‘20-20-20 targets’, which contained a number of directives on climate and energy. Together, these legal instruments have attempted to place single market principles and the environment side by side. In particular, the Renewable Energy Directive has provided a major push for the development of renewable energy throughout Europe, contributing to innovation and lowering costs of renewable energy technologies.

The situation today

At the end of 2013, it appeared that most large public and private players were not doing very well under liberalisation. This was due to a number of factors: the 2008-2009 economic crisis, decreasing wholesale prices from overcapacity, better efficiency, competition from renewable energy sources and new market actors, such as prosumers and energy communities... Large energy companies united in the so-called ‘Magritte Group’ gathered in Brussels to mount an attack on renewables in an attempt to regain their old positions. This was packaged as an initiative to secure the energy future of Europe, and to solve all the so-called problems caused by renewable energy resources, which they labelled as unreliable and expensive for consumers. This powerful group of oligopolists was successful in watering down the EU’s 2030 commitments to further develop renewable energy and energy efficiency. Furthermore, they successfully pushed for new rules to further expose renewable energy to responsibilities and market forces, for instance through ‘State aid guidelines for energy and the environment’⁹ (2014).

Finally, at the national level they managed to push for new market mechanisms where only they could participate, sometimes known as capacity mechanisms or strategic reserves. The development of these mechanisms has allowed energy companies to continue receiving subsidies at the expense of taxpayers, consumers, and the proper functioning of the market.

This brings us to today, leaving us with the following question: ‘Has liberalisation really benefited citizens?’

THE IMPACT OF LIBERALISATION ON THE ENVIRONMENT

by Josh Roberts

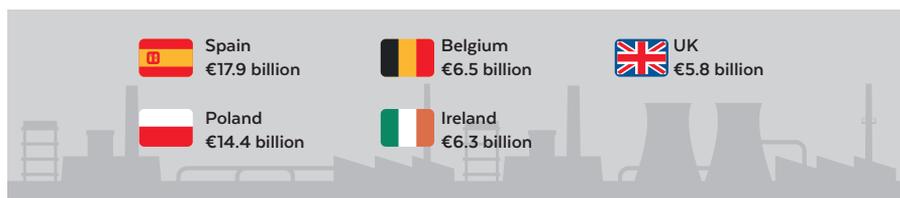
The link between climate and energy has been acknowledged at the EU level since the late 1980s, but the overall process of integrating climate and energy has been slow. The first energy packages were solely focused on a single market approach (liberalisation and competition), without having other objectives in mind.

The lack of consideration for the environment in the energy sector is partly explained by the legacy upon which the sector has developed. Oil, coal, gas and nuclear power plants are examples par excellence of centralised, large-scale production. In Belgium, for example, nuclear power plants are concentrated on two sites, and used to produce more than half of the country's electricity. Despite the decreasing profitability, these interests have been well protected by national governments.

The problems and costs of fossil fuels and nuclear energy have been shifted to future scientists and generations. For nuclear in particular, this has concerned the demolition of obsolete plants, and the processing and storage of radioactive waste. Moreover, the plants are almost never insured against accidents.

As for coal, the price that consumers pay is severely disconnected from the actual costs it presents to the environment. According to a recent Greenpeace report¹⁰, in Europe coal plants alone emit 18% of the EU's carbon emissions and cause 19,500 premature deaths every year because of air pollution.

The worst offenders: subsidies to polluting coal, gas and nuclear



Source: Greenpeace

This does not take into account the environmental cost of extraction and its negative impacts on the local environment.

Thus, while the electricity from these old installations is quite cheap in purely financial terms it is quite expensive if wider environmental costs are included, moreover it will be future generations that bear these costs — not us.

THE IMPACT OF LIBERALISATION ON CITIZEN PARTICIPATION IN THE ENERGY TRANSITION

by Josh Roberts

For the average citizen, EU energy policy has historically been mostly irrelevant. This is because energy policy has largely viewed citizens as passive energy consumers. That is, final users of energy that are beneficiaries of low-cost, secure energy supply brought about by an efficient and competitive market. EU energy market legislation was designed to create competition in the industry and allows consumers to exercise choice, ‘empowered’ by better information. Until recently, EU legislation had not once acknowledged citizens as active participants in renewables or other activities in the energy sector.

Instead, support for citizen involvement in renewables has come about through a number of local and national policies. As a result, citizen involvement — particularly through citizen energy communities — has grown into a European movement. Indeed, citizens have been jointly investing in renewables since the 1970s even before liberalisation. Slowly these grass-roots initiatives were able to get the attention of their national governments, and throughout the 80s and 90s policies began to support the entry of renewable energy sources into the market.

Because of the supportive policies that were put in place, citizen energy community initiatives are now prevalent throughout Western and Northern Europe. However, they are still relatively undeveloped in South- and Central-Eastern Europe, mainly due to the lack of supportive frameworks, even though the interest from communities and local authorities there is palpable.

At the moment, REScoop.eu, the European federation of groups and cooperatives of citizens for renewable energy, which represents citizen energy communities, enjoys membership from around 1500 initiatives across 14 different European countries, while it estimates that there are currently around 3400 citizen energy communities across the EU.

And the potential for future growth is significant. According to a 2015 study by CE Delft, by 2050 approximately 45% of renewable energy production could be owned by citizens, 37% of which could come through participation in an initiative of a citizen energy community.¹¹

That is not to say citizens have not been empowered to become ‘active’ by significant changes in EU energy policy over the past two decades. Indeed, liberalisation has made it possible for citizen energy communities to start supplying their members with their own renewable energy.

Furthermore, the Renewable Energy Directive pushed national support measures for renewables that created incentives for individual citizens and citizen energy communities to set up renewable energy projects.

However, the lack of any mention of citizen involvement in the energy system has created a giant policy blind spot across Europe. Without recognition, citizens as an energy sector stakeholder have been overlooked in policy and decision making.

Regulation is far behind the trend of allowing citizens and their citizen energy communities to freely and fairly participate in the energy market. Energy market rules were traditionally designed for the large, centralised, energy companies. On the other hand, prosumers and citizen energy communities have flown under the radar of regulators, or have been treated as an annoying afterthought.

The main issue revolves around the fact that household and SME prosumers and citizen energy communities are quite small in size and are largely run by non-professionals. Citizen community energy initiatives in particular are run by volunteers, are traditionally driven by 'local' investment and participation, and have different aims for getting involved in renewables (e.g. savings on energy bills, socially responsible investment, local community benefits, etc.). This makes them very different from the average energy company, and these characteristics also present a unique set of challenges. Because they have not been organised politically, they have been unable to advocate with the same effectiveness as well-oiled lobby machines employed by bigger energy companies.

Without any acknowledgment of differences between themselves and large energy companies, citizens and their citizen energy communities have been unable to successfully push their national governments for fair and proportionate rules. They are implicitly discriminated against. Furthermore, the lack of EU level support has resulted in a very uneven development of citizen energy communities in Europe. For example, most citizen energy communities can be found in Western and North-Western Europe. While the number is growing in Southern Europe, in Central and Eastern Europe there are still very few or no citizen energy communities. This means that across Europe there are very uneven opportunities for citizens to invest in and benefit from the energy transition.

Even in countries where citizen energy communities have historically been supported, new rules that are intended to 'integrate' renewable energy sources into the market are squeezing citizen energy communities out of the market. Take Germany for example. Between 2013 and the end of 2016, the share of citizen ownership in Germany had decreased from 47% to 42,5%.¹²

In 2012, initiatives of citizens or cooperatives accounted for 36% of new renewable energy investments for the year; by 2016, that number dropped to only 15%. With the introduction of auctions for onshore solar and wind, the number of citizen energy communities or 'Bürgerenergiegenossenschaften' participating in the development of new projects in Germany has significantly decreased.

In conclusion, liberalisation has contributed to market opening, providing citizens with the opportunity to enter the sector. However, without a dedicated support and a proper set of common rules for all member states to follow, citizen energy communities are likely to be a short-lived fad within the story of liberalisation.

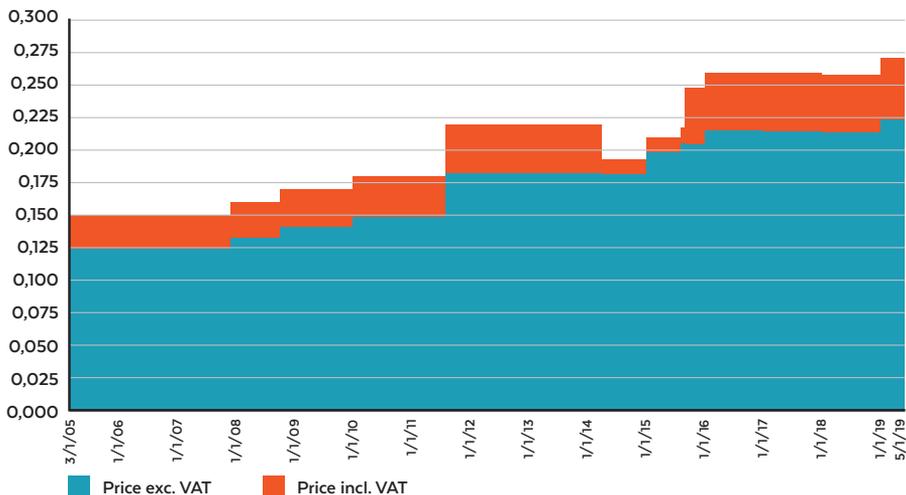
MORE COMPETITION, SMALLER MARGINS FOR SUPPLIERS BUT HIGHER ELECTRICITY PRICES FOR HOUSEHOLDS

by Dirk Vansintjan

The liberalisation of the energy markets was intended to lead to more competition between suppliers benefitting households. However, many EU citizens do not believe that this is the case.

Let's take a look at the example of Ecopower in Flanders, Belgium. Ecopower is a citizen energy community that was created in 1991 and which started producing green electricity in 2001. In 2003 its members decided in their General Assembly that Ecopower would become an electricity supplier once the energy market was liberalised in Flanders (Belgium) on 1 July 2003. It was decided the electricity would be supplied at cost, without a difference between day/night and with the same price in the whole of Flanders, regardless of the distribution network and their (quite) different tariffs. As a result, Ecopower was one of the cheapest supplier for most Flemish households with tariffs up to 25% lower than the incumbent monopolist Electrabel (now Engie).

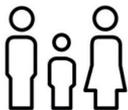
Price green electricity Ecopower 2005-2019



For the members of Ecopower, selling green electricity at cost, the price almost doubled since the liberalisation in 2003, VAT went from 21% to 6% and back to 6%. Source: Ecopower

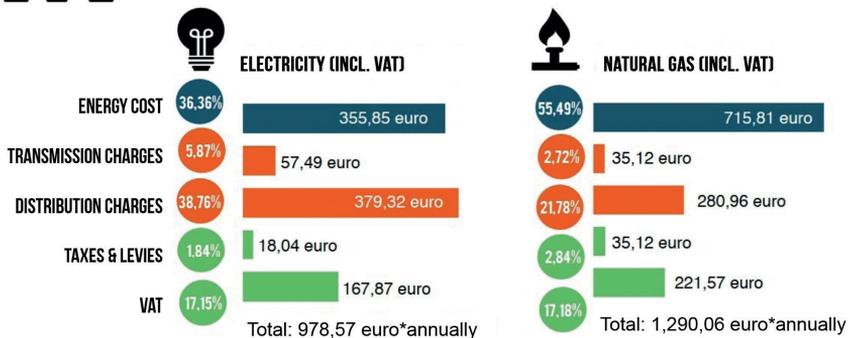
Part of this was due to the fact that in those early days of the liberalisation green electricity produced in Flanders didn't have to pay distribution and transmission costs. But the perception of the citizens then was that the lower prices were due to competition.

The advantage of no distribution and transport costs however was soon taken away and when almost the entire cost of the energy transition (green certificate system, a feed in premium system) was transferred to the electricity bills of households and other consumers with low tension connections, prices for them kept rising.



The results are based on:

- an annual electricity consumption of 3,500 kWh (dual meter: day:1,600 kWh and night: 1,900 kWh);
- an annual natural gas consumption of 23,260 kWh (heating);
- prices August 2018. The analysis of the prices is based on the V-test.



Composition of the electricity price for an average household in August 2018 in Flanders. Source: VREG, Flemish Regulator Energy (<http://bit.ly/electricity-price-flanders-2018>) / Translation REScoop.eu

In Flanders (BE) households and SMEs connected to the low tension grid pay about 150 times more for the energy transition than companies connected to the high tension grid. Mid tension grid customers pay 9 times less than low tension customers (households and SMEs)¹³.

Contribution of different customers to 'public service obligations'

(Public service obligations reflect the main cost of the energy transition)

TYPE OF CUSTOMER	CONSUMPTION LEVEL	COST PER MWH	TIMES MORE
 households/ small enterprises	Low tension	€ 53,83	150
 medium size enterprises	Mid tension	€ 5,95	16,5
 very large enterprises	High tension <i>Flemish competence</i>	€ 0,36	1
 very large enterprises	High tension <i>Federal competence</i>	€ 0,00	0

Cost/MWh energy transition for different customers in Flanders (BE) 2017

Source: V-test of Flemish regulator VREG

Meanwhile competition between the suppliers led to levelling of the tariffs and today margins are melting like glaciers, resulting in the disappearance of several smaller suppliers.

To summarise: the effect of the liberalisation for households in Flanders (BE) is not visible anymore, mainly due to the fact that they almost completely cover the cost of the energy transition.

Only if you compare the price of Ecopower with the price of the dormant clients of the former monopolist Engie (Electrabel) you can see the effect of the liberalisation.

	PRICE	PERCENTAGE	TYPE OF ELECTRICITY
Engie	€ 781,29	114,37%	grey electricity
Ecopower	€ 683,04	100%	green electricity

Comparison price for 1200 kWh day/1200 kWh night for household low tension customer in Flanders (BE), Iverlek DSO zone, December 2018.

Source: V-test of Flemish regulator VREG

INDUSTRIAL CONSUMERS DON'T CONTRIBUTE TO THE ENERGY TRANSITION

by Dirk Vansintjan

As was shown above in the example of Flanders (BE) there is a big difference in electricity prices between different categories of consumers: households and small enterprises on the low tension grid, medium sized enterprises on the mid tension grid and large energy intensive industry on the high tension grid.

Overall:

- the more you consume the lower your kWh price is,
- the more you consume, the lower taxes and levies are.

Across Europe very different prices between countries occur as well. Eurostat offers us public information¹⁴ about this.

Electricity prices for households 2008-2016¹⁴

The EU-28 average price — a weighted average using the most recent (2016) data for the quantity of electricity consumption by households — was €0,2049 per kWh. The development of electricity prices for household consumers in the EU-28 since the first half of 2008 is presented in Figure 1.

Development of electricity prices for household consumers, EU-28 and EA, 2008-2018

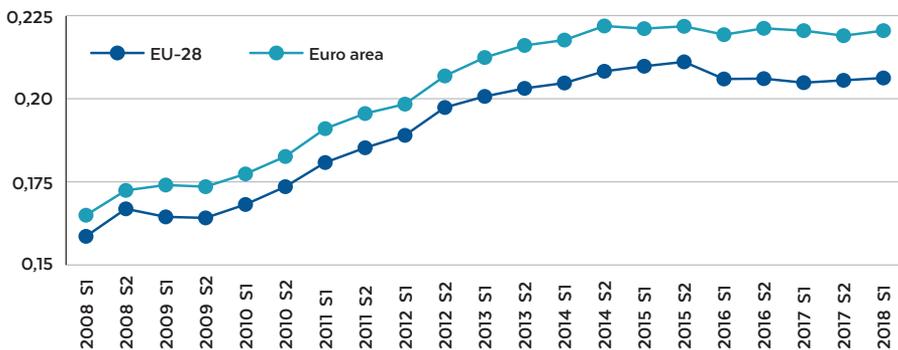


Figure 1: Development of electricity prices for household consumers, EU-28 and EA, 2008-2018 (€ per kWh) Source: Eurostat (http://bit.ly/nrg_pc_204)

Weight of taxes and levies for household consumers differs greatly between member states

The proportion of taxes and levies in the overall electricity retail price for household consumers is shown in Figure 2. The relative amount of tax contribution in the first half of 2018 in the EU was smallest in Malta (4,7 %) where a low VAT rate is applied to the basic price and no other taxes are charged to household consumers. The highest taxes were charged in Denmark where 67,7% of the final price was made up of taxes and levies.

