



PRODUCTION OF RENEWABLE ENERGY FROM OTHER LOCALLY AVAILABLE RENEWABLES

CORRESPONDING
MODULE 3

Introduction

Even though the possible integration of renewable energy facilities and farming land are huge and it is difficult to resume up all possibilities available, some of the local possible solutions are the following ones:

Energy Communities; Renewables and Efficiency Integrated in facilities; Agrovoltaics; Floating solar power plants irrigation ponds or local lakes; Solar water pumping; Wind water pumping; Microhydraulic; Biomass, Solar thermal or Geothermal energies in facilities; Biomass production (Agroforestry, SRPs, slurry Biogas production, SRP, Solid Biomass production, etc.); Wastewater use to produce biomass; Microalgae; Others

We do not speak about big power plants that are installed instead of agricultural and livestock activities, but integrated ones.

Description

The IRRIGATION SUBSCRIBER COMMUNITY SUR-ANDÉVALO was created in 1989. It is made up of a large group of farmers. It currently has more than 9,400 hectares registered with the right to irrigation, especially for the cultivation of citrus fruits and some strawberries, and a census of around 700 members. Water is carried from the 'Piedras Canal' to properties in the municipalities of Villanueva de los Castillejos, San Bartolomé de la Torre, Gibraleón and Cartaya. There are a series of regulating reservoirs that allow them to have a reserve of 1,500,000 m³ of water.

The motors that carry the water from the reservoir to the farmland consume a lot of electricity. For this reason, the irrigation community has installed a photovoltaic solar plant with floating modules on one of the regulating reservoirs. More than 8,500 floats have been installed, supporting 1.6 MW of power. The plant went into operation in March 2022. This system is called Isifloating.

It is the highest quality, most durable and cost-efficient floating solar system in the world. Its unique and patented technology allows partial or complete coverage of the water surface. It can be used in irrigation or industrial ponds, reservoirs as well as hydroelectric or water treatment plants, mining lakes, etc.

It has been installed by the company ISIGENERE. It is an engineering and product development company that has created the world's pioneer floating solar system since 2008.

They are a leading Spanish team in solar photovoltaic structures. Any organisation with access to water bodies and committed to the environment should take advantage of their technology.

They work with a team of partners to deliver solutions to end customers while continuously innovating to develop a better floating solar system with more agile, simple, efficient, flexible ways of working and adapted to each project.

- The farmers of the Irrigation Community have invested more than 75 million € in order to be able to irrigate their land efficiently, flexibly and adapted to each project.
- The employment generated by this irrigation community is about 4448



jobs per year.

- Isigener company has developed 35 solar floating projects.

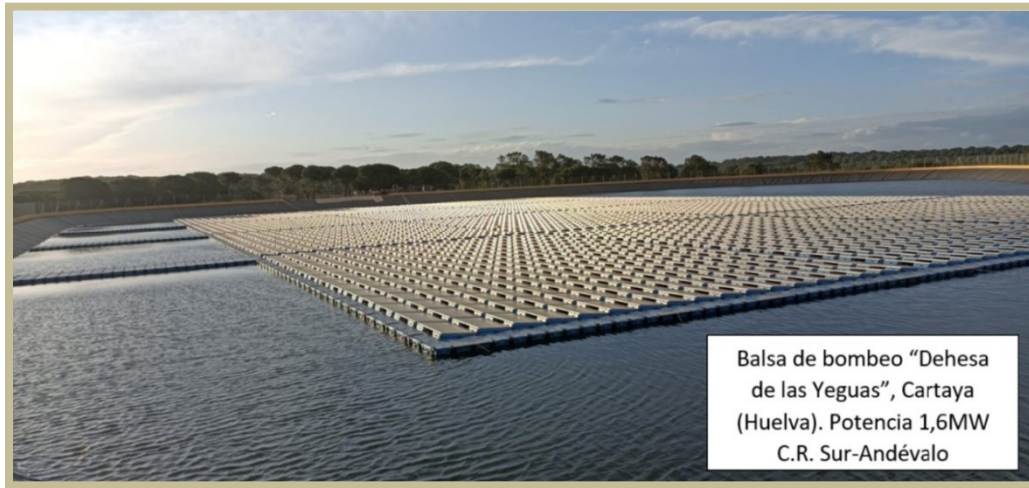


Image 1: General view of the floating photovoltaic system

Source: Provided by the company

Image 2: Detail view of floating photovoltaic installation



Source: Provided by the company

Image 3: Example of another floating photovoltaic installation in Portugal

Source: Provided by the company

Advantages and challenges

The c
contin
the hig

- Adv
- Irr
- P
- R
- In
- P



livestock or nature.

- It does **not** generate **negative visual impact** and allows the regeneration of polluted or non-productive areas.

eve
with
ing
is
to
sts
re,

Main data

- Company ISIGENERE:
 - Email: efort@gmail.com
 - Website: www.isifloatin.com
 - <https://es.linkedin.com/company/isigenerere>
- Irrigation Subscriber Community Sur-Andévalo:
 - <https://surandevalo.net/>
 - Email: surandevalo@surandevalo.net
 - Phone: +34 959 39 26 24

Further Information

- <https://www.diariodehuelva.es/articulo/provincia/regantes-andevalo-blindan-lagunas-generan-energia/20220921175933293204.html>
- <https://futureenergyweb.es/la-tecnologia-de-isifloating-by-isigenerere-usada-por-la-comunidad-de-regantes-de-sur-andevalo-huelva-en-una-planta-solar-flotante-de-16mw-para-autoconsumo/>
- <https://www.pv-magazine.es/2022/09/19/finalizada-en-huelva-una-planta-flotante-de-autoconsumo-de-16-mw-para-bombeo-solar-con-nuevo-sistema-de-acceso/>