



Project co-financed by the European
Regional Development Fund

Promoting Effective Generation And Sustainable Uses of electricity Highlights Newsletter No 5

Dear reader,

It is our pleasure to welcome you to the fifth edition of the PEGASUS Newsletter.

In the PEGASUS project, 10 partners from MED countries are working together to study into more details microgrids, focusing on 7 rural and island areas. The objective is to implement a set of tools and measures that aim to facilitate the development of microgrids.

The purpose of this Newsletter is to update you about the progress of the project. If you would like to keep up to date with all the latest developments of our project follow us on Twitter <https://twitter.com/PegasusPZ> and on the website <https://pegasus.interreg-med.eu>.

Kind regards, PEGASUS partners



Don't miss the final events – SAVE THE DATE!

INTERREG MED CAPITALISATION EVENT - MED FOR YOU

24th of October 2019 – Athens

Web: <https://interreg-med.eu/events/med-for-you/>

JOIN US ON WEBINAR

Emerging Business Models for Energy Communities – Lessons from the PEGASUS project

31st of October at 11:00

Web and Registration form:

<https://www.fedarene.org/emerging-business-models-for-energy-communities-lessons-from-the-pegasus-project-webinar-31710>

This webinar will present the details of the “energy communities” provisions in the revised Renewable Energy and Electricity Market directives, bring forward the perspective of a funding body that supports the development of such projects and showcase the results of the PEGASUS project along with a focus on one of the pilots.

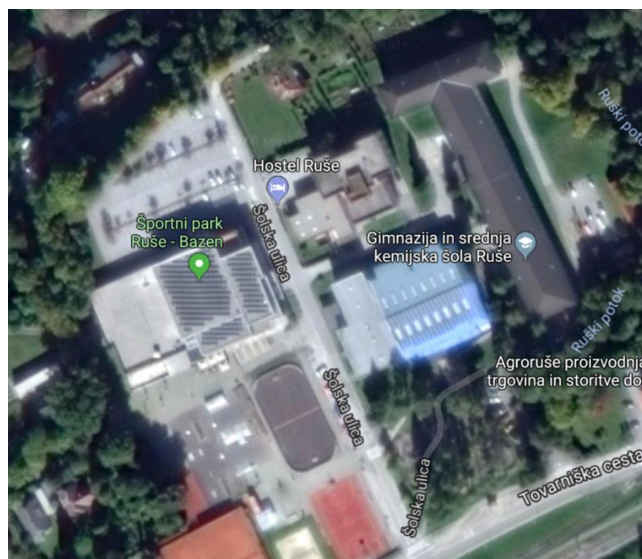
Conclusions and evaluations on PEGASUS Pilots

In the frame of the PEGASUS project, energy agencies simulated functioning microgrids in 7 pilot areas. The first economic evaluations of the pilots are out. Here you can read about some of them.

A Pilot microgrid at the Ruše Sports Park

In the Sport Park Ruše in Slovenia, the pilot site is based in a sports resort and includes two existing PV plants of 50 kWp each. A group of four buildings was selected that would represent the loads of a micro-grid with about 500 MWh/year total electricity consumption.

Through the project the possibilities of a microgrid implementation in a local environment with good overall potential for such an installation has been tested. The usage and production curves, loads and simulating possible production scenarios have been tested. We have found out that a microgrid implementation is possible.



We have also investigated the legal requirements for implementing a microgrid in this area and we found out that there are no real obstacles for it. So, we actually could physically connect all the buildings in to a working microgrid. There have also been some changes in the legislation that enable users to use renewable energy produced locally on the main grid like they are connected to a microgrid. This is only the case if users are connected to a single transformer to produce their own energy and share it with other users on the same transformer station. But it is a big step in the direction that enables the use of existing infrastructure for grid connected microgrids.