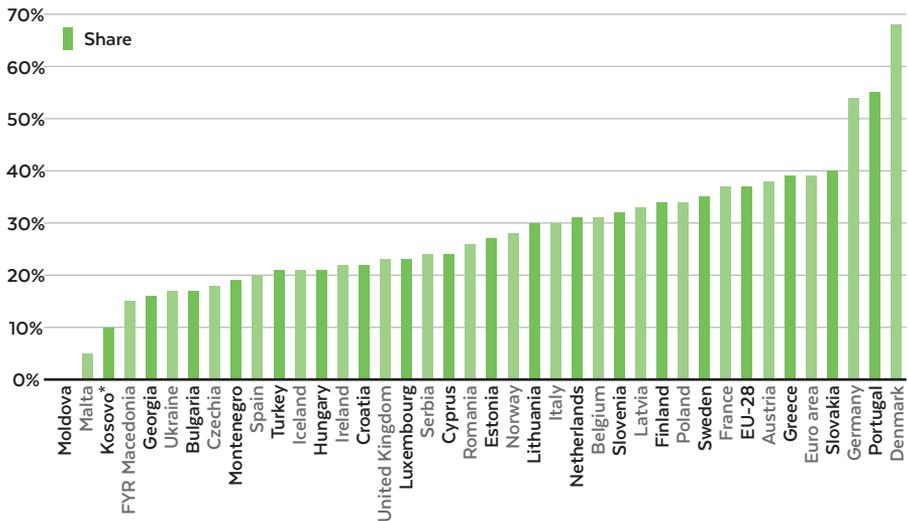


Figure 2: Share of taxes and levies paid by household consumers, first half 2018 (%)

Source: Eurostat (http://bit.ly/nrg_pc_204)

Electricity prices for medium-size consumers

For non-household consumers (defined for the purpose of this publication as medium-size consumers with an annual consumption within the range of 500 MWh < consumption < 2000 MWh), electricity prices during the first half of 2018 were highest among the EU member states in Germany and Italy (see Figure 3). The EU-28 average price – a weighted average using the most recent (2016) national data for the quantity of consumption by non-household consumers – was €0,1142 per kWh.

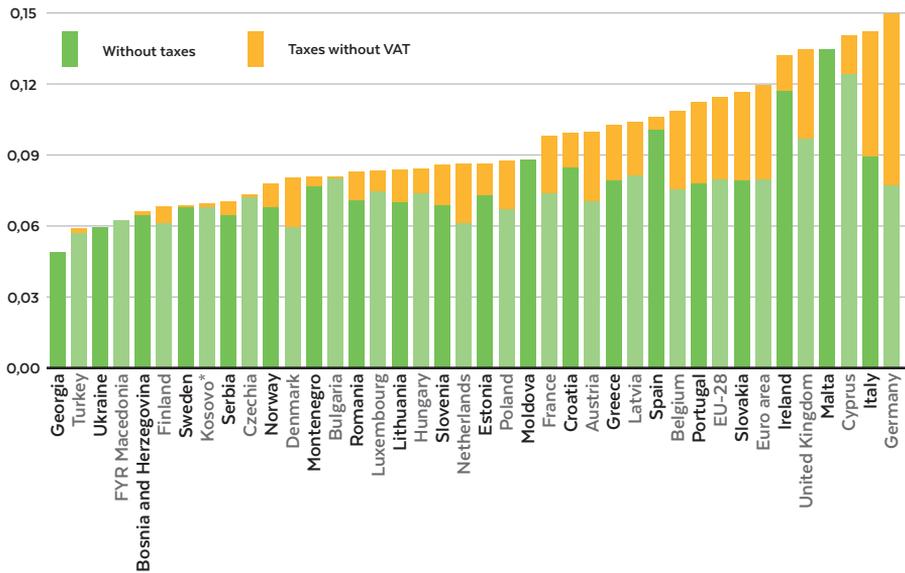


Figure 3: Electricity prices for non-household consumers, first half 2018 (€ per kWh)

Source: Eurostat (http://bit.ly/nrg_pc_205)

The development of electricity prices for non-household consumers in the EU-28 since the first half of 2008 is shown in Figure 4. These prices increased from 2008 until the first half of 2014 except for the second semesters of 2009, 2012 and 2013. Since then, the prices have decreased every semester except for the first half of 2017 and 2018.

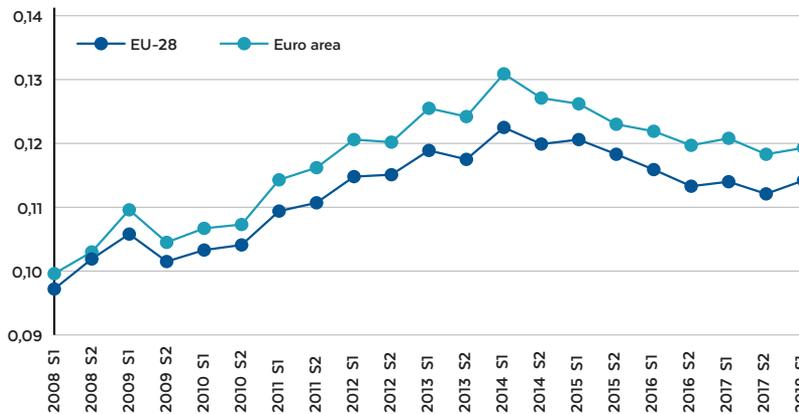


Figure 4: Development of electricity prices for non-household consumers, EU-28 and EA, 2008-2018 (€ per kWh) Source: Eurostat (http://bit.ly/nrg_pc_205)

Electricity prices for large industrial consumers

Figures about what large industrial consumers pay are harder to find due to the fact that electricity prices of individual companies can differ significantly, depending on company-specific consumption structures and procurement strategies for electricity.

In July 2015 Fraunhofer/Ecofys published the report of a study¹⁵ performed for the German Ministry of Economic affairs and Energy on this issue.

Their comparison showed that energy-intensive, large-scale consumers from the metalworking industry and the chemical industry pay the lowest electricity prices in most of the analysed countries. They pay no or significantly reduced levies and taxes and low network charges, resulting in a kWh price that is up to 4 times lower than the price for households.

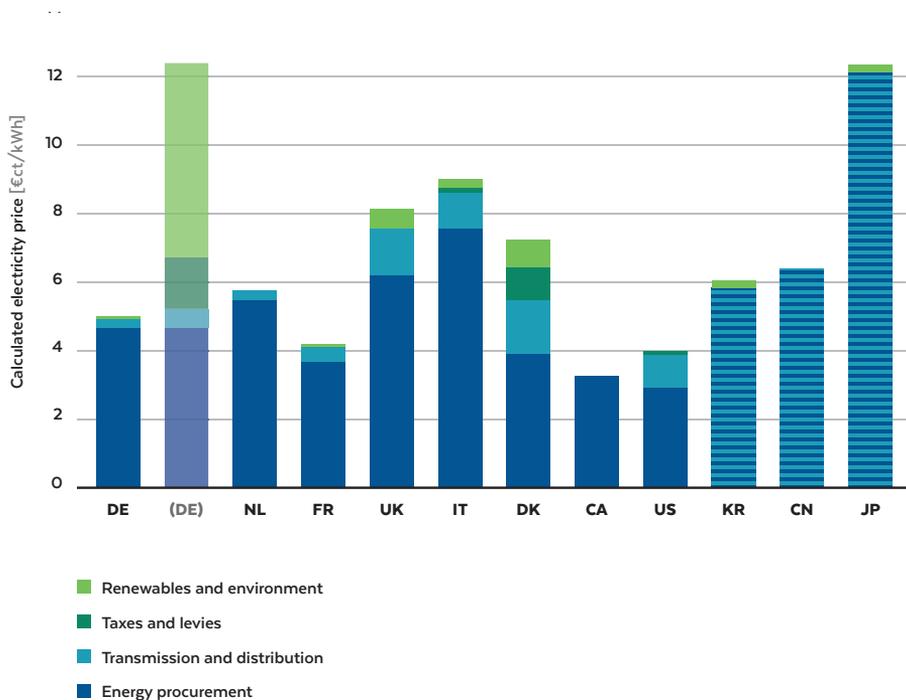


Figure 5: Electricity prices for big, privileged companies.

Source: Ecofys and Fraunhofer (2015), Electricity Costs of Energy Intensive Industries

CONTEXT OF THE RESCOOP MECISE HORIZON 2020 PROJECT CLIMATE CHANGE

by Dirk Vansintjan

This text was written on the day the COP 24, the United Nation Climate Conference, started in Katowice (Poland) and one day (2 December 2018) after 75.000 citizens, despite the rain, went to Brussels for the biggest Climate March ever in Belgium. Among the protesters were many members of the citizen energy communities of Belgium.



© Mario Heukemes, Courant d'Air (Belgian REScoop)

Although the Belgian Minister of Climate and Energy, Mrs. Marghem, was, to the irritation of her colleagues, present at the demonstration, she was — in the eyes of the protestors — actually protesting her own failing policy. The day after she took a private jet to and from Katowice, posted this on Twitter and as a result irritated the protesters even more.



© Twitter account of Mrs. Marghem, Belgian minister of Energy and Climate, 3 December 2018

In this context of climate change, all across Europe, citizens not only protest, but also organise themselves in REScoops or citizen energy communities and act, often in close collaboration with local authorities. Councils came together by signing the Covenant of Mayors and investing in the energy transition in an attempt to counter climate change. This is what the REScoop MECISE project is all about.

This is why REScoops also engage at the yearly Climate Conferences to show authorities at all levels, NGO's and citizens all around the world what European citizens do themselves and together in citizen energy communities to tackle climate change.

COP21 IN PARIS (2015)

by Dirk Vansintjan

In the first year of the REScoop MECISE project, the partners organised a project meeting in Paris while the COP21 was being held there. This gave all partners the opportunity to attend a successful event on 10 December 2015. REScoop.eu co-organised this with its French member Enercoop.

It turned out to be one of the biggest side events at the COP21 with more than 400 attendees and a fantastic line-up of speakers, including the acting French Minister of Energy, Ségolène Royal, the executive director of the European Environment Agency, Hans Bruyninckx, and Alexandra Sombsthay of the Directorate General of Energy from the European Commission.



© Enercoop

COUNTRIES FAIL TO ACT

by Dirk Vansintjan

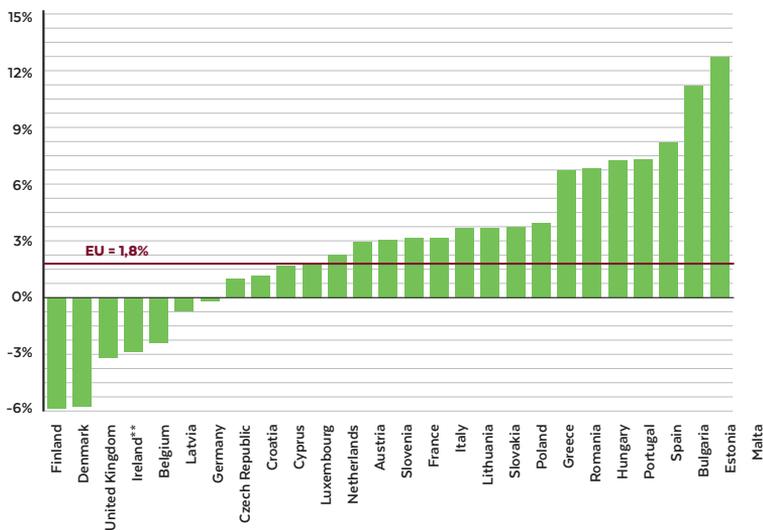
Three years after the COP21 in Paris it transpires that most countries failed to put their commitments into effective results as Eurostat¹⁶ statistics demonstrate.

CO₂ emissions from energy use

Eurostat estimates that in 2017 carbon dioxide (CO₂) emissions from fossil fuel combustion even increased by 1,8% in the European Union (EU), compared with the previous year. CO₂ emissions are a major contributor to global warming and account for around 80% of all EU greenhouse gas emissions. They are influenced by factors such as climate conditions, economic growth, size of the population, transport and industrial activities.

This information on yearly estimates of CO₂ emissions from energy use for 2017 is published by Eurostat, the statistical office of the European Union.

According to Eurostat estimates, CO₂ emissions rose in 2017 in a majority of EU member states, with the highest increase being recorded in Malta (+12,8%), followed by Estonia (+11,3%), Bulgaria (+8,3%) Spain (+7,4%) and Portugal (+7,3%). Decreases were registered in seven member states: Finland (-5,9%), Denmark (-5,8%), the United Kingdom (-3,2%), Ireland (-2,9%), Belgium (-2,4%), Latvia (-0,7%) and Germany (-0,2%).



Source: Eurostat (2018), Early estimates of CO₂ emissions from energy use 2016-2017

CITIES AND MUNICIPALITIES ACT

by Achim Langer

All across Europe cities and municipalities don't wait for higher authorities to come in action. They often join the Covenant of Mayors and networks of peers like Climate Alliance, Energy Cities and ICLEI.

One of the growing number of examples is the joint effort of the municipalities of Amel and Büllingen in the German speaking part of Belgium. REScoop MECISE partners Courant d'Air (BE) and Ecopower (BE) successfully won a public tender jointly issued by these municipalities to erect six large wind turbines. The wind farm will be co-owned by the municipalities and the citizens joining the REScoops. The investment will generate additional income to finance local energy efficiency and renewable energy projects.

A public-civic project

Since 2013, the municipalities of Amel and Büllingen have intended to develop a wind farm on municipal parcels of land on the border between their respective territories. The future wind farm location was identified in the Wallonia Wind Power Mapping of 2013 as the only location on the territory of the two municipalities that can accommodate several wind turbines while at the same time being sufficiently distant from existing wind farms. In 2013, both municipal councils unanimously decided to support the development of a wind farm at this site.

Courant d'Air is the local renewable energy cooperative. In 2012 the municipalities of Büllingen and Amel approached them with the concept of citizen participation in wind farm projects according to the REScoop model. By successfully implementing the Waimes wind farm in 2011, Courant d'Air has developed valuable skills in the creation, implementation and management of wind farms. Courant d'Air has operated an 'open book' basis providing their municipal partners with complete transparency on all aspects of the project. For the municipalities, this provides significant added value by having a trusted local partner.

After the municipal councils of Büllingen and Amel had approved the development of a wind farm on their common border, the municipalities laid down the conditions for the specifications for the selection of a project developer in 2015. In addition to financial aspects, the specifications established the basis of participation of both municipalities and citizens.

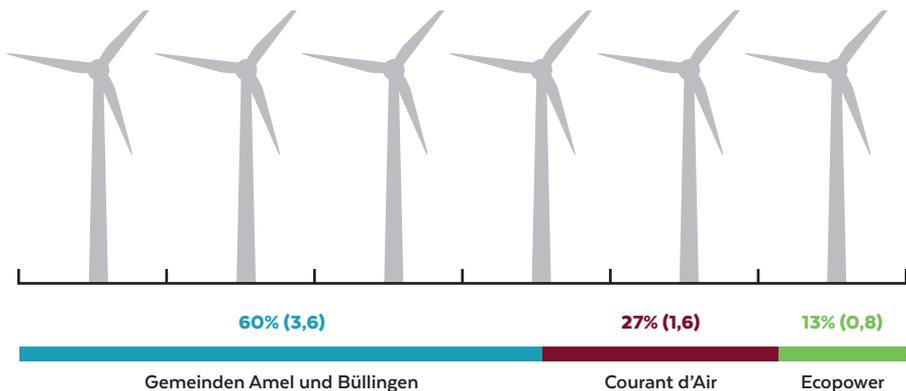
Regarding the participation of the municipalities in the ownership of the park, the project developers should indicate the maximum amount of the participation granted. A further criterion was the obligation to imply

cooperatives in accordance with the Walloon framework plan for wind power. This provides for a participation of 24,9% each for the public sector and for cooperatives, should these actors be interested.

The municipalities of Amel and Büllingen have gone further in their call for tenders. The contenders were not allowed to propose cooperatives that they directly or indirectly controlled. It should be an autonomous citizen participation, independent of the private project developers.

As a result of the knowledge it had acquired, Courant d’Air decided to participate in the project as a direct partner. In order to share the risk of the project development, Courant d’Air teamed up with her ‘big sister’ Ecopower from Flanders to submit a joint bid. The Ecopower-Courant d’Air consortium was awarded the contract and the two cooperatives were commissioned to develop the wind farm project.

The offer of Courant d’Air and Ecopower foresees a participation of up to 60% of the two municipalities (according to their wishes and financial possibilities) in the park. Citizens will be able to participate in 40% or more of the park through Courant d’Air and Ecopower. An agreement between the two partners provides for a split of 2/3 for the local player Courant d’Air and 1/3 for Ecopower.



The municipalities of Büllingen and Amel each want to operate at least 1 wind turbine in the new wind farm. They are free to increase their participation up to 60%, which corresponds to 1,8 wind turbines for each municipality. Source: Courant d’Air

Since the beginning of 2016, Courant d’Air and Ecopower have been working together. The number and position of the wind turbines was determined with the municipalities. The tender explicitly stated that the municipalities wished to be actively involved in the development process. Such an approach

certainly helps to improve the general acceptance of a project. In the same year, the necessary studies were commissioned (environmental impact assessment, wind study) and at the beginning of 2017 the mandatory citizen information event was held. In January 2018, after 2 years of work, the studies were completed and the application for global approval could be submitted.

