

## SPAIN

# Environment & climate action

### Location

LAG Eivissa-Formentera

### Programing period

2014 – 2020

### Priority

P6 – Social inclusion & local development

### Measure

M19 – LEADER/CLLD

### Funding (EUR)

Total budget 21 418  
EAFRD 17 134  
National/Regional 4 284

### Project duration

2017 – 2017

### Project promoter

LAG Eivissa-Formentera  
(Grup d'Acció Local de  
Eivissa i Formentera)

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### Website

n/a

A pilot project to demonstrate the environmental and economic benefits of using solar energy.

## Summary

The Balearic islands import 96% of the energy they consume. As a result, energy on the islands is expensive and this increases production costs in the agricultural sector.



The project, promoted by the LAG Eivissa-Formentera, provided information and technical support to five agricultural cooperatives and slaughterhouses on the islands of Eivissa and Formentera, so that they could produce solar energy for self-consumption. In this way, the project increased their economic and environmental sustainability, while at the same time contributing to the transition towards a low carbon economy.

## Results

The feasibility studies provided the five participating entities with proposals that would enable them to achieve energy self-sufficiency levels of between 26% to 67%.

All five participating entities proceeded to implement the measures proposed in the feasibility studies.

In response to the very high level of interest in producing energy for self-consumption, a spinoff project was designed. It will support the preparation of 55 feasibility studies to assess energy production potential, and will be aimed at farms and food companies.

## Lessons & Recommendations

- ❑ Make sure that the expert consultant who prepares the feasibility studies is independent from the providers who will be submitting bids in the procurement process.
- ❑ General suggestions that are not adapted to each specific location must be avoided. It is necessary to clearly communicate what the studies will consist of, and to be sure that there is enough initial interest from the beneficiaries.
- ❑ There was a reassuringly high level of interest in energy self-generation, and photovoltaic technology has demonstrated very good performance in all cases.
- ❑ The existing lack of initiative was due to the historical image of the photovoltaic technology, existing regulatory complexity and the absence of communication between specialised services in the territory and the potential end users.
- ❑ Public subsidies are still a key factor in fully developing the photovoltaic sector in the islands.

### Context

According to the Balearic Government's 2014 "Plan for Renewable Energy and Energy Efficiency", the Balearic islands import 96% of the energy they consume. The annual energy cost is estimated at around one billion EUR, which is equal to 3.8% of the Islands' GDP. In addition, renewable energy represents only 3.5% of the energy consumed in the Balearic Islands, while on the mainland the share of wind and solar energy is 21% per annum.

Faced with this reality, this project initiated a process of change towards energy efficiency related methodologies, systems and technologies and the use of renewable energy sources. It intended to strengthen the economic viability of the agricultural sector through savings in energy expenditure.

### Objectives

The overall objective of this project is to promote the use of renewable energy in the agricultural sector.

Its operational objective was to provide the agricultural cooperatives and slaughterhouses of the islands of Eivissa and Formentera with the necessary technical, economic and environmental information to enable them to invest in photovoltaic systems for the production of electricity for self-consumption.

### Activities

The activities carried out by the project included:

- Presenting the project to the two slaughterhouses and four agricultural cooperatives. All slaughterhouses and cooperatives within the territory were contacted and invited to participate. All showed an interest in participating except one cooperative that had only recently been established.
- Two slaughterhouses and three cooperatives formally confirmed their participation in the project, undertaking to provide information and access to their sites.
- Experts in renewable energy were hired to provide technical assistance and to carry out feasibility studies for each of the five participant entities.
- Each entity provided information about their annual electricity consumption cost.
- On-site visits were organised. During these visits, the experts collected detailed information about the energy consumption of the five entities over the last six months and installed energy consumption meters to assess their real-time electricity consumption profiles.
- The experts drafted the feasibility studies for each of the five entities covering the technical, economic and environmental aspects of their energy usage. The studies proposed solutions enabling the five participating entities to cover the largest possible proportion of their current energy costs through the immediate use of the energy they would produce – thus complying with energy self-production regulations.
- Beneficiaries were presented with the results and an explanation of the process through which the bespoke investment proposals were developed.
- Draft contracts were prepared, with specifications for the proposed investments. This enabled the entities to start to seek offers from service providers in the event that they decided to invest in photovoltaic energy production.
- Assistance was provided to help the beneficiaries to compare the bids they received and select the most advantageous offers.



## Main Results

### Direct benefits:

The proposals made in the studies to each of the five participating entities, are presented in the table below:

Study	Power	Solar panels surface	Investment cost	Consumer coverage	Annual savings	Amortisation with aid
1	8,31 kWp	52,8 m <sup>2</sup>	16 640 €	67 %	1 090 €	7 years
2	7,28 kWp	46,2 m <sup>2</sup>	15 142 €	26 %	965 €	6 years
3	34,3 kWp	218 m <sup>2</sup>	50 764 €	35 %	4 525 €	3 years
4	13,52kWp	89 m <sup>2</sup>	26 888 €	50 %	3 278 €	4 years
5	6,2 kWp	39,6 m <sup>2</sup>	14 260 €	36 %	1 093 €	5 years

According to the state regulations for energy self-consumption facilities in Spain, a net balance remuneration is not applied. This means that the electricity produced must be consumed immediately, or be dispersed into the national network without payment to the producer. Therefore, the studies considered the seasonal and hourly energy consumption in the design of the investment plan and its profitability.

The slaughterhouses (studies three and five) are publicly owned and eligible for ERDF aid with 80% aid intensity, while the rest of the sites (private cooperatives) could apply for RDP grants with a maximum intensity of 40%.

All five beneficiary entities made the recommended investments proposed in the studies.

Additionally, the project opened the door for new initiatives, like the following.

- Several members of the boards of directors of the cooperatives showed an interest in having similar studies for their farms. This led to the preparation of a project to carry out 55 additional studies in farms and agri-food businesses of Eivissa and Formentera.
- Fishing organisations on the islands have shown interest in having similar studies for their buildings.
- Apart from the savings in energy costs and CO<sub>2</sub> emissions that can be achieved with the proposed investments, some site managers are thinking about how to introduce changes in their activity and investments to take better advantage of the generated photovoltaic energy (changes in hours, investments in electric cars ...).

### Networking value:

This project has successfully connected different stakeholders: the agricultural sector, specialised consultancy experts, installers and the public administration in charge of public subsidies.

### Transferability:

The project is fully transferable to other sectors, contexts and territories as proven by the new feasibility study spin-off project.



### Synergies with other EU policies:

The investments have been financed by different sources, among which are RDP support and the ERDF. This shows that there has been a high level of synergy between several community funds.

Policy-wise, the project directly contributes to the objectives of the EU 2020 Climate & Energy Package.

*"I was surprised by the simplicity and speed of the installation"*

Pep Mayans, cooperative Agroevivissa S. Coop.

\*This project has been categorised under 'Environment & Climate Action' by the nominating National Rural Network