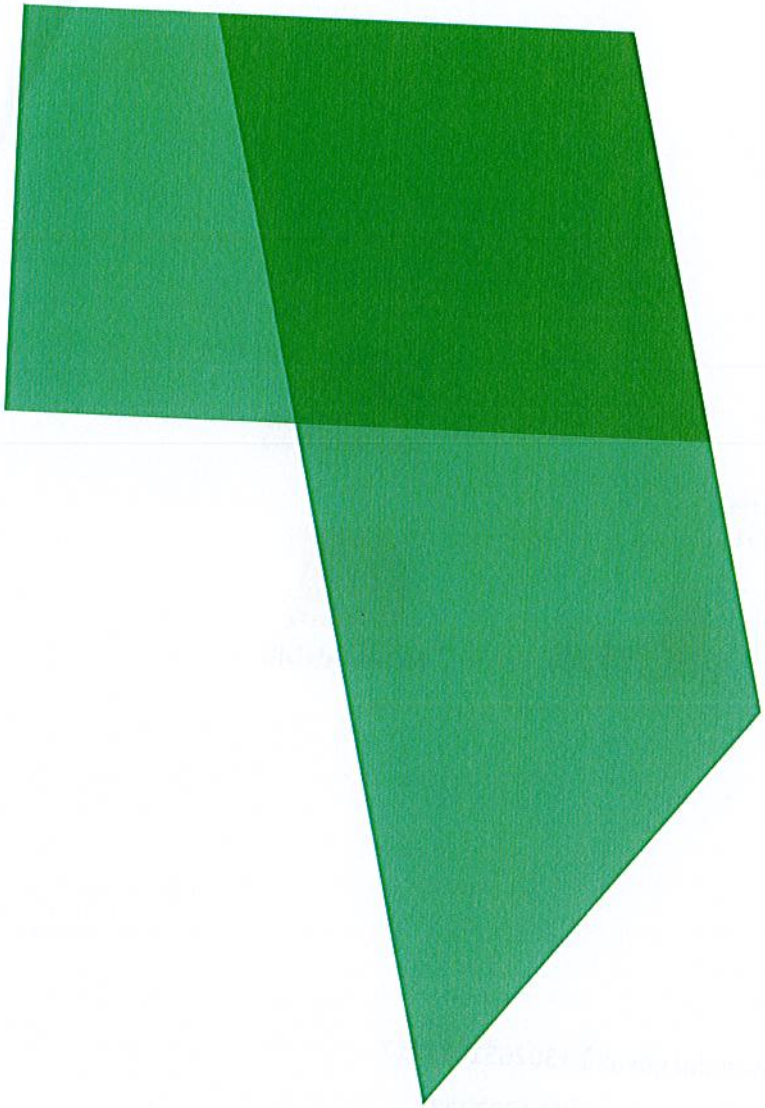
APPROVE
Interreg Europe

Advancing Public Participation and stakeholdeR engagement
fOr the improVement of renewable Energy policies



EPIRUS REGION

ACTION PLAN 2020-2022

FOR THE IMPROVEMENT OF REGIONAL POLICIES PROMOTING RENEWABLE ENERGY

HELLENIC REPUBLIC
REGION of EPIRUS

This action plans is a deliverable of

APPROVE - an Interreg Europe Low-carbon economy project

https://www.interregeurope.eu/approve
https://twitter.com/APPROVEproject
http://www.linkedin.com/company/approve-interreg-europe