The approval procedure provides for a 30-day public consultation, during which citizens can learn about the entire application dossier and give their opinion. In order to provide the citizens of the two municipalities with factual and detailed information on the project, Courant d’Air, Ecopower and the two municipalities took a proactive approach and prepared a comprehensive information brochure. Over 12 pages, the mayors of the two municipalities explained their objectives and the project partners were introduced. The document set out the challenges of climate change and described the characteristics of the project and the most important results of the environmental impact study.



The information brochure was distributed to all households in the municipalities of Amel and Büllingen, with a total of 5300 letterboxes. Source: Courant d’Air

The citizens were also invited to learn about the project during an open day at the Courant d’Air offices. However, despite the efforts made to provide correct and factual information, a significant part of the inhabitants of a village adjacent to the wind farm expressed their opposition to the project. But because the project meets all criteria regarding the protection of the inhabitants, the objections were deemed not relevant. The community councils from Amel and Büllingen once again unanimously voted in favour of the project.

Rejection at first

The big surprise came in June 2018. Despite 25 positive reports from a total of 28 different government agencies, the administrative authority had spoken out against the project. The rejection was mainly based on the statement of the forestry authority, for whom the project was unacceptable due to possible impacts on the forest and the red kite. The decision was even more surprising as the project provides for extensive measures in favour of biodiversity. These had been developed within the framework of a working group initiated by Courant d’Air and supported by local nature conservation actors.

Appeal and permit

The municipalities of Amel and Büllingen, as well as Courant d’Air and Ecopower, appealed against the rejection. They contended that the objections of the forest administration were not justified, and the numerous positive aspects of the project were not sufficiently considered. Based on the appeal, the Walloon Regional Minister responsible for urban development re-evaluated the project and gave the green light for the construction of the six wind turbines at the beginning of December 2018.

If this decision is not appealed against at the Council of State, the construction of the wind turbines should start by the end of 2019. Commissioning could then take place in the autumn of 2020.

Wind project will boost the energy transition in Amel and Büllingen

The financial surpluses generated by the wind farm can be used by the municipalities of Amel and Büllingen to implement sustainable energy measures including insulation of municipal buildings and schools and installation of biomass boilers.

The development of the Amel-Büllingen wind farm is an opportunity to demonstrate the region’s commitment to an energy transition against the background of the challenge of climate change.

Courant d’Air would also like to play a role in the implementation of the wider municipal climate action plan, by (among others):

- The implementation of an ambitious plan for the installation of 500 photovoltaic systems in the municipalities of Amel and Büllingen. This plan provides support, financing assistance for households requesting it, group purchases and administrative procedures and is aimed at all households and SMEs.
- The installation of ten charging stations for electric cars, five in each municipality.
- The commissioning of a village electric car sharing initiative in each municipality, available to the citizens.

In addition to these three ideas, Courant d’Air is ready to support citizens’ projects for energy efficiency and green electricity generation. Courant d’Air is one of the founders (28 December 2018) of The Mobility Factory, a European Cooperative Society, bundling the cooperative e-carsharing initiatives in Europe.

See: www.themobilityfactory.eu

Wind project Amel and Büllingen

The wind farm project envisages the installation of 6 wind turbines, 3 on the territory of the municipality of Amel and 3 others on the territory of the municipality of Büllingen. All turbines are located on the property of the two municipalities, 5 in the agricultural zone and 1 in the forest area. The wind turbines are arranged in a linear manner in the north-west south-east direction, i.e. perpendicular to the main south-west wind direction. The wind turbines have a maximum height of 180 m to the tip of the blade and each have a capacity of 3 to 3,6 MW. Depending on the wind turbine model, the power generation of the wind farm will amount to 43.555 to 56.235 MWh/year. The generation in the minimal case corresponds to the annual electricity consumption of at least 11.772 Walloon households and prevents the emission of 18.628 tCO₂eq each year. The investment volume amounts to approximately €24 million.

CITIZENS ACT, PRIVATELY AND IN CITIZEN ENERGY COMMUNITIES

by Dirk Vansintjan

Citizens and municipalities often lack time, resources and technical expertise to initiate renewable energy projects or undertake deep energy renovations, leaving the potential for energy savings largely untapped. At the same time European targets require savings of 80% in the building sector by 2050. REScoop MECISE is bridging that gap. The project partners, all REScoops or as they are now called 'citizen energy communities', are currently helping citizens and their municipalities to initiate energy efficiency measures and save energy in their private homes or public buildings and connecting them to renewable energy projects. Other REScoops are likely to follow the examples worked out in the REScoop MECISE project.



FRENCH FARMERS GO BIG ON RENEWABLES IN LUMS DE LARZAC

by Maëlle Guillou



© Enercoop

Collective action has a history in Larzac in the South-West of France. In 1985, local farmers managed to convince the government to jointly manage an abandoned military terrain, and started their cooperative Société Civile des Terres du Larzac. When one of the farmers suggested to include solar PV in the plans for his new roof, the cooperative jumped at the idea, looking into opportunities for the whole area. The vision: to collectively produce local renewable energy, use the returns to restore and conserve the former military estate and to mobilise new farmers to join the initiative.

This initiative is a perfect illustration of a renewable energy project anchored in a local community. 17 farmers from 12 towns are participating, with support of the French REScoop Enercoop on legal questions, project feasibility and economic viability. Énergie Partagée, a fund co-founded by Enercoop, contributes to the equity, so the farmers can focus on the involvement of citizens in the project. The solar panels are installed by the local company C2A (Compagnie des Artisans Associés). Today, the project consists of 19 roof-top solar PV installations of 9kWp and one larger installation on a warehouse of 100 kWp which hosts processing, drying and storage of wood pellets to supply local farms equipped with automatic boilers.

More information is available at:
<http://bit.ly/project-lums-de-larzac> (in French).

ECOTRAJECT

by Fiene Biesbrouck



Ecopower (BE) successfully developed the cost-covering service, Ecotraject (<http://bit.ly/ecotraject>), to assist citizens (members) in commissioning deep energy renovations in their homes. Impartial, long-term, high-quality advice on an individual basis is the core of the approach.

An online questionnaire – Quickscan – is used to collect information on the current energy level of the house and to get a first idea on the planned investments. The tool proved to be very useful to identify the target group, being members with plans for a deep energy renovation of their home.

At the end of 2018, Ecopower has 57.000 members all over Flanders, living in a wide variety of housing typologies. This reduces the potential for a one-size-fits-all retrofitting solution. Instead tailored advice on feasible energy measures is made after an energy consultant, selected by Ecopower, has completed an individual audit of each property. This approach guarantees the quality of the approach.

A complete overview of the possible measures, put in the right order to maximise the energy saving potential, is summarised in a comprehensive report. Further technical documentation of a specific measure is available in case more detailed information is requested. The technical documentation is also made available online: www.ecopower.be/energiebesparing/ecotraject.

Ecopower helps its members when approaching contractors and helps them to compare offers they receive.

When certain conditions are met, this model can be replicated by other European REScoops.

Ecopower composed a framework other REScoops can use to develop an energy savings service that suits their target audience. It can be found here:

<http://bit.ly/ecotraject-movie>

GENERATION KWH

by Nuri Palmada

Som Energia (ES) created Generation kWh, a new and easy way to collectively generate your own renewable energy. The model paves the way for a future based on 100% renewables where energy generation is owned by the people – a future of energy sovereignty and energy democracy.



Whereas the profitability of renewable energy projects is typically based on feed-in tariffs set up by national governments, Spain's rapidly changing political situation has made investments in renewable energy very risky. The Generation kWh model was thus created during the REScoop MECISE project by the Spanish REScoop Som Energia in the wake of the elimination of incentives and subsidies for renewables in Spain as well as the introduction of government-imposed barriers to individual self-consumption.

At Som Energia, Spain's first renewable energy cooperative, any member of the cooperative can participate via Generation kWh by purchasing energy shares, each worth €100, in line with their annual electricity consumption. As an example, for a household with an average annual electricity consumption of 2400 kilowatt hours to generate 70% of its own electricity for 25 years, 9 energy shares are required amounting to an investment of €900. This comes as a special loan to the cooperative at zero interest.

For each €100 in participation, investors get an estimated 170–200 kWh at the cost of generation per energy share compensated annually on their electricity bill from Som Energia. A household with 10 shares can thus expect to get 1700 to 2000 kWh/year at cost, which is roughly at 3,5–4 cents per kWh as compared to a current market price for electricity of 4,5–5 cents per kWh (the cost of generation of course fluctuates along with market prices). After 25 years, the entire sum originally invested is then returned to the investor, who has all the time been saving on their energy bills through the scheme. Participants keep paying taxes, grid access fees, etc., but the cost of generation is more stable since the main component, the amortisation of the installation and other components such as maintenance, rent, insurance, etc., are covered by long term contracts. Each project is owned by Som Energia's

limited daughter company, and its production is sold via a bilateral contract to the cooperative, which in turn redistributes the kWhs to each participant.

One photovoltaic project that used the Generation kWh model of Som Energia has been already built and has been producing electricity since May 2016; two more projects are expected to be completed in 2019.

As of December 2018, some 3609 Som Energia members have participated in the Generation kWh model, contributing a total of €3.468.500.

Generation kWh is thus already proving itself in Spain, where there was a need for innovative business models like Generation kWh to overcome existing barriers. Generation kWh can, however, be replicated by interested citizen energy communities worldwide.

More information available on: www.generationkwh.org.

Alcolea del Rio

Alcolea del Rio is the first community-owned solar PV project in Spain. The project is close to Sevilla and one of the first projects by Generation kWh, an innovative financing scheme developed by Som Energia. Its members provide zero-interest loans and in return they get access to clean energy at cost price. Despite the lack of subsidies or feed-in premiums, this REScoop decided to proceed because of the project's environmental and societal value. The project has been operational since 2016 and generated enough electricity to cover the needs of about 1300 families.



© Som Energia

CONTEXT OF THE RESCOOP MECISE HORIZON 2020 PROJECT

THE ENERGY TRANSITION TOWARDS A DECENTRALISED, RENEWABLE AND CITIZEN OWNED ENERGY SYSTEM

by Dirk Vansintjan

At the start of the electrification of Europe, starting at the end of the 19th century, Europe witnessed a decentralised start of power generation. However, by the 1930-40s centralisation was underway and this continued mainly through nationalisation after World War II. This culminated in the 1970s and 1980s with the construction of large nuclear power plants.

Since the late 1990s prices of renewable energy production installations, especially of PV-panels and wind turbines, have seen a steep cost decline while their efficiency grew. Combined with the progress of information of technology the energy transition was unleashed when some countries like Denmark and Germany set up successful support mechanisms that encouraged especially citizens and citizen energy communities (REScoops) to invest in renewable energy production.



The energy transition leads us:

- From centralised to more decentralised production.
- From polluting fossil and nuclear fuels to renewable energy.
- From wasting energy in large, inefficient production facilities to a more efficient energy system where energy is generated:
 - at the location where it is consumed;
 - in the amounts that are needed;
 - at the right moment.
- From a top-down system in the hands of a few large energy companies to an internet of millions of active 'energy citizens'.

In other words: energy is generated locally, close to the consumer who often becomes an active energy citizen by installing PV-panels on their roof or by joining a citizen energy community that produces renewable energy in their neighbourhood.

This is a unique opportunity for citizens.

THE ENERGY TRANSITION TO ENERGY DEMOCRACY

THE POTENTIAL OF ENERGY CITIZENS AND CITIZEN ENERGY COMMUNITIES

by Dirk Vansintjan

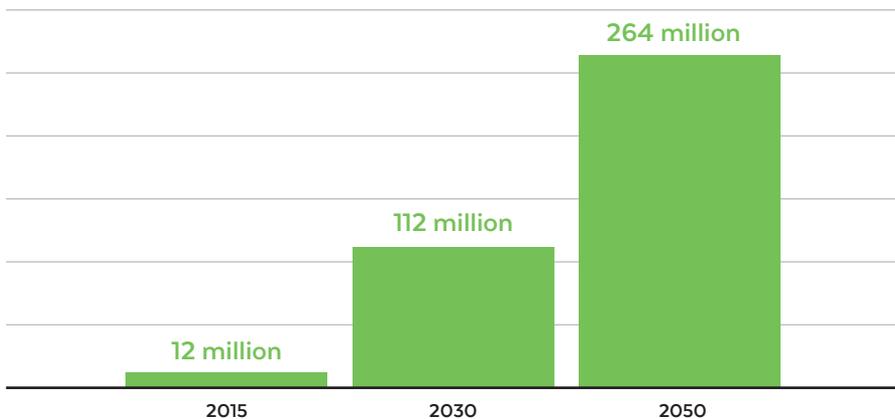
“Most importantly, our vision is of an Energy Union with citizens at its core, where citizens take ownership of the energy transition, benefit from new technologies to reduce their bills, participate actively in the market, and where vulnerable consumers are protected.”

- European Commission 2015¹⁷-

Europe’s energy market is undergoing a fundamental transition from a system based on fossil and nuclear fuels towards one based entirely on renewable energy. It is also transforming from a centralised market dominated by large utilities to a decentralised market with millions of active ‘energy citizens’ or prosumers. Without informed energy citizens, the energy transition is less likely to succeed.

Empowering energy citizens to produce their own energy is about democratising the energy system. However, energy citizens still face significant legal obstacles throughout the European Union including explicit legal restrictions, disproportionate administrative and planning procedures and punitive tariffs. With the right EU legal framework, we could mobilise the European citizens to invest in sustainable energy and energy citizens could flourish and deliver a significant share of Europe’s renewable energy and provide important flexibility to the energy system through demand response. Citizen energy communities (REScoops) have transformed the energy market in many European countries while contributing significantly to revitalising the local economy and creating local jobs.

Energy citizens deliver a significant share of investments in renewable energy and promote the local development and public support of renewable energy. In Germany for example, renewables deliver a third of Germany’s electricity. Nearly every second kWh of this renewable electricity is generated by a broad range of energy citizens¹⁸ thus significantly revitalising the local economy and creating local jobs.



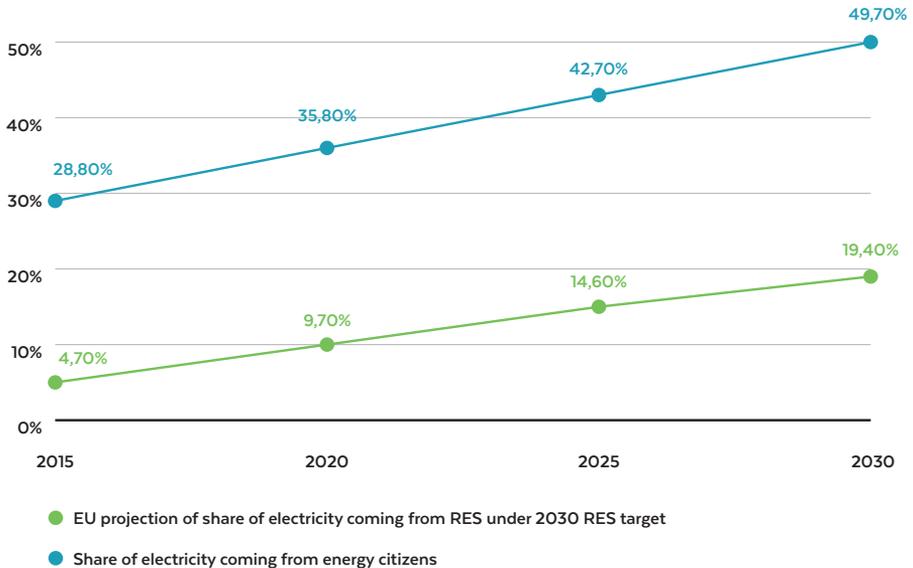
Potential for increase in number of citizens producing electricity in the EU-28
Source: CE Delft (2016)

Calculating the potential

The available data on energy citizens is limited. In order to help remedy this, the European Renewable Energies Federation (EREF), Friends of the Earth Europe, Greenpeace and the European Federation of groups and cooperatives of citizens for renewable energy REScoop.eu commissioned in 2016 the environmental research institute CE Delft to calculate the potential of energy citizens¹¹ in Europe to produce renewable electricity and engage in demand response.

The report uses the Greenpeace Energy [R]evolution 2015 World Energy Scenario¹⁹ which models a global energy system based entirely on renewable energy by 2050, and draws on existing data on energy citizens in European member states.

