

Una manera de hacer Europa



BUENAS PRÁCTICAS

Actuaciones Cofinanciadas

Improvement of energy efficiency in the Central Market

Burriana City Council

**Programa Operativo
Plurirregional de España**

Año 2022

Fondo Europeo de Desarrollo Regional

IMPROVEMENT OF ENERGY EFFICIENCY IN THE CENTRAL MARKET.

Burriana City Council

The purpose of the intervention in the Burriana Central Market, carried out by the city council, is to improve the energy efficiency of the building. The operation has involved rehabilitating the roof and a comprehensive solution to improve energy efficiency. The main actions were:

Energy audit: The energy audit analyzed the starting situation and determined the potential for reducing energy consumption and improvements for optimizing the air conditioning system, greater durability of the equipment and increasing the comfort of workers and installation users.

Replacement of the roof and air conditioning equipment: The actions developed to improve energy efficiency, following the conclusions of the audit, have been, on the one hand, the replacement of the air conditioning equipment and the lighting system of the market and, on the other hand, another, the replacement of the fibre cement roof with another made of metal carpentry.

The action contributes to reducing the municipality's carbon emissions by promoting energy efficiency, with 20-30% savings in energy and economic consumption. Specifically, the annual energy savings are 45,811 kWh in lighting and 64,983 kWh in air conditioning. This climate change mitigation measure means reducing the carbon footprint of Burriana's direct energy consumption. In addition, replacing the fibre cement roof is a health and environmental prevention measure by eliminating the potential danger due to deterioration of the fibre cement roof.

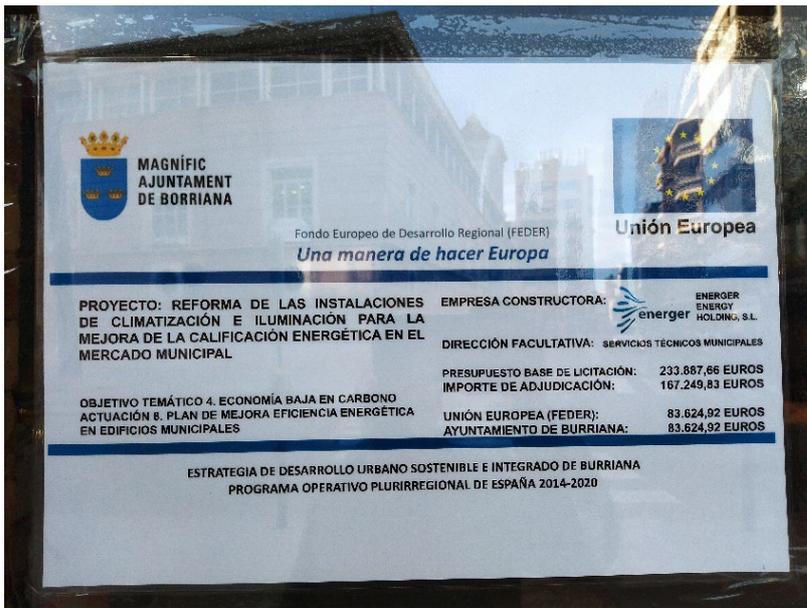
The project cost 314,000 euros, which was 50% co-financed by the European Union, which meant a subsidy of 157,000 euros.



- 2. The role of the ERDF in the action has been conveniently disseminated among the beneficiaries, potential beneficiaries and the general public.**

Compliance with communication obligations has been carried out through:

a. Temporary sign and permanent plaque



b. Press. Radio slot.

A radio slot has been published, announcing the rehabilitation of the market to improve energy efficiency and thermal comfort. The wedge indicates that the action has been developed within the framework of the EDUSI Strategy of Burriana and indicates the co-financing of 50% of the FEDER funds in Spain's multi-annual regional operational program.

The slot has been broadcast on 2 radio stations during the last week of April 2022, in different programs that have covered the time slots from morning to night.

In the DIAL CASTELLÓN station, it has been inserted 35 times. In the SER CASTELLÓN station, it has been inserted 33 times. In total, the spot has been broadcast 68 times.

c. Television advertisement:

An announcement was made on local television in Burriana.

<https://www.facebook.com/ajuntament.burriana/videos/%EF%B8%8F-lajuntament-millora-eficiencia-energ%C3%A8tica-del-mercat-municipal-una-iniciativa/415981830361613/>

d. Press. Articles in newspapers.

Press publications have given visibility to the market reform with articles in different media following the dissemination of the prepared press release.

Some of the publications are in digital press and printed press.