lead partner

REGIONAL COUNCIL OF LAPLAND

advisory partner

Poliedra
Politecnico di Milano

territorial partners

HELLENIC REPUBLIC
REGION of EPIRUS

EREN
ENTE REGIONAL DE LA ENERGÍA DE CASTILLA Y LEÓN

Junta de Castilla y León

RÉGION NORMANDIE

Partner organisation: Region of Epirus

Country: Greece- NUTS2 region: Epirus

Contact person: *Agni Anastaselou* ✉ a.anastaselou@php.gov.gr ✆ +302651087217

Evangelos Tsiaras ✉ e.tsiaras@phh.gov.gr ✆ +302651087327

Text elaborated by:Anastasiou Dimitris, Antoniou Vasileios

IOANNINA, May 2021

Table of content

EXECUTIVE SUMMARY

This Action Plan is being conducted in the framework of APPROVE project. Its aim is to identify actions that could be incorporated into the operational programs of the Region of Epirus, further contributing to their effectiveness and absorption. The proposals of the actions are the result of a long process of exchange of experiences and know-how between the project partners. The project team of the Region of Epirus, after studying and evaluating the good practices of the other partners, drew valuable inspiration and came up with the proposal of two actions, which can be integrated in the ROP Epirus 2014-2020 and ROP Epirus 2021-2027 respectively. As will be demonstrated by the presentation of the actions that follows, both take into account the special characteristics of the Epirus Region and aim at strengthening and expanding the use of RES. The implementation of these actions will significantly contribute to the achievement of the goals of the Epirus Region regarding the reduction of carbon dioxide emissions and the protection and upgrade of the environment.

PART I - GENERAL INFORMATION

This action plan has been developed within the Interreg Europe APPROVE project, which aims at improving the policies for the **promotion of Renewable Energy Sources (RES)**of four different European regions (besides Epirus: Lapland in Finland, Normandy in France, Castilla y León in Spain).The project considers **awareness raising, capacity building and stakeholder participation** as ways to enable and promote RES, tackling barriers such as: low level of knowledge in the general public, lack of expertise of RES proponents and civil servants dealing with permitting procedures, issues of public opposition within approval procedures.

Through interregional cooperation and involvement of regional stakeholder groups, the four partner regional authorities (Regional Council of Lapland, Region of Epirus, Normandy Regional Council, EREN - Regional public energy entity of Castilla y León) have **shared and transferred experience and knowledge to improve their policies.** The advisory partner Poliedra, an Italian research centre from Politecnico di Milano, has supported the regional authorities through the activities of the interregional learning.

The process has included interregional workshops and sites visits in Lapland, Epirus and Castilla y León in 2018 and 2019, allowing the partners to gain knowledge about RES projects and policies in the other regions. Such phase produced an analysis of regional gaps, needs and opportunities and the identification of more than 20 regional good practices, including 3 proposed by the Region of Epirus. All the produced deliverables and material can be found on the project website. Since the covid-19 pandemic prevented the partnership to complete the exchange of experience through face-to-face meetings and site visits, during 2020 and 2021 the exchange was carried out through online meetings, bilateral discussions and "peer review" workshops.
As final goal, the lessons learnt from the interregional cooperation have been used by each regional authority, working with the respective regional stakeholder group, to define an action plan such as the present document, focused on the improvement of its Structural Funds Operational Programme in terms of RES use and development, considering investment priorities related to TO4 "Supporting the shift towards a low-carbon economy in all sectors".
The next phase of the project, which will end in November 2022, will see the implementation of the regional action plans and their monitoring and assessment.

The Region of Epirus saw a great opportunity in participating in this innovative Interreg Europe project and to deal with some of the main issues for renewable energy development.

Renewable energy is becoming a significant part of the mix of energy production in many parts of the world. Due to its favorable geographical location, Greece can take advantage of this valuable potential. Nowadays, several RES-based actions are taking place throughout Greece and their results are very positive. For example, the total national consumption of electricity in January 2020 was approximately 4.318 GWh/month. Based on Power Production Company (PPC) statistical data, a total amount of 788 GWh was produced by RES (about 18%).It is more useful to take 2020 data into consideration because

they refer to the pre-Covid era and they are quite realistic compared to the current situation. Due to Covid-19 pandemic almost all activities were suspended or reduced and that means than energy consumption and production date were influenced too. The use of pre-pandemic data will help us plan on a more ordinary future.

