



ECOBUS - Collecting used cooking oils to their recycling as biofuel for diesel engines

LIFE02 ENV/E/000253



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Project description:

Background

Cooking oil is a waste material that can be found everywhere in the European Union and for which collection schemes and recovery options are not sufficiently developed. Cooking oil is generally recycled and used for animal feed. However, because of recent legislative developments, this practice may not be possible in the near future. Therefore it is necessary to find another recovery option and an outlet for waste cooking oil. The common method of depositing the oils in the sewage system is an illegal practice that causes many problems. The oils clog the sewage systems causing malfunctions in the filters and oil/water separators. Cooking oils can be recycled into an environmentally friendly fuel and could then be used by public transport in the city centre of Valencia, in Spain.

Objectives

The main objective of the project is to put Valencia's large volume of used cooking oils to good use. The project will develop a pilot scheme, the results of which will serve as a starting point for setting up an adequate collection system for waste vegetable oils. This system will collect not only domestic oils, but also those coming from the catering sector – the collection procedure involves oils used in the frying process in bars, restaurants and hotels. All collaborating establishments are identified with a sticker, and they are given containers for the

collection of used oil. Subsequently the oil collected in this way is processed in a plant that transforms it into biodiesel fuel, which is then used in Valencia's urban bus fleet. In this way, the project will also help reduce the amount of hazardous and polluting emissions, thus improving air quality in Valencia.

Results

The project achieved the objectives outlined: 1. Implementation of a used vegetable oil collection procedure has stopped it from being dumped into the public drainage system. The collection system operated as follows: - Three points were established in Valencia to collect domestic waste oils (on average around 100 litres/month were collected) - In relation to the commercial establishments different kind of containers were used (from 20 to 60 litres). By the end of the Project 800 establishments were involved and around 800,000 litres of used cooking oil had been collected. 2. The oil collected was stored and sent to a transformation plant to produce bio-diesel, fuel to be used by urban buses. During the Project 322,654 litres of eco-diesel were used. The amount of eco-diesel/diesel mix used in the fleet was 1,778,140 litres and the buses covered 3,228,783 km. 3. As an additional result of the project, the beneficiary sent to Valencia City Council a proposal to establish, at local level, legal regulations to manage the used cooking oil. *This project has been selected as one of the 24 "Best" LIFE Environment projects in 2004-2005*

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Environmental issues addressed:

Themes

Energy - Supply

Waste - Waste recycling

Waste - Municipal waste (including household and commercial)

Keywords

vegetable oil, waste use, separated collection, biofuel

Natura 2000 sites

Not applicable

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Beneficiaries:

Coordinator	Empresa Municipal de Transportes de Valencia
Type of organisation	Public enterprise
Description	The beneficiary is EMT (Municipal Company of Transports of Valencia) a public company which leads the Project and is in charge of its development.
Partners	Federación Vaqlenciana de Empresarios del Turismo y Medioambiente Federación Nacxional de Transporte de Viajeros por Carretera Concejalía de Medioambiente Asociación Nacional de Transportes Colectivos Urbanos de Viajeros de Superficie Universidad Politécnica de Valencia Instituto para la Diversificación y el Ahorro Energético

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Administrative data:

Project reference	LIFE02 ENV/E/000253
Duration	01-NOV-2002 to 01-NOV -2004
Total budget	1,676,440.00 €
EU contribution	798,415.96 €
Project location	Comunidad Valenciana(España)

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Read more:

Project web site	Project's website (in Spanish only)
Publication: Layman report	Title: Layman report (Spanish) Year: 2005 No of pages: 16
Video feature	Title: DVD of the project LIFE02_ENV_E_000253

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