Powering the transition to 100% renewables



Contribution of energy citizens to the EU 2030 target. Source: CE Delft (2016)

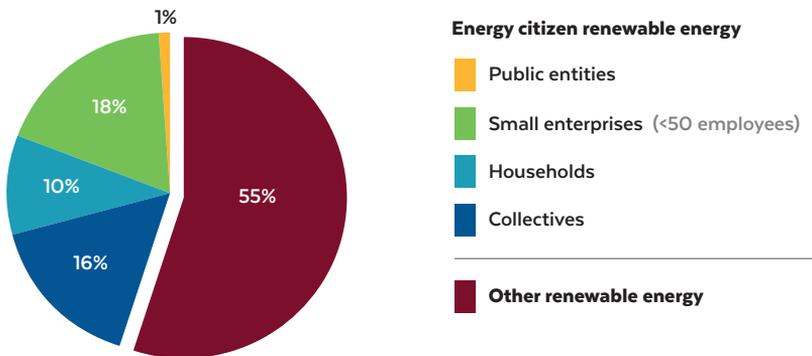
The report estimates the number of energy citizens that exist today and that could exist in 2030 and 2050 in individual member states and in the EU as a whole if the right conditions are in place. It shows that over 264 million European citizens which amounts to half of all citizens in the European Union could produce their own energy in 2050.

These energy citizens could produce 611 terawatt-hours (TWh) of electricity in 2030 and 1557 TWh by 2050. This means that in 2030 energy citizens could deliver 19% of Europe's electricity demand and 45% in 2050. This is a significant contribution to achieving the EU's 2030 renewable energy target and moving towards a 100% renewable future.

The report also shows the potential of different types of energy citizens. In 2050, collective projects such as cooperatives could contribute 37% of the electricity produced by energy citizens, while micro and small businesses could contribute 39%, households 23% and public entities 1%.

These groups could own as much as 45% of Europe's renewable electricity production in 2050.

Share of electricity production by investor type in EU-28 in 2050



Share of electricity production by investor type in EU-28 in 2050.

Source: CE Delft (2016)

The report also looks at what energy citizens can contribute in demand response. It shows that in 2050, seven in ten European citizens could be engaged in demand response. Energy citizens could unlock 1494 gigawatt hours (GWh) of electric storage in 2030 and 10.490 GWh in 2050. This electric storage would significantly reduce system peaks and ensure a clean and affordable backup capacity.

The results show that energy citizens are capable of delivering a large share of the renewable energy and demand-side flexibility needed to decarbonise Europe's energy system.

Realising the potential: MECISE

The scale of the potential shows that without empowering energy citizens, Europe's transition to a sustainable energy system is at risk through missed investments in renewables, in efficiency and in demand response, missed benefits for the energy system through greater flexibility and much lower public support for a transition from which people feel disengaged.

However, the enormous potential and benefits of energy citizens demonstrated by the report will only be realised with the right legislative framework in place. That is why the partners in the REScoop MECISE project put forward mid 2016 that the European Union should create a framework to protect, support and promote energy citizens at the core of the Energy Union. This means establishing targeted policies and measures in key legislation that would be proposed by the end 2016, specifically the revised Renewable Energy Directive and the Market Design Initiative.

In their view the Renewable Energy Directive should:

- Enshrine the right to self-produce, self-consume, receive fair payment for excess electricity fed into the grid, the right to store energy and to engage in demand-side management.
- Guarantee priority grid connection for projects of energy citizens.
- Continue to allow exemptions for state aid to projects of energy citizens, regardless of project size.
- Simplify administrative procedures, such as the creation of one-stop shops for energy citizens.
- Encourage innovative financing solutions including third-party financing, on-bill financing by distribution system operators and joint purchasing programmes.
- Provide opportunities for low-income communities to become energy citizens through obliging member states to design targeted measures.
- Ensure that the true benefits of energy citizens are communicated transparently, and included in impact assessments.
- Member states should plan for and report on increased shares of energy citizens and set targets for energy citizens in their 2030 national renewable energy action plans.

The Market Design Initiative should:

- Ensure energy citizens have access to generation and demand response markets individually, collectively, or via a third party enterprise.
- Regulate and incentivise distribution system operators to act as neutral market facilitators for distributed renewable energy generation, storage and demand response.
- Ensure that taxes, fees and network tariffs are set in a transparent way. Benefits of active participation should be reflected and taxes, fees and network tariffs should be designed to encourage active market participation of energy citizens.
- Regulate for dynamic retail pricing with sufficient variability to incentivise demand response.
- Discourage member states from establishing capacity mechanisms as they can hamper investments in renewable generation and demand response.
- Encourage member states to retire polluting, inflexible coal and nuclear plants to make room for energy citizens in the market.

Since the publication at the end of November 2016 of the Clean Energy for all Europeans package by the European Commission, the partners of the Horizon 2020 project REScoop MECISE have joined forces with other organisations like networks of municipalities and cities (ICLEI, Climate Alliance and Energy Cities), environmental organisations (Friends of the Earth Europe, Greenpeace Europe, Can Europe, Bank Watch, WWF), Housing Europe, EREF, ... in an informal Community Energy Coalition to foster the role of active energy citizens and their collective initiatives. They all engaged in the process of the making of new EU directives on energy.

CITIZEN ENERGY COMMUNITIES TEAM UP WITH MUNICIPALITIES

by Daan Creupelandt and Dirk Vansintjan

The energy transition will require a considerable investment that will ultimately be paid for by all citizens: as consumers, as taxpayers or as money savers, rather than it is paid for by the industry. That is why citizens should be at the heart of this energy transition. They should be offered the opportunity to control their energy production, transportation, distribution and supply.

REScoops typically emerge in countries with supportive legislative frameworks for community-owned RES generation like Denmark, Germany or the Netherlands. They are much harder to find in Central Eastern Europe, not at least because the former communist regimes took control over the cooperatives. That is the reason why the word ‘cooperative’ is still often associated with communism in Eastern European countries.

Other factors that might stand in the way of citizen engagement in the energy transition in Eastern Europe are financial constraints, unsupportive legal frameworks and non-liberalised energy markets.

Since in the past few years production aid for renewable energy has been going down in most EU member states, many REScoops have been forced to extend their scope and to develop new business models and activities. As a result, they are no longer only producing renewable energy. Amongst the members of REScoop.eu, we now also find suppliers (of electricity, wood pellets, biogas, etc.), aggregators, balancing companies, distribution grid operators, e-car sharing cooperatives, energy monitoring cooperatives, community-owned microgrids. Some of these initiatives deploy demand-response and smart grid integration tools or do peer-to-peer energy exchanges based on blockchain technology. Some REScoops have also shifted their businesses towards energy efficiency. They support members and local authorities — such as regions, provinces, cities and municipalities — to save vast amounts of energy.

Why local authorities work with REScoops

With the publication of the Sustainable Development Goals — the ‘SDGs’ — back in 2015, the United Nations clearly recognised the role for local authorities in the transition towards a more sustainable future. The SDGs clearly acknowledge the right to clean and affordable energy for all and to sustainable cities and communities.

Through the Horizon 2020 programme, the European Commission has adopted these aspirations in its current and future European policy framework. To empower cities and communities in taking local climate and energy actions, the Commission also launched the Covenant of Mayors, a growing network of now, 19 December 2018, 7755 local and regional authorities from across 53 countries worldwide that offers technical and methodological support to write and implement sustainable energy and climate action plans. These action plans translate the political commitment of a signatory in practical measures and initiatives.

Unfortunately, lack of technical expertise, insufficient budget and inadequate public support often discourage the successful implementation of the sustainable energy and climate action plans. This is where REScoops, citizen energy communities, can help. REScoops and municipalities are natural allies who both serve the same citizen stakeholder. REScoops from across Europe are keen on working with local authorities and some have already developed innovative ways of collaboration.

REScoops can support them to identify, develop and finance sustainable energy projects with a local character. So far, the European REScoops have developed projects with an estimated production capacity of 4-5 GW.

In Belgium for example it has been estimated that the energy transition to 100% renewables would cost somewhere between €300 billion and €400 billion²⁰. The questions for the Belgian citizens therefore are:

‘Who’s going to pay for it? Are we going to rely on multinationals or foreign state-owned utilities? Or, are we going to mobilise our regions, provinces, cities, municipalities and citizens?’

REScoops typically provide consumers with the choice of using locally produced renewable energy at the fairest price. When the citizen energy community owns the infrastructure, any benefits or savings are passed on to the members, meaning directly to the consumer. Imagine how much money we could keep within our communities that is now leaving our municipality, region, country, EU for purchasing gas, oil, coal, uranium if we just took matters into our own hands. All we need to do is mobilise the funds within the local community and finance our own energy transition.

Local authorities also find it difficult to create a sense of urgency amongst their citizens, to mobilise them and to gain public support for renewable energy projects within their communities. REScoops typically foster social acceptance for sustainable energy. Open membership, citizen participation, empowerment, long-lasting local ties, democratic ownership, transparency and a fair return on investment are central themes within an energy cooperative.

REScoops aim to maximise local value rather than mere financial profit to support the social and economic welfare of the local communities in which they operate. It has been demonstrated that community-owned wind farms in Germany generate eight times more local added value than commercially owned projects.²¹

Many REScoops also have a social aim, which includes support of community infrastructure, improving energy efficiency in public buildings, and fighting against energy poverty.

Local ownership also promotes a circular local economy, where profits are kept within the community to promote other objectives of the energy transition, such as energy savings measures and public building renovations.

REScoop MECISE event in Eupen

Workshop 4 : Collaboration of SE Cooperatives with municipalities : best practices and participation to the REScoop MECISE project



Programme interregional Mecise Conference Eupen 17 January 2017

To endorse the further engagement of local actors, the European federation of renewable energy cooperatives (REScoop.eu) and the other partners of the Horizon 2020 project REScoop MECISE organised a very successful interregional conference in Eupen, at the border of five European regions: Euregio Meuse-Rhine on 17 January 2017. More than 120 people from different municipalities and administrations from 4 EU countries attended the meeting.

The aim of the event in Eupen was to attract local authorities from the Euregion BE-NL-DE-LU, and make them realise that citizen energy communities are their best partners for realising their climate ambitions, through mobilising their citizens, at the same time fostering local economy and social inclusion. Key aspects were addressed by expert speakers.

One session focused on the aspect of birds and wind farms, a subject relevant to many local authorities. Whilst lacking objective know-how and insights, local authorities have to decide whether to support or oppose to wind farm developments. This subject was particularly appropriate for the REScoop MECISE project as the Amel-Büllingen wind farm, a first concrete example of the REScoop-municipality approach, was risking to be halted by the bird protection issues.

The Eupen event was highly professional and had a great outreach. The event has been influential on the credibility of REScoop and its members among Walloon authorities. The development of four wind turbines and five hydropower stations awarded to Walloon REScoops is an indirect result of the Eupen event.

Moreover, the Amel-Büllingen project was recently licensed by the Walloon government, even when some administrations advised against it. A major argument for licensing was the extensive set of measures to avoid the impact on birds, and the fact that REScoops worked with two local municipalities to build the wind farm.



List of all the presentations in the morning and the documents of the 4 workshops in the afternoon: <http://bit.ly/eupen-2017-documentation>

List of all the photos and videos of the conference:
<http://bit.ly/eupen-2017-films-presentations>

Local authorities and their role in the energy market

Public ownership

Since 1880, the production and distribution of electricity quickly spread across Europe. The initiative primarily came from private investors in the more populated regions whilst rural regions were served by local authorities or cooperatives. This decentralised scene changed dramatically after World War II when electricity related activities were centralised and often nationalised. In some European countries municipalities kept a role, e.g. the ‘Stadtwerke’ as they are referred to in Germany. Energy production, transmission, distribution and supply was widely recognised as something that required public exploitation and governments at all levels took up the glove. Despite liberalisation and unbundling efforts in the 1990s and 2000s, many municipal companies persevered and still act as important players in today’s energy market. As a consequence, there are municipalities that own sustainable energy projects themselves, either directly or through municipal companies.

Stadtwerke Munich GmbH for instance is owned by the city of **Munich** (DE) and supplies energy (electricity, gas and district heating) to over 750.000 households in the area. By 2025 the city would like to produce enough sustainable energy to power the entire city. That would make Munich the first city with over a million citizens to achieve this ambitious goal. The city owns and controls the municipal company and finances the investments.

In Belgium budget limitations, legal constraints and search for economies of scale forced local authorities after World War II into several intermunicipal cooperative societies for the supply of energy, most of the time in a 50/50 deal with one of the private producers. About 20% of the municipalities joined in 100% publicly owned cooperatives or in a few cases stayed autonomous. In the 1980s the private producers fused into Electrabel and focused on producing nuclear electricity. The liberalisation of the energy market, enforced in the late 1990s by the European Union, led to a complete reshuffle of the Belgian energy market: Electrabel (now Engie, France) retreated from the distribution grid operators (DSO) that now all are 100% owned by municipalities.

In Flanders (Belgium) the group of DSOs that used to be linked to Electrabel (Eandis) and the group that used to be purely municipality owned (Infrax) decided in 2018 to join forces in Fluvius. This results in a market where private companies invest in the production of energy and the public sector focuses on the distribution.

Civic ownership

For various reasons local authorities may decide not to participate in the projects themselves. Instead, they may rely on a private partner. That is particularly true for services that require capital intensive investments like sustainable energy projects. In that case, local authorities can and should rely on REScoops and 'civic' ownership rather than on commercial companies and private ownership for obvious reasons mentioned above. Let us now have a look at some examples.

In **Odenwald** (DE) the local municipality supported the foundation of a local REScoop that has raised over €10 million from local citizens to finance projects within the community. An overall budget of €36 million has so far been invested in RES production installations so that the members could get access to locally produced energy from renewable sources. The revenues were then partly used to construct the so-called House of Energy, a former brewery that has been transformed into a space where public administration institutions sit side by side with energy consultants, architects, craftsmen and mortgage lenders willing to answer customer questions relating to energy. The House of Energy also has a canteen, a kindergarten, parking lots and public event and exhibition spaces.

Yet another example is the case of a local football club in **Grossbardorf** (DE) that needed a roof on its stands but lacked the funds to make the investment. The municipality actively supported the creation of the Friedrich Wilhelm Raiffeisen Energiegenossenschaft Großbardorf, a local energy cooperative that could make the investment with funds that were provided by the fans. The club now rents the rooftop space for 20 years. Members of the REScoop get either a financial return, a season ticket to watch the games or one sausage per game.

Public/civic ownership

In some cases, municipalities set-up public/civic partnerships which allow shared ownership between public and private partners. So far, public/civic partnerships have led to interesting collaborations between REScoops and municipalities.

In **Dour** and **Quévrain** (BE) the REScoop **Emissions Zéro** (BE) set up a new legal form (SPV) for the exploitation of two wind turbines that are part of the largest onshore wind farm in Belgium. This SPV is a cooperative itself and is called **Moulins du Haut-Pays**. Half of the shares are in the hands of local citizens through Emissions Zéro; the local municipalities own the other half.

Profits are thus equally shared between the two types of investors. The two municipalities use these revenues to finance other sustainable energy projects and other projects that benefit the whole community. This way everybody shares in the profits: not only the citizens that participate in the REScoop.



© Moulins du Haut-Pays

How municipalities can work with REScoops

When selecting a private partner to develop and/or execute sustainable energy action plans, local authorities may prefer working with a civic partner: a citizen energy community (REScoop). Some municipalities, provinces and regions require citizen participation as a prerequisite in their public tenders.

In **Wallonia** (BE) project developers of wind energy projects are requested to offer 24,99% to local citizens and 24,99% to local authorities. The so-called 'cadre de référence' is not a law but a recommendation that is widely accepted and applied within the region.

Similar recommendations are being put forward by two Flemish provinces. In **East Flanders** and **Limburg** (BE) private wind projects are recommended to disclose at least 20% to local citizens and to the local municipalities.

Similar requirements are adopted by a wide range of Flemish municipalities. In Leuven, Oud-Heverlee, Torhout, Laarne, Tienen, Scherpenheuvel-Zichem, Eeklo, Maldegem and Kortrijk, ... (BE) the city council decided that renewable energy projects in their municipality needed to disclose up to 50% direct participation of its citizens according to the principles of the International Cooperative Alliance.

In 2017, the municipality of **Kuurne** (BE) was looking for a private partner to put solar PV-panels on a public building and to set up a local campaign that would trigger solar investments by citizens. Allowing the local citizens to participate in the project ended up being an important topic in the call for tenders and resulted in a collaboration with the cooperative **BeauVent**. The cooperative will now install 500 kWp and help the municipality in saving €5.000-€10.000 per year. The municipality is now actively supporting the fundraising campaign.

Some more inspiring examples of collaborations between REScoops and local authorities

In 1999, **Ecopower** won a public tender in the city of **Eeklo** (BE) and got the chance to invest in its first three wind turbines. The city council explicitly requested in their tender procedure that local citizens should get the opportunity to participate and co-own the installations. Together they informed and involved a wide range of local stakeholders (citizens, environmental organisations, advisory committees, the municipality council, etc.) which resulted in a SEAP, a 'sustainable energy action plan' *avant la lettre* that generated considerable support within the community. Cooperative wind turbines were part of that plan and generated revenues that could then be used to finance the wages of a part time energy expert on the payroll of Ecopower. This person now works on behalf of the municipality and initiates new RES projects, energy efficiency measures in public buildings and a district heating network. He also supports local citizens who want to save energy in their private homes.

