

A call to stop the leakage of copper and copper alloy scrap – a strategic raw material for a resilient and sustainable Europe

This paper reflects the position of the signing enterprises and organizations (see the Annex)

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1. Copper recycling helps reduce GHG emissions and contributes to meeting the increasing demand for copper

Copper is a key material for achieving a climate-neutral, digital and resilient European economy. It is recognized as a strategic raw material that enables electrification, energy efficiency and renewables, and is widely used in most decarbonisation technologies. More copper will be needed as the world decarbonises and becomes more digital, in order for living standards to improve. Copper demand is expected to grow by 35%¹ in the EU and to double globally by 2050².

Unlike many other materials, copper can be recycled indefinitely without losing its intrinsic properties, making it an ideal component of a circular system. This inherent recyclability ensures that copper remains a valuable resource throughout its lifecycle, reducing waste and contributing to sustainable resource management.

Around half of the copper in use in the EU today comes from recycling³. Efforts should be made to increase this share because recycling copper helps reduce the greenhouse gas (GHG) emissions associated with production and enhances resource efficiency. In addition to lowering greenhouse gas emissions, the use of copper scrap helps reduce raw material costs for secondary smelters-refiners and semi-fabricators. Beyond copper itself, recycling also offers a pathway to recover other valuable metals from complex streams such as electronic waste. **However, it will not be possible to meet growing demand for copper through recycling alone, largely because of copper's long in-use lifetime (on average 25–30 years). Both mining and recycling must be increased to meet projected copper demand.**

Regarding the EU-US framework agreement on reciprocal, fair and balanced trade, we urge the European Commission to build on its July 29th document (The EU-US trade deal explained) pointing out that both sides are committed in joining forces “to protect the Steel, Aluminium and Copper sectors from unfair and distortive competition”. We welcome the European Commission’s commitment to treat copper on an equal basis with steel and aluminium. During the next steps of negotiations ahead of finalizing the legal text of the agreement we urge the EU and the US to remain fully committed “to cooperate on ring-fencing their respective domestic markets from overcapacity, while ensuring secure supply chains between each other, including through tariff-rate quota solutions”, as copper alongside with steel and aluminium are of a major importance for both economies and value chains.

In this paper, we focus on the highest-purity scrap covered under HS code 7404, highest purity copper and copper alloy scraps, both grades either used for cathode production and heat-management roles in the furnace by refineries and/or as direct melt by semi-fabricators.

¹ Metals for Clean Energy, KULeuven, 2022 <https://eurometaux.eu/media/jmxf2qm0/metals-for-clean-energy.pdf>

² MineSpans Copper Demand Model Q3 2021

³ <https://copperindustry.eu2030.eu/wp-content/uploads/2025/01/2025-01-20-ICA-Europe-EU-Clean-Industrial-Deal-Position.pdf>

2. Copper recycling strengthens European supply chains

Europe must avoid dangerous dependencies for critical raw materials. Every raw material we save – primary and/or secondary – makes us more competitive and more resilient. The European copper scrap consumers (fabricators and refiners) should have first and prioritized access to the European urban mine's raw materials.

3. Copper secondary refiners and semi-fabricators aim to increase scrap usage to improve competitiveness and help meet climate targets

Currently, around 2/3 of the refined copper produced in EU comes from primary (concentrates) and 1/3 from secondary (scrap)⁴. For semi-fabricated products, around 3/4 comes from primary (cathodes) and 1/4 from secondary (direct melt of scrap)⁵.

In the EU, copper scrap is processed via two main routes: **refined secondary production** and **direct melt**.

In the secondary-refining route, old, post-consumer copper undergoes fire-refining or is converted to anodes and then electrolytically refined into cathode-grade copper. Roughly 70 % of the scrap processed by secondary smelters today is sourced from end-of-life products⁶. Scrap is also used in the primary converting stage where smelters typically add 10–30 % scrap to absorb heat from the exothermic reaction. **When high-quality scrap is not available, it must be substituted with freshly cast anodes, which raises raw material costs and reduces economic efficiency.**

In the direct melt route, scrap of sufficiently high quality can be fed directly into furnaces to produce semi-fabricated copper products such as wire rod, sheets, tubes, rods and bars. Unlike lower-grade secondary material, remelt scrap requires no extensive cleaning or refining beforehand, making it ideal for direct melting without additional refining⁷. **Semi-fabricators**, in all regions, **are looking to expand their use of both pre- and post-consumer scrap** to meet growing demand, lower their Scope 3 emissions (the greenhouse-gas impact embedded in purchased materials), and reduce reliance on refined copper.

