The summer 2019 has again broken all records with the highest temperatures ever recorded in EU cities and around the world. Experts explain that work productivity is lower when temperatures are high. Advice on how to best adapt to such working conditions include working during the night, as many cooling systems are not able to work well due to the lack of electricity caused by rising demand. In such circumstances, we are all aware that climate change is not only a matter of environment. Each city, village and municipality are confronted with the urgency of helping people, ensuring good living and working conditions or even avoiding deaths of the most vulnerable. If only few years ago the discussion about renewable energy sources (RES) was centred mainly around the financial benefits, today more and more people, municipal administrations and politicians are talking about the urgent need to install RES to have local sources and to secure enough energy during extreme weather conditions. Pumping drinking water, cleaning wastewater, cooling data storage rooms, operating an alarm system for fires and floods - all of these activities are dependent on electricity. With electrical black outs, many essential and life-supporting services cannot be assured. The issue of RES is elevating to higher level, not only from a legislative point of view. Member states, regions and municipalities have to act. The Renewable Energy Directive from December 2018 also gives citizens and smaller energy market players the possibility to organize themselves within the renewable energy communities. Supporting schemes on an equal footing with large participants will have to be ensured. There are already some good practices of RES communities across the EU. With more information, providing technical and financial support, reducing administrative requirements, including community-focused bidding criteria, creating tailored bidding windows for renewable energy communities, or allowing renewable energy communities to be remunerated through direct support where they comply with requirements of small installations more and more communities will be established in the next years. Each of us will be able to participate actively to secure affordable energy for all and to adapt to the new climate conditions.

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ENERGAP Director and Mayor of Selnica ob Dravi (SI)
INTERVIEW DIRK VANSINTJAN
PRESIDENT OF RESCOOP

REScoop is the European federation of renewable energy cooperatives. It is a growing network of 1,500 European energy cooperatives and their 1.000.000 citizens who are active in the energy transition.

For the first time in history, the Renewable Energy Directives provide provisions for renewable energy communities. A big step forward towards democratization. Are you satisfied with these provisions?

On paper, the Clean Energy Package aims to create a strong legal basis to ensure renewable energy communities such as cooperatives can participate on a level playing field with other larger commercial market actors. Unfortunately, it moves away from treating citizens and communities as simply passive consumers towards active participants in driving the energy transition. In this way, it also acknowledges the value of empowering citizens in the fight against climate change. In particular, the RES Directive also represents a unique opportunity to address issues of equal treatment of small and local non-commercial market actors which focus on delivering social innovation rather than profits, in the market.

Of course, the concept of ‘energy communities’ is brand new to many national decision-makers who must now translate these new EU laws into national law. As with most EU legislation, the energy community definitions contained in the Directive are principles-based, meaning they provide Member States with much discretion on how they are transposed. On top of this, much will depend on decision-makers’ and national regulators’ attitudes towards empowering energy communities. Therefore, creating national frameworks from scratch will be no easy task. The development of regulatory frameworks for innovative activities such as collective self-consumption and energy sharing will also raise many technical and practical issues. In all likelihood, the Clean Energy Package represents an important first step towards building an effective legal and policy framework to ensure citizens are brought along Europe’s energy transition.

How do you evaluate the support of the Member States so far? What do you see as an “ideal support” at the national level?

Earlier this year, we assessed the treatment of energy communities in the 28 draft National Energy and Climate Plans (NECPs), independently of any pre-existing national frameworks. From our assessment, we had several takeaways. First, while a number of Member States were aware of energy communities based on the Clean Energy Package, actual planning for how to support them was very low. We identified a few Member States that showed strong commitment and should be looked at for best practice, such as Greece, Austria, Spain and the Netherlands. We also saw that most Member States are not fully aware of the potential of renewable energy communities to contribute towards other areas of the energy transition such as energy efficiency, energy poverty, e-mobility, rural development, and district heating. Furthermore, we also noticed that many Member States do not fully understand what renewable energy communities are. For instance, they often confused them with activities such as RES self-consumption and energy sharing.

