



DESIROWS

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NEWSLETTER

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Follow-up technical visit of the Life Desirows demonstration plant

The Life Desirows project continues to move forward. On February 20, 2023, a follow-up technical meeting was held in which the development status of the demonstrative plant was verified.

LIFE DESIROWS (LIFE19 ENV/ES/00447) is a demonstration project to reduce first osmosis brine, crystallize salts, remove nitrates and recover water resources. All this using renewable energy.

The project, financed by the Life Program of the European Union, combines various technologies from an industrial perspective in order to minimize energy consumption.



The consortium is led by the company Regenera Levante and the Polytechnic University of Cartagena, the Arco Sur Irrigation Community, Hidrogea and Hidrotec also participate in it.

The process proposes to extract all the salts from the water and is part of the so-called ZLD (Zero Liquid Discharge, for its acronym in English). Therefore, all the brine is recycled. In addition, the project complies with the circular economy strategy as long as no waste is generated since it is proposed to reuse all the salts, the researchers point out.



Solution to an environmental problem

The groundwater of the entire Mediterranean Basin, and specifically the Campo de Cartagena area, has high nitrate contents. The presence of these salts in fresh water from underground wells causes serious environmental damage. In the case of the Campo de Cartagena, these waters used for irrigation end up pouring into the Mar Menor, unbalancing the natural values of this saltwater lagoon.



— An advantage over the production of desalinated sea water, since it is achieved at the same price, but without the generation of waste.

— An improvement in the quality of reclaimed water for the agricultural sector from underground wells at an affordable price.

— The use of technologies based on energy efficiency.



PARTNERS

REGENERA: a company focused in energy efficiency

Founded in 2007, REGENERA is an Energy Services Company (ESE), focused on energy efficiency, renewable energy and environmental protection. Regenera leads the Life Desirows project, in which the Polytechnic University of Cartagena, the Arco Sur Irrigation Community, Hidrogea and Hidrotec also participate.

Regarding operations and maintenance, the projects in which REGENERA participates are varied and include, but are not limited to: energy audits, control and software modeling, and software integration, including alarms and consumption alerts to ensure better control, especially in water treatment infrastructures.

REGENERA also works in renewable energy services. Design, build and install solar thermal and photovoltaic energy, as well as audits of existing facilities.



Within its environmental department, they stand out in the energy management of hydraulic infrastructures, through energy and thermal simulations, and the integration of renewable energies in many types of plants, ensuring both high efficiency and low environmental impact.

REGENERA also manages photovoltaic solar pumping projects for agriculture. Regarding industrial maintenance, its actions are focused on energy systems, also carrying out the installations and commissioning of this type of equipment, offering energy saving solutions and delivering the required construction activities.



REGENERA

Its main lines of business are the following:

- Consulting and engineering services.
- Construction works in industrial environments. Energy efficiency and renewable energy.
- Environmental services and water cycle works.



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<https://lifedesirows.eu/>

As well as on Twitter and Youtube:



Ángel Molina, Álvaro Rubio and Socorro García after the thesis defense

A UPCT student proposes the cooperative use of photovoltaic energy to optimize the pumping of groundwater for irrigation

Cooperative use and connection to the electrical grid are the two main recommendations for optimizing the installation of photovoltaic pumping systems for groundwater for irrigation provided by the thesis of Álvaro Rubio Aliaga at the Polytechnic University of Cartagena (UPCT), in the who has multidimensionally analyzed the different energy alternatives and two case studies with problems of overexploitation of aquifers, in Castilla-La Mancha and in Morocco, where the doctoral student spent 20 months. energy sources for pumping the precious water resource".

This doctoral research with international mention has been directed by Ángel Molina and Socorro García and is the first to be defended in French at the UPCT.

Source: UPCT

The evaporation tower Life Desires goes live

We made progress in the commissioning of the Life Desirows demonstration plant. During the month of February 2023, the EVACOLD evaporation tower was commissioned.

This tower is a high-performance natural evaporator for brackish wastewater that cannot be treated, in our case brine.

VIDEO



The Life Desirows project was the protagonist during the International Conference on Project Management and Engineering organized by AEIPRO in Terrassa thanks to the award for Best Master's Thesis awarded to Pablo Calleja Cayón from the Master's Degree in Renewable Energies (UPCT).

Source: Francisco Vera García