Economic factors that enable the self-sufficiency are the price of the produced energy and the price of the energy from the main grid. Reliability in this case was not an issue. Solar energy has been found out to be a completely viable energy source that ensures renewable energy at an affordable price. The system just needs to be planned and implemented correctly. A problem is of course the temporal volatility in the availability of such energy. This can be improved by using energy storage that was found to be too expensive. We tested the economic viability of energy storage. Testing has been done with simulating the use of a CHP system that uses natural gas as an energy source. Here we found out that there needs to be a certain price difference between the price of electricity and the price of gas for the system to be viable. But it still might be a viable possibility for the future.

The final conclusion might be that the factors for successful microgrid implementation are improving and in our eyes, main grid operated partial autonomy of users will be the norm in which direction the development will go. [More](#)

A Microgrid in Saint-Julien-en-Quint, Auvergne-Rhône-Alpes

In the village of "Saint-Julien-en-Quint", power outages can occur after 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, thanks to local energy sources.



For this purpose, "SAS Centrales Villageoises ACoPrEV Val de Quint" was formed in June 2018. It is a company with mainly citizen capital and local cooperative governance investing in photovoltaic equipment installed on roofs.

The cost benefit analyze has been completed in July 2019. The project consists of a 36 kWp PV plant, operated by a local energy community, whose electricity could be directly sold to the 33 consumers of the pilot area. The new French regulatory framework of "collective self-consumption" would be used.

The study shows that some subsidies would be necessary for the community to propose a competitive price of electricity. A detailed analysis of the consumers' bills has been led to assess the impact of the project on their bill, according to various hypotheses on taxes and grid fees. The results have been presented to the local inhabitants and the project is now being adapted to its final perimeter. [More on technical](#) and on [economic evaluation](#).

A Pilot Microgrid in the Mega Evydrio Community

The Greek pilot microgrid is planned to be installed near the city of **Farsala** – in the Mega Evydrio community – and it is going to have one single point of common coupling (PCC) with the main electricity grid. It is going to be organized as a local "energy community", where the municipality of Farsala and the residents of the community of Mega Evydrio are going to participate.

The present situation for the Greek pilot before the establishment of the micro-grid was the following:

- The consumers buy electricity from the main grid;
- The producers sell electricity to the main grid;
- The prosumers buy electricity from the main grid in a net metering basis (consumption – production). If production is higher than consumption they don't earn money for the surplus of electricity.



The situation after the establishment of the micro-grid for the Greek pilot will be the following:

- An “Energy Community” will operate the micro-grid. In the “Energy Community” will participate the local municipality, local residents, local shop owners, local electricity producers, and various other interested parties.

The economic evaluation has taken into account multiple parameters (including resources potential, cost of used renewable sources, the price of purchase for the electricity produced by these sources etc.), studied different scenarios and examined several different strategies for the Mega Evydrio microgrid functioning. [More](#)

A microgrid pilot in the Municipality of Potenza

The pilot includes two energy-intensive infrastructures: the swimming pool of Montereale Sport Park and the Santa Lucia escalator, 600 meters long, able to transport up to 9000 people/hour from the outskirts to the city centre. The pilot was aimed at demonstrating the achievable advantages by the application of the Italian regulation “Scambio sul posto Altrove”, according to which the two plants can be considered as a single electric user under the condition that a renewable generation is operating at least in one of the two sites.

A heat driven Combined Heat Power system, assimilated to renewable in connection with its high efficiency, installed in the swimming pool can be used for water and ambient air heating. The generated electricity exceeding the local demand is fed into the public distribution network. In a symmetrical way electricity is withdrawn from the network when local demand overcomes the electric power available from CHP.

A measurement campaign throughout the year 2018 of thermal and electrical consumption of the pool and the electricity demand of the escalator allowed the optimal CHP sizing.



Communication activities and events

Over the last months, PEGASUS has moved from the Testing to Transferring phase. All pilots in rural and island areas prepared transferring actions (workshops, meetings, and seminars) of their pilot testing results: to inform, educate and train what microgrids are and how the business models can work under different conditions.