Moving forward, we hope that Member States will step up their commitments to empower citizens and communities. Concretely, that means ensuring the rights of renewable energy communities and citizens to establish themselves and participate across the market. Member States will also need to ensure renewable energy communities have a bike lane in national renewable energy support schemes. Furthermore, they will need to set up enabling national frameworks that provide capacity-building support to citizens that want to set up energy communities, including financial and technical informational support, as well as ensure the vulnerable and energy poor citizens are able to participate in energy communities. Lastly, regulation needs to ensure equal and proportionate treatment of renewable energy communities, simplifying and streamlining procedures and requirements where possible.

The discussion around citizen’s ownership of microgrids has become quite vocal. There is partial reluctance from regulators and traditional market players. What are the best arguments in favour?

In the early 20th Century, outside of cities many distributed electricity and heating networks were constructed and operated by local authorities and civic cooperatives. Many of these networks remain locally-owned until this day. These networks have good records of being safely and cost-efficiently operated, and because they are self-owned, they operate in citizens’ best interests. A number of them, for instance in the Italian region of South Tyrol, are also far ahead in terms of implementing smart grids. In rural and sparsely populated areas, it may very well make sense to empower citizens to take ownership of energy infrastructure so they can guarantee themselves better quality of supply, and provide services to the public grid during the energy transition.

In its original Clean Energy Package legislative proposals, the EU Commission suggested providing energy communities with a right to set up, own, and operate local power networks. Due to pressure from distribution monopolies, however, the final text gives Member States discretion whether to grant energy communities this right. We hope that regulators and decision-makers see the benefit of local grid ownership and will empower municipalities and local cooperatives to take a more active role in managing the energy transition locally.
The PEGASUS project aims to define the economic, technical and administrative conditions that facilitate the development of “microgrids” in rural or insular areas. It ran until 31st October 2019 and was 85% financed by European funds, through the InterregMED program. The aim was to set up tools to support the development of microgrids by monitoring 7 pilot sites across Europe.

One of the pilot projects was led by Auvergne-Rhône-Alpes Energie Environnement (AURA-EE) in France, where the new legal framework of “collective self-consumption” was experimented. In the strong winds and threaten the electricity supply for farmers’ cold stores or woodchip boilers. As a result, local representatives and inhabitants were searching for innovative solutions that can help the village to become more independent regarding its energy supply through local energy sources.

For this purpose, the company SAS Centrales Villageoises ACoPrEV Val de Quint was formed in June 2018. It is with mainly citizen capital and a local cooperative governance investing in photovoltaic equipment installed on roofs. This cooperative behaves like a traditional third-party investor: bearing the initial investment costs, annual operating expenses and being remunerated on the sale of energy. This can be done via a feed-in tariff or via the tariff offered directly to consumers, in the case of collective self-consumption.

From an economic perspective, the proposed collective self-consumption needs to be able to strike a balance between at least three parameters: 1) profitability for the producer, to be able to recover their investment; 2) consumers being able to buy locally generated electricity at a price not exceeding that of their current bill; 3) the fact that the back-up suppliers of the consumers concerned are able to make an adapted offer on the part not coming from local production.

The economic study of the pilot proved complex due to the large number of consumers and the high number of possible combinations, particularly with the choice variants of the French Tariff networks (TURPE). The results depend strongly on the profiles of the consumers concerned, both on their seasonal profile (higher winter consumption) and on their daily profile (synchronization of consumption with solar production periods).

On the producer side, direct or indirect investment support (by mixing the operation with other photovoltaic installations on total sale) makes it possible to reduce the cost per kWh sold locally to a level acceptable to consumers.

On the consumer side, the choice of the TURPE specific to collective self-consumption is often the most relevant.

The pilot ended with the results being returned locally and it is now necessary to provide didactic details for each consumer on the evolution of each invoice according to the final scope that will be used. The risk linked to changes in this scope over time (entry/exit of consumers, changes in consumption profiles, etc.) will also have to be assessed, particularly with regard to financiers.