The **Region of Epirus** used to be one of the most remote and isolated regions of Greece. However, thanks to the construction of infrastructure projects, i.e. the Egnatia and Ionia Highways, the Region came out of such isolation and is taking progressive steps towards development in all sectors. One of the most important challenges the Region of Epirus has to deal with is the promotion of energy efficiency and the use of RES, as well as the reduction of carbon dioxide emissions. Indeed, Epirus is making a great effort in promoting RES. According to the revised Renewable Energy Directive (Directive (EU) 2018/2001) and the national legislation (L. 1630B/2010 and 3851A/2010), the Region of Epirus intends to contribute to EU targets. In particular the Region set a goal as regards the reduction of annual emissions of greenhouses gases,, i.e. 3.631 CO_2eq tons. The reference year is 2012 and the target is to be reached by 2023. The calculation of this target was made by the General Secretariat of the Ministry of Energy based on the methodology on the annual report for climate change to the UN (Annual Inventory Submission under the Convention and the Kyoto Protocol for greenhouse and other gases).

In the framework of APPROVE project implementation, the Region of Epirus has exchanged experience with project partners and has organised several meetings with **regional stakeholders**in order to share and discuss the project activities and to get ideas about the regional action plan. Among the stakeholders that contributed to this process were

- Managing Authority of the Operational Programme of the Region of Epirus
- CRES: Centre for Renewable Energy Sources and Savings - A public organisation appointed as the national co-ordination centre in the area of renewable energy sources, rational use of energy and energy saving
- ALESCO-Alexis Kotrolos- Technical company specialized in energy projects and in particular in PV installations, gave a significant contribution especially in designing Action 1
- Liapatis C. and Ntatsis E. - Owners of a biogas plant, engineers specialized in biogas projects; they largely contributed to the planning of Action 2
- Khalil Khoury-Electrical engineer, specialized in energy efficiency projects
- Papageorgiou G - Constructions company with great experience in energy efficient constructions.
- Chamber of Commerce of Epirus

The definition of our actions took inspiration from good practices and experiences gained in the APPROVE project. It should be noted that almost no good practice of partners was transferred as such to our territory. This is understandable, because every region has its peculiarities and each good practice has been designed and applied based on those local peculiarities. However, the most important aspect of the experience exchanged is that most of the times regions need just some inspiration and then they can adjust the good practices based on their specific needs and features.

PART II - POLICY CONTEXT

The Action Plan aims to impact:

☒Investment for Growth and Jobs programme
☐European Territorial Cooperation programme
☐Other regional development policy instrument

Name of the policy instruments addressed:

Regional Operational Programme o fEpirus 2014/2020
Regional Operational Programme of Epirus 2021/2027

Under TO 4 "Supporting the shift towards a low-carbon economy in all sectors", the Regional Operational Programme Epirus 2014-2020 includes investment priority 4.5 "Promotion of strategies of low carbon dioxide emissions for all types of areas, specifically for the urban ones, including the promotion of sustainable multimodal urban mobility and measures of adjustment to mitigate the consequences". The measures concern the funding of sustainable mobility plans and of sustainable energy action plans for the main urban centers according to the initiative "Covenant of Mayors". The fund allocation is 13M€dedicated to the improvement of transport and city energy efficiency. The aim is to reduce CO^2 emissions while also reducing energy consumption.

In order to achieve a more integrated and comprehensive results, the Region of Epirus believes that the ROP should be improved as concerns the following aspects:

- Integration of RES into the plans to be funded is, admittedly, poorly defined, and a wider range of measures for the promotion of RES needs to be introduced. As said above, according to the revised Renewable Energy Directive (Directive (EU) 2018/2001) and the national legislation (L. 1630B/2010 and 3851A/2010), the Region of Epirus intends to contribute to EU targets, so to this end, the use of RES in both public buildings and private companies must be promoted.
- Benchmarking of good practices needs to be enhanced, in order to improve the measures of the ROP and to better evaluate their impact. Identified good practices could inspire pilot projects and improve existing projects.
- There is a need to improve bureaucratic procedures, speed up the evaluation and funding processes, and define the monitoring of RES investment projects. The growing trend for the creation of digital services helps to avoid bureaucratic delays in the investment of RES projects. However, many procedures are still complex and slow.
- There is the opportunity of implementing synergies with the local level, as the main municipalities of the region are committed to undertake a sustainable energy action plans for their cities. Through the current ROP, the municipalities are given the opportunities to implement projects for the promotion of waste and energy saving.