PEGASUS Microgrids Summer School

Very important activity was to organize the Microgrids Summer School. A successful two days event took place on 30th and 31st of May 2019 in Cagliari, Italy powered by the PEGASUS project and supported by Interreg Mediterranean. During the 2 days-event, participants explored what prospects microgrids are opening for local/regional energy resource exploitation in support of energy transition. Special attention was given to understanding how microgrids may become active components of integrated grids, optimise the use of local energy resources and enable the zeroing of the carbon footprint of Municipalities and Communities. During the event, the PEGASUS partners leveraged their knowledge from experimenting a simulation of functioning of microgrids in 7 pilot areas: France, Cyprus, Slovenia, Italy, Croatia, Malta, and Greece. [More](#)



PEGASUS partners cooperated with interreg MED RES Community

In this year PEGASUS partners cooperated in several events organized from GREENCAP project and Interreg MED RES Community. **Jointly we have prepared A VIDEO on the Pilot PEGASUS project based in the village of Saint-Quentin-en-Quint in France** where power outages can occur after strong winds and threaten the electricity supply for farmers' cold stores or woodchip boilers.

[WATCH THE VIDEO AND LEARN ALL ABOUT THE EMPOWERED ENERGY COMMUNITIES IN FRANCE](#)

**PEGASUS Pilot Project
in the Drôme Region, France**

In May 2019 we were present at Regional Consultation Workshop of RES Community at National Hellenic Research Foundation in Athens, Greece.



In June 2019 we were present at EUSEW Networking Village and at RES Community side events in Brussel, Belgium. Pegasus had a stand on the event. Project partner FEDARENE had showcase the approach and main results of project process. Participants were expected to leave the stand with a clearer understanding of how microgrids operate in practice, the benefits they may bring to a local energy community as well as the commercial viability of this new technology.



MIEMA had participated in two projects funded through the Interreg MED Programme under the thematic area of Renewable Energy

MIEMA presented the preliminary results of the two projects during an interregional event organised in the framework of the Interreg Europe project – SUPPORT, organised by the Gozo Regional Committee on the 27th of March 2019. The project team presented best practices in relation to the promotion of renewable energy sources. San Lawrenz Local Council is collaborating with the MIEMA on a pilot study related to the design of a community based micro-grid as part of the PEGASUS project.



The implementation of such micro-grid models can help to reduce energy bills for the residents and enhance the reliability of energy supply. [More](#)

Municipality decision-makers seminar in Cittadella, Victoria – Gozo

The main objective of the event was to transfer to the local political level the latest achievements of PEGASUS, illustrating them how this cooperation project - involving 7 micro-grid pilot areas in the Mediterranean region - helps small communities to become more energy independent. [More](#)



PEGASUS final results and conclusions on STORES Final event in Cagliari, on 28th of May 2019

The main aims of the event were to present the StoRES project achievements and main results and to discuss complementarities with other MED projects from the renewable energy community of projects.

From PEGASUS project Ms. Ivana Ostoic from Preko Municipality had a presentation with the title "Penetration of Renewable Energy sources in the future of the grid".



PEGASUS participated on International event of Smart Villages in Courmayeur in Italy

Within the events scheduled for the year of the Italian Presidency of EUSALP, Regione autonoma Valle d'Aosta organized an event to bring together politicians, researchers, project managers, associations and all those people who are involved on the thematic of Smart Villages.

AURA-EE was a speaker on the event to present the topic of microgrids through the experience of PEGASUS. On the second day AURA-EE has also presented a poster on microgrids.



PEGASUS Local campaign in Saint-Julien-en-Quint

The objective was to gather the inhabitants of Saint-Julien-en-Quint, their local representatives as well as other local stakeholders so as to present them the results of the pilot study and to encourage them to get involved in the realization of the microgrid. This local event showed that people were not so worried about the impact of the microgrid on their bill, provided that the eventual increase keeps reasonable. People were quite enthusiastic about getting involved in a project that would enable them to consume local electricity. Three of them directly confirmed they would participate in the project.



