

# Eco-design for Sustainable Products Regulation New Product Priorities

## European Copper Institute position

12 May 2023

**ECI welcomes the European Commission's (EC) ambition for a sustainable product policy framework to reduce the negative life-cycle environmental impacts of products placed on the EU market.** The EC proposal on Eco-design for Sustainable Products Regulation (ESPR) has great potential in driving product design towards more sustainability. The new draft set of product priorities and horizontal measures, as identified by the Joint Research Centre (JRC) [study](#), give a first indication of the EC's focus for the next years.

To ensure that the envisaged eco-design requirements are commensurate to the environmental and circularity aspirations for intermediate products made of – inter alia – copper, we would like to provide the following comments in relation to the ecodesign performance requirements:

- **Recycled content is not the most suitable recycling efficiency indicator for copper – End-of-Life (EoL) collection, processing, and recycling rates, co-product content, and circular material use rate are.**
- **The sustainability improvement potential of product and system design shall be valorised to facilitate disassembly at EoL and recyclability of materials.**
- **The sustainable sourcing and production of raw materials should be certified through robust and credible industry and multi-stakeholder schemes, and OECD-aligned standards.**
- **Any requirements on the restriction of hazardous substances should be risk-based and not solely based on their presence per se in products.**

## Recycled content is not the most suitable recycling efficiency indicator for copper –EoL collection, processing, and recycling rates<sup>1</sup>, co-product content, and circular material use rate are

Not all performance requirements set at EU level through Delegated Acts can a priori apply to all types of products and product groups, because they have different needs. When it comes to the recycling metrics of copper-containing products and intermediates, recycled content falls short of showing the actual efficacy of the waste management system due to the following reasons:

- **The copper scrap market is mature enough.** According to the JRC study, the amount of recycled copper in new products is moderately high today (over 40%). This is confirmed by the latest figures from our Mass Flow Analysis (MFA) which show that in 2020 the recycling input rate of copper in products for the EU-28 was almost 50%. Recycled content can serve as stimulus only for those materials whose secondary streams are not fully functioning yet.
- **Copper's lifespan in products can last even decades.** An estimated 66% of the 690Mt of copper produced globally the last 100 years is still in productive use<sup>2</sup>. Recycled content will not help increase copper's high recycling rates if copper remains in productive use for long; let alone that its demand will exponentially rise due to its strategic characterization (reflected in the Critical Raw Materials Act) for the energy transition (electronics, batteries).
- **Recycled content has narrow scope.** First, it does not directly point to the recycling efficiency with which post-consumer scrap is collected and processed to secondary-sourced metal suitable for different uses. Second, it focuses only on the recycling of European post-consumer scrap in Europe, excluding the recycling of:
  - (a) European post-consumer scrap treated elsewhere; and
  - (b) global scrap in Europe.

The scrap flows within Europe, regardless of where they are treated or coming from, need all to be equally considered as they add to the availability of secondary copper resources.

- **Recycling over certain limits has trade-offs.** The more industry is pushed to increase recycled content of a metal with high recycling efficiency, like copper, beyond what is thermodynamically possible and technically feasible, the more cleaning and further treatment steps are needed for processing inputs of different composition for high-quality yields. This results in higher energy consumption and increased Scope 1 CO<sub>2</sub> emissions.
- **Consumers play a fundamental role in secondary material availability.** If products are not discarded or if they are not disposed of in the right collection bins, resources can never return back to the industry for reprocessing and recycling.

**ECI asks the EC to not limit the assessment of recycling efficiency upon recycled content, and to take due account of trade-offs (e.g., energy efficiency) when setting eco-design performance requirements for products and product groups.**

<sup>1</sup> <https://www.sciencedirect.com/science/article/pii/S030142072100221X?via%3Dihub>

<sup>2</sup> <https://copperalliance.org/resource/copper-recycling/>

For copper-bearing products/intermediates, the most suitable recyclability metrics are:

- **EoL collection rate**  
Amount of copper collected out of the total copper content in EoL products
- **EoL processing rate**  
Amount of copper recycled out of the copper collected from EoL products
- **EoL recycling rate**  
Amount of copper recycled out of the total copper content in EoL products
- **Co-product content**
  - A. Amount of Non-Ferrous Metals (NFM) carried by copper and recovered during copper recycling (e.g., gold, silver, zinc, cadmium, palladium)
  - B. Amount of industrial minerals, purposefully produced during smelting and refining processes of copper (e.g., iron silicate, slimes, sludges)
- **Circular material use rate**  
Amount of Group B co-products that are used either as secondary input within the copper furnace they are produced, or as safe and sustainable substitutes for primary raw materials in other sectors (e.g., iron silicate<sup>3</sup>)

## The sustainability improvement potential of product and system design shall be valorised to facilitate disassembly at EoL and recyclability of materials

Efficiencies at system level (e.g., a building) can further increase environmental benefits compared to product-only improvements. This can be achieved through sufficient consideration of potential trade-offs with the broader sustainability parameters that will be introduced for all products embedded in a system. At the same time, policy-makers should equally uptake system-level opportunities' to the screening of product groups. The Ecodesign for power cables (Lot 8<sup>4</sup>) is a typical example, where optimizing the system (e.g. building, lighting, industrial and IT systems) delivers as much energy saving as would be expected from policies addressing the efficiency of products alone. In some cases, addressing the product-system level could double the energy, CO<sub>2</sub> and cost savings:

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<sup>3</sup> Technical Report by the Joint Research Centre of the European Commission: Study on methodological aspects regarding limit values for pollutants in aggregates in the context of the possible development of end-of-waste criteria under the EU Waste Framework Directive. Hans Saveyn et al, 2014. >> [Link](#)

