



# GEIR

Groupement Européen de l'Industrie de la Régénération - The Re-refining Industry Section of UEIL

## **Waste Oils Regeneration: A case study on the environmental and economic benefits in Greece**

### **Background**

In 2005, the European Commission published a proposal for a Thematic Strategy on the Prevention and Recycling of Waste with a view to revisit the EU waste policy. In its revised approach to the management of waste, the Commission suggested the revision of the Waste Framework Directive and the repeal of the Waste Oils Directive, potentially leading to the end of the priority to the regeneration of waste oils across the EU. However, in February 2007, the European Parliament reintegrated a mention to the need for a preference to the regeneration of waste oils in its 1<sup>st</sup> reading of the Waste Framework Directive.

GEIR- the Groupement Européen de l'Industrie de la Régénération- the Re-refining Industry Section of UEIL- strongly believes that the regeneration of waste oils should remain an EU policy priority. Waste oils regeneration has many environmental and economic benefits. It leads for instance to a significant reduction in environmental impacts when compared to primary production of lubricants. It also allows for a reduction of the illegal incineration of waste oils. As the present case study shows for Greece, there is a strong correlation between an increase in waste oils collection for regeneration and the decrease in illegal disposal. This case study confirms the need for the regeneration of waste oils to remain an EU priority.

### **Benefits of the collection of waste oils for regeneration**

From an environmental perspective the recycling of waste oils makes an extremely important contribution to a more sustainable Europe. It is a very effective way to alleviate the significant environmental burden of the primary production of lubricants, especially in relation to fossil fuel depletion. It also represents the largest and most environmentally friendly recovery option, ensuring the proper collection of waste oils, as opposed to its incineration, which attracts the unwanted mixing of waste. This has proven to be the case in Greece, where data illustrate the link between the collection of waste oils for regeneration and the decrease in illegal incineration.

### **Legislative Framework in Greece**

The legislative framework for waste oils regeneration in Greece is defined by the following texts:

#### **➤ At the European level:**

- Directive 75/439/EEC of 16 June 1975 giving priority to the regeneration of waste oils over its disposal
- Directive 87/101/EEC of 22 December 1986 (amending Directive 75/439/EEC)
- Directive 91/692/EEC of 23 December 1991 (standardising and rationalising reports on the implementation of certain Directives relating to the environment)

#### **➤ At the national level:**

- Law 2939/2001 for alternative waste management of package and other wastes.
- Presidential decree 82/04 for waste oil alternative management (replacing Joint Cabinet decision 980/2/2001/96)



## **Waste oils management in Greece:**

Approximately 100.000MT of lubricants are consumed annually in Greece originating from a variety of sources including automotive (e.g. vehicle servicing), industrial (e.g. petrochemical manufacture) as well as other sources (hydraulic fluids, freezing circuits).

The most common waste oils management procedures are:

- a. Regeneration
- b. Reuse without regeneration
- c. Energy production out of waste
- d. Uncontrolled waste disposal

Procedures b, c and d are illegal according to the Greek environmental legislation and there are no plants in Greece that have permission to use waste oils for energy production.

Since 1 July 2004, the collection of waste oils is managed in Greece by the National Collective System for waste oils alternative management (ELTEPE S.A.). Waste oil collection is carried out by the collection network of the System (by licensed collectors, who collect and sell the product to the System). The National Collective System then sells waste oils to the 6 industries involved in the process of waste oils regeneration across the country. Amongst them, CYCLON Hellas S.A. is a waste oil regeneration plant operating under the most advanced regeneration technology, meeting all environmental requirements, as well as Best Available Techniques requirements. The capacity of CYCLON Hellas S.A regeneration plant is 40.000 MT WLO/year having invested more than € 50 million over the years. The other 5 regeneration plants are smaller installations (with a total annual capacity of 15.000 MT) but evenly distributed around the country, offering the essential flexibility to the SYSTEM OF ALTERNATIVE MANAGEMENT OF WLO.

## **Socio-economic benefits**

The total capacity of the regeneration plants in Greece is approximately 55.000 MT WLO per year. The regeneration industry in Greece directly contributes to around € 30 million and indirectly to more than € 300 million to the national economy. It employs more than 250 people (scientific and technical personnel). Most regeneration companies are small and middle sized, and in direct competition with multinational lubricant and petroleum companies operating in Greece.

## **Prioritisation to waste oils collection and regeneration**

Before the implementation of the new legislation in 2004 the quantity of waste oils collected in Greece was no more than 8.000 MT annually. With the implementation of the new legislation for waste oil management, Greece has collected and regenerated more than 36.000 MT of waste oils in 2006 and in 2007 approximately 42.000 MT. This collection represents 42% of the total lubricants consumption in Greece and meets the national collection target set by Presidential Decree 82/04. 100% of the collected waste oils are intended for regeneration.

The above-mentioned evolution clearly shows the correlation between the increase in regeneration and the fall in uncontrolled disposal of waste oils. These results were made possible by the priority given to the regeneration of waste oils at the EU level as well as by the set up of objectives by the National Framework on the management of waste oils including:

- Control and elimination of unauthorised disposal
- Increase in the quantities of regenerated oils



## Conclusion

This case study shows that by collecting waste oils for regeneration, the waste oils industry has contributed to a sharp drop in illegal incineration and disposal in Greece. This benefit is one of the many environmental and economic advantages the regeneration of waste oils can bring to Europe. Other benefits, which would be lost were the EU priority to waste oils regeneration be repealed, include:

- ⇒ The conservation of European oils resources in a context of fossil fuel depletion and at a time when there is a need for sufficient supply of base oils to underpin future European growth.
- ⇒ In view of the positive developments in the formulation of lubricants, the environmental benefit of waste oils recycling is likely to increase even further in the future. The significant reduction in environmental impacts associated with waste oils recycling, as compared to the primary production of lubricants and to incineration as an alternative recovery option, would not bear fruit, were the regeneration not to remain a priority.

**In view of the successful example of Greece and of the arguments outlined above, GEIR calls on EU policy makers to support the preference to waste oils recycling as mentioned in the European Parliament's first reading proposal of the revised Waste Framework Directive.**

**Waste oils regeneration has an important role to play in securing a competitive and sustainable Europe. In order to encourage investment in regeneration, realise the economic and environmental potential of this technology and secure a future for this industry in Europe, it must remain an EU waste management priority.**

## Sources:

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