A successful seminar organized in Cyprus

A successful meeting with several municipalities was organized on the 24th of June 2019 for presenting the results of the project PEGASUS (Promoting Effective Generation and Sustainable USes of electricity), followed by a fruitful discussion on the involvement of municipalities towards the sustainable future and other sustainability aspects.



Stakeholder consultation in Barcelona on April 2019

The Stakeholder consultation concerning the policy paper for ETUs was held in Barcelona on the 25th of April 2019.

The objective of the consultation was to present, distribute and share activities and results of the projects belonging to the MED RES Community activities on the MED territory that will support local authorities to define innovative local fiscal policies intended to promote RES, focusing on rural areas and islands where these policies would have a key role in increasing renewable energy sources.



Workshop for local municipalities in Preko

In June 2019 workshop for local municipalities was held in Preko. It was hosted by Mayor Mr Jure Brizic. PEGASUS team had presented main advantages of using microgrids and Preko's results. All municipalities from Ugljan and Pasman Island took part.

Discussion meeting with the stakeholders in Municipality of Farsala in Greece

During the event organized in May 2019, CRES presented the project PEGASUS and the Greek pilot microgrid of Mega Evydrio.

More specifically it was presented the business/organizational model of the pilot (essentially under technical conditions), the results of the questionnaire and the list of risks that CRES had already prepared. After the presentation there was a discussion of the results through the workshop. CRES presented an "Indicative list of risks" for the Greek pilot. This list was reallocated and the risks were sized one by one. The workshop was attended by Engineers and Technicians, the head of technical department of the municipality, Architects, Contractors, RES investors and Planners.



Workshop - pilot project of Municipality of Potenza

Regulatory of "Scambio sul Posto" of pilot of Potenza. This is an application of a net metering system that will allow an exchange between the same public entity that has generation and consumption in two different locations. This is the first opportunity for open up the market and run applications in the directions of microgrids. The case study of Potenza represents its first application.

The training run to the market operators as engineering professionals that works as free-lance consultants, public companies and business operators represented a transfer opportunity of the methods and knowledge acquires. Inputs were collected and active participation was shown off.



Discussion on Microgrid business models from the PEGASUS project in Brussel

PEGASUS partners from France, Malta and Croatia took part in a meeting organised by FEDARENE in their Brussels office on 10th of October 2019. Present were representatives from RESCOOP, EU Commission and IAS. During this meeting, participants had a chance to gain some insights from the key learning of the PEGASUS project, exchange on their own experiences with similar projects and together lay the ground for new projects and strategies.

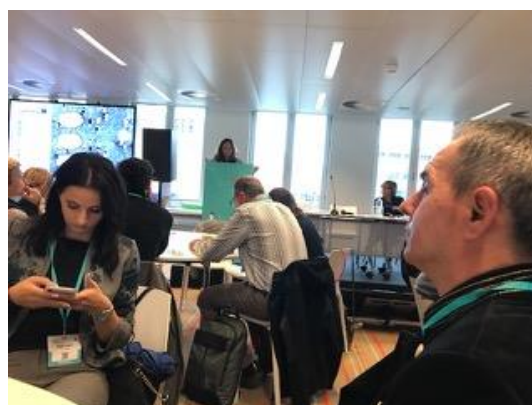


PEGASUS took part on Interreg MED Piazza event

Municipality of Potenza, Municipality of Preko and FEDARENE took part on Interreg MED Piazza event. It was held on 9th of October 2019 in SQUARE building as side event of EU Regions week.

The workshop has taken a stock of the achievements of the Interreg MED Programme, involving almost 900 public and private organisations from 13 Euro-Mediterranean countries, to engage the audience in an open debate on the role of the regions and cities should play on three cross-cutting topics: climate change, blue economy and inclusive growth.

At the event Municipality of Preko also presented PEGASUS project and the results of their Pilot in Preko.



PEGASUS 5th Steering Technical Committee project meeting in Gozo, Malta

PEGASUS project partners joined at the 5th meeting in Gozo (Malta). It was hosted by Malta Intelligent Energy Management Agency (MIEMA) from 1st to 2nd of July 2019. Partners presented the results and conclusions of 7 pilot cases, implemented in 7 MED regions.