Currently, **copper production costs in the EU are some of the world's highest** compared to other regions where copper is produced, notably due to higher energy and regulatory costs. Copper is a globally traded commodity, and the copper price is set on global markets, which means that EU smelter-refiners and semi-fabricators cannot pass on higher energy, carbon or regulatory costs to consumers. This hinders the competitiveness of European producers vs the rest of the world. At the same time, copper smelters face growing competitiveness challenges due to a tight copper concentrate market and expanding Chinese smelting capacity. Treatment and refining charges (TC/RCs), the fees smelters earn for converting concentrate into refined copper, have fallen to historic lows. This is a concern for European smelters that import 48% of their concentrate supply.

Increasing the use of scrap is key not only to cut costs to remain competitive in a global market but to lower the **carbon footprint of copper production** and help refiners and semi-fabricators achieve company-specific decarbonisation targets. **This has also a positive impact on the Scope 3 of the industrial value chain.**

Indeed, directly melting high-purity scrap consumes 80–90 % less energy than primary production⁸, directly reducing on-site CO₂ emissions (Scope 1) and electricity-related emissions from purchased energy (Scope 2) for both smelters and semi-fabricators. Additionally, the use of copper scrap can significantly reduce Scope 3 emissions of the smelters-refiners, given that the mining and concentration processes account for about 60% of the total GHG emissions of copper cathode production.

⁴ ICSG Statistics Yearbook 2024 <https://icsg.org/publications-list/>

⁵ IWCC

⁶ ICSG Statistics Yearbook 2024 <https://icsg.org/publications-list/>

⁷ ICSG Statistics Yearbook 2024 <https://icsg.org/publications-list/>

⁸ Copper recycling (International Copper Association, 2017): <https://internationalcopper.org/wp-content/uploads/2017/12/ica-copper-recycling-201712-A4-HR.pdf>

4. The EU market is short of scrap, and it is expected to worsen

The availability of scrap in the EU has severely decreased due to rising demand and increasing scrap net export. In addition, EU semi-fabricator companies are investing to increase production, which will further widen the gap between their higher copper scrap needs and its lower availability.

These trends are highlighted below in Table 1:

- The increase in **demand for refined copper** (+35% between 2023 and 2050⁹).
- The **export of scrap (HS code 7404)** from the EU has been exploding (+31% between 2022 and 2025), particularly to China, and is anticipated to increase further.
- The **import of scrap** to the EU has sharply declined (-23% between 2022 and 2025). The **import of scrap from the US** (110 kt in 2023) is expected to decrease or stop due to the development of secondary smelters in the US, the announcement of US tariffs on copper, and expected scrap export control measures from the US.
- **EU copper scrap trade profile** shifted from being a net importer (52 kt in 2022) to a net exporter (203 kt in 2024). With global semi-fabricators increasingly competing for high-quality scrap, imports are likely to continue to fall and exports to rise.
- **Additional EU capacities** of fabricators dedicated to scrap and additional secondary refining capacity will come into operation, and smelters are expected to increase their strategic focus on scrap. This will deepen the EU's scrap supply deficit even further.

