# Industry and environmental organisations call for measures to improve the reuse and high-quality recycling of materials and components from end-of-life vehicles

**In July 2023, the European Commission adopted its proposal for revising and merging the End-of-Life Vehicles Directive and the 3 R Type-Approval Directive into a Regulation on Vehicle Design and Management of End-of-Life Vehicles. The proposal aims to strengthen the EU single market while reducing the negative environmental impacts linked to the design, production, use, and end-of-life treatment of vehicles and contributing to improving the circularity and sustainability of the automotive and recycling sectors.**

The undersigning organisations support the objective of the proposal to improve the circularity of the sector through measures such as design requirements, improved definitions, information requirements and better traceability of end-of-life vehicles (ELVs), as well as treatment obligations for waste vehicles.

To better align the proposal with the Waste Hierarchy, decrease the environmental footprint of the automotive sector, and increase the availability of secondary materials to strengthen EU strategic autonomy, the signatories of this statement urge co-legislators to:

1. Facilitate the reuse of parts and components and high-quality recycling of materials by maintaining and expanding pre-shredding disassembly and dismantling requirements and introducing quality thresholds for recycling output fractions.
2. Address environmental impacts from vehicles of unknown whereabouts and exported non-roadworthy vehicles through strict definitions and measures to improve information on registration status.

**Disassembly/Dismantling requirements and quality thresholds for recycling (pre-processing) output fractions**

While high reuse and recycling rates for ELVs suggest a functioning end-of-life regime for vehicles, the reality is that a large share of materials from ELV treatment is not efficiently recycled, and is still sent to landfills or incinerators. Critical raw materials – including rare earth metals – contained in the increasing number of electronics in vehicles are barely recycled at all, and the quality of scrap resulting from ELV treatment can be low due to contamination with other materials from the shredding process.[1] To tackle this issue, the Commission suggested implementing extra dismantling requirements for specific parts and components at the end of a vehicle's life. This aims to promote the reuse of parts and components and enhance the quality of material recycling. However, the Commission did not define clear quality requirements for each material.

The undersigning organizations support this approach, as it not only allows to derive the maximum value from components through reusing them in other vehicles, but it is also the most effective way – and for some materials the only one – to recover materials in a high-quality through recycling. The signatories however urge the inclusion of clear requirements on the quality of the materials recovered from the treatment of ELVs.

The examples of aluminium, copper, and glass show the importance and environmental benefits of combining dismantling and quality criteria:

- Concerning **aluminium components**, the great challenge is to separate different alloy families. This allows for the recycling into the same alloy family and hence the application in the same product/function in closer loops. This is currently not done at a large scale and requires either disassembly before the vehicle is shredded and/or the use of advanced post-shredding technologies.
- Regarding **copper**, its content in vehicles has tripled over the last 20 years and will continue to surge amidst ongoing electrification.[2] However, due to very limited dismantling of copper containing parts and components – in average French facilities, e.g., hulks sent to shredders after dismantling still contain 86% of copper wires[3] – and insufficiently advanced shredding processes in some facilities, significant amounts of copper are lost as impurities in the main steel fraction. This leads to copper losses of 1.7–5.8kg per ELV[4] – substantial considering the number of treated vehicles in the EU. At the same time, copper that is not separated during dismantling or PST acts as a contaminant in the resulting steel fraction, decreasing its quality and preventing closed-loop recycling of steel.
- Currently, it is not possible to recycle **glass components** (windscreens, glass roofs, etc.) into container glass or even flat glass if shredded with other components, as is common practice. According to the European Federation of Glass Recyclers dismantling glass components could facilitate the recycling of 500kt of glass per year. Some countries have recognized this potential already and introduced legislation in this regard such as France, Portugal, the Netherlands, and Spain.

[1] See the European Commission's impact assessment study as well as recent reports by the Institute for Mobility in Transition (IMT-IDDRI) and Transport & Environment.
[2] Hannah Gross, Jean-Philippe Hermine. 2025. Car-to-Car Steel: Potential of End-of-Life Vehicle deep-dismantling and use of copper depolluted steel scrap to decarbonize automotive flat steel production. IMT-IDDRI.
[3] Ibid.
[4] Own calculations based on European Commission (2023) and IMT-IDDRI (2025).

Against this background, **we urge the co-legislators to**:

- Maintain the provisions regarding the **mandatory removal of parts and components** and consider the expansion to closures, glass roofs, smaller copper and electric and electronic equipment (EEE) including copper wire harnesses, sensors and internal and external charging cables.
- **Require that dismantled glass components are kept separated** from other glass fractions possibly recovered after dismantling.
- Require the **separation of aluminium fractions into four different families**, regardless of the technology used. Fractions with:
    - silicon > 1,5%, copper ≤ 0,5% and iron ≤ 0,2%
    - silicon > 1,5% and that does not meet the composition requirements of i) for copper and iron
    - silicon ≤ 1,5%, magnesium ≤ 1,5%, copper ≤ 0,3% and zinc ≤ 0,3%
    - silicon ≤ 1,5% and that does not meet the composition requirements of iii) for magnesium, copper and zinc
- **Introduce quality thresholds for output fractions**:
    - The copper content of the main steel fraction shall not exceed 0.1% on a weight basis.
    - The shredder heavy fraction derived after air separation and separation of iron, shall be further treated with the aim to separate ferrous, non-ferrous metals, plastics and other organic materials for recycling or recovery. The residue of these processes shall contain less than 1% of metal content by weight and, in accordance with Council Decision 2003/33/EC, less than 5% of total organic content by weight
    - The shredder light fraction shall be further treated with the aim to separate ferrous, non-ferrous metals, plastics and other organic materials for recycling or recovery. The residue of these processes shall contain less than 1% of metal content by weight and, in accordance with Council Decision 2003/33/EC, less than 5% of total organic content by weight.