Addressing part of such needs for improvement, the development of the present action plan focused on the revision of the Call 81 entitled **Interventions that contribute to the energy efficiency of urban transports and centers** of the Regional Operational Programme Epirus 2014-2020. Such call has the

objective on one hand to support the development of an environmentally friendly and energy efficient multimodal transport system and on the other hand to reduce CO^2 emissions by increasing the energy efficiency and the use of RES. Potential beneficiaries are the Municipalities of Igoumenitsa, Arta, and Preveza. This Call constituted a great opportunity because the project team realized that some of its actions fell under the APPROVE scope and it could be improved based on the APPROVE objectives. Additionally, it was the project team unique chance to influence the current ROP, based on the initial goal of APPROVE, since all other Calls and actions of the Operational Programme 2014-2020 had been finalized.

The interregional exchange done in APPROVE stimulated the Region of Epirus to consider further opportunities of policy improvements. In particular, the exchange with the Normandy Region, also in occasion of the site visits of the Liapitis plant in Epirus[1], inspired to work at the introduction of measures oriented to the **promotion of biogas** in the development of the next ROP, since it was too late to make such a change in the current ROP. Besides livestock waste management is one of the key priorities of the Region of Epirus and the Operational Programme 2021-2027 will offer a great opportunity for the integrated implementation of biogas projects.

[1] https://www.interregeurope.eu/policylearning/good-practices/item/3731/bioenergy-plant/

PART III - DETAILS OF THE ACTIONS ENVISAGED

ACTION 1. MODIFICATION OF CALL 81 IN ORDER TO INCREASE THE INSTALLATION OF PHOTOVOLTAIC PANELS AND INTEGRATE THEM WITH THE REALISATION OF E-CHARGERS

Background	Call 81 of the current ROP "Interventions that contribute to the energy efficiency of urban transports and centers" includes the following measures: 1. Construction of open parking spaces 2. Smart lighting with photovoltaic panels 3. Installation of photovoltaic panels to public buildings The second modification of the call intends to further promote the installation of photovoltaic (PV) panels and their integration in the development of the electric mobility system. It is expected that e-mobility is going to make a big progress in Epirus and that, as announced by the Greek government, in the next years numerous charging points will be constructed. Epirus lacks infrastructure on this field and needs to take some steps towards the production of energy by RES. Solar energy is a great asset for the whole country, and Epirus must take advantage of this great potential so as to cover part of its energy needs by solar energy. PV panels installation will contribute to the achievement of the above-mentioned goal. Epirus' actions were partly inspired by the following Spanish good practices pointed out by the APPROVE advisory partner Poliedra, who had known about them from the Interreg Europe project PROMETEUS: • *Sustainable electric chargers stations*[2]*:* which was the first solar charging station for electric vehicles that is 5 metres high and completely sustainable installed in Segovia. • *The Castilla y Leon electromobility guide*[3]*:* which provides people, automotive industries or other stakeholders such us public administrations, with information regarding e-mobility, and it helps authorities to establish policies and regulatory measures in order to foster the use of this sort of vehicles.
Description	Call 81 was modified (second modification) in order to increase the installation of PV panels and to integrate them with the realisation of e-chargers. The modification also

[2]https://www.interregeurope.eu/policylearning/good-practices/item/1960/sustainable-electric-charging-stations/
[3]https://www.interregeurope.eu/policylearning/good-practices/item/1711/the-castilla-y-leon-electromobility-guide/