The 5th STC meeting has lasted for 2 days. The first day has been dedicated to the Bilateral meeting between Technical Partner and Responsible Partners from each Pilot and the second day to the work done in the Semester 4 and work plans for the Semester 5.



Lessons learned from the solutions that transpire through the implementation of the PEGASUS project and the demo at the University of Cyprus

The Cyprus Employers and Industrialists Federation (OEB), in collaboration with FOSS Research Centre for Sustainable Energy of the University of Cyprus, in the context of Wednesday's lectures on environment and energy, successfully organized a workshop on "The role of Microgrids on the development of Energy Communities", on 24th of September 2019. The workshop was well attended by more than 80 participants from all sectors of the economy. The workshop was led by Dr. Venizelos Efthymiou, Dr. Christina Papadimitriou and Mr. Costantinos Charalambides, members of the FOSS Research Centre for Sustainable Energy, Mr. Theocharis Tsoutsos, Professor at the Technical University of Crete, and Ms. Anthi Charalambous, Head of the Department of Energy. [More](#)



Final conference in MARIBOR: »Establishment and operation of microgrids«

Energap organized the Final conference of the Pegasus project and present the process and the results of Energap tested model – Simulated microgrid pilot example in the Sports park of Ruše. The Final conference was organized in May 2019 in Maribor at Faculty for Electrical Engineering and Computer Science.

A pilot example of the theoretical microgrid in the Sports Park Ruše, which was developed under the EU project PEGASUS, was presented. The pilot Ruše is aimed to demonstrate the economic and environmental advantages for users and producers through an energy efficient microgrid which would help to make the best use of the existing resources, eventually using storage systems, and would provide cheaper electricity to end-users while ensuring at the same time a good remuneration to the PV generators. The pilot can be a showcase for other public facilities.



Final conference of PEGASUS project in Auvergne-Rhône-Alpes

The Final conference took place in June 2019 organized by AURA-EE and Energie SDED (local DSO). The event was divided into two sessions. During the morning, 2 round tables were organized with representatives from public institutions and politicians. They stressed the importance of rural territories in the development of RES, more particularly through microgrids and energy communities. The barriers to microgrids and the possible evolution of the legal framework were also mentioned.

The afternoon was dedicated to technical aspects and feedbacks from the first collective self-consumption experiences at a national level. AURA-EE had a complete presentation of the results from the pilot site study in Saint-Julien-en-Quint. This conference was one of the first big events organized at a regional level on this topic. Many people attended since the issue is quite new and generates many questions.



PREKO final conference in October 2019

At the end of October final conference of PEGASUS project was held in Preko. Conference was a side event to the celebration of the Day of the Preko Municipality. More than 30 persons attended the conference, mostly from islands of Preko and Pasman as well as from the Zadar County.

Conference was opened by Mr Jure Brzici, Mayor of Preko, who said that being a part of the Interreg MED project as well as a part of the MED RES community brought added value to the Municipality and that he hopes that results of pilot project will serve as model for other local municipalities to follow. Main theme of the conference was "Is there financial and environmental value for small communities in using microgrids". Speakers involved at the conference were Mr Marko Ruzic from City of Velika Gorica, Ms Drazena Strihic from Preko and Mr Ante Zupan from Zadar County. Moderator was Ms Ivana Ostoic.



Project Partners

- Municipality of Potenza (IT) – Lead partner
- Centre for Renewable energy sources and savings, CRES (GR)
- Malta Intelligent Energy Management Agency, MIEMA (MT)
- Energy Agency of Podravje, ENERGAP (SI)
- Design and Management of Electrical Power Assets, DEMEPA (IT)
- The Auvergne-Rhône-Alpes Energy Environment Agency, AURA-EE (FR)
- University of Cyprus, UCY (CY)
- Municipality Preko, PREKO (HR)
- Abengoa Innovación S.A., ABENGOA (ES)
- European Federation of Agencies and Regions for Energy and the Environment, FEDARENE (BE)



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