

End-of-Life Vehicles Regulation European Commission proposal

European Copper Institute position

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The European Copper Institute (ECI) welcomes the European Commission's (EC) ambition to bolster responsible production and recycling of vehicles, as well as maintain within the EU economy the value carried by this stream. The EC proposal for a Regulation on End-of-Life Vehicles (ELVR) has great potential in driving vehicles' sustainability, and to effectively do so, we believe the following enabling conditions should be secured:

1. Collection, recovery and recycling of high-quality secondary materials (Recital 64)

Resource efficiency should be strengthened taking due account of energy efficiency, economic viability, and technical feasibility aspects.

2. Unknown whereabouts (Article 38)

Keeping the management of vehicle exports at national competence level limits the effectiveness of getting the challenge of the unknown whereabouts under full control.

3. Hazardous substances (Article 5)

Should not be restricted upon their presence in vehicles, but upon the form in which they are found and the adverse impacts caused by the exposure to humans or the environment .

This initiative is of great relevance and importance for the copper sector. Currently, there is an estimate of 300kt unrecovered copper from ELV separation and shredding inefficiencies, which, combined with the illegal exports challenge, lead to over EUR 6bn losses. By 2030, copper in vehicles is expected to rise by 200% (electric vehicles, electrification-related products, and charging infrastructure), tripling the embodied economic value. More information on copper recycling in ELVs can be found [here](#). Therefore, the ELVR is a critical tool to secure secondary copper availability and the maintaining of its associated value within the Union.

Collection, recovery and recycling of high-quality secondary materials

Recital 64 foresees the recovery of high-quality secondary materials, and especially with respect to copper being strategic for green & digital transition. Taking the example of vehicles' wiring harnesses, the major recycling value lies within copper conductors in cables. Ensuring that ease of dismantling is put at the forefront of the full life cycle considerations at the design stage of a vehicle is of paramount importance. This allows the highest value parts and components to be easily detected by dismantling companies. Subsequently, high-grade copper can be recovered and recycled in lieu of other low quality materials which are used in sub-quantities and is more difficult and less economically beneficial to recycle. Besides wires, this rationale can be extended to all vehicle parts (e.g., electronics and printed circuit boards) where most value of materials needs to be maintained at End-of-Life (EoL). Nevertheless, the means to maximize secondary copper availability under this Regulation need to range equally between vehicle design and waste phases. That said, Articles 6 (recycled content), 7 (design), 28 (shredding), 33 (reuse, remanufacturing and refurbishment of parts/components), and 34 (recycling targets) are instrumental in recovering the maximum amount of copper from ELVs.

ECI asks the EC to consider the following recommendations in its design and waste management measures laid down in the proposal:

- **Article 6:** We support the EC's decision of keeping copper out of the scope of materials with recycled content targets. Unlike plastic, copper has a mature scrap market. Also, this metric cannot demonstrate the efficacy of the waste management system because it does not consider copper's durability and long lifespan, and does not account for the amount of secondary copper trade flows. On top of that, it is a realistic acknowledgment that even a 100% recycled content target could not help satisfy the expected increased demand for copper in the automotive. Primary copper is equally needed as secondary copper, and what the vehicle waste legislation can secure is to provide the basis for recovery of high-quality copper, thereby avoiding copper losses from this EoL stream.
 - **Measures for the collection of vehicles at End-of-Life, the separation of the most valuable parts and the dismantling of components before shredding are ambitious yet pragmatic to increase secondary copper availability.**
- **Article 7:** Design-oriented measures secure separation and recycling of materials from ELVs. However, a more coordinated optimization approach between actors from design to recycling is needed to increase copper and copper alloys recovery. The Copper Alliance has mapped the multitude of different alloys, structured them by common copper alloy families, and allocated them to five main fields of applications, incl. transport uses (see Figure 4 [here](#)). This helps in the knowledge of copper alloys in ELVs, and reflects the need for more value chain collaboration.