	aims at a bigger percentage of funds absorption without changing the budget (12.217.735 €). The Call modifications include the following additional requirements: ▪ Construction of open parking spaces: We expanded this measure by the requirement of adding shaders covered with PV panels with batteries that will collect solar energy and supply e-charging points that will cover the charging needs of e-cars exclusively by solar panels. ▪ Smart lighting with PV panels: We further expanded this measure by requiring to install batteries and to provide the energy not used for lighting to to e-cars charging points. ▪ Installation of PV panels to public buildings: We further expanded this grid by providing some of this energy to e-cars charging points and not only to public buildings. The PV panels will provide the necessary power for the charging points to be self-sufficient, to operate in an autonomous and independent way, without the need of conventional energy from the Power Production Company. This second modification of Call 81 will highlight the new ideas on the way we construct open space parking areas, city lighting and public buildings considering their energy consumption balance. Additionally, it will place a particular focus on the way we use solar panels providing electricity to the charging points in the cities. In other words, we will show the advantages of combining the construction of charging points in open parking spaces and public buildings with the installation of solar panels. After the closure of the call, the Region of Epirus will organise workshop targeted to the beneficiary municipalities. The workshop will provide indications about how to involve local stakeholders and the citizens in the implementation of the projects, for example in deciding the exact location or characteristics of the PV panels, e-chargers, and so on. The participation in APPROVE, in fact, raised the awareness of the Region of Epirus about the fact that involving stakeholders and citizens can significantly improve the quality and effectiveness of the funded projects. This workshop is to be held at beginning of 2022, after the evaluation of the applications The Region plans also to hold four workshops after the realization of the projects so as on the experience gained through this process and the lessons learnt. Through these workshops, potential future beneficiaries will avoid mistakes and delays.
Players involved	Call beneficiaries: Municipalities of Ioannina, Arta, Igoumenitsa, Preveza. The implementation of the projects will have also some indirect interested parties e.g. Public Power Company, Charging points constructors and other private business partners , since Municipalities during the construction phase will be addressed to such businesses.
Steps and timeframe	▪ The second modification was announced officially in September 2020 and will be open until 28/05/2021 (https://peproe.gr/aa-4522/). ▪ As for April 2021, already 11 projects have been applied to the call and 5 of them concern RES installations. All projects concern the four major cities of the Region

	of Epirus, i.e. Ioannina. Arta, Preveza and Igoumenitsa. Two out of 11 projects have already been approved. ▪ The evaluation of the rest of applications will last about a month after the closing date. However, the budget for these actions is only 12.5 million euros, out of a total budget of 26 million. This means that a great amount won't be spend under this call. ▪ The funded projects are expected to start right after the evaluation and the implementation is expected to be finalized by the end of 2023. ▪ After the evaluation of the applications, i.e. at the beginning of 2022 the Region will organise workshop to the beneficiary municipalities on how to better involve local stakeholders. ▪ Once the projects are finalized the Region of Epirus will have enough data so as to organize dedicated workshops on the experience gained through this process and the lessons learnt. Through these workshops, potential future beneficiaries will avoid mistakes and delays. The Region intends to host these workshops in all four major cities/capitals of the Regional Units, i.e. Ioannina, Arta, Preveza and Igoumenitsa.
Costs	The modification of the current ROP wouldn't have remarkable costs as it didn't change the initial budget.
Expected results	The modification of the call will help municipalities and private businesses to develop integrated RES and e-mobility systems with environmental and economic benefits, saving electricity costs. The Region intends to implement such projects in all four major cities of Epirus, i.e. Ioannina, Arta, Preveza and Igoumenitsa. Eeach PV panel installation will have an inverter device which is going to collect data on the power produced in Kw/h by the PV panels. Based on our estimations, each parking space will cover an area of around 15 m^2. This area corresponds approximately to 6 panels, so each parking space PV shader will produce 2.000 kw/h on an annual basis. There will be also a system that will measure how much of the energy produced by the PV installation was used for the vehicles charging needs. The same method will be applied also in public bus station and in public buildings. The Region expects that the modification of Call 81 will contribute to the achievement of the goal set by the Region as regards the annual CO^2 emissions reductions, i.e. 3.631 tons. (see part I). Also, this modifications will contribute to the second target set by the Region, i.e. the improvement of almost 50.000 m^2 of open urban spaces.

ACTION 2. DEVELOPMENT OF A SMALL SCALE NETWORK OF BIOGAS PLANTS UNDER THE ERDF 2021-2027

Background

The rural economy Epirus is specialized in livestock farming where sheep and goat farming, poultry farming and pig farming have a prominent place in the whole of domestic production. The livestock units are scattered in the Region except for the north and south-east. Poultry farms are mainly located in the Regional Unit of Ioannina and the plains of Arta, the pig holdings are concentrated in the area of Filippiada and Aitoloakarnania, while the bovine holdings are mainly concentrated in the Regional Unit of Thesprotia and the mountainous area of Pindos. The primary sector has a significant bearing on the economic development of the region.