✓ Digital prey in different media:

https://www.elperiodic.com/burriana/burriana-mejora-eficiencia-energetica-rehabilitacion-mercado-municipal_818089

Burriana mejora la eficiencia energética con la rehabilitación del Mercado municipal

ROBA PIQUER - 23/04/2022



Cofinanciada por el Fondo EDUSI, la actuación logrará reducir un 30% el consumo energético y económico

El Ayuntamiento de Burriana ha rehabilitado el Mercado Municipal. Concretamente ha actuado en la cubierta del edificio y ha reformado las instalaciones de climatización e iluminación.

✓ Printed press.

In El Mundo newspaper in the Castellón edition:

EL MUNDO CASTELLÓN AL DÍA DOMINGO

24 DE ABRIL DE 2022 CASTELLÓN 11

BURRIANA FONDOS EUROPEOS

EL MERCADO GANA EN EFICIENCIA ENERGÉTICA

Con la rehabilitación de cubierta del edificio municipal y la reforma actual de las instalaciones de climatización e iluminación

BURRIANA
El Ayuntamiento de Burriana ha conseguido mejorar la eficiencia energética del Mercado municipal mediante la rehabilitación de la cubierta del edificio y con la reforma de las instalaciones de climatización e iluminación para la mejora de la calificación energética, que se ha completado recientemente. Una iniciativa enmarcada en la estrategia Edusi, cofinanciada por el Fondo Europeo de Desarrollo Regional en el marco del Programa Operativo de Crecimiento Sostenible 2014-2020.

La concejal de Comercio y Mercados, Sara Molina y el edil de Sostenibilidad Medioambiental, Bruno Armandis manifestaron que estas actuaciones «comportan un importante ahorro energético y económico, una mayor durabilidad de los equipos y al mismo tiempo un aumento en la satisfacción de todos los trabajadores y usuarios de las instalaciones del Mercado».

La reforma de las instalaciones de climatización e iluminación realizadas con un importe de 157.249,83 euros han consistido en la sustitución de los equipos existentes por otros de similares características, pero con una mayor eficiencia energética, ya que los equipos anteriores «presentan un bajo rendimiento energético, además de disponer de un gas refrigerante R-22, dañino para la capa de ozono, y que en unos años ya no podrá utilizarse, normando todavía más el rendimiento energético del equipo, explicaron ambos concejales».

Además se ha incorporado un recuperador de calor con el objetivo de cumplir con las exigencias de la normativa vigente en cuanto a la ventilación del local. En cuanto a la instalación de iluminación, se ha apostado por materiales más eficaces en todo el inmueble y el cambio necesario en el cableado y cuadro de la instalación eléctrica, y se han sustituido las luminarias por nuevas de tecnología LED, con lo que se ha conseguido una mejora de la eficiencia energética del edificio. Igualmente, en la medida de lo posible, se han mantenido los conductores de distribución de aire por el interior del mercado, y se han dispuesto dispositivos que permiten contabilizar el consumo de forma separada al resto de instalaciones.

La implantación de estas soluciones técnicas más favorables «son beneficiosas para el planeta y el ahorro económico» y además, «la reducción del consumo de energía no renovable y de las emisiones de dióxido de carbono nos ha permitido obtener una mejor calificación energética del edificio».

Respecto a la Clase Energética de eficiencia resultante del estudio de calificación tras la aplicación de las mejores energéticas propuestas centradas en climatización e iluminación se ha conseguido pasar de la 'C' a una 'D'.

La rehabilitación de la cubierta del Mercado Municipal realizada en 2018 y ejecutada por un importe de más de 150.000 euros, fue el inicio del proyecto global para la mejora de la eficiencia energética del edificio. Su objetivo principal fue por un lado solucionar el problema de goteras que padecía y la pérdida de calor, así como eliminar el potencial peligro ambiental por deterioro de filtramiento de cubierta.



La concejal de Comercio y Mercados, Sara Molina y el edil de Sostenibilidad Medioambiental, Bruno Armandis. c.a.o

3. The performance incorporates innovative elements

The innovative elements of the action are the improvement in the enclosures and air conditioning of the municipal market. As for the enclosures, making the building more watertight reduces energy demand for heating and cooling.

Regarding air conditioning, controlled mechanical ventilation systems improve indoor air quality and reduce energy consumption.

In addition, LED technology is used in lighting, changing the existing one, which was old and obsolete technology that represented a significant expense for the municipal coffers and energy consumption and emission of greenhouse gases into the atmosphere.



The existing air conditioning and lighting equipment has been replaced with others with greater energy efficiency. ESEficiencia.es

4. Adequacy of the results obtained to the established objectives:

This operation has made it possible to achieve the environmental and climatic challenges initially posed in the EDUSI Burriana. Specifically, it has improved the management of public spaces, allowing the reduction of greenhouse gas emissions by replacing inefficient air conditioning equipment with highly efficient equipment and improving enclosures.

