

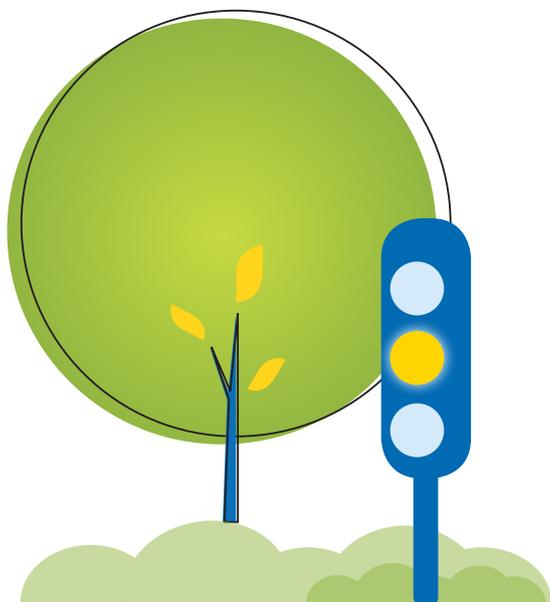
EcoEnLight

100% LED traffic lights and intelligent public lighting system in Almada

A Covenant of Mayors 2016 Case Study

In a nutshell

The EcoEnLight project has enabled to improve the energy efficiency of Almada's public lighting through a smart tele-management system and the conversion of all traffic lights to LED technology.



Almada in numbers

Number of inhabitants in Almada:
174,000

CO₂ reduction target: 22% by 2020

Number of Covenant of Mayors
signatories in Portugal: 112

Background

Located in Southwestern Portugal, Almada has a population of 175,000 inhabitants. The City Council has responsibility for local environmental action, planning and management. As an urban Council with no heavy industry in the city, the major focus is on mobility and buildings renovation.

In the framework of the Local Climate Change Strategy, Almada is promoting several measures such as the implementation of the light rail system, the development of renewable energies and the refurbishment of its buildings. It has also been a pioneer in creating a local fund to finance energy efficiency investments in municipal buildings and equipment named "Almada Less Carbon Fund".

A financial scheme unique in Portugal

An integrated approach to financing has been key to the success of Almada's strategy for developing actions and measures related to energy efficiency and renewable energy production.

The planning phase and pilot projects of EcoEnLight were financed by combining the grants from the European Structural and Cohesion Funds (ICT Policy Support programme) with the city's contribution through its local climate fund, the "Almada Less Carbon Fund". Almada's fund is a voluntary scheme which fosters the City Council's investment in energy efficiency and renewable energy. The "Almada Less Carbon Fund" is a one-of-a-kind initiative in Portugal, where such funding instruments are not widely used yet.

Smart tele-management of public lighting

The EcoEnLight project was implemented by the municipality of Almada between 2011 and 2013. This project was focused on improving the energy efficiency of Almada's public lighting system, which accounts for more than 60% of the municipality's energy consumption. During the EcoEnLight project, a smart tele-management system for Almada's public lighting system was procured and implemented.

This tele-management system allows to remotely manage public lighting intensity in Almada by adjusting the luminous flux of all the lights throughout the day. This way, a more efficient and tailored energy consumption coming from the public lighting system can be ensured, which fully takes into account the needs of the citizens who use Almada's roads during day and night.

A success for the municipality

Thanks to the EcoEnLight project, the city has been able to reduce the energy needs for public lighting by roughly 40%. This represents a reduction of nearly 0.6 GWh and 300 tons of CO₂eq. The savings estimations, which include maintenance and electricity cost savings, pointed to an average of €80,000/year. More than €464,000 were invested in the EcoEnLight project in total, with roughly €188,000 coming from Almada itself.

The project has also included the conversion of all traffic lights to LED technology, which resulted in a reduction of energy requirements by 80% (i.e. a reduction of almost €70,000/year and 96 tons of CO₂eq).

Project numbers

Project duration: **2011-2013**

€464,000 invested

€275,000 financed by the city

€80,000 million estimated savings (maintenance and electricity costs)

40% decrease in energy needs for public lighting due to the tele-management system

80% decrease in energy requirements of traffic lights thanks to the use of LED technology

Further resources

www.ageneal.pt



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