<sup>4</sup> <https://erp4cables.net/>

- The revised MEErP<sup>5</sup> (adopted in 2011) encourages the consideration of different layers, stating that "(...) *it always makes sense for a regulator to look beyond the strict product approach, to look forward to the possible applications of a component, sub- assembly or product in order to avoid sub- optimisation. (...) at the very least the 'extended product approach' should be taken into account*".
- The European Parliament in its Report on the implementation of the Ecodesign Directive<sup>6</sup> states that "(...) *the development of a 'system approach' to consider not only the product but the whole system required for its functioning in the Ecodesign process is becoming an increasingly critical success factor for resource efficiency and urges the Commission to include more of such system-level opportunities in the next Ecodesign work programme*".
- The policy recommendations in the European Parliamentary Research Service Implementation Assessment of the Ecodesign Directive<sup>7</sup> states that "(...) *considering not only the product but the whole system required for its functioning in the Ecodesign process would be another important success towards resource efficiency*".

**ECI asks the EC to valorize the system-level opportunities when setting eco-design requirements for specific products, also where existing legislation does not or insufficiently addresses sustainability aspects.** Sustainability aspects that are not or are insufficiently covered by product- or application-specific legislation (e.g., Construction Product Regulation for construction products, linked to Environmental Performance of Buildings Directive for building) should in priority be considered under and addressed by that product- or application-specific legislation. The ESPR should only set requirements where existing specific legislation cannot address specific environmental sustainability aspects. This reflects accurately the '*lex specialis derogat lex generalis*' principle.

To secure that copper resources are not lost after a product reaches its EoL and that waste is minimized, the necessary action must be taken at the design stage of products (e.g., cables) or systems (e.g. buildings). Design-for-Sustainability requires product/system designers to focus on assessing which material promises the best sustainability performance, for example with regard to energy efficiency combined with other factors, like recyclability, which are more durable, valuable after use, and easier to sort and separate, by taking a full life cycle perspective (UNEP, 2013<sup>8</sup>). Proper product/system design shall allow compatible groupings of metals to be easily dismantled and directed into the correct metallurgical processing infrastructure. While a sustainable-by-design approach to material production, pursuant to JRC's aspiration<sup>9</sup>, aims to prevent the hindrance of reuse, waste collection, sorting, and recycling/upcycling, these depend on product/system design in the end.

<sup>5</sup> Methodology for Ecodesign of Energy-related Products >> [Link](#)

<sup>6</sup> European Parliament resolution of 31 May 2018 on the implementation of the Ecodesign Directive (2009/125/EC) (2017/2087(INI)); §28. >> [Link](#)

<sup>7</sup> The Ecodesign Directive (2009/125/EC): European Implementation Assessment. Study by the European Parliamentary Research Service. Author: Anna Zygierewicz. Ex-Post Evaluation Unit. PE 611.015, November 2017, p.93. >> [Link](#)

<sup>8</sup> <https://wedocs.unep.org/handle/20.500.11822/8423;jsessionid=5E91D8E5938F795C22F70904D4B73BC5>

<sup>9</sup> <https://publications.jrc.ec.europa.eu/repository/handle/JRC128591#:~:text=The%20SSbD%20is%20an%20approach,human%20health%20and%20the%20environment.>

**ECI proposes to the EC to emphasize more in product and system design to facilitate recyclability of NFM in final products.** Not only material production requirements can make sustainable products the norm, but also requirements on product and system design to select those materials, which is a necessary precondition.

## **The sustainable sourcing and production of raw materials should be certified through robust and credible industry and multi-stakeholder schemes, and OECD-aligned standards**

Due diligence in the copper industry is driven both by industry's proactiveness in prioritizing concerns around human rights and adverse environmental impacts through their and their business partners' activities, and by lawmakers' ambition to move from voluntary schemes and good practices to legally binding regulations. Although it is the individual responsibility of each company to comply with the applicable rules, industry schemes and voluntary standards can verify a site's compliance, and subsequently, the materials it produces, when their sustainability systems are based on:

- Transparent, robust and trustworthy industry schemes based on the ISEAL credibility principles (e.g., positive contribution to sustainability impacts, meaningful stakeholder engagement, value creation, measurable progress, transparency, impartiality, and continual improvement)
- OECD-aligned voluntary standards<sup>4</sup>

**ECI recommends the EC to explicitly refer to the role industry and multi-stakeholder schemes, and voluntary standards, to verify sustainable material sourcing and production.** If such multi-stakeholder initiatives are not recognized as reliable evidence of a company's sustainable practice to source and produce copper (or other materials), this would lead to an untapped potential, and would go against the EU Batteries Regulation provision that foresees the recognition of industry schemes, or the EU Corporate Sustainability Due Diligence that clearly stipulates upon the responsible operation leverage that voluntary initiatives can achieve.

## **Any requirements on the restriction of hazardous substances should be risk-based and not solely based on their presence per se in products**

While the proposal empowers the Commission to adopt new eco-design requirements for substances of concern in products, 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). In addition, recycling streams and naturally

occurring raw materials inevitably contain varying amounts of hazardous substances, which, in conjunction with the miniaturization trend, also explains the presence in products of a variety of substances, including hazardous ones. 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 ensure that substances needed for the strategic autonomy and sustainable innovations are not regulated according to their inherent toxicity but according to the risk and control over exposure.** Once in use in products, metals do not a priori lead to harmful effects. Exemptions from any minimisation or substitution requirements of “substances of concern” need to be introduced where they do not cause harmful exposure to human health or the environment. Therefore, 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.

ECI is willing to contribute to developing ecodesign requirements for copper-bearing products and participate in the Eco-design Forum’s subsequent work to help ensure sustainability metrics are fully respected when it comes to copper’s presence in products. We also remain at the Commission’s disposal for any information our expertise can provide in developing the three-year working plans.

#### **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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