

Una manera de hacer Europa



BUENAS PRÁCTICAS

Actuaciones Cofinanciadas

"Comprehensive energy rehabilitation of the Ciudad Real City Council building through the renovation of its thermal envelope and the glass enclosures"

Ciudad Real City Council

**Programa Operativo
Plurirregional de España**

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Fondo Europeo de Desarrollo Regional

The action "Comprehensive energy rehabilitation of the Ciudad Real City Council building through the renovation of its thermal envelope and the glass enclosures" is presented as a Good Practice.

This action consisted of a rehabilitation of the town hall building by improving its facilities and existing infrastructures. When the City Hall was built in 1971 in Mayor Square, there were no specific regulations on energy efficiency, and the materials used were not the most suitable for thermal insulation of the building. Therefore, in accordance with the technical recommendations established in the previous energy audit carried out, a series of measures have been carried out to improve the energy efficiency of the building, and reduce the annual carbon footprint generated.

All the metal carpentry and existing windows have been replaced by other high-performance and energy-efficient ones, adapted to the technical conditions required by the Technical Building Code in matters such as wind resistance, solar factor, watertightness, limitation of energy demand and acoustic insulation..



In addition, the carpentry and the entrance doors to the Town Hall have been changed. In the main one, an interior windbreak system has also been installed that allows the synchronization of the two automatic doors, so that the passage of the air flow is restricted.

The enclosure of one of the interior staircases has also been made, by the installation of a modular glass wall with aluminum alloy profiles and a double-leaf door that allows internal access to the installation, and its use as an emergency exit through the exhibition hall of the Town Hall.



In some offices, cladding has had to be made by lining or covering the walls, or insulating coatings have been installed in other areas. The internal partitions of the frontage have also been cleaned up due to the existing humidity, some of the planters have been repaired, and the existing electricity, data and voice, telephone and sound facilities have been rehabilitated.

This action has had an eligible expenditure of 242.613 euros and an ERDF aid of 194.090 euros, and the impact is translated into the reduction of electricity consumption by 74,800 KWh per year.

It is considered a good practice because:

1.- The role of the ERDF in the action has been conveniently divulged among beneficiaries, potential beneficiaries and general inhabitants:

Public has been well informed since the action has been disseminated in compliance with the communication obligations set out in the Regulations, with its corresponding poster, plaque, and information about it on the single portal

(<http://edusiciudadreal.es/LA3.php>).



During the execution of the works, a fence with information of the works and the contribution of the ERDF was installed, as well in the bidding procedure.



The project has been conveniently divulged among the beneficiaries, potential beneficiaries and general public thanks to different communication actions that focused on the publication of news



and reports in newspapers and digital newspapers:

La Tribuna de Ciudad Real 13°
Ciudad Real, Puertollano, Provincia, Región, España, Mundo, Deportes, Opinión, Punto y Aparte, Galerías

La rehabilitación del Consistorio permite reducir el consumo
La obra en el Consistorio ha supuesto un ahorro de 75.000 kilowatios por hora y año y una reducción de emisiones de gases de efecto invernadero de 110,27 toneladas de CO2 equivalente/año



La rehabilitación del Consistorio permite reducir el consumo

La concejala de Participación Ciudadana y responsable de la Eduso, Sara Martínez, y el concejal de Mantenimiento e Infraestructuras Casimiro Pastor, han visitado la primera fase de la obra de Rehabilitación Integral Energética del Edificio del Ayuntamiento de Ciudad Real. Envoltorio térmica, cerramientos acristalados impulsada dentro de la Estrategia de Desarrollo Urbano Sostenible Integrado Ciudad Real 2022 Eco-Integrador, cofinanciada por el Feder.

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Nuevos ventanales y una puerta de doble apertura para mejorar la eficiencia energética del Ayuntamiento

Eusebio García del Castillo - 26 octubre, 2017 - 12:57 7 Comentarios

Eusebio G^a del Castillo Jerez.- La Junta de Gobierno Local aprobó el pasado lunes la necesidad de ejecutar las obras de rehabilitación energética del Ayuntamiento de Ciudad Real en su fase primera, que comprende los cerramientos acristalados. Esta actuación, que da sus primeros pasos administrativos, estará cofinanciada por el Fondo Europeo de Desarrollo Regional, pues se enmarca dentro de la Estrategia de Desarrollo Urbano Sostenible e Integrado (EDUSI).



Ciudad Real Televisión also made a report on the works that were being carried out:



Casimiro Pastor
Concejal de Infraestructuras y Mantenimiento

1:27 / 2:18

At its completion, a video that summarizes the actions that have been carried out was edited:



Advertising was also broadcast on a local radio about what this performance has meant. On the municipal website it has been reported in all communications that the action is co-financed by the European Regional Development Fund (ERDF)





An informative email was also sent to all City Council officials with the results of the action and the change that the new windows had brought about, and leaflets were made with this information available to citizens.