Table 1. Key EU refined-copper and scrap data and forecasts for 2022–2027, covering refined-copper demand, scrap trade balances, and planned semi-fabrication capacity additions. Please note that IWCC data cannot exclude, at the moment, the UK for anti-trust reasons

in kt Cu	2022	2023	2024	2025	2026	2027	Comment
Refined Copper Demand (EU+UK) (1)	3051	3031	3059	3090	3120	3152	IWCC data 2022-2024 (incl. UK for anti-trust reasons)
<i>Refined Copper Demand (EU+UK) (1) (%)</i>		-0.66%	+0.92%	+1%	+1%	+1%	1% CAGR projection (25-27) based on KULeuven study
Copper scrap import (kt) (2)	542	452	407	419			Further decline likely 2026-27
<i>of which from USA (kt) (2)</i>	<i>128</i>	<i>98</i>	<i>81</i>				Further decline likely 2026-27
Copper scrap export (kt) (2)	490	531	610	640			Further increase likely 2026-27
<i>of which to China (kt) (2)</i>	<i>198</i>	<i>230</i>	<i>259</i>	<i>315</i>			Further increase likely 2026-27
Copper scrap trade balance (Kt)	52	-79	-203	-221	> -221	> -221	Import - Export
Additional scrap capacity planned (kt)					130	270	Estimate based on publicly available information
Copper scrap scarcity (kt)	0	-79	-203	-221	> -350	> -400	vs 2022 baseline (3)

(1) source : IWCC (UK included for anti-trust reasons)

(2) source : trade data, ICSG. For 2025: Q1 data multiplied by 4

(3) calculation: scarcity = imports - exports - new capacities

⁹ Metals for Clean Energy, KULeuven, 2022

EU fabricators and secondary smelters are expected to achieve a net increase of at least 400 kt in copper scrap processing capacity between 2026 and 2030. While this figure represents aggregated industry projections, detailed information on specific company initiatives has been provided confidentially to the European Commission.

5. Measures must be taken to improve the availability of copper scrap in the EU to ensure a competitive and circular copper value chain

The large gap between today's actual scrap use and the higher potential use highlights an urgent need for targeted measures to safeguard the sustainable development of the EU's secondary-refining and semi-fabrication copper industry. A reliable scrap supply is critical to the copper industry's role in a low-carbon, circular economy. Yet the EU faces a growing shortage, threatening its strategic autonomy, industrial competitiveness, and climate goals. A key driver is the ongoing export of high-quality scrap that could otherwise be recycled domestically.

While broader reforms under the Circular Economy Act can boost collection, improve product design for dismantling, facilitate shipping, **urgent EU action is needed to specifically address scrap leakage.** The following measures should be considered:

5.1 Export restriction: A temporary and targeted restriction on the export of high-purity copper scrap would immediately boost domestic feedstock availability. By preventing the outflow of key scrap grades (pre-consumer and post-consumer Copper scrap), smelters and fabricators within the EU could secure a larger, more reliable supply. Europe can look to China's approach under GB/T 38471-2019 (effective July 1, 2020). There is no reciprocity in the scrap trade with China. While scrap imports are only allowed as "raw material", scrap exports are prohibited.

To prevent competitive imbalances, the EU should adopt the reciprocal measures outlined in the Draghi Report¹⁰ by restricting exports of critical raw material wastes (such as high-purity copper scrap) to any third country that has imposed its own export limitations on critical raw materials.

5.2 Export duty: Applying a graduated export duty on copper scrap exports, especially to countries with lower environmental and/or sustainability standards, will create a financial disincentive for moving material overseas, while generating revenue that can be reinvested into high-quality recycling infrastructure and collection programs. A modest duty will strike a balance between capping exports and avoiding increasing unlawful activity.

5.3 Eliminating the End-of-Waste criteria for copper: End-of-Waste (EoW) criteria under the Waste Framework Directive are meant to define when a material no longer counts as waste, promoting resource efficiency, supporting the circular economy, and giving legal certainty to businesses within the EU. In practice, however, implementation is uneven across the EU and open to abuse.

Even more concerning, some operators abuse EoW rules to bypass strict waste controls. In many member states, copper scrap can be self-declared as "no longer waste" without prior approval, allowing material that should stay under the waste regime to exit the EU entirely bypassing the Waste Shipment Regulation and its environmental protection clauses. This loophole diverts valuable secondary raw materials from high-quality domestic recycling and undermines the EU's capacity for sustainable resource management.

To eliminate this loophole, the EU should abolish the EoW criteria for copper scrap. Abolishing the EoW criteria would guarantee that all recovered copper remains subject to stringent waste