More specifically, 22.1% of the livestock holdings and 7.4% of the country's livestock is located in Epirus. The largest number of animals is recorded in poultry, followed by sheep and goats. Indicative of the dynamics of sheep and goat farming in the Region of Epirus is the fact that 10.7% of the sheep holdings and 7.4% of the goat holdings of the country are concentrated there. The pig sector has a significant potential especially in the Regional Units of Preveza and Arta (triangle of Filippiada) with vertically integrated and rationally organized units.

Milk and its products constitute an important product category for the region of Epirus, being a cornerstone of the local economy and society, and especially supporting the mountainous rural and border regions. Epirus, where some of the largest milk and cheese production industries are operated, offers to the Greek market, and abroad, traditional products with special characteristics, which retain their typical traditional taste and their nutritional value, including some PDO (Protected Designation of Origin) products.

One of the environmental impacts of livestock farming is the production of a substantial amount of wastes. A great percentage of these wastes come from small of medium scale farms that do not apply a waste management system or method.

Generally, in Greece the anaerobic digestion technology is used mainly as a waste treatment method but not accompanied with biogas and energy production. This is also true for the Region of Epirus. But the chemical and physical properties of animals waste (moisture content, C:N ration) are suitable for bio-chemical conversions such as anaerobic digestion and fermentation. An anaerobic digester energy system promotes biogas production (which contains methane), captures and converts it to electricity and heat for on-farm use or sale to the local utility. Biogas can also be used for combined heat and power (CHP) generation. In recent years, this bioenergy conversion technology has been developing as one of the most attractive renewable energy resources especially in Northern Europe. Biogas production by anaerobic digestion of biomass may help in partially replacing fossil-fuel derived energy and thereby in reducing environmental impact by providing a clean and diffused fuel from renewable feedstock.

	In occasion of the second APPROVE interregional workshop held in Ioannina in April 2019, the Region of Epirus organized a site visit to the Liapatis biogas plant, located in Filippiada. It was possible to discuss with the partner regions the characteristics of such plant, which represents locally a very successful case that ensures the environmentally sound management of waste, and can represent a good example for the successful development of other biogas plants. The Region of Epirus had then the opportunity to learn about the recent strong development of the biogas sector in Normandy, and on their *Biogas Production Plan*[4], included as a good practice in the Interreg Europe Policy Learning Platform. This was also among the topics discussed during an Epirus-Normandy bilateral meeting in May 2020. It was not possible to include this topic in the ROP 2014-2020, because it demands a careful prior planning. However, the Region of Epirus intends to consider it among its priorities, to be possibly addressed through the next ROP 2021-2027, which is currently under consultation procedures (https://peproe.gr/op2027/).
Description	Under the PO2 "a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management", the Region of Epirus intends to implement actions "Providing incentives to increase the environmental performance of agencies (public /private) by creating appropriate conditions for the integration of environmental dimension in their operation (eg small scale RES projects, etc.)". In this framework, it will be possible to fund a small number of biogas plants which will receive and manage the waste of local poultry livestock and poultry farming. In this way we will avoid the uncontrolled disposal of livestock waste and we will respond to environmental and human health challenges of industrial livestock and poultry farming. The benefits of this action are multifold as it will have economic, environmental and social positive impact; specifically, the objectives of this project are to: ▪ manage waste, to produce energy and sell it to the PPC ▪ benefit the environment and especially the lake as it will be free of farming waste ▪ raise awareness among the local population concerning the benefits of the sound management of farming waste ▪ provide distant heating to the communities where these plants will be located ▪ produce fertilizer as a product of the livestock management which will be used in agriculture.