A similar model was put in place in **Asse** (BE). The municipality received technical support from **Ecopower** to write their sustainable energy action plan. This resulted in the construction of 4 wind turbines. This model has considerable replication potential.

EnerGent, a local cooperative from **Ghent** (BE) also took action on energy efficiency and teamed up with the city to execute the sustainable energy and climate action plan. Back in 2015 the co-op provided a €50.000 loan to finance double glazing in an important monument right in the historic city centre. With financial support from the city, EnerGent also initiated a programme to enhance collective energy retrofits in private homes. Energy experts help citizens to identify the needs, prioritise, compare offers and follow up on the construction works. Through the project Gent Zonnestad (Ghent Solar City) they are now maximising the production of renewables in a neighbourhood by installing solar PV-panels on public buildings and private homes. Through the project Buurzame Stroom they are also investigating whether citizens can share solar energy with one another. The latter is also linked to the WiseGRID Horizon 2020 project (involving MECISE partners Ecopower and REScoop.eu) that tries to develop wide scale deployment of integrated smart grid solutions in four EU countries in order to prove that the decentralised energy system with citizens at its core is actually feasible and economically viable.



© Energent

In the city of **Halle** (BE), the REScoop **Pajopower** recently replaced 445 traditional public street lights by LED. The investment (€225.000) was financed by the cooperative and helps the city to save both energy and money. See: <http://bit.ly/adopteer-je-energiezuinige-straatlamp>.



ADOPTER JE STRAATLAMP: INVESTEREN IN DUURZAME ENERGIE IN HALLE

Adopt your streetlamp: invest in sustainable energy in Halle © Pajopower

REScoops strategic partners of municipalities

In 2017 **Ecopower** was appointed as strategic partner of the city of **Leuven** (BE) after winning a public tender procedure to find a strategic partner to accelerate the energy transition. Ecopower worked with a consortium of local organisations and companies and signed up to help local citizens, authorities and companies save energy and produce energy from renewable sources. An essential part of the proposal was that Ecopower would offer local citizens the chance to participate in the projects by means of joining a local citizen energy community (REScoop). LICHT-Leuven was founded as the project development unit (PDU) to put the plans to action in Leuven.

In an attempt to maximise RES production, the unit identifies suitable rooftops to install solar PV-panels and efforts will be made to save energy in private homes and public buildings. The city of Leuven won the European Green Leaf Award 2018 for its ambitious and participative approach.

More information: www.visitleuven.be/en/leuven-wins-green-leaf-award.



Recommendations for local authorities

REScoops have many things to offer to local authorities. The regions, provinces, cities and municipalities need to support promotional efforts and make the cooperative business model more widely known. If we want to empower our citizens and keep the energy transition fair, affordable and local, we will need to identify the existing initiatives, learn from them, empower them, foster interregional and international collaborations and replicate the best practises.

Although the transition is accelerating and a large number of local actors are taking steps to translate the Sustainable Development Goals into climate action plans, the need for sustainable development with a clear role for citizens should be even more recognised and adopted by actors at all levels: EU institutions, member states, regions, provinces, cities and municipalities. Although the choice for citizen energy communities makes sense from a financial, social and environmental perspective, these benefits are often not recognised or taken into consideration when writing public tenders. Local authorities should foster collaborations with REScoops and at least create an equal level playing field for local citizen energy communities to participate in public tenders. This can be done by considering more than mere financial criteria and by putting direct citizen participation as a prerequisite.

If we really want the transition to succeed, we need to mobilise the local authorities and aggregate the RES and energy efficiency projects that they identified in their sustainable energy and local energy action plans. Through REScoop MECISE, local authorities could then apply to ELENA and get technical assistance to develop these projects and engage with local citizen energy communities. Once the projects have reached the financing stage, equity can be raised from local citizens and the European Investment Bank can provide soft loans.

CITIZEN ENERGY COMMUNITIES TEAMING UP WITH SCHOOLS

by Paul Phare



Successful solar PV projects on schools. © Energy4All

The Social Enterprise Energy4All has been helping schools and communities in the UK start community renewable energy projects for years. After the success of the Wey Valley Solar Schools Energy Co-operative in 2011, schools across the country contacted Energy4All to join the financial model the co-operative had set up. Due to changing feed-in tariffs in England in 2013, Energy4All adapted the Wey Valley model and founded the Schools' Energy Cooperative in order to support more English schools in creating renewable and energy efficiency projects. Profits and energy savings are paid back to the schools, reducing their monthly bills.

The first solar PV project was a 150 kW installation on a primary school in Bexhill in 2014, which remains one of the largest installations on a school in the UK until today.

When the conditions for feed-in tariffs changed again a year later, Energy4All, under the REScoop MECISE project, helped the cooperative to pre-register 52 more potential project sites and submit the applications for feed-in tariffs for these projects. The Schools' Energy Cooperative now owns and operates 1,76 MW of solar PV on 44 schools.

Overall, Energy4All helped the Schools' Energy Cooperative raise £1,9 million, and continues to support the schools with monitoring of the systems and administrative tasks.

All locations can be found on the map of the cooperative's website: www.schools-enbronsgroenergy-coop.co.uk.

The CAVES project

Another interesting case is the collaboration between four cooperatives from Flanders (BE): EnergielD, CORE (a students' cooperative from Leuven) and Educatief Centrum Paddenbroek are teaming up with Efika in what is referred to as the CAVES project. This ambitious project aims to develop a methodology to engage a whole range of local stakeholders (parents, school management, neighbours, etc.) in a cooperative that can implement energy efficiency measures and finance energy retrofits in local schools.

See: www.efika.be/cases/mip-project-caves.

BronsGroen

Another REScoop, BronsGroen, recently conducted energy audits in five public primary schools in the city of Tongeren (BE). They made observations, gathered consumption data and provided solutions to lower their levels of consumption on water, heat and electricity.

See <http://bit.ly/bronsgroen>.

Klimaatscholen

Through Klimaatscholen 2050, a consortium of five REScoops from Flanders are assigned to help the catholic secondary schools to save significant amounts of energy in their buildings by initiating energy efficiency measures and by putting solar PV-panels on their roofs. The funds that are needed to make these investments will be raised from local citizens. The REScoops will be responsible for the project exploitation, so that the participating schools get a reduction on their energy bills.

See: www.klimaatscholen2050.be.



Facilitating solar PV on schools. © Klimaatscholen 2050

FROM PASSIVE CONSUMER TO ACTIVE MEMBER OF A CITIZEN ENERGY COMMUNITY

by Dirk Vansintjan

REScoop MECISE enabled the Belgian REScoop, Ecopower, to team up with municipalities to help them realise their sustainable energy action plan by mobilising their citizens.

Ecopower: a citizen energy community

Ecopower cvba (www.ecopower.be) is a Belgian renewable energy cooperative, a REScoop, in the Clean Energy for All Europeans Package also referred to as a citizen energy community. Founded in 1991 by a handful of citizens around a kitchen table, Ecopower has 57.000 cooperative members by the end of 2018, produces 90 GWh/y green electricity (wind turbines, PV and watermills) which it supplies to its members at home (1,5% of Flemish households) at cost price. Ecopower also produces wood pellets from locally sourced pine wood and provides energy efficiency services to its members and public authorities. Its investments total €60 million, its capital €50 million. Ecopower is the driving force behind the Belgian, Flemish and European federation of REScoops (www.rescoop.eu). Ecopower has been involved in several EU funded Intelligent Energy and Horizon 2020 projects: **REScoop 20-20-20**, **NobelGrid** (www.nobelgrid.eu), **WiseGRID** (www.wisegrid.eu), **REScoop Plus** (www.rescoop-ee.eu) and **REScoop MECISE** (www.rescoop-mecise.eu).

Ecopower has been working together with the city of Eeklo since 1999 and with the municipalities of Asse and Beersel since 2008, but the REScoop MECISE Horizon 2020 PDA project (2015-2019) allows Ecopower to multiply its collaboration with local authorities who signed the Covenant of Mayors to help them realise their sustainable energy action plans (SEAP), e.g. the cities of Mechelen, Leuven and Antwerp and the municipalities of Amel, Büllingen, Schoten, Lanaken, Bilzen, Alken, ...

From LICHT Leuven...

In May 2017 Ecopower was selected by the city of Leuven as their strategic partner to boost the energy transition. In its proposal to the city Ecopower was backed by a consortium of local organisations and companies that are engaged in helping citizens, public authorities and companies to save energy and produce renewable energy on a daily basis. Essential is that the citizens

will get an opportunity to financially participate in the projects through a citizen energy community (REScoop).

After its selection LICHT-Leuven was formed: a project development unit (PDU) consisting of in total six people: from Ecopower, the city of Leuven and the association Leuven 2030, backed by a consortium general assembly. It soon became obvious that the municipalities and smaller cities around Leuven should also be involved, e.g. when thinking about wind energy and biogas production from compostable household waste.

See: www.lichtleuven.be.



© LICHT Leuven

... to LICHT Vlaams-Brabant

With the support of the province and by aligning all the existing programmes and projects, a consistent approach to all the municipalities of the province Vlaams-Brabant was created. This helped partners achieve the goals set when signing the Covenant of Mayors and writing their SEAP (October 2017). LICHT-Vlaams-Brabant is the enlarged consortium led by Ecopower.

The consortium is now aggregating a large portfolio (more than €30 million) of potential investments in sustainable energy (EE and RES) throughout the entire province and will then propose this to the ELENA facility of the

European Investment bank. ELENA is a joint initiative by the European Investment Bank (EIB) and the European Commission under the Horizon 2020 programme. ELENA provides grants for technical assistance focused on the implementation of energy efficiency, distributed renewable **energy** (<http://bit.ly/eib-energy>) and urban **transport** (<http://bit.ly/eib-transport>) projects and programmes. See: <http://bit.ly/eib-elena>

Following the appeal of the Flemish minister of Energy, the consortium will focus on larger solar PV installations on schools, public buildings, industry, the national airport, ... But also the existing efforts will be intensified, making schools more sustainable, helping households insulate their homes, electrify their heating and install solar PV. Wind energy is difficult in this province due to the proximity of the national airport of Brussels, but the opportunities are being studied because a new GPS or an adapted radar system at the airport might allow wind turbines in the future.

The guaranteed profits of wind turbines should be kept as local as possible to help finance energy efficiency at a local level. Ecopower already installed six wind turbines in the Province of Vlaams-Brabant for in total €15 million in 2015, the total amount of the investment has almost been completely raised by citizens in the province by the end of 2017.

The REScoop approach

With the support of the Province Vlaams-Brabant, the provincial capital Leuven, cities and municipalities from this province and all partners of the LICHT-consortium Ecopower sets up and supports up to ten local citizen energy communities (LICHT-groups) of citizens and SMEs that (learn to) select possible investment opportunities in their municipality. These projects will be technically examined by the Project Development Unit (LICHT Vlaams-Brabant), led by Ecopower and – if financially feasible – added to the investment programme and finally realised. By doing this Ecopower activates its members across the province. This is a model that other REScoops can replicate across Europe.



Solar panels on a school in Leuven © Ecopower

FROM RARE EXCEPTION TO INTERESTING PARTNER FOR LOCAL AUTHORITIES

EDINBURGH COUNCIL WORKS WITH ENERGY4ALL TO CREATE COMMUNITY OWNED ENERGY IN THE SCOTTISH CAPITAL

by Paul Phare

The Edinburgh Community Solar Co-operative worked in partnership with the City of Edinburgh Council and Energy4All, partner in the REScoop MECISE project, to install solar PV on 24 public buildings in the city. Schools, leisure and community buildings were selected to host the panels and a community benefit fund has been created to help reduce carbon emissions of the host buildings and provide education tools for young people.



© Energy4all

The project was initiated in 2012 by a grass roots organisation whose objective is to deliver community energy projects in Edinburgh. After struggling to get wind and biomass projects off the ground they decided to investigate solar. It was proven to be viable if a good number of south-facing rooftops could be secured on buildings with a good internal electricity demand. The local authority was considered to be a good partner because they owned a lot of properties in the city. A grant was secured from Local Energy Scotland to investigate the feasibility of a project. The local authority offered use of

any of their buildings, but the group decided to focus on buildings which have a community purpose rather than office or administration buildings, so the project would be presented to more members of the community who regularly use the buildings. They therefore decided to focus on schools, community centres and leisure centres.

A list of 100 buildings was selected based on this criteria and a condition survey that the council had undertaken on all its properties. A local renewable energy consultant then completed a desktop study to select buildings with large south-facing roofs and shortlisted 36 potentially suitable buildings. These buildings were then surveyed and a report was produced which estimated the capacity of each roof to support solar PV and the expected output. This showed that a project of up to 25 buildings would be viable (more than 25 solar PV buildings owned by a single organisation would mean a drop in the feed-in tariff).

The group then had to form a Society for the Benefit of the Community (a co-op) since it was agreed that the best way to raise capital was with a public share offer. Once registered in December 2013, the newly formed Edinburgh Community Solar Co-op had to get permission from the local authority before it was able to apply for a CARES loan from the Scottish government. Energy4All were engaged by the group to give confidence to the local authority that a professional organisation with a track record for helping communities to deliver projects at this scale was advising the society.

The business model was further developed by Energy4All with council staff and a report was delivered to elected members for approval. This was granted in April 2015 and the society could then secure the CARES loan which allowed it to make planning applications, engage lawyers and procure an installer. The loan along with REScoop MECISE support allowed Energy4All to manage the process of pulling together all the information required to produce a community share offer document and a marketing campaign to engage Edinburgh residents. In September 2015 the share offer was launched at one of the host properties, a school where the pupils welcomed VIPs from the city who came along to help launch the scheme. The event made front page of the Edinburgh Evening News that day and was featured on a local TV news programme.

After two months, the full £1.4 million was raised and an installer was contracted. In the UK once a feed-in tariff has been granted, there is a six month deadline for the panels to be installed and commissioned. The government however recognises that communities take longer to raise capital than other organisations so a further six months is granted. This proved useful as there were a number of delays, primarily having to change installer, then getting building surveys completed, apply for warrants and negotiating availability with all the building managers. All panels were installed before the deadline of 30 September 2016 and the feed-in tariff was secured.

The project has been generating well to date, however there has been a long drawn out process to replace some of the existing meters in the buildings that allow the society to measure the exported electricity and therefore get paid by the energy companies for any surplus electricity that isn't used by the buildings. After two years of operation, the community benefit fund (i.e. the profits of the business) have been a good deal greater than forecast and many other local authorities and organisations have been in contact with Edinburgh Solar to ask for advice. Edinburgh solar is now investigating a number of new roofs for the society and investigating battery storage.



FROM INVESTING IN RENEWABLE ENERGY AND ENERGY EFFICIENCY TO DISTRICT HEATING, E-CARSHARING, ...

by Karel Derveaux

REScoops often start with renewable energy or energy efficiency projects, but increasingly also invest in district heating, e-car sharing, ... During the REScoop MECISE Horizon 2020 project **Ecopower** engaged even more with the city of **Eeklo** (BE) to develop district heating in the city.



Event in Eeklo about the district heating project © Ecopower

Eeklo — a city in Flanders of about 30.000 inhabitants — is a forerunner in renewable energy production on its territory. With signing the Covenant of Mayors, the ambition was set to become both energy self-sufficient and climate neutral. A key element in realising this ambition is putting to good use the 15 MW of condenser heat that is continuously dumped at the household waste incineration plant on the territory of Eeklo. To turn their plan into action, the city tendered the right of using the public underground for a district heating system. The requirement in the tender had not previously been seen in Flanders: they include the obligation to:

- allow at least 30% financial participation of citizens,
- turn to 100% green heat in the system by 2036, and
- supply heat at a cost comparable to heat from fossil fuels.

Ecopower worked with waste and energy industrial giant Veolia to win the tender. The municipality was keen to involve all kinds of local stakeholders, including any party connecting to the district heating system, individual citizens, as well as SMEs, schools, elderly homes, and the local hospital. Participants are allowed to co-invest and have a say in the SPV that is set up to own and operate the project. Ecopower helped the city of Eeklo to make it happen. Through this district heating project, Eeklo would reduce its greenhouse gas emissions over 40% by 2030.

See: www.warmteneteeklo.be.



All stakeholders signing their engagement for the district heating project in Eeklo during the congress of 24 april 2018. © Ecopower



© Ecopower

ENERGY DEMOCRACY OFFERS OPPORTUNITIES FOR THE LOCAL ECONOMY

by Dirk Vansintjan and Josh Roberts

Europe is undergoing an accelerating energy transition: from polluting, centralised, utility-owned energy production, from imported fossil and nuclear fuels to a more decentralised energy production based on clean, local renewable energy sources. In the next decade, this will fundamentally transform our economy, our way of life and our society as a whole for the better. For instance, electric mobility will transform transport, new buildings will produce most of the energy they need, and old buildings will be adapted to new standards or replaced. The need for heating and cooling will be reduced and fuelled with renewable energy or waste energy from farming, industry or energy production through heat networks. Energy poverty will be tackled: no one will be left behind.