While it needs to be acknowledged that dismantling and further treatment of the various fractions will increase costs for some actors along the recycling chain and potentially shift revenues between them, it will also create jobs and increases revenues due to the increased value of the recovered factions. For example, regarding copper, a recent assessment shows that recovering significant amounts of additional copper from ELVs through manual dismantling results in almost no additional net cost due to the value of the extracted copper.[5]

[5] Ibid.

**Reinforced measures to condition the export of used vehicles and enhance resource loops in the European Union**

Vehicles that are exported from Europe to third countries (mainly in Africa) tend to be old, of poor quality, and often pose both a safety and environmental hazard. The proposal aims to restrict the export of second-hand vehicles by conditioning it to a 'roadworthiness' test, i.e. in a fit state to drive on the road and introducing clearer criteria to distinguish used vehicles from waste (ELVs) to avoid exporting waste under disguised reuse status. We welcome the alignment with the Waste Shipment Regulation (EU) 2024/1157 and propose to build on these important provisions by including additional requirements to ensure the quality and high environmental performance of exported used vehicles out of Europe. Specifically, we suggest setting a minimum Euro 4 limit on exported vehicles from 2028 onwards. Additionally, all exported vehicles must have an effective exhaust gas cleaning. This would improve the quality and durability of exported vehicles, while also contributing to electrifying the fleets of third countries in the long term.

It is further acknowledged in Recital 86 of the Commission's proposal that vehicles of unknown whereabouts are one of the major implementation challenges of Directive 2000/53/EC, however, measures to tackle this issue are postponed to a future legal package. The signatories welcome all measures to solve the issue of "missing vehicles" and to tackle the illegal treatment and illegal export of ELVs. In this regard, requirements to avoid that non-roadworthy vehicles can be exported outside the EU should be strengthened and it should be considered to implement the measures mentioned in Recital 86 to tackle missing vehicles in this regulation as opposed to postponing it to a later stage.

## About the signatories

**About EEB**

The European Environmental Bureau (EEB) is Europe's largest network of environmental citizens' organisations, standing for environmental justice, sustainable development and participatory democracy. It represents over 185 members in over 41 countries.

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**About DUH**

Environmental Action Germany (Deutsche Umwelthilfe – DUH) is a recognized German environmental and consumer protection organization, which has been campaigning for resource conservation and consumer interests since 1975. DUH is politically independent, non-profit and it campaigns on a national and European level. It is for example renowned for its role in uncovering the Diesel Scandal and in establishing a deposit system for non-refillable beverage containers in Germany. Within its Department Circular Economy, DUH promotes waste prevention, responsible consumption and a sustainable economy.

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**About ECOS**

ECOS - Environmental Coalition on Standards is an international NGO with a network of members and experts advocating for environmentally friendly technical standards, policies, and laws. We ensure the environmental voice is heard when they are developed and drive change by providing expertise to policymakers and industry players, leading to the implementation of strong environmental principles.

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**About T&E**

Founded over 30 years ago, Transport & Environment (T&E) is one of the leading clean transport NGOs in Brussels, envisioning a zero-emission mobility system that is both affordable and has minimal impact on public health, climate and the environment. T&E serves as the umbrella organisation for 63 member organisations working to promote smarter and cleaner transport in 25 countries across Europe and beyond.

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**About Eurometaux, European non-ferrous metals association**

Eurometaux is the voice of non-ferrous metals producers and recyclers in Europe. We are an umbrella association representing the interests of the combined non-ferrous metals industry towards EU policy makers. In total the industry employs directly 500,000 people and indirectly more than 3 million across over 900 production facilities, with an annual turnover of €120bn.

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**About European Aluminium**

Founded in 1981 and based in Brussels, European Aluminium is the voice of the aluminium industry in Europe. We actively engage with decision makers and the wider stakeholder community to promote the outstanding properties of aluminium, secure growth and optimise the contribution our metal can make to meeting Europe's sustainability challenges. Our 100+ members include primary aluminium producers; downstream manufacturers of extruded, rolled and cast aluminium; producers of recycled aluminium and national aluminium associations, representing more than 600 plants in 30 European countries. Aluminium products are used in a wide range of markets, including automotive, transport, high-tech engineering, building, construction and packaging.

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**About International Copper Association Europe**

The International Copper Association Europe is the leading advocate for the copper industry in Europe and the European arm of the International Copper Association (ICA). Our members mine, smelt, refine and recycle copper for use across the economy, in the electricity system, buildings, transport and industry.

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**About Glass for Europe**

Glass for Europe is the trade association for Europe’s flat glass sector. Flat glass is the material that goes into windows and facades for buildings, windscreens and windows for vehicles, solar energy equipment, furniture and appliances. Glass for Europe brings together multinational firms and thousands of SMEs across Europe, representing the entire flat glass value chain. It comprises flat glass manufacturers, AGC Glass Europe, Guardian, NSG-Group, Saint-Gobain, and Şişecam and works with national partners gathering glass processors and transformers.

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