

Navarra de Infraestructuras Locales, SA (NILSA), a public company of the Government of Navarre, presents a good practice for improving energy efficiency in wastewater treatment plants in Navarre.

May 2023

Presentation:

The government of Navarre prioritizes its commitment to sustainability and the fight against climate change to facilitate the transition towards a new socioeconomic and energy model with a low carbon economy.

With the aim of achieving climate neutrality in the year 2050, the Foral Community of Navarre works to achieve the objectives established by Europe to reduce net emissions of greenhouse gases by at least 55% in 2030 with respect to the levels of the year 1990.

Within the thematic objective to promote the transition to a low-carbon economy in all sectors, the FEDER 2014-2020 operational program for Navarre has selected actions in the line of support for energy efficiency, intelligent energy management and use of renewable energy in public infrastructure, including public buildings, and in houses.

The action that includes the following projects has been chosen as good practice: installation of photovoltaic panels in the wastewater treatment plants of Navarre: “EDAR Bajo Ebro”, “EDAR Tafalla-Olite”, “EDAR Tudela”. The action is managed by the public company NILSA responsible for water purification in Navarre.

The contribution of the FEDER in this action has promoted its successful execution. Taking into account the results of the three treatment plants, there has been an annual reduction in greenhouse gases of 207 TCO₂/year and a reduction in annual consumption of primary energy in public buildings of 396,400 kWh/year.

The total cost of ALL the actions CO-FINANCED BY THIS THEMATIC OBJECTIVE amounts to 7,833,130 euros and the aid provided by the ERDF is 3,916,565 euros.

This action is considered a Good Practice by the following criteria:

1. High diffusion among beneficiaries and the general public

NILSA, as a beneficiary entity of these aids, has used various means of communication to guarantee a wide diffusion among the citizens of the FEDER aid received.

All the information related to the FEDER has been published on the NILSA website, organizing this information in the “Programming”, “Management”, “Evaluation” and “Communication” sections. Below are some screenshots of the website.

[NILSA's Website](#)

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FONDO EUROPEO DE DESARROLLO REGIONAL (FEDER 2014-2020)

NILSA está dotando a las depuradoras con paneles solares para potenciar la energía fotovoltaica, reducir las emisiones de dióxido de carbono y ahorrar en energía eléctrica. No en todas las instalaciones será posible llevar a cabo esta práctica, ya que en algunas lo desaconseja la climatología, pero el objetivo es entender al máximo esta buena práctica en la lucha contra el cambio climático y por la sostenibilidad.

Los buenos resultados obtenidos en 2019 en la planta piloto, ubicada en la depuradora de Eirere-Phillas, evaluaron la extensión del proyecto a otras instalaciones con una cofinanciación del 50% por parte de los fondos FEDER (Fondo Europeo de Desarrollo Regional) de la Unión Europea.

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más información

Likewise, the Public Business Confederation of Navarre CPEN, a company of the Government of Navarre, parent of public companies, has included the news on its website.

[CPEN's website](#)

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Azala --Las depuradoras navarras comenzarán a abastecerse de energía solar para evitar la emisión de 116 toneladas de CO2

Las depuradoras navarras comenzarán a abastecerse de energía solar para evitar la emisión de 116 toneladas de CO2

La sociedad pública NILSA, responsable de la depuración de aguas, ha iniciado un proyecto de implantación de paneles fotovoltaicos en varias plantas

Noticias NILSA / 30 de agosto de 2020



Todos estos proyectos han sido cofinanciados al 50% por el fondo FEDER (Fondo Europeo de Desarrollo Regional) de la Unión Europea. NILSA ha gestionado en sus 31 años de andadura más de 36 millones de euros en fondos europeos, con los FEDER como principal efectivo.

During the execution of the installation work of the solar panels, temporary posters were placed. Once the work has been completed, permanent plaques have been placed in the treatment plants in visible places. Below is an example of this.



Likewise, the action has been widely disseminated through the media, both national and regional, written press and digital media that have guaranteed a greater reach of the news.

[Noticia en prensa regional - digital](#)

Diario de Navarra



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Todos estos proyectos han sido cofinanciados al 50% por el fondo FEDER (Fondo Europeo de Desarrollo Regional) de la Unión Europea.

2. The action incorporates innovative elements.

The projects for the installation of photovoltaic panels in the wastewater treatment plants arise as a result of a series of energy audits carried out in several of the facilities and a study directed by the National Center for Renewable Energies, CENER.

After these studies, it was decided to start installing photovoltaic energy parks as the most viable solution to meet the energy saving objectives.

After a pilot project with successful results in the Beire-Pitillas treatment plant in 2019, the decision was made to extend the installation of solar parks to the largest treatment plants in the Foral Community: "Bajo-Ebro", "Tafalla-Olite" and "Tudela".

It should be noted that the use of self-consumption renewable energy in public buildings and facilities serves as an example and can help other entities and citizens in general to opt for the installation of solar panels to reduce electricity consumption. According to the latest data from the Administrative Register of Self-consumption of the Department of Economic and Business Development of the Government of Navarre, updated to January 2023, the installations of solar panels for self-consumption have almost multiplied by four in the last year; most of them carried out by individuals.

3. Contribution to the resolution of a regional problem or weakness

These actions have fulfilled their main objective of promoting photovoltaic energy compared to other polluting energy sources; carbon dioxide emissions into the atmosphere have been reduced and electrical energy has been saved. Solar panels boost photovoltaic energy and reduce carbon dioxide emissions into the atmosphere.

