

CONVERSION OF VEHICLES TO RUN ON PURE PLANT OIL



CARLOW KILKENNY ENERGY AGENCY

AIEA PROJECT SUMMARY5

Summary

The Carlow Kilkenny Energy Agency was established to provide sustainable energy information and services to the people of Carlow and Kilkenny, to local businesses and community groups and to the Local Authorities.

The Agency, as a promoter of energy efficiency and renewable energy, aimed to convert 2 vehicles to run on Pure Plant Oil (PPO), and provide a fuelling station for these vehicles. The objective then is to promote the use of biofuel as an alternative to fossil fuels for transport uses by demonstrating that vehicles can be run effectively on PPO. The vehicles to be converted needed to be highly visible in the community. Carlow County Council made available a Ford Ranger and Carlow Urban District Council a Mitsubishi Canter, used by the Environment and Litter Patrol Departments.

Project Classification

END-USER AREA	TARGET AUDIENCE	TECHNICAL
<input type="checkbox"/> NEW BUILDINGS	<input checked="" type="checkbox"/> CITIZENS	<input type="checkbox"/> ENERGY EFFICIENCY
<input type="checkbox"/> REFURBISHMENT OF BUILDINGS	<input type="checkbox"/> HOUSEHOLDS	<input type="checkbox"/> HEATING
<input checked="" type="checkbox"/> TRANSPORT AND MOBILITY	<input type="checkbox"/> PROPERTY OWNERS	<input type="checkbox"/> COOLING
<input type="checkbox"/> FINANCIAL INSTRUMENTS	<input type="checkbox"/> SCHOOLS AND UNIVERSITIES	<input type="checkbox"/> APPLIANCES
<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> DECISION MAKERS	<input type="checkbox"/> LIGHTING
<input type="checkbox"/> LEGAL INITIATIVES	<input checked="" type="checkbox"/> LOCAL AND REGIONAL AUTHORITIES	<input type="checkbox"/> CHP
<input type="checkbox"/> PLANNING ISSUES	<input checked="" type="checkbox"/> TRANSPORT COMPANIES	<input type="checkbox"/> DISTRICT HEATING
<input checked="" type="checkbox"/> SUSTAINABLE COMMUNITIES	<input type="checkbox"/> UTILITIES	<input type="checkbox"/> SOLAR ENERGY
<input type="checkbox"/> USER BEHAVIOUR	<input type="checkbox"/> ESCOs	<input checked="" type="checkbox"/> BIOMASS
<input checked="" type="checkbox"/> EDUCATION	<input type="checkbox"/> ARCHITECTS AND ENGINEERS	<input type="checkbox"/> WIND
<input type="checkbox"/> OTHER	<input type="checkbox"/> FINANCIAL INSTITUTIONS	<input type="checkbox"/> GEOTHERMAL
<input type="checkbox"/>	<input type="checkbox"/> OTHER	<input type="checkbox"/> HYDRO POWER
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> TRANSPORT

CONTACT DETAILS



Rory McConnon
Agency Manager
Carlow Kilkenny Energy Agency

Castle Hill, Carlow, Ireland

Tel No: +353 59 914 3871

Fax No: +353 59 914 3290

E-mail: info@carlowkilkennyenergy.com

Website: www.carlowkilkennyenergy.com

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Duration

Upon selection of suitable vehicles for the project, delivery of the conversion kits from Germany took 2 weeks and installation by a local mechanic took a further week.

Process

- ? Selection of suitable vehicles which would be highly visible in the community.
- ? Identification and procurement of the conversion kits from the German manufacturer.
- ? Installation of the conversion kits by a suitably trained local mechanic.
- ? Assembly of a fuelling station to allow for delivery of the PPO fuel in 1,000 litre IBC tanks and including a specialised meter to allow accurate reading of the viscous fuel.
- ? Preparation and dissemination of a detailed report on the project – available by contacting info@carlowkilkennyenergy.com.

Financial resources and partners

Organisation		Country
Carlow Kilkenny Energy Agency	CKEA	Ireland
Carlow County Council	CCC	Ireland
Carlow Urban District Council	CUDC	Ireland
Carlow Leader Rural Development Company	CL RDC	Ireland

Impact

The use of biofuels is an innovative action based on a premise of fully sustainable and environmentally sound practice. Currently in Ireland, virtually all vehicles are fuelled with imported fossil fuels. This project will allow the demonstration and promotion of transport based on locally produced renewable fuels. The project has the potential to be replicated for a very large number of existing and new vehicles. It will also help to encourage expansion of the locally grown fuel resource, rape seed, and the development of farm based biofuel processing plant.

More specifically, the vehicles' running costs have been reduced significantly compared to using the fossil diesel. In addition to this, future energy cost increases will be minimised. The use of PPO also results in the elimination of carbon dioxide emissions equivalent to every litre of fossil fuel diesel which is displaced.