

GEIR Position on the Revision of the Waste Framework Directive

April 2024¹

In a nutshell

- **GEIR**, the European Waste Oil Re-refining Industry Association, comprises member companies actively engaged in the **collection of waste oils and their re-refining into valuable lubricant base oils**. GEIR represents 80% of Europe's waste oil re-refining industry.
- **Waste oil regeneration stands out as the most environmentally friendly waste management solution**: it saves 71% CO₂ emissions compared to virgin crude oil and 47% CO₂ emissions compared to the main alternative - treatment to fuel. **Regeneration sits higher in the 'waste hierarchy'**, which clearly mandates the prioritization of regeneration over energy recovery.
- However, today, approximately **16% of collectable waste oils remain uncollected**, and **only 61% of the waste oil collected is regenerated**. The rest is mostly used as fuel that produces much higher GHG emissions and contributes to climate change and resource depletion.
- The insufficient collection and regeneration of waste oils can be attributed to the **absence of rigorous enforcement of the waste hierarchy** and the **absence of well-defined collection and regeneration targets**.

To reinforce the waste hierarchy and increase waste oils circularity, **GEIR proposes to:**

- **Establish high, mandatory and EU-wide collection and regeneration targets for waste oils.**
- **Ban or, at least, restrict the use of waste oils for energy recovery and recycling operations** which have a negative environmental performance and yield a different product than re-refined base oils.

Full integration with the Circular Economy

GEIR is the [European Waste Oil Re-refining Industry Association](#). GEIR member companies are active throughout Europe in supporting the **collection of waste oils and re-refining these back to valuable lubricant base oils**. GEIR represents 80% of the waste oil re-refining industry in Europe.

Waste oils are the **largest amount of liquid hazardous waste in the world**. Their appropriate **collection and recycling** is thus **essential** for a **healthy environment**. The re-refining industry is entirely integrating the philosophy of circular economy in its daily business. Our activities aims at

¹ Please note that the information presented in this document is based on the 2023 revision of the GEIR Position Paper. Future revisions may include updated content.

saving valuable raw material (crude oil) by re-refining used oil and turning it into a valuable raw material (base oil) for the lubricants market, the quality of which can be compared to that of virgin base oils.

Lubricating oils are used in everyday mechanical processes. Applications range from automotive and transport to industrial production or escalators and lifts sectors. Lubricating oils are essential products that keep moving parts apart, reduce friction, carry away contaminants and debris, transfer heat and prevent corrosion for which the demand is high across Europe.

Why is regeneration the best waste management option for waste oils?

Regeneration represents not only the **most eco-friendly way** to treat waste oils in comparison with alternatives (e.g., incineration and bunker fuel) but it also sits **higher in the 'waste hierarchy'**, which clearly mandates the prioritisation of regeneration over energy recovery. Waste oils regeneration is considered to be the best practice because:

- **It reduces CO2 emissions:** the latest IFEU LCA study² shows that regeneration saves 71% CO2 emissions compared to virgin crude oil (net benefit of 1,152 kg CO2eq. per Mg) and 47% CO2 emissions compared to the main alternative: treatment to fuel oil (net benefit of 540 kg CO2eq. per Mg). Further indicators (e.g., fine particles, resource depletion etc.) are also favourable to regeneration.
- **It strengthens the EU's strategic autonomy** by recovering highly valuable primary material – crude oil – and hence reducing the EU's dependence on fossil fuels from third countries, keeping valuable raw materials in the EU and ensuring the security of supply.
- **It removes toxic additives and chemicals** which is not the case when waste oils are burnt or mixed. As a result, re-refined base oils are non-hazardous meeting the same REACH criteria as for virgin oils.
- **It provides a high-yield:** resource efficient.
- **It produces high-quality base oil** similar to virgin oils.

In addition, regeneration is key for the European **industrial leadership in the green transition**. With over 1.1 million tonnes of waste oils regenerated yearly by GEIR member companies, Europe is a world leader in waste oil regeneration.

What are the main challenges of the regeneration industry?

Currently, about **61% of the waste oil collected is regenerated** in Europe, while the rest is mostly used as fuel that has higher GHG emissions than regeneration and contributes more to climate change and resource depletion. In addition, recycling rates for collected waste oils vary greatly between Member States. Collectable **waste oils which is not collected is estimated at 16%**, indicating significant room for improvement.

The lack of collection and regeneration of waste oils can be explained by multiple factors:

- **Lack of enforcement of the waste hierarchy.** The Waste Framework Directive (WFD) mandates the prioritisation of regeneration when it comes to the treatment of waste oils (Article 4 and 21). However, this principle is not well implemented, as large amount of waste oils suitable for regeneration are still being used to produce fuels or burnt in cement kilns, which have a much higher environmental impact. This prevents further re-refining of waste oils across Europe.

² [Updated Life Cycle Assessment \(LCA\) for Regeneration of Waste Oil to Base Oil, September 2022](#)

- **Lack collection and regeneration targets** for waste oils collection and regeneration. As highlighted by the European Court of Auditors highlighted in the Review 2/2023³, this is one of the challenges to increase the recycling of hazardous waste such as waste oil, which limits the market opportunities for waste operators in the EU.
- **Lack of separate collection of waste oils.** Despite the mixing ban (Article 21 of the WFD), waste oils with different chemical properties/compounds are often being mixed, making them essentially improper for regeneration.
- **Strong competition with other alternatives:** used oils are a high-in-demand commodity since industries are keen to burn used oils to meet their energy needs, while the bunker fuel market sees it as a cheaper alternative to heavy fuel oil.
- **Lack of awareness about the negative impacts of illegal burning.** Burning waste oils not only produce more CO2 emissions than regeneration, but it also releases dangerous chemicals into the atmosphere.

Our proposals to reinforce the waste hierarchy and increase waste oils circularity

The Waste Framework Directive is the principal EU legislation governing waste oil re-refining. In particular, waste oil re-refining is covered by Article 3.18 on the definition of re-refining, Article 21 on waste oils and Article 4 on the waste hierarchy. In order to reinforce the current framework and increase the rate of waste oils re-refined, GEIR proposes the following measures:

1. **Establish high, mandatory and EU-wide collection and regeneration targets** for waste oils: Mandatory and ambitious recycling targets at the EU level will help increase the collection and regeneration of waste lubricant oils and minimise the risk of pollution. In addition, it would improve the overall environmental outcome of waste oils management and enable the consistent and harmonized implementation of the waste hierarchy and the polluters pay principle. Analyzing the situation across Europe, there is a clear correlation between national regeneration and collection targets and re-refining rates.

Approach:

- **By 2030:**
 - An EU-wide target of **95 % collection of waste oils** of the produced and collectable waste oils in each Member States;
 - An EU-wide target of **85 % of re-refined waste oils** of the produced and collectable waste oils in each Member States.
 - Member States that have no waste oil regeneration facility shall be deemed to achieve these regeneration targets by exporting the collected waste oil from their country, in line with the requirements on transboundary shipments of hazardous waste set down in Regulation (EC) No 1013/2006, to another Member State.
 - Member States that perform well at present should keep their existing high recycling rates while others are brought up to a similar level. Such targets can also be supported by economic instruments at national level (e.g., tax reliefs on lubricants).
2. **Ban or, at least, restrict the use of waste oils for energy recovery and recycling operations** which have a negative environmental performance and yield a different product than re-refined base oils (e.g., plastics). This would boost the circularity of waste oils and increase the rate of regenerated waste oils.

³ [Review 2/2023: EU actions to address the increasing amount of hazardous waste](#)