Electric power represents the greatest expense in treatment plants; in "Tudela" about 15,000 euros per month, in "Tafalla-Olite" it is around 10,000 euros in "Bajo Ebro" 7,000 euros. The installation of solar panels has managed to reduce the electricity bill in the three treatment plants; Through self-consumption, a reduction in the cost of electricity of around 20% on average is expected.

After completing the installation of the solar panels in these three treatment plants, NILSA continues to extend this practice to other treatment plants in the Foral Community. It should be noted that the installation of plaques in the following treatment plants have already been selected for co-financing with FEDER funds, period 14-20: "Bajo Arga", "Bajo Ega", "Valtierra-Arguedas", "Cintruénigo" and "Milagro".

Likewise, and in order to promote the continuity of this successful practice, the Government of Navarre has selected this same type of action to be co-financed at 40% by the FEDER program in the 2021-2027 programming period.

NILSA therefore continues to bet on equipping the largest possible number of treatment plants in the Foral Community with solar panels to extend this good practice to the maximum in the fight against climate change and for sustainability. As more treatment plants are supplied with solar energy, the more the harmful effects of carbon dioxide emissions and pollution on the environment can be reduced.

4. Contribution to the resolution of a problem or weakness detected in the field of execution.

The results achieved with this action have contributed to solving a weakness.

As previously indicated, before proceeding with the installation of the photovoltaic panels in the treatment plants, energy audits were carried out in various facilities and a study was commissioned from the National Center for Renewable Energies, CENER. After obtaining the results of these studies, NILSA opted to install photovoltaic energy parks as the most viable solution to meet the energy saving objectives.

Electricity represents the greatest expense in treatment plants. Self-consumption can reduce the cost of energy by an average of 20% in addition to saving energy and reducing the emission of carbon dioxide into the atmosphere.

By substituting a polluting energy source for solar energy, it has been possible to reduce the emissions of polluting gases into the atmosphere.

In the Tafalla-Olite treatment plant, the percentage of self-supply of energy over the total consumption of the plant is 17.75%. In "Tudela" and "Bajo-Ebro" the percentage is higher, around 20% or 30%.

5. High degree of coverage of the target population.

The public company NILSA has the mission the purification of wastewater, the management of urban waste and collaboration in supply. All this, with a high level of quality and framed within the general objectives of protection of the Environment and water resources of the Foral Community.

Navarre has more than 159 treatment plants. The progressive installation of photovoltaic panels in the largest treatment plants in the Foral Community produces a reduction in electricity consumption and, therefore, a lower emission of polluting gases into the atmosphere.

The fight for sustainability and against climate change is a priority for the Government of Navarre; All the actions carried out in this regard have a positive effect on the environment and, consequently, on the citizenry as a whole.

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

The Government of Navarre values positively, as a selection criterion for actions co-financed by the ERDF, that the entities benefiting from the aid keep in mind criteria of gender equality, non-discrimination, social responsibility and environmental sustainability in their management. NILSA is an example of an entity committed to gender equality.

The III Equality Plan 2022-2026 is currently in force, which involves the incorporation of the gender perspective in business management. In this plan, areas for improvement and measures and actions have been defined to achieve real progress in equal opportunities as a principle. It is evaluated annually by the Equality Work Team and the reports are presented to the Negotiating Commission and the rest of the staff.

NILSA has a Protocol for action and prevention of sexual or gender-based harassment with the aim of preventing, detecting and eradicating attitudes contrary to the dignity and freedom of people in the field of sexual and gender-based harassment.

Likewise, there is a firm commitment from NILSA management so that the Equality Plan is applied effectively.

In addition, the Practical Guide for the use of inclusive language in public companies in Navarre is applied in day-to-day management.

Below is a video edited by the Government of Navarre to promote gender equality in public companies; NILSA workers participate: "Female talent in the public companies of the Government of Navarre":

https://www.youtube.com/watch?v=A_aw4KUlcljM



On the other hand, NILSA has assumed a commitment to quality; its work is aimed at offering society work in transparency, involvement, communication and efficiency. To do this, they use the model of excellence and quality, EFQM (European Foundation for Quality Management).



7. Synergies with other public intervention policies or instruments.

The Government of Navarre is committed to the commitment to sustainability and the fight against climate change in order to be a benchmark for sustainable development, with a territory that is environmentally responsible and efficient in the use of its resources.

The ambitious Foral Law on climate change and energy transition has been approved to mitigate the effects of climate change, with a focus on reducing harmful emissions into the atmosphere. In addition, a climate change roadmap for Navarre 2017-2030-2050 has been drawn up as Navarre's contribution to the international commitment to Climate Change.

A significant part of the FEDER resources assigned to Navarre for the 2014-2020 programming period are allocated to actions within the line of support for energy efficiency.

The installation of solar panels in the treatment plants of the Foral Community is in line with the Navarre 2030 Energy Plan, to which the strategic energy objectives established by the European Commission are transferred. In accordance with the provisions of the aforementioned Plan, NILSA must achieve "a 26% reduction in its CO2 emissions in 10 years, a 50% share of renewable energy in total energy consumption and a 19.54% reduction of primary energy through efficiency actions."

It should be noted that NILSA is part of the first project of the European Union LIFE NAdapta for adaptation to climate change. Awarded to the Government of Navarre in 2018 and endowed with 15.6 million euros. The LIFE NAdapta project seeks to anticipate the changes that may occur through the development of adaptation measures that limit the negative effects derived from these changes and, to the extent possible, take advantage of the positive impacts. NILSA, within the framework of this project, works to increase the energy efficiency of its processes and the development of good practices for the management of water bodies.