[4]https://www.interregeurope.eu/policylearning/good-practices/item/3398/normandy-biogas-production-plan-technical-committee-for-project-appraisal/

	It will be interesting also to consider the *Language of the Nose*®tool presented by the Normandy Region[5]. This sensory method helps residents recognize odours from various economic activities such as waste treatment and inform the competent authorities in case of odour discomforts. Of course it would be too early and premature if we planned something like that in Epirus, however, it could be a potential action that may enhance the project's acceptability since it is commonly accepted that most of the times this kind of projects is facing serious scepticism by the local community. The active involvement of locals is such actions is likely to improve the level of the project's acceptability.
Players involved	▪ Livestock and poultry farmers that are interested in managing their waste and gaining some percentage of the power produced for their farms ▪ Municipalities where this kind of farms are located, since they will prove their effort to upgrade the environment and promote RES ▪ PPC as the buyer of the excess energy
Steps and timeframe	▪ The consultation process on Regional level has been finalized. ▪ The next stage is the consultation with the competent Ministries (i.e. Ministry of Energy and Infrastructure, Ministry of Development and Investments, Ministry of Finance, Ministry of Agriculture in order to avoid overlapping of actions and double funding. This procedure will begin in mid-May and is expected to be finalized by June 2021. ▪ Afterwards, the Regulations of the OP have to be approved by the European Commission. This is a long procedure and it is expected to last at least 18 months. ▪ After the approval of the Regulations, the Region will be ready to submit Calls for approval, which will be implemented in the 2023-2027 period. ▪ All Calls have not been specified yet. With regard to the biogas plants, it should be noted that up to now the Region OP 2021-2017 does not include any specific formulation of these plants. However, based on the Proposal of the Region of Epirus under Target 2 "Greener, low-carbon Europe, by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management", one of the priorities set is the production of energy from RES including livestoock waste treatment management. This is where APPROVE project plans to contribute, since our efforts will be to influence the ROP so as to specify the actions towards the implementation of the above-mentioned biogas plants.

[5] In Normandy the Language of the Nose® is considered to be a good practice for companies and for the local authorities who have promoted it in the Plan for the Protection of the Atmosphere. It has been used in dealing with economic activities such as refinery, chemistry, waste treatment, ports.At the moment this method is not registered as a good practice on the APPROVE website, since it cannot be linked with the topic or renewable energyyet, but there is the intention to test it in the biogas sector as well.

Costs	Approximately 1million€per plant, for at least 16 plants
Funding sources	ERDF
Expected results	Active involvement and interest from all possible beneficiaries, private businesses and municipalities. Limitation of uncontrolled waste disposal that leads to environmental degradation. Integrated waste treatment and production of energy that could be used for the needs of the farms or sold told to the PPC. The Region expects to fund at least 4 plants to each of the four Regional Units (Ioannina, Preveza, Arta, Thesprotia). Each plant will have its own monitoring systems and once installed we can have concrete data on the biomass energy produced and re-used. These monitoring and recording system are essential and required since they provide the necessary information on the optimum biomass mixture to used so as to produce energy. In other words, the mixture and the percentage of each biomass component and type of waste would be constantly calculated and evaluated, since any change in the quantity or quality of these component affects the whole procedure and the overall efficiency of the plant. This action is expected to further contribute to the achievement of the goal set by the Region as regards the annual CO^2 emissions reductions, i.e. 3.631 tons.

PART IV – MONITORING

As for the Action 1, each PV panel installation will have an inverter device which is going to collect data on the power produced in Kw/h by the PV panels. Based on our estimations, each parking space will cover an area of around 15m^2 . This area corresponds approximately to 6 panels, so each parking space PV shader will produce 2000kw/h on an annual basis. There will be also a system that will measure how much of the energy produced by the PV installation was used for the vehicles charging needs. The same method will be applied also in public bus station and in public buildings.

Concerning Action 2: Each plant will have its own monitoring systems and once installed we can have concrete data on the biomass energy produced and re-used. These monitoring and recording system are essential and required since they provide the necessary information on the optimum biomass mixture to used so as to produce energy. In other words, the mixture and the percentage of each biomass component and type of waste would be constantly calculated and evaluated, since any change in the quantity or quality of these components affects the whole procedure and the overall efficiency of the plant.

The success of both actions will act towards the capitalization of APPROVE results. Additionally, these actions will greatly contribute to the achievement of the goal set by the Region of Epirus and concerns the annual reduction of CO2 emissions by 3.631 tons by 2023.

Date: 30/7/2021

Signature:

Stamp of the organisation: