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# BUENAS PRÁCTICAS

## Actuaciones Cofinanciadas

Water supply pumps repair and tuning up to improve their operation in Albatana, Férez, Liétor and Socovos

Albacete Provincial Council

**Programa Operativo  
Plurirregional de España**

Año 2022

**Fondo Europeo de Desarrollo Regional**

## **WATER SUPPLY PUMPS REPAIR AND TUNING UP TO IMPROVE THEIR OPERATION IN ALBATANA, FÉREZ, LIÉTOR AND SOCOVOS.**

### **ALBACETE PROVINCIAL COUNCIL**

Albacete Provincial Council has promoted water supply facilities renewal in different municipalities that make up the Functional Area of Hellín, Albatana, Férez, Liétor and Socovos.

Replacement of different elements that make up the facilities has allowed the existing technology to be improved, since the previous water pumps, with outdated technology due to seniority, have been changed to others with a superior technology that allows for economic and environmental costs savings, improving both functional and energy efficiency.

This action improves water cycle management efficiency in the different municipalities, and also reduces the energy employed, since these new pumps use 50% less energy to supply water to urban centers, also making a significant reduction in CO<sub>2</sub> emissions into the atmosphere.

Furthermore, it should be noted that these improvements have been carried out in urban centers with a small population, allowing the divergences that occur between them and the large centers with a larger population to be reduced, since normally these populations do not have sufficient budget to undertake these actions.

**Action total cost has been 71,527 euros, of which 80% has been co-financed by the European Union thanks to the European Regional Development Fund (FEDER): 57,221 euros.**



# 1. Role of FEDER has been to disseminate benefits appropriately among beneficiaries, potential beneficiaries and general public.

Actions to communicate the operation have been the followings:

## Permanent Plate



## video report in provincial digital media



## Radio spot on provincial station



## Action has its own website section

## Performance has been spread on social networks

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### Gestión eficiente del servicio de abastecimiento de agua en las poblaciones

**Presupuesto de la operación:**  
123.823,28 euros

- 99.058,62 euros aportados por la Unión Europea (80%)
- 24.764,66 euros aportados por la Diputación Provincial de Albacete (20%)

**Contratos asociados a la operación:**

- Auditorías Energéticas de gestión eficiente del Servicio de abastecimiento de agua de determinados municipios del Área Funcional de Hellín: 12.269,40 €
- Redacción Proyectos de auditorías energéticas Gestión eficiente Servicio de Abastecimiento de Agua determinados municipios del Área Funcional de Hellín: 9.546,90 €
- Mejora para la eficiencia de instalación eléctrica B.I. en los municipios de Albatana, Ferez, Liétor y Socovos: 71.527,47 €.

Esta operación consiste en la mejora de la eficiencia energética de los sistemas de abastecimiento de agua potable, en particular, las instalaciones de extracción de agua potable a través de equipos de bombeo de agua subterránea, además del estudio de las distintas mejoras de las instalaciones de dicho servicio de abastecimiento que puedan aumentar la eficiencia y ahorro de costes energéticos.

Las actuaciones se realizarán en dos fases:

En la primera fase de auditoría, se harán estudios en el abastecimiento de agua de los municipios pertenecientes a la EDUSI. Estas auditorías tienen como objetivo principal la mejora de la eficiencia energética en la gestión del abastecimiento de agua en las poblaciones, por lo que de estas auditorías resultarán unas propuestas de mejora. Una vez realizadas las auditorías se realizarán los proyectos para una siguiente fase de ejecución de los trabajos.

En la segunda fase de ejecución de los proyectos (redactados respecto a las auditorías) se realizarán mejoras en cuatro localidades: **Albatana, Ferez, Liétor y Socovos.**

Las acciones más importantes que se realizarán en los cuatro municipios en los que se va a actuar, con las que se alcanzará un ahorro mayor del 50%, son:

- Se adecuará la instalación eléctrica al vigente Reglamento Electrotécnico para baja tensión, a fin de eliminar eventuales fallos y evitar posibles accidentes personales y adaptándolos a las condiciones ideales de funcionamiento.
- Se mejorará el aprovechamiento al máximo de las horas valle que ofrece la tarifa contratada, con la instalación de un reloj conmutador.
- Mejora del rendimiento y eficacia de la bomba extractora de agua y alargamiento de su vida útil gracias a la colocación de un variador de frecuencia.
- Se eliminará el consumo de energía reactiva gracias a la instalación de una batería de condensadores y filtros armónicos.
- Mantenimiento de la red local de agua potable para evitar fugas de agua que acaba por mezclarse con las aguas residuales, pérdidas que se estima del orden del 20%.

**ACTUACIONES PUBLICIDAD:**

**Diputación de Albacete**  
@dipualba

🔊 Nuestro presidente, Santi #Cabañero, junto a la vicepresidenta @amparorres, ha supervisado 🏆 las #mejoras acometidas 🔥 en #Férez y #Socovos en el marco de la #EDUSI que lideramos y, en estas localidades, con objetivos como la #EficienciaEnergética en #abastecimiento de agua

EDUSI Albacete

10:48 a. m. · 29 sept. 2020

5 Retweets 1 Cita 3 Me gusta

## **2. Action incorporates innovative elements**

Action incorporates innovative elements since it promotes the improvement of water supply pumps and energy connectivity in different locations belonging to Hellín Functional Area, specifically in Albatana, Férrez, Socovos and Liétor.

These urban centers are characterized by being part of the rural world, being small municipalities that do not have financial solvency enough to invest in technological improvements that are beneficial in the long term from an economic and environmental point of view.

In this way, the above-mentioned municipalities had outdated water and energy supply facilities, so a change and rehabilitation of these was necessary so that they could comply with 21st century standards.

Based on a study on the supply needs of the municipalities and different audits, actions were carried out to improve the water supply performance network and the pumps electrical installation, reducing their energy and economic cost.

## **3. Results adequation to established objectives.**

The aim of this action has been to improve water supply efficiency and reduce energy consumption.

This objective has been achieved since the update in the pumps improves water management in the aforementioned municipalities. In addition, thanks to its highly innovative nature, the improvement also manages to reduce the energy consumption that they previously exercised. Specifically, It is estimated that the savings are over 50%, both in CO2 emissions and in the energy bill.

El objetivo de esta actuación ha sido mejorar la eficiencia en el abastecimiento de agua y reducir el consumo energético.

## **4. Contribution to a weakness or problem detected at execution scope territory:**

At initial EDUSI Strategy, the following problems and weaknesses were identified:

- The poor condition of the pipes in the AF leading to water leaks in the system. 77% of water collections for supply require forced installation or pumps, which entails high energy consumption for water extraction, in many cases greater due to obsolete pumps wear and pipes poor condition. Only 32% of deposits have meters, which makes it difficult to control losses.

With this action, the problems related to water management and supply have been resolved, a particularly difficult issue in small municipalities whose budget does not allow them to carry out improvement works in these areas, and in addition, the efficiency of water management has been improved. energy, since the change in the supply pumps has made it possible to reduce both the energy consumption of the previous ones and the CO2 emissions that were emitted into the atmosphere.

Based on these problems, this Strategy has been designed addressing different solutions so that the Provincial Council of Albacete can implement actions to improve water cycle management and reduce energy consumption. With this action, different benefits are achieved for the Functional Area:

- Improve water supply efficiency
- Reduce the water pumps energy cost
- Reduce CO2 emissions into the atmosphere

## 5. High coverage degree over target population.

Firstly, the population that directly benefits from this action is all those who reside in the municipalities of Albatana, Férez, Liétor and Socovos, specifically 4,149 people, the majority residing in Socovos (42%) and Liétor (26%). Albatana and Férez have a lower percentage of population; however, this action is essential for all municipalities, since their small size prevents them from having budgetary capacity enough to carry out this type of action themselves.

Therefore, the action guarantees that municipalities belonging to rural areas can enjoy the same rights as populations residing in larger urban centers.

## 6. Consideration of horizontal criteria of equal opportunities and non-discrimination, as well as social responsibility and environmental sustainability:

This action clearly meets the criteria of social responsibility and environmental sustainability, since its main objective is to make a more rational use of natural resources (in this case, water and energy) of different rural municipalities that make up the functional area of Hellín.

To this end, water supply pumps have been changed in different rural municipalities, promoting water cycle improvement in different municipalities. In addition, this change allows less energy to be used to supply the urban centers with water, reducing electricity bill and reducing CO2 emissions.

Furthermore, it has a clear criterion of territorial development, since the actions have been concentrated at all times in municipalities with fewer than 1,500 inhabitants.

## 7. Synergies with other public intervention policies or instruments

Provincial Council of Albacete is carrying out different actions to reduce the divergences that have occurred between rural areas and urban populations, promoting that rural spaces have the same rights as urban centers with larger population.

For this reason, the EDUSI of the functional area of Hellín places special emphasis on actions that promote the reduction between the divergences that occur between rural and urban terms, improving, in turn, environmental efficiency criteria, which give greater added value to these actions.

Among the actions that the Provincial Council has carried out so far, the following stand out:

- Change in lighting fixtures to LED lights in sports-cultural facilities of Hellín.
- Heating boilers replacement, to improve energy efficiency in municipal buildings in Pozohondo, Socovos and Hellín.

It is worth highlighting the great commitment of Albacete Provincial Council to 2030 Agenda and the achievement of the Sustainable Development Goals of the United Nations Organization, this action being a clear example of how the provincial administration can move towards them. In this case, in achieving the following ODS:

- ODS 6: Agua Limpia y Saneamiento
- ODS 7: Affordable and non-polluting energy
- ODS 11: Clean water and sanitation



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