For a small member state as Belgium, it is estimated that the energy transition will require investments between €300 billion and €400 billion up to 2050. But Belgian citizens together have about €250 billion of sleeping savings in banks, which could be invested locally. Such investment could create between 20.000 and 60.000 jobs, and save the Belgian economy up to €20 billion a year by avoiding the import of gas, oil, coal and uranium.²⁰

With the European citizen at its core, the energy transition can help reshape globalisation by empowering local economy, local society and democracy

The energy transition represents an opportunity to refocus economic development on building more sustainable, circular, local and regional economies. Globalisation, fuelled by polluting fossil fuels, has favoured mainly big multinational concerns and has destabilised local economies, making many citizens feel helpless and left behind. Investments in renewables and energy efficiency offer citizens, communities, and businesses new opportunities and benefits, especially if locally driven. The return for the local economy and communities is up to eight times higher if these renewable production facilities are owned by local citizens, local citizen energy communities, and other SMEs.²¹

In particular, income from local renewable energy production can provide an indispensable basis to make the necessary investments in energy efficiency in buildings. Local ownership not only helps revive the local economy of rural areas, where our renewable energy sources are located, but also empowers citizens to get involved. It will strengthen not only our economy but also our European democratic model.

Ownership matters: Local added value from a community wind farm ²²

Often talked about, rarely quantified — how much more revenue does a community-owned wind farm bring in for the community, as opposed to a project by out-of-towners? A study conducted by the Institute for Distributed Energy Technologies (IdE) on behalf of Stadtwerke Union Nordhessen (SUN) took a look at the issue. It found that the local financial benefits were eight times greater.

SUN is an umbrella group that brings together six local municipal utilities. Recently, it developed a community shareholder model to keep as much as possible of the profits from wind farms at home. The state of Hesse plans to be 100% renewable for electricity by 2050, and it also has recommended that citizens be allowed to invest in order to increase acceptance.

But SUN discovered that citizen ownership and a high level of local added value play only a minor role when decisions about priority wind zones on land owned by the state are made. The result, the organisation fears, could be a lack of winning bids among community projects, with international project developers winning out when the German wind sector switches over to auctions in 2017. Income from wind farms in the state would then be paid to international investors. SUN therefore wanted to see how much of this revenue could be local to begin with.

The IdE study found that a focus on land leases does not go far enough. A closer look revealed that international firms sign fewer contracts with local service providers, do not get funding from local banks, generally do not operate wind farms themselves (instead selling them turnkey to other international players), and do not provide investment options for local players, be they cooperatives or municipalities.

The IdE found that the level of local added value varies according to a number of factors:

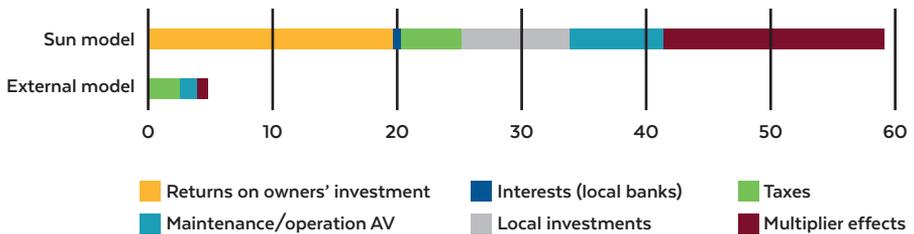
- Who owns the land?
- Who owns the wind turbines?
- Who financed the project, and were local governments and citizens allowed to purchase stakes?
- Did tenders give preference to local service providers? How are profits distributed?

For a wind farm with seven 3 MW turbines, only €7 million would flow back to the community if the project were developed by an international player, compared to €58 million if the project developer were local.

SUN says the total amount could add up to around €3 billion of lost revenue in this region alone, which has a potential of around 270 wind turbines worth 1350 MW. None of this is likely to sway current legislation, however; both German and EU lawmakers and courts prefer to promote EU-wide competition, partly out of fear of local corruption.

Digitalisation of our energy systems should emphasise the integration of prosumers in the Energy Union. Putting citizens at the centre of decision-making processes and making them smarter – better informed and better equipped – stakeholders of the energy transition on a global scale.

Local added value in millions of euros generated over the lifetime of the project according to the model



Source: IDE 2016

How can we make it happen?

By Europe directly supporting the empowerment of citizen energy communities.

By recognising citizen energy communities as a key potential for the energy transition and acknowledging the obstacles currently met by local energy communities.

Besides setting a framework for citizen involvement in Europe's energy transition, the EU can help small municipalities, cities, islands, SMEs and local citizen energy communities access financing tools to take ownership of the energy transition and put the Clean Energy for All Europeans to practice.

Because of their intrinsic characteristics of setting up local projects, citizen energy communities often face specific obstacles to finance their projects. This includes, but is not limited to, expensive finance for citizen energy communities because of high interest rates, extensive due diligence costs, extensive legal expenses, lack of long-term financing; lack of equity and, hence, difficulty to leverage other funds; lack of stable income and lack of access to financial guarantees for local community projects; lack of track record for projects led by local communities and therefore lack of access to the same type of finance as larger organisations and companies; and lack of risk sharing among local projects. However, citizens and other local actors are mobilising to innovative new ways to access finance and get over these hurdles.

To cope with these obstacles, the European federation of groups and cooperatives of citizens for renewable energy, REScoop.eu and its partners in the REScoop MECISE Horizon 2020 project have set up a common European tool for citizen energy communities in order to pool their, often smaller, sustainable energy projects so they have access to European financial tools of the European Investment Bank for example.

By providing easier access to EFSI and EIB investment tools, the European Commission can help support citizen energy communities.

ENERGY DEMOCRACY AND LOCAL DEMOCRACY

by Maëlle Guillou & Albert Ferrari

In its practical guide for local authorities, the French Ministry of Environment and Energy, the national environmental agency ADEME and Energie Partagée²³ estimated that in France a community owned wind farm of 8 MW brings €10 million or three times more local value than a traditional company-owned wind farm.

Even if the gap is relatively broad compared with the results of the study conducted by the Institute for Distributed Energy Technologies (IdE) on behalf of Stadtwerke Union Nordhessen (SUN)²¹, which calculated that a community-owned project brings over eight times more local value than one with only external investors, this certainly gives an idea of the beneficial impact of citizen and local investment and not only in Germany.

Moreover local community projects help facilitate local economic development and this added value also brings more jobs and return on investment for the community.

It is nonetheless important to underline the direct outcomes of the participation and existence of community power initiatives on a local territory and its social and economic life. For instance, in Odenwald, the local REScoop built a kindergarten for the village of Offenbach in 2015 while this had no direct link with their primary activity of producing and supplying renewable energy. Cooperatives are also often involved in educational or training projects in communities about climate change, energy savings or to tackle energy poverty.

Cooperatives are truly driven by their members, active citizens of a territory and are therefore naturally rooted in the economic and social issues of their communities. In addition, these citizen dynamics can also often contribute to the regeneration of local democratic life.

Energy communities can strengthen social bonding

By including people in a citizen energy community, by making them share, cooperate and sometimes even compare their energy consumption among themselves, citizen energy communities create a bond and a collective identity which can spread into a broader group involved beyond the sole scope of their membership which revolves around energy transition issues.

Several energy transition projects starting with a rather small group of people have had wider social impact than just producing renewable energy or reducing energy consumption. For instance, various REScoops have

initiated energy poverty mitigation programmes that aim at strengthening the community as a whole. Indeed, REScoops are not only embedded in their local communities but they also have strong solidarity values at their core. Concern for the community is one of the seven International Cooperative Alliance principles²⁴.

Generation Zero Watt

The REScoop **Courant d’Air** (BE) has developed an education programme called **Generation Zero Watt**²⁵ together with local schools in areas in Belgium where the cooperative is already active. Concrete examples of energy efficiency measures are taught, encouraging behavioural changes in classrooms as well as at home. This link with families helps support households and creates social bonds within the community.

See: www.generationzerowatt.be.

Shaped by communities and driven by collective interest aspirations, community energy projects allow greater interactions and solidarity between members of a community. This is not only useful in the process of identifying energy poor households, it also allows for citizen energy communities to develop innovative solutions in order to tackle energy poverty on the local level and better adapt these solutions to the needs of their communities as well as reaching a wider scope of beneficiaries.

Energie Solidaire

This is the case of **Enercoop** (FR), the cooperative supplier of electricity in France, whose members called for the creation of energy poverty mitigation actions that later became the programme **Energie Solidaire**²⁶, a micro-donation project that allows Enercoop clients to add micro-donations to their energy bills which will then directly support grassroots energy poverty solutions in France.

See: www.energie-solidaire.org.

Several examples of energy transition actions led by municipalities and involving inhabitants have also highlighted the importance of leading these actions on a strictly local level, so as to be able to have a tangible impact on behaviours of communities. Setting up energy transition and energy savings actions that are not imposed by public authorities but voluntarily

implemented by inhabitants is essential for a collective behavioural change towards a more rational energy use and for reaching the energy savings and energy efficiency targets.

Citizen energy community projects can help revitalising local democracy and local communities

One of the effects of the involvement of citizens after they experienced citizen energy communities can also be political. They start asking: “What is the local government doing to support energy democracy?”

Energy transition can be a lever for the revitalisation of local communities. Several striking examples exist in Europe that showcase the significant potential of such initiatives for territories facing economic and social difficulties. This happened in the town of **Loos-en-Gohelle** in the North of France, its 6500 inhabitants and their local representatives, who initiated a transition from a coal mining centred economy to a pioneering energy transition community.

This region of France was particularly affected by unemployment and social and economic difficulties after the end of coal mining industry, as in other parts of northern Europe. The city was initially rural, and even today, around 70% of its territory is dedicated to agriculture, but it was heavily marked by the exploitation of coal from 1873 to 1986 with seven mineshafts and eight spoil heaps, as well as by World War I, during which it was thoroughly destroyed. When the mining period came to an end, the city of Loos-en-Gohelle gave a new impulse to its urban planning and policies which led to innovative programmes based on sustainable development. For the past 20 years, the city has been setting up new local policies involving the citizens and based on a mix of social economy and environmental values.



© REScoop.eu - 2015. PV-panels on the church of Loos-en-Gohelle

Several local actors led by Jean-François Caron, elected representative and mayor of Loos-en-Gohelle, gradually oriented the local planning and local policies towards the promotion of energy efficiency measures in households, renewable energy projects like solar panels on the church's roof, waste recycling programmes and other sustainable actions. This spurred a general movement involving inhabitants in the planning and deployment of such actions.

According to the mayor, the direct cooperation and engagement of citizens was the key to the success of the whole local transition process and although the participation of the citizens is a long process, it brings people to understand what makes a society:

“What is interesting in the question of energy is that energy is a transactional object. Obviously I am an activist of another kind of power generation, etc. But what interests me as a mayor is that the issue of energy directly affects people. It helps to get them involved because in the end, they pay the bill, they see the wasted public lighting or not, it's either cold or very hot in schools. This is interesting because there is an actual framework to their involvement”.²⁸

Energy democracy and local authorities can enhance the efficiency and reach of energy transition projects

Another added value is that involving local citizens in municipally led projects can help enhance the efficiency of the measures and actions deployed. Indeed, planning such policies together with inhabitants allows to better define the needs of the local community. When the needs are better identified, better aligned with day-to-day priorities of the population, public action is better understood and accepted by the population. Moreover, this direct involvement helps evaluate the scope of the solutions that need to emerge from the local authorities and therefore make them more efficient. This is particularly relevant when setting up local energy and energy saving projects because such projects, while providing very tangible and quantifiable results (production or reduction of energy in kWh), do not bring very visible results in the short term.

The role of cities and municipalities is essential to carry out these projects adapted to the needs of the territories and in support of the inhabitants who, when alone, rarely have the possibility to make projects succeed.

Over 70% of climate change actions must be taken locally: building renovation, smart mobility, RES production, etc. Citizens and local authorities must play an extensive role in tackling climate issues. The potential of energy consumption, savings, and production is most efficiently assessed locally. And who can better decide on the deployment and planning of these actions

than local authorities? Member states should guarantee operating and financial means for local authorities to deploy their energy transition.

A major role can be played by local authorities: they are expected to facilitate the local energy democracy dynamics, they can provide budget, investment capacities as well as buildings for energy communities.

This is why energy and local democracy should and will go hand in hand. Both dynamics can strengthen each other: prosumers becoming active citizens, local authorities supporting citizen energy communities and energy transition having better local acceptance. More and more, local authorities and citizens join efforts to cooperate in innovative forms, finding efficient ways to serve public interests and citizens. In France, a specific legal entity exists, called SCIC, *société coopérative d'intérêt collectif* (collective interest cooperative company). This allows in its governance and business model to have all stakeholders involved in the energy transition, including local authorities.

Also, project partner Enercoop²⁹, is a SCIC as well. It is a network of 11 collective interest cooperatives and it supplies green energy from and to its members, helping them to save energy and decentralise the energy system. Their membership not only gathers consumers and producers of renewable energy, but also municipalities who support this transition to energy democracy. This dynamic of cooperative platforms goes beyond energy and is a promising solution for an alternative between public and fully private organisations.

ENERGY DEMOCRACY AND EUROPE

by Josh Roberts

Before mid 2018, EU legislation and policy had nothing to say about the role of citizens or communities in Europe's energy market or its clean energy transition. As we have seen, rules on liberalisation and Europe's internal energy market were designed to benefit the passive consumer by, 'in theory', giving them choice and lower prices by ensuring cost-efficient competition.

However, all that is currently changing. The EU Institutions have end 2018 put the finishing touches to a new European legal framework that will establish a supportive framework for energy citizens and their communities so that their role in the energy market and the energy transition is finally recognised and ensured. This means that every European citizen now has the right to participate in (both individually and collectively), invest in, and benefit from the transition.

EU Commission: Clean Energy for All Europeans

When REScoop.eu was established, the 2008 Renewable Energy Directive had already been in place for five years. As such, it was important to highlight to EU policy and decision makers what was happening on the ground, and how EU priorities — without any reference to active citizens or communities in the market — were affecting REScoops. The revision of this legislation would provide the opportunity citizens were looking for.

In 2013, the EU embarked on an enormous exercise to update its policy framework in order to match its vision for its 2030 climate and energy objectives for renewables, energy efficiency and greenhouse gas emissions reductions. In 2015, the Juncker Commission launched an ambitious political plan to create an Energy Union, which aimed to “put citizens at its core, where citizens take ownership of the energy transition, benefit from new technologies to reduce their bills, participate actively in the market, and where vulnerable consumers are protected”³⁰.

Shortly afterwards, the Commission communicated its intention to develop a new energy market design in order to integrate renewables, and to provide a new deal for consumers in order to deliver the Energy Union Strategy.

As the Commission developed its legislative proposals, it became clear that there was a need to ensure that citizens — both individually and acting in cooperation together — have a clear framework to ensure that they could benefit from the new opportunities to get involved in the energy transition.

As the Commission sought views from the industry and the public, REScoop.eu set out a number of policy priorities:

- To give a definition to citizen energy communities.
- To require at least partial community ownership in renewable energy projects.
- Binding national targets for community energy.
- A separate 'bike lane' for citizen energy communities in the design of national support schemes and in the EU's state aid guidelines.
- The provision of financial support to citizen energy communities for preliminary works and investigations for new projects.
- Urban planning for citizen energy communities and a one-stop shop for applications for new projects.
- Equitable grid access arrangements for citizen energy communities.
- Proportionate laws for allowing citizen energy communities to become owners/operators of grids and to become licenced energy suppliers

At the end of 2016, the Commission released proposals for 8 pieces of legislation, entitled the Clean Energy for All Europeans Package. The pieces of legislation that were most relevant to energy citizens and their communities were:

- The Renewable Energy Directive;
- The Electricity Directive and Electricity Regulation (Market design legislation); and
- The Governance Regulation.

Making good on its claims to put citizens at the centre, the Commission proposed an overarching EU legal framework to acknowledge self-consumption and energy communities, provide a set of rights to these new actors, and require the establishment of national level frameworks to ensure a level playing field for citizen energy communities, both in the field of renewables and in the electricity market.

In particular, the Commission proposed:

- New definitions of self-consumption, active customers, and 'local' energy communities, and a set of eligibility criteria for being considered a 'renewable' energy community.
- A requirement for member states to take renewable energy communities into account when designing renewables support schemes.

- Rights for ‘local’ energy communities to access the market, establish, own and operate community networks (or grids) and to receive non-discriminatory treatment.
- The right for all consumers to engage in self-consumption of renewables.