2.- This action has incorporated innovative elements:

All the metal carpentry and glass used are energy efficient and adapted to the technical conditions required by the Technical Building Code. It has been studied in each of the rooms what type of glazed metalwork would be the most suitable, as well as at the entrances to the building. The action of the wind, solar incidence and noise level have been also analyzed.



The older carpentry at the entrance to the City Hall has been replaced by a large glass wall that occupies the entire surface of the door, made up of horizontal modules made with aluminum, that allow wide viewing areas both from the inside and from the outside. The glass has extreme selectivity and high thermal, energetic, acoustic and light performance.



In addition, several rooms have covered the interior walls with thermal insulation of mineral origin that had never been applied before in the City Hall.

6 planters that were in poor condition have also been replaced by new ones made of a new micro-concrete, which is resistant to chemicals that easily damage the stone.



3.- Adequacy of the results obtained to the established objectives.

The objectives of this project are to replace all the enclosures and windows of the Ciudad Real City Hall building, improve its global energy rating by at least one letter on the Energy Rating Scale, and reduce the annual carbon footprint generated by the energy consumption.



Before the works were carried out, the building had an energy consumption of 349,981 kWh per year, ranking "E" on the scale. In addition, greenhouse gas emissions were 110.27 tons of CO₂ equivalent per year.

With the actions carried out, a reduction in consumption is achieved by 74,800 KWh per year, and an annual reduction in greenhouse gases of 21,492 equivalent tons of CO₂ / year, with which the building would have an energy rating of "D", fulfilling the objectives set with the works.

The glasses in the City Hall building (with the exception of a part on the second floor) were simple, of small thickness and they were insufficient for the thermal and acoustic insulation of the rooms. The new enclosures, as well as the interior cladding made, have allowed there to be no leaks in the air conditioning of the building, improving its energy efficiency.

4.- Contribution to the resolution of a problem or weakness detected in the territorial scope of execution.

The poor condition of the carpentry and enclosures of the Ciudad Real City Council building caused cold air to enter some rooms, currents, energy losses from the interior, and therefore the increase in heating necessary for keep rooms conditioned.

This work has solved these problems, guaranteeing the breakage of the thermal bridge through the use of polyurethane foams between the concrete structure of the façade, new frames, the most efficient windows, and the installation of new venetian blinds.

In addition, with the windbreak built around the staircase located in the exhibition hall, it has been possible to avoid the draft that was produced when the main door on the ground floor was opened to the upper rooms, which suffered from the entry of hot air in summer and cold in winter.

All these measures have allowed a much more effective use of the public economic resources dedicated to the air conditioning of the building, reducing costs, while improving the working conditions of municipal workers and citizen in general.

5.- Degree of coverage of the target population.

This action has a high degree of coverage, because it is not only aimed at the civil servants and staff who work in the city council building of Ciudad Real (around a hundred), but also benefit all residents and visitors who have to come to carry out all kinds of procedures in the Consistory: payment of receipts, bus tickets, claims, tender for public contracts, requests for public spaces, tourist information, civil marriages, assistance to Contracting Tables or Plenary sessions, attention by the councilors or the mayoress...

Thanks to this contribution from the European Funds, the City Council officials work in better conditions than they did until now, and the people who go daily to solve administrative management in the Consistory have also seen their stay in the building improved.

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

This action is respectful with the regulations of the Ciudad Real City Council on equality between women and men and non-discrimination, promoting equality between men and women, since all municipal offices have been intervened, regardless of whether they were occupied by men or by women, or who are going to be the people who come to carry out managements at these dependencies.

It has also improved the accessibility conditions of the building by providing it with a double automatic entrance door, and marking inside the route that a person with visual impairment must take through a series of highlighted tiles.



Regarding environmental sustainability, the effect of the works is very clear, since both with the replacement of the glass enclosures and the execution of the interior cladding, a great reduction in energy consumption is achieved, since no so much heating is needed to keep the building at a comfortable temperature, which translates into a considerable reduction in CO2 emissions into the atmosphere every year.

8.- Synergies with other policies or instruments of public intervention:

The Castilla-La Mancha Community Government has launched a call for aid endowed with 1.6 million euros for energy savings and efficiency in the building sector, from which neighboring communities are benefiting to carry out replacement of windows and boilers. With this action, the

Government of Castilla-La Mancha promotes energy savings and CO2 reductions, subsidizing the thermal insulation of the housing envelope and helping to install new heating boilers that consume less energy and reduce CO2 emissions to the atmosphere.

Also from the Ciudad Real Provincial Council and the Institute for Energy Diversification and Saving (IDAE), energy efficiency projects are being developed in the province of Ciudad Real that will involve an injection of almost 9,000,000 euros, through lines of energy saving and efficiency, use of renewable energies and actions on the envelope of public buildings.



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