- **Incentives for full value chain cooperation from designers to recyclers can strengthen industrial synergies and lead to easy-to-dismantle vehicles at the end of their service life.**
- **Article 28:** We welcome the EC's shredding-focused measures. New technologies and techniques can help improve the copper recycling processes.
- **Idem as above, incentives for full value chain cooperation from designers to recyclers can strengthen industrial synergies and lead to easy-to-dismantle vehicles at the end of their service life.**
- **Article 34:** We support reuse, recovery, and recycling targets for vehicles, insofar as these take due account of their technical feasibility and economy viability. Any targets shall always be ambitious but at the same time realistic. For example, sensor-based technologies promise the economical and practical recovery of materials and products that can directly be sold on the internal market instead of shipping these metal fractions to third countries for manual sorting.
- **The EC should focus on further incentivizing investments in and larger scale roll out of sensor-based sorting and recovery technologies.**

Unknown whereabouts

In view of the decarbonization of road transport and the associated expected soaring demand for copper, it is vital to improve the ELVR provisions aiming to reduce the unknown whereabouts. These are for a large part due to vehicle dismantling at illegal sites and exports of ELVs outside of Europe as used cars. Although the proposal lays down rules under Article 38 to tackle exports of used vehicles (e.g., not EoL and with a certificate of roadworthiness), the legal text falls short of addressing the issue of unregistered vehicles without a certificate of destruction, which is in fact the root of the problem when it comes to illegal exports or treatment at illegal sites. In addition, by keeping this competence at national level, the proposal boosts even further the likelihood of vehicles' embedded material leakage to third countries.

ECI asks the EC to lay down rules that secure the completeness of statistics. To better control ELV exports, we recommend:

- **Strengthening national registration systems** (e.g., register any road transport vehicle where the owner/user is resident/registered), and **strengthening enforcement of Article 26.** From that moment, the owner will be bound by at least two payment obligations (insurance, roadworthiness

test) serving as incentives to dispose of the vehicle in an authorized treatment facility when the vehicle reaches its EoL.

→ **Update diligently the vehicle registration system** upon change of ownership (incl. export within/outside the EU – with necessary documentation) **and through measures to further incentivize continuous cooperation among national competent authorities pursuant to Article 47 to secure enforcement.**

→ **Deregistration from the system in case of destruction** (certificate of destruction by an authorized treatment facility) **or theft** (police statement)

ECI recommends amending Article 38, par. 4b accordingly: *‘a statement confirming that the used vehicle fulfils the requirements set out in paragraph 3’.*

Hazardous substances

ELVs contain various hazardous substances which fulfil essential functions. As long as their exposure to human health and the environment is low, these do not cause any adverse effects. For metals, some hazardous endpoints are assessed differently for different forms under the Regulation (EC) No 1272/2008 (CLP Regulation). Environmental toxicity may, for example, be present for the powder form of metals but not for the massive form – as reflected in the Guidance to the CLP Regulation (Annex IV, section IV.5.5). Recycling streams and naturally occurring raw materials contain varying amounts of hazardous substances, but the copper industry is able to treat recycling streams efficiently, safely and responsibly – even those containing residues of hazardous substances. More specifically, during copper production and recycling, these substances are extracted and separated to the highest extent using best available technology. This ensures that pure copper and by-products can be recycled and recovered from complex metal scrap streams.

ECI asks the EC to address regrettable substitution from a chemicals management (REACH datasets and restriction processes) and broader perspective (if hindering recycling), by using a materials’ lifecycle approach. Once in use in products, metals do not a priori lead to harmful effects. It should be both the identity and the form of a substance used in products that would matter when setting requirements for substances of concern in products. This would allow continued use of sustainable materials and take full consideration of their strategic value.

→ Exemptions from any minimization or substitution requirements of “*substances of concern*” need to be introduced where their exposure does not cause effects to human health or the environment.

A huge amount of critical raw materials are needed to achieve the Green Deal goal of decarbonizing road transport. Producing enough battery cells to meet the expected rise in demand for battery electric vehicles will require significant amounts of copper. To meet this demand, it is important to facilitate its recovery and recycling from ELVs. ECI is willing to further contribute to the policymaking process and remains at the Commission’s disposal for any information our expertise can provide in developing the Delegated Acts mentioned in the text for used vehicles, the calculation rates for recycling targets, maximum concentration values, or else.

About the European Copper Institute

Based in Brussels, the European Copper Institute (ECI) is the leading advocate for the copper industry in Europe and is the EU Regional HUB of the International Copper Association (ICA). Through a team of policy, industry and scientific experts, ECI acts to support copper’s role in achieving the EU’s policy goals. 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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