These legislative proposals were not perfect. However, they provided a solid basis to develop an overarching supportive EU legal framework for energy communities. Furthermore, they still had to make their way through the co-decision process of the European Parliament and the Council. Both institutions would be entitled to make their own proposed amendments, after which they would need to agree on a single text. Only then could the Commission’s proposals become final EU law. Therefore, it was up to environmental, citizen and city-based organisations to advocate to ensure these legislative proposals were maintained and improved.

EU Parliament: Energy for Citizens

Prior to the Commission’s launch of its legislative package, the European Parliament had already expressed, quite vocally, its support for the development of a supportive framework for citizens and their energy communities so they could invest in renewables.³¹

Once the Commission proposed its legislation, the European Parliament went to great lengths to improve the texts, particularly in the Renewable Energy Directive.

Led by very vocal Members of European Parliament from several political groups, in particular the Europe of Freedom and Direct Democracy (EFDD) and the Greens, and with buy-in from an open-eared Alliance of Liberals and Democrats for Europe Group (ALDE) and from the Rapporteur of the Progressive Alliance of Socialists and Democrats (S&D), Jose Blanco Lopez, the Parliament proposed a number of progressive amendments to the proposed Renewable Energy Directive II (REDII):

- Stronger criteria for the definition of a ‘renewable energy community’.
- The right of all consumers to be able to participate in a renewable energy community without losing their consumer rights.
- Requirements for member states to develop ‘enabling’ national frameworks with specific criteria to support the development of renewable energy communities and renewables self-consumers.
- The right to engage in peer-to-peer trading of renewables.
- The right to self-consume behind the meter without being subject to taxes or levies.

In the Market Design legislation (MDI), a much less ambitious Rapporteur from the European People’s Party (EPP), Krisjanis Karins and more market-

minded MEPs from the mainstream political groups meant it was less of a priority to improve the Commission's text. Nevertheless, some key improvements were made, particularly regarding the acknowledgment of benefits of what at that moment was called 'local' energy communities and active customers when regulators are calculating energy system costs, and regulatory oversight.

EU Council: Energy for consumers

The Council was much less receptive to the Commission's proposals on energy communities, and at one point was considering whether to suggest deleting the proposals in their entirety. This was in part due to the Commission's proposal to give energy communities a right to own and operate their own grids.

Intensely lobbied by utilities and distribution system operators, the Council slowly watered down many of the Commission's proposals. In particular, they focused primarily on ensuring that citizens and their communities would have to abide by the same rights and obligations as any other energy company, and to ensure that all network charges, taxes, and levies could be applicable to citizens and their communities. They also proposed to get rid of certain rights for energy communities, such as a right to own and operate distribution networks. Finally, the Council substantially reframed the articles on renewable energy communities and local energy communities.

Interestingly, it was these changes that would later pave the way for the development of definitions that would incorporate principles that are very important in distinguishing 'citizen energy communities' from traditional energy companies. In particular, the Council adopted several of the International Cooperative Alliance principles, such as open and voluntary participation, and a main aim to provide environmental, social and economic community benefits instead of profits. This was largely thanks to the Presidency of the EU Council at the time, Estonia.

Results of the Trilogue and impact on Energy Communities

The final pieces of legislation making up the Clean Energy Package (CEP) were finalised in the waning days of 2018. The trilogue negotiations between the European Parliament and the Council were hard-fought. Nevertheless, the text that was originally proposed by the Commission was greatly improved and clarified during the various stages of negotiations within the EU institutional processes.

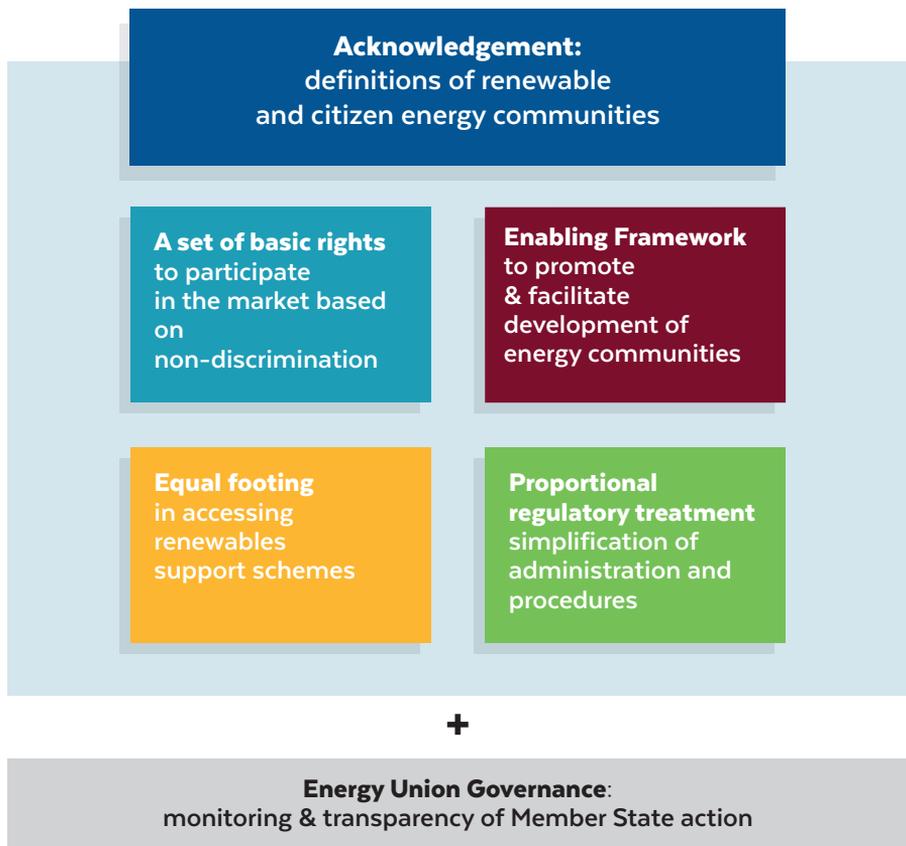
Now that the Clean Energy Package is finalised, citizens, REScoops, local authorities and SMEs have an unprecedented number of opportunities to invest in and benefit from the energy transition. While the resulting framework

is far from perfect, it provides an important basis on which to build in the future. For communities, local authorities and citizens that are looking for opportunities to invest in the energy transition, the new EU legislation will ensure that national policies, laws and regulations are put in place to ensure they are supported.

Renewable energy communities

The new REDII contains several elements which, together, provide the basis for development of national frameworks that support REScoops and local authorities to invest in renewable energy and energy efficiency. Each of these elements will be summarised below.

The Clean Energy Package: a policy foundation for energy communities



Definition of renewable energy community

The definition of ‘renewable energy communities’ in the REDII is at the heart of the new EU legal framework for community energy. This is because the definition establishes, or identifies, which types of community initiatives may benefit from support that the EU legal framework provides. Importantly, it contains characteristics – primarily governance characteristics and main aims of the community – that distinguish renewable energy communities from traditional, larger energy companies.

Member states will be required to define specific legal entities, or forms, that are eligible to be considered renewable energy communities. Member states can do this by identifying existing legal entities, or by creating new legal entities. Many of the principles included in the definition are inspired by the International Cooperative Alliance principles. Whatever definition the member state comes up with, it must comply with the definition that is in the REDII.

‘Renewable energy community’ means a legal entity:

- 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.
- The shareholders or members of which are natural persons, SMEs or local authorities, including municipalities.
- 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.

Greece: a model legal definition for energy communities

In January 2018, the Greek Parliament voted to pass the first dedicated legislation in Europe on community energy. Importantly, the legislation defines energy communities, who can participate in an energy community, how they can be established and operated, and how profits may be used. Importantly, the legislation frames energy communities as cooperatives that aim solely at promoting social and solidarity-based economy and innovation in the energy sector, addressing energy poverty and promoting energy sustainability, generation, storage, self-consumption, distribution and supply of energy as well as improving end-use energy efficiency at local and regional

level. Profit-making is limited to certain instances. The legislation also states a wide scope of activities that energy communities are allowed to engage in, and lays out certain support measures so that energy communities may flourish.

A basic set of rights

The REDII provides a set of rights to both the participants in an energy community, and to the energy community itself.

Rights for citizens

- As a ‘final’ energy consumer, every citizen has a right to participate in a renewable energy community without being subjected to unjustified or discriminatory conditions or procedures that would prevent participation, and without losing their consumer rights.
- All members should have equal standing in the community itself.
- Citizens also have a right to information, awareness raising, guidance or training – including on technical and financial aspects – so they are able to exercise their rights.

Rights for renewable energy communities

- Renewable energy communities have the right to generate, store, consume (including self-consumption) and sell renewable energy.
- Renewable energy communities have a right to access all suitable markets they might want to participate in, both individually or through aggregation, for example, to access the balancing market.
- The right to engage in collective self-consumption.
- Energy communities must be able to engage in energy sharing, a new opportunity because it is currently illegal in most – if not all – countries (for example, through virtual net metering, peer-to-peer energy trading).
- Access to a one-stop-shop in order to get a permit, where they can easily submit relevant documentation, they have access to relevant technical information, and where there are shorter, clearer waiting times to get projects approved.
- Smaller projects can sidestep the permitting process altogether, requiring only a simple notification.

Enabling national frameworks

Member states will be required to develop an enabling framework to support the development of renewable energy communities. In order to inform the development of these frameworks, the member states are required to assess 1) the potential for development of energy communities, and 2) existing barriers to the development of renewable energy communities.

The UK's Community Energy Strategy

In early 2014, the UK government released a comprehensive 'Community Energy Strategy'. It was produced after an extensive effort by the Government to identify, then learn about, the different actors within the community energy sector, including the specific challenges they face. The strategy was developed with input from a Community Energy Contact Group established by the Government. The resulting strategy laid out the Government's priorities and plans for how it intended to develop greater support for community energy in the following years.

The Directive requires these enabling frameworks to cover a number of points:

- **Reduction of unjustified regulatory and administrative barriers.** Once an assessment identifies barriers to the development of renewable energy communities, the framework should ensure unjustified administrative and regulatory barriers are removed.
- **Non-discrimination.** The enabling framework must ensure that renewable energy communities are not discriminated against in the activities they perform.
- **Fair, proportionate and transparent licensing and registration procedures.** Member states must ensure that licensing requirements and other regulations and rules for renewable energy communities are not disproportionately burdensome.
- **Fair, proportionate, transparent and cost-reflective network and other charges.** Member states must ensure energy communities contribute to network and other system costs in a fair way. However they must determine such costs based on a cost-benefit analysis, providing an opportunity to frame energy communities in terms of the benefits they can provide the energy system and the community.
- **Access to finance and information.** This particular requirement is particularly useful for individuals that are concerned with the issues covered by the MECISE Project. Governments should be pressured

to establish financial tools for energy communities such as revolving funds or other investment support such as favorable loans, grants, or tax reductions for investments by members of energy communities.

Revolving funds for energy communities: a growing trend around Europe

A growing number of EU countries are beginning to recognise the challenges that energy communities face in financing renewable energy projects. Increasingly, they are putting in place revolving funds that communities can access in order to finance upfront project development costs such as feasibility studies or obtaining permits. These funds often come in the form of grant-to-loan schemes in order to limit investment risks for communities. In Denmark this is provided for by the Promotion of Renewable Energy Act of 2008, while Scotland administers a CARES fund in order to meet its non-binding community energy target. England has both a Rural Community Energy Fund and an Urban Community Energy Fund to support different types of communities. As part of its 2030 Climate Agreement, the Netherlands has also committed to setting up a €40 million revolving fund to promote its objective to reach 50% community ownership of new renewable energy projects.

- **Access for vulnerable, low income, tenants.** Many REScoops also use renewables to address energy poverty (e.g. through development of specific programmes, solidarity funds to help members pay their bills, or funds dedicated to financing efforts to tackle energy poverty). Member states will need to put in place specific policies and measures to promote these actions.

Energy communities broadening access to renewables for all: lessons from Europe to the US

In a number of EU member states, REScoops explicitly pursue social aims, such as fighting against energy poverty. They do this in a number of ways, including by developing solidarity schemes to help members that are vulnerable pay their energy bills, by providing services and education to their members to undertake energy efficiency measures to reduce their consumption, and using revenues from renewable energy generation to improve the living standards of vulnerable and low income households.

- **Collaboration between municipalities and REScoops.** As demonstrated by the MECISE project, municipalities increasingly want to set up an energy community by themselves or cooperate with an existing energy community. Local authorities can now ask for specific regulatory and capacity building support so that they are allowed, and empowered, to participate in renewable energy community projects. They should also be empowered to put in place local measures to support energy communities, for instance through local planning or financial policies, or through public procurement.

Inclusion in renewables support schemes

The move towards auctions and tenders is having an obvious and negative impact on the ability for renewable energy communities to compete for, or access, available renewable energy support schemes. The REDII addresses this issue by placing a requirement for EU member states to take the specificities of renewable energy communities into account when they are developing support schemes. Member states will have quite broad discretion in how they take energy communities into account in the design of their support schemes. However, the recitals of the directive provides citizens with options for what to advocate for in order to ensure energy communities can access support. This includes:

- Provision of information, technical and financial support.
- Reduce administrative requirements.
- Community-based bidding criteria.
- Tailored bidding windows for renewable energy communities.

Citizen based criteria for tenders in Belgium

In Belgium, local authorities can tender out the development of renewable energy projects on publicly-owned land. In carrying out these tenders, they often integrate policy or development objectives, including citizen involvement and public acceptance. The tendering criteria may be based on points, or specific criteria that the authority will take into account when assessing the bids. Here are a couple of examples:

Eeklo tender for local wind development (20 MW) according to provincial wind plan

- Aiming for at least 50% direct participation for municipality and local citizens.
- Contribution of €5000/year for each wind turbine (paid to a community benefit fund).
- Contribution of €5000/year for each wind turbine (paid to the municipality).
- Including social-societal criteria in the public tender (not only financial criteria).

Tendering criteria for Amel & Büllingen: points-based criteria

- Transparency (10)
- Farm configuration taken into account
- Rent (25)
- Compensation for farmers (10)
- Remuneration for developers (5)
- Remuneration for maintenance during exploitation (5)
- Direct participation of municipality (30)
- Other e.g. quality (5), comprehensibility (5), other (5)

Citizen energy communities

While most existing REScoops engage in renewable energy production, increasingly REScoops are getting into other activities that are more central to the electricity market, such as retail supply, and the provision of flexibility and energy efficiency services. Therefore, they need broad recognition and support for participation across the EU's internal energy market.

Comparing definitions of energy communities in the Clean Energy Package

in the Renewables Directive
Renewable Energy Communities

ELIGIBILITY



Members/shareholders that are:

- Natural persons.
- Local authorities (including municipalities).
- Micro-, small and medium enterprises (SMEs)

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.

OPEN & VOLUNTARY MEMBERSHIP



- Participation must be voluntary.
- Participation in renewable energy generation projects should be open to all potential local members based on non-discriminatory criteria.

DEMOCRATIC GOVERNANCE & OWNERSHIP



- 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.

The Market Design Initiative now provides this support. Similar to the Renewable Energy Directive, the Electricity Directive acknowledges and defines, ‘citizen energy communities’. Although slightly different from the renewable energy communities definition, it maintains some of the same characteristics (governance and main aims) that distinguish REScoops from larger, traditional energy companies.

in the Electricity Directive Citizen Energy Communities

Members/shareholders that are:

- Natural persons.
- Local authorities (including municipalities).
- Micro- and small enterprises
- Medium and large enterprises.

Primary purpose:

Environmental, economic, social community benefits for members or local areas of operation rather than financial profits.

- Participation must be voluntary.
- Participation should be open to all potential members based on non-discriminatory criteria.

- 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.

Just like the Renewable Energy Directive, The Electricity Directive gives citizen energy communities and participating citizens specific rights to ensure they can participate without being subjected to overburdensome administrative, procedural or cost barriers. They also have the right to arrange energy sharing.

In particular, citizen energy communities have a right to proportionate regulatory treatment to ensure they do not always have to abide by the same rights and obligations as other larger market actors, especially if they are arbitrary and overburdensome. This includes being able to benefit from priority dispatch for smaller installations. This is important because it ensures that renewable energy is not kicked off the grid by cheap, dirty fossil fuels.

Where member states allow, citizen energy communities may also become a distribution system operator, or establish smaller micro-grids. Ideally, this would have been a right for energy communities; however, it was too contentious for member states. Therefore, it will be up to citizens to advocate to their national decision makers that local energy infrastructure should be locally owned and operated.

Self consumers

The Renewable Energy Directive contains two definitions of renewables self-consumption:

Individually. People, families and SMEs will be able to install their own renewable energy system on their roofs or premises.

By acting jointly in a building or apartment block. The directive recognises that for the over 40% of Europeans living in apartment blocks, acting together to install a bigger renewable installation for multiple residents, may be the best way to benefit from renewable energy, at the same time removing the need to own a roof. Energy communities will also be able to set up these types of systems.

