

## **Pilot implementation of biodiesel mixtures in public transport busses by the Regional Energy Agency of Crete (REAC)**

The Regional Energy Agency of Crete, in the framework of the implementation and promotion of the European Directive for Biofuels, has implemented – according to a working programme of many months for testing and evaluation in real conditions – a pilot use of high biodiesel mixtures into the public transport busses in the Eastern Crete. This project has been realized in cooperation with the Public Bus Company of Eastern Crete, the Public Center of Vehicles Control of Heraklion and the scientific support of National Technical University, with simultaneous provision of information for biodiesel use to all relevant national, regional and local authorities.

In this innovative project biodiesel mixtures of much higher concentrations (e.g. 20%) than the ones legislated, have been tested, taking into account the experience and the know-how of European Organizations, which are using biodiesel mixtures of 100% in public transport. Great attention has been paid to the dissemination and to the public information and awareness activities through brochures, articles, TV and radio broadcasts, creation and distribution of special DVD etc. The energy – environmental and financial impacts of the project are widely disseminated at scientific, public and entrepreneurial level and are also directly related to the policies on energy, on environment, on agriculture and on employment.

### **Achievements:**

- A market assessment of the quantities and the collection and logistics systems of the used vegetable oils has been realized by the Regional Energy Agency of Crete
- A seven-month special system for monitoring and control of the busses, which have been used for the experimental procedure, has been organized
- Greek technicians and staff of the Regional Energy Agency of Crete have participated in training courses in Austria
- A special DVD, for the technology of biodiesel use, has been created and distributed by REAC
- Impressive labels have been put on the busses promoting the use of biodiesel by special logos and slogans
- An information leaflet has been distributed by REAC for the use and the benefits of biodiesel
- Local experience and know – how have been obtained on the use of biofuels
- The results of the pilot use of high biodiesel mixtures in the busses are very encouraging for the environment and the mechanical operation of the busses
  - ✓ Significant reduction of the smoke density (opacity)
  - ✓ During the seven – month period of the use of biodiesel mixtures, the mechanical behaviour and the general operability of the busses were perfect
  - ✓ The use of biodiesel had no impact on lubricating oil and the wear metals were in very low concentrations
  - ✓ Reduction of the hydro-carbon (HC) emissions
  - ✓ Reduction of the carbon-monoxide (CO) emissions
- The successful implementation of the project is widely known and disseminated in National level and the national media (TV and Radio broadcasts, Newspapers,

Magazines). National, regional and local media have paid great attention in the importance and the innovation of the successful implementation of biodiesel in public transport in Crete and Greece.