Given that the previous equipment had low energy performance and contained a refrigerant gas system (R-22) that was harmful to the ozone layer, they have been replaced by air conditioning installations with similar characteristics but with greater energy efficiency, in addition to eliminating the refrigerant gas system.

As for the lighting installations, more efficient materials have been used throughout the market, and changes have been made to the wiring and the electrical installation panel, to which is added the replacement of luminaires with new LED technologies, which results in an improvement in the complete energy efficiency of the entire building.

On the other hand, all the air distribution ducts inside the market have been maintained as far as possible, providing intelligent devices that account for consumption separately from the rest of the facilities.

Finally, the rehabilitation of the market roof meant an end to the problems of leaks and heat loss, in addition to eliminating the existing environmental risk due to the deterioration of the fibre cement to which the old roof was composed.

Therefore, all these actions materialize in the results that were expected with the implementation of these actions in the Central Market since it has meant a notable improvement in the energy efficiency conditions of the facilities with savings of between 20% and 30% in energy and economic consumption given the type of installed equipment, which results in a reduction in greenhouse gas emissions.

5. Contribution to the resolution of a problem or weakness detected in the territorial scope of execution:

The main problem of the Central Market was, on the one hand, the poor state of the roof of the market itself and, on the other hand, the continued use of obsolete polluting equipment for the air conditioning and refrigeration systems. This situation generated numerous economic losses in energy, high greenhouse gas emissions due to using the R-22 refrigerant, and losses of potential resources due to the inefficient system.

In addition, the operation will contribute to reducing greenhouse gas emissions compared to 2005 values (EU 2020).

It will also contribute to the National Energy Efficiency Action Plan 2014-2020 objective of reducing emissions and saving primary energy by implementing plans for undertaking audits and energy certificates in the construction sector and public services.

Concerning the benefits in the daily activity of the market, by improving the air conditioning systems, there has been an improvement in the refrigeration of the market products, ensuring their good state of conservation from the moment they reach the market until they are finally sold. In this sense, the renovation of the roof should be highlighted since it has considerably improved the risk of food contamination due to the loosening of fibre cement, plaster, metals and debris, as well as leaks, which allowed direct passage from the outside to the inside the market of stagnant on the cover that leaked other polluting products inside.

6. High degree of coverage of the population to which it is directed:

The beneficiary population of the market remodelling are the city's inhabitants, 35,019 according to the 2022 census provided by the Spanish Statistics National Institute (INE, acronym in Spanish). Furthermore, a higher number could be considered since the Central Market is regarded as a point of attraction for commerce in the region.

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

Concerning the general principles (non-discrimination, gender equality and sustainable development), this action contributes above all to sustainable development since the action seeks to improve energy efficiency and, therefore, contribute to reducing greenhouse gas emissions throughout the central market. Therefore, including accessibility measures in works to improve energy efficiency is not the objective of this operation; however, some general criteria have been considered.

Therefore, in terms of accessibility, these actions have included projects that contemplate compliance with current regulations on accessibility, such as law 51/2003 on equal opportunities, non-discrimination and universal accessibility for people with disabilities (LIONDAU, acronym in Spanish), since these actions seek the comprehensive improvement of the entire central market, favouring all users and all market sellers.

8. Synergies with other policies or instruments of public intervention

The combination of the actions carried out in this operation together with other operations carried out within the framework of OT4, such as the operations to promote sustainable urban mobility, are closely related to the EDUSI of Burriana since they contribute as a whole to addressing the climatic and environmental challenges of the city and to highlight the need to focus the development of the city from the perspective of Sustainable Development. The promotion and execution of both actions will mean a

substantial improvement in the environment of the city of Burriana by promoting non-motorized modes of transport, reducing the use of private vehicles and reducing energy consumption by improving energy efficiency.

On the other hand, this operation, together with the operations to improve and promote sustainable urban mobility and promote the historical and cultural heritage of the city of Burriana, represents a substantial change in tourist flows by connecting the train station with the historic town centre, facilitating access to the Food Market for tourists on foot or by bicycle, which will positively result in the attraction of new segments of tourists who value actions to protect the environment, where in turn, bicycle connections are favoured by the entire city, forming a close and non-polluting system and connections, something that generates a lot of interest in the tourist segments of central Europe.

Finally, it is part of the National Energy Efficiency Action Plan 2014-2020, which aims to reduce emissions and save primary energy as a result of implementing plans for the performance of audits and energy certificates in the construction sector and public service