Self-consumers also have a set of rights:

- The right to produce, store, consume and sell renewable energy, both individually and jointly.
- The right for people to be free from being unfairly charged for energy they produce themselves.
- The right to receive or access appropriate remuneration or support for engaging in renewables production.
- A right to engage in peer-to-peer energy trading or energy sharing.
- A right to have access to information that allows citizens to understand how to exercise these rights.

Citizens will be guaranteed access to a one-stop-shop in order to get a permit, where they can easily submit relevant documentation, they have access to relevant technical information, and where there are shorter, clearer waiting times to get projects approved. Smaller projects, clearly including households, can side-step the permitting process altogether, requiring only a simple notification.

Similar to the requirements for renewable energy communities, REDII obliges governments to put in place an enabling framework to promote and facilitate the development of renewables self-consumption. Government will have to base the framework on “an assessment of the existing unjustified barriers to, and of the potential of, renewables self-consumption in their territories and energy networks”.

In particular, the national framework must:

- remove obstacles so that everyone can access renewables self-consumption, including low income or vulnerable households;
- address financial and regulatory barriers to projects and see that incentives are provided to building owners to create opportunities for renewables self consumption including for tenants;
- ensure prosumers’ non-discriminatory access to support schemes for the electricity they feed into the grid;
- ensure that, for that same electricity, the share of system costs they are required to pay adequate and balanced.

Governance

In order to ensure that member states stay true to their commitments and follow EU rules, the Governance Regulation provides transparency and accountability. Concretely, member states must develop National Energy and Climate plans (NECPs) for how they intend to meet certain EU climate and energy objectives, while later they must report on their performance. The Commission can then scrutinise performance or, if severity necessitates, take other measures.

There is a link between the development of national enabling frameworks for energy communities and self-consumers and the national planning process. As part of the planning process, governments are invited, but not required, to develop objectives for renewable energy produced by self-consumers and energy communities. This provides a unique opportunity for citizens to advocate for a high level target for self-consumption, or for community ownership over renewable energy production.

National community energy target: a growing trend in Europe?

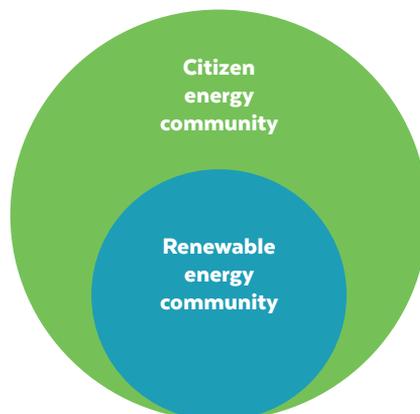
As part of its 2020 climate and energy strategy, the **Scottish Government** committed to developing at least 500 MW of community and locally-owned renewable energy by 2020. This non-binding objective has served as the basis for a number of supportive policies and financial measures that have been put in place to ensure the objective is met. Seeing that they would surpass their target early, the Government updated the target to 1 GW of community and locally-owned renewable energy by 2020, and 2 GW by 2030. Furthermore, at least half of all newly consented renewable energy projects will need to have some element of shared ownership with the local community.

Throughout 2018, the **Dutch government** has been holding a dialogue with stakeholders across the country in order to agree on goals for a political climate agreement to take the Netherlands to 2030. Renewable energy cooperatives have been at the table of this dialogue and through the process have been able to communicate value of local and community ownership of renewable energy projects. As a result, the final agreement contains a non-binding objective for all new wind and solar projects to be 50% owned by the local community. The objective will serve as the basis for municipal planning of renewable energy development and into the planning permission process. This will guarantee that when developers are seeking permission for the development of new projects, that they talk with communities to see how they want to be involved, including through ownership.

In addition, in their National Energy and Climate Plans (NECPs) member states must, where applicable, include policies and measures to support the role of energy communities in achieving other energy efficiency policy objectives. Concretely, this means that in their NECPs member states should include policies and measures to:

- Support participation by energy communities in energy efficiency schemes and alternative measures with a social purpose under Article 7 of the EED.
- Support energy communities in the renovation of public and private buildings.
- Promote the delivery of energy efficiency services by energy communities.
- Promote participation by energy communities in the delivery of energy efficient public procurement.
- Support energy communities in undertaking information and training measures for citizens.

The proposal for the regulation on the Governance of the Energy Union also ensures that citizens and their communities can input into the development of these national plans. Each member state must develop a Multilevel Climate and Energy Dialogue Platform that allows to “support active engagement of local authorities, civil society organisations, business community, investors, any other relevant stakeholders and the general public in managing the energy transition.” This means national governments should go beyond simple consultations and genuinely involve cities and civil society in the co-design of their plans. As the deadline for submission of the plans is end of 2019, local authorities should make sure their voices and need are given due consideration.



RESCOOP MECISE: FINANCIAL TOOL FOR CITIZEN ENERGY COMMUNITIES

by Maëlle Guillou

Access to finance remains a barrier for community energy projects in Europe

One notable barrier identified in many countries remains the access to finance at different stages of development for citizen-led renewable energy projects. Indeed, several studies³² and the work done through the REScoop MECISE Horizon 2020 project indicate that projects carried out by REScoops face a certain number of obstacles:

- Different countries face stop-start approaches to renewable energy and sometimes, inadequate regulation, particularly in the case of public tenders for highly capital-intensive projects such as renewable energy installations.
- Difficult access to funds during the more risky stages of project development (for instance the start-up phase).
- Difficult access to bank loans for projects of small size and led by groups of citizens who often mobilize around a single project on their territory.
- Difficulty to maintain local control of the projects and a governance involving the local communities, which are often the initiating actors of these projects.
- Expensive finance for some REScoops because of high interest rates, extensive due diligence costs, extensive legal expenses, lack of long-term financing, lack of equity and therefore difficulty to lever other funds.
- Difficulty to invest in large-scale renewable energy projects.
- Lack of access to financial guarantees for REScoops.

Investors are attracted to projects that have been built and are operational. In contrast it can be difficult to find equity for construction or for the short period of time before the project is fully operational. At the same time, some REScoops which have been operating for several years can also face the situation when they have funds available on a given period of time but no ongoing project in which to invest at that period of time.

Consequently, the partners of the REScoop MECISE Horizon 2020 project have decided to tackle these various obstacles in the form of a European cooperative vehicle for financing sustainable energy projects.

Providing time, access, credibility and solidarity to citizen energy communities

This financial vehicle was created in order to work on solutions that lessen REScoops dependence on unstable regulations, their lack of access to equity and affordable finance, their difficulties in upscaling the size of projects and not being able to share risk among local initiatives.

Based on several key principles of flexibility, fairness (low profitability, fair distribution of benefits and responsibilities), sustainability and cooperation; Courant d'Air (BE), Ecopower (BE), Enercoop (FR), Energy4All (UK), Som Energia (ES) and the European federation REScoop.eu officially founded the European cooperative REScoop MECISE on 11 October 2018 which will be operational in the course of 2019.

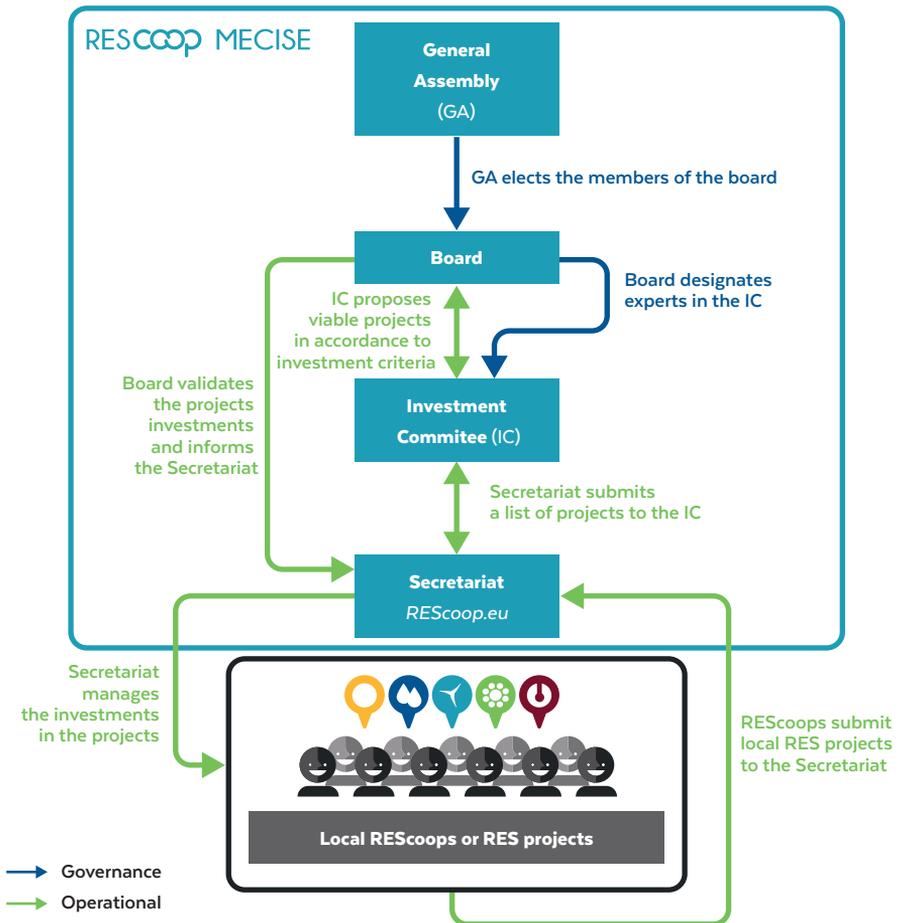
REScoop MECISE stands for 'European Mutual for Energy Communities Investing in a Sustainable Europe' and acts as a direct support for citizen-led projects, REScoop MECISE aims to provide time, access, credibility and solidarity to renewable energy and energy efficiency projects in Europe:

- By supplying temporary equity to help REScoops finance their projects and thus give them time to raise equity locally, or by acting as a bridge to buy back commercial projects and open them for investment to local communities. Once these projects are up-and-running, REScoop MECISE will support a local energy community to raise funds from local citizens and replace the Mutual. That's how the REScoop MECISE SCE will maintain its revolving character and ensure the projects benefit directly to the local communities.
- By aggregating small community projects and assisting them in accessing financing tools reserved for larger projects and by adding credibility to local projects through the provision of guarantees for banks, local authorities or institutional investors. Upscaling projects to over €25 million would make them eligible to soft loans from the European Investment Bank or other institutional investors.
- By combining funds from cooperatives, municipalities and institutional investors, citizens will also get the opportunity to develop large-scale projects, which are today often unattainable for communities. Upscaling will automatically lead to economies of scale and gains on purchasing power.

Finally, REScoop MECISE will foster collaborations and solidarity between REScoops and local authorities, particularly by helping the latter overcoming the challenges they face. By aggregating renewable energy and energy efficiency projects at the local level, municipalities and REScoops could for instance reach

the €30 million threshold that is required to apply to ELENA and get grants for technical assistance on the implementation of energy efficiency, decentralised renewable energy and urban transport projects and programmes. Through ELENA, REScoop MECISE will support the set-up of Project Development Units (PDU) all over Europe. Once these projects have reached the final stage of development, REScoop MECISE can support them in setting the right Public Civil Partnership and apply for soft loans from the European Investment Bank.

Governance and operational set-up for the MECISE vehicle



The European Union was built in the 1950s on the European Coal and Steel Community and later the Euratom Treaties which meant to make war 'materially impossible'³³ between member states. Today, with the Energy Union for all Europeans, an attempt at relaunching a dynamic based on energy as historic pillar of the European project is underway. Nevertheless, the European Union is facing daunting challenges of unity and political vision and it is crucial to support the emergence of a model that will ensure a decentralised and democratic energy system in the future. Hence, going further than basic financial cooperation, the REScoop MECISE Mutual was conceived as the achievement of essential values shared by its founding members such as solidarity and trust. The Mutual fits clearly into the social and solidarity economy rationale by putting financial tools directly at the service of local communities and the energy transition towards energy democracy.

Example: Krammer wind project in the Netherlands

Individual REScoops often lack the financial means to raise sufficient equity to reach the financial closure when doing big projects. As a result, they are often forced to sell part of their projects to commercial companies. This has been the case for **Zeeuwind** and **Deltawind** for instance, two local REScoops who managed to develop a 102 MW wind project in the Netherlands worth €215 million (cf. Krammer). The two cooperatives were initially forced to sell 50% to the wind turbine manufacturer simply because they could not raise enough equity themselves. Now that the project is actually constructed and the wind turbines are in place, the two cooperatives organised a second financing campaign. In only two days, they managed to raise over €10 million to buy-out the wind turbine manufacturer. Most cooperatives are not that lucky and either lose their part of the project or have to buy back their share at a considerably higher price thus losing important value that could otherwise be used for local development. Doing local and thus smaller projects typically leaves REScoops with less economies of scale, less power in negotiations with suppliers and considerably higher interest rates for their loans. Through REScoop MECISE SCE we aim to overcome this challenge.



CONCLUSION

by Dirk Vansintjan

The partners of the REScoop MECISE project are convinced that increased investments in sustainable energy and a stronger involvement of European citizens are needed to achieve the transition to renewable energy and energy democracy across our shared continent.

This is why renewable energy cooperatives in Europe are for a democratic energy transition.

As the many examples in this report demonstrate, hundreds of thousands of citizens are jointly investing in the energy transition from fossil and nuclear fuels to renewable energy and energy efficiency through more than 3400 citizen energy communities (REScoops) across Europe.

We believe a decentralised ownership of projects encourages greater acceptance of renewable energy and benefits local communities.

This model has proven its environmental, economic and social added value, but still too few renewable energy installations are owned by local communities in Europe. Whilst the actions and contributions of renewable energy cooperatives are increasingly recognised in national and European policies and regulations, this model is still struggling to develop in some European countries.

The challenge to address climate change is substantial and the window of opportunity available to us to act is very short.

The time for action is now and community ownership is a key part of achieving an energy transition across Europe.

GLOSSARY

‘REScoop’, short for Renewable Energy Sources cooperative’:

refers to a business model where citizens jointly own and participate in renewable energy or energy efficiency projects. Their projects can also be referred to as community power or community energy projects. REScoops do not necessarily have the legal status of a cooperative, but rather can be identified by the way they do business, which distinguishes them from traditional for-profit energy companies. In particular, they are distinguished due to their respect for the 7 principles that have been outlined by the International Cooperative Alliance (ICA). Often local SMEs and public authorities can also join a REScoop.

‘Citizen Energy Community’:

is an organisational concept defined in the EU Electricity Directive of 2019. It refers to a legal entity where citizens, micro and small enterprises and local authorities come together, as final users of energy to cooperate in ownership of generation, consumption, distribution, storage, supply, aggregation of electricity, or offer energy efficiency/demand side management services. Citizen energy communities are distinguished from traditional commercial energy companies primarily through their integration of principles on ownership, governance and control by citizens, micro and small enterprises and local authorities, and non-commercial purpose, into their governing statutes. Citizen energy communities can perform any activity that pertains to electricity, or power – not just renewable energy. REScoop.eu, the European federation of citizen energy cooperatives, considers Citizen Energy Communities that respect the 7 International Cooperative Alliance principles eligible for full membership.

‘Renewable energy community’:

is an organisational concept defined in the EU Renewable Energy Directive of 2018. It refers to a legal entity where local citizens, SMEs and public authorities come together, as final users of energy to cooperate in ownership of generation, consumption, distribution, storage, supply, and aggregation of electricity from renewable sources. Renewable energy communities are distinguished from traditional commercial energy companies primarily through their integration of principles on local ownership and control, non-commercial purpose, and democratic governance, into their governing statutes. For the most part, the renewable energy community can be seen as a subset of the citizen energy community. Unlike a citizen energy community, which focuses on all activities related to the electricity sector, a renewable energy community focuses solely on activities related to renewable energy.

It also has stricter eligibility criteria relating to local control and autonomous internal governance, and therefore benefits from more favourable regulatory treatment at EU-member state level. REScoop.eu, the European federation of citizen energy cooperatives, considers Renewable Energy Communities that respect the 7 International Cooperative Alliance principles eligible for full membership.

‘Energy citizens’:

are individual citizens or households...

‘Active customers’:

are non-commercial organisations, public entities and enterprises...

... that not only consume energy, but also actively participate in the energy market, either individually or collectively, for instance through an ‘energy community’. Active participation in the market may consist in producing and consuming or exporting renewable energy, engaging in energy efficiency and flexibility through demand side response, aggregation, storage, etc. The 2019 Electricity Directive acknowledges and defines ‘active customers’.

‘Energy prosumer’:

is a final consumer of energy that also produces renewable energy, for instance through solar photo-voltaics (PV), either for self-consumption, export, or a mix of the two. The 2018 Renewable Energy Directive defines both individual and collective energy prosumers, referring to ‘renewables self-consumers’ and ‘jointly acting renewables self-consumers’, respectively.



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