

EFENERVI-Energy Efficiency in the Wine Industry

Summary

The evaluation and development of pilot tests in the EFENERVI project is crucial to optimising strategies for implementing hybrid energy sources and improving winery operation to maximise energy efficiency in still and sparkling wine production processes.

Objectives

The objectives of the project are to:

1. Evaluate technology hybridisation based on renewable energies and high-performance equipment to meet the energy requirements for still and sparkling wine production processes.
2. Demonstrate experimentally the economic and energy viability of the solutions studied in the pilot facilities.
3. Promote innovation and sustainability in the wine industry.
4. Increase the energy efficiency of wineries, promoting self-consumption.
5. Generate guides to good practices and dissemination mechanisms to replicate energy-saving strategies in wineries in Catalonia.

Description of the actions carried out in the project

Action 1 - Analyse the energy status of wineries, studying the energy infrastructure currently available for each pilot test, as well as the winery operation model, production processes and equipment maintenance. Next, the data will be analysed in detail to diagnose the energy efficiency of the production process in the pilot plants and to study the impact of meteorological and production conditions on global plant consumption.

Action 2 - Study of strategies for improving winery energy efficiency. To do this, an analysis of new technologies to can replace existing energy facilities will be carried out. The actions involved will be:

- Study of high efficiency technologies available on the market.
- Study of the most suitable renewable energies in relation on climate conditions and limitations to the installation surface area.
- Study of high-performance hybrid equipment configurations.
- Development and implementation of advanced control strategies, focused on optimising energy resources of winery facilities.

Action 3 - Assessment of the impacts of the newly defined equipment configurations, applied to winery operation conditions and current infrastructure.

Action 4 - Analysis of the optimal energy equipment operation in the pilot plants, to determine the energy, economic and environmental impact obtained by applying smart control strategies.

Action 5 - The same analysis will be carried out by extrapolating the experimental data to the rest of the wineries in Catalonia, to provide representative information on the sector, promoting innovation and sustainability in the wine industry.

Final results and practical recommendations

The expected results for the EFENERVI project are:

- Obtaining a comprehensive list of new technologies for the wine industry.
- Improving production methodologies and general energy consumption.
- Determining the energy, economic and environmental impact of applying smart control strategies.
- Obtaining a thorough analysis in other wineries in Catalonia to observe the reliability of the EFENERVI study.

Leader of the Operational Group

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Subject area(s) of application

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> | Agricultural production system |
| <input type="checkbox"/> | Agricultural practice |
| <input type="checkbox"/> | Agricultural equipment and machinery |
| <input type="checkbox"/> | Livestock farming and animal welfare |
| <input type="checkbox"/> | Vegetable production and horticulture |
| <input type="checkbox"/> | Landscape / Territorial management |
| <input type="checkbox"/> | Pest and disease control |
| <input type="checkbox"/> | Fertilisation and nutrient management |
| <input type="checkbox"/> | Soil management |
| <input type="checkbox"/> | Genetic resources |
| <input type="checkbox"/> | Forestry |
| <input type="checkbox"/> | Water management |
| <input type="checkbox"/> | Climate and Climate Change |
| <input type="checkbox"/> | Energy management |
| <input checked="" type="checkbox"/> | Waste and by-product management |
| <input checked="" type="checkbox"/> | Biodiversity and environmental management |
| <input type="checkbox"/> | Food quality/processing and nutrition |
| <input type="checkbox"/> | Supply chain, marketing and consumption |
| <input type="checkbox"/> | Competitiveness and agricultural and forestry diversification |
| <input type="checkbox"/> | General |

Geographical area(s) of application

PROVINCE(S)	REGION(S)
Barcelona, Girona, Lleida, Tarragona	All

Dissemination of the project (publications, seminars, multimedia, etc.)

News on the progress of the project will be published on the INNOVI.cat website and posted on the social media of INNOVI and the Cluster members.

Project website

www.innovi.cat/efenervi

More information on the project

PROJECT DATES	BUDGET APPROVED
Start date (month-year): September	Total budget: €210,808.39
Completion date (month-year): August	DARP funding: €85,153.01
Current status: Application	EU funding: €64,992.63
	Own funding: €59,662.75

With funding from:

Project funded through Operation 16.01.01 (Cooperation for Innovation) through the Catalan Rural Development Programme 2014–2020.

Order ARP/133/2017 of 21 June, approving the regulatory bases for grants for cooperation for innovation by promoting the creation of European Association for Innovation operational groups in the areas of agricultural productivity and sustainability and the execution of innovative pilot projects by those groups, and Resolution ARP/1531/2019, of 28 May, announcing the call for the grant.



Generalitat de Catalunya
Departament d'Agricultura,
Ramaderia, Pesca i Alimentació



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de Desenvolupament Rural:
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