**Microgrid Solution in Gozo Island, Malta**

Another pilot of the Interreg MED PEGASUS project focuses on the island of Gozo, the second island of the Maltese archipelago with a surface area of 67km² and a population of around 37,000 inhabitants, spread among 14 municipalities.

The pilot is characterized by 15 sites, 14 of which are located within the Municipality of San Lawrenz and one in the Municipality of Victoria. In San Lawrenz there are 12 households, 1 commercial property and the Local Council building. The site in Victoria includes 4 PV systems installed at the Ministry for Gozo.

The proposed micro-grid model may be defined as a community-level energy system that can provide cleaner energy and reliability of supply through the integration of distributed RES (and possibly energy storage system). Due to its position and size, Gozo strongly suffers of “double-insularity”, being connected only to Malta by ferry or private boats. This makes Gozo strongly dependent on Malta, including for its energy supply and thus the possibility of operating in islanding mode may be considered only in case of emergency (i.e. during power cuts) since this would result in a much higher cost of implementation.

Based on the cost benefit analysis carried out, it can be concluded that maximising self-consumption between the different micro-grid community members and establishing a collective self-consumption agreement can be financially feasible. Yet, micro-grid models can be feasible in the case of higher consumers that are paying high electricity tariffs to the main grid and may purchase electricity at a lower tariff from the micro-grid, which is currently not the case.

In terms of environmental impact, micro-grids can also allow higher penetration of RES into the grid and can possibly provide services to the grid with respect to peak shaving, load levelling, load shifting and power quality management with the final goal to reduce greenhouses gas emissions. Given the present energy mix in Malta it can be assumed that each kWh consumed results in 254 grams of CO₂.

The energy presently imported from the grid by the micro-grid pilot building amounts to 9.641 MWh. Thus it can be estimated that if additional renewables are installed on site, a maximum reduction of 2452kg of CO₂ per month could be achieved. Additionally, if the energy is produced and consumed on site, distribution losses will also minimise. In total is estimated that 32.688 tons of CO₂ can be avoided yearly.
In the PEGASUS project (Promoting Effective Generation And Sustainable UseS of electricity), 10 partners from MED countries worked together to study into more details microgrids, focusing in rural and island areas. The objective was to implement a set of tools and measures that aimed at facilitating the development of microgrids. The innovative approach of the project as in experimenting a simulation of functioning of microgrids in 7 pilot areas jointly. Technical and financial scenarios were developed based on concrete situations with real data. The PEGASUS project aimed to give evidence of the feasibility of microgrids acting on technical or administrative obstacles which are hindering the use of microgrids in disadvantaged areas.

Visit the website: [https://pegasus.interreg-med.eu/](https://pegasus.interreg-med.eu/)

C-Track 50, an EU funded project under the Horizon 2020 Research and Innovation Programme, aims to mobilise and support local and regional authorities in energy and climate planning in order to achieve climate resilience and carbon neutrality by 2050. Indeed, sub-national public authorities often lack the technical know-how and resources to develop long-term climate and energy actions. The project is implemented in 11 EU countries, namely: Austria, Croatia, France, Germany, Greece, Hungary, Latvia, Poland, Portugal, Romania and Spain.

Within the project’s framework, each partner country organised 3 roundtables with the participation of national public authorities and other key actors, on challenges faced for long term policy planning on energy and climate, as well as for achieving multi-level governance. The outcome of the roundtables was the formulation of a series of recommendations, which were discussed and validated with the participating stakeholders. These recommendations are thoroughly analysed in the [Recommendations’ report on national energy priorities](http://c-track50.eu).

C-track 50 will support at least 116 sustainable energy and climate policy action plans and develop at least 105 funding proposals for implementing sustainable energy and climate actions/projects.

Visit the website: [http://c-track50.eu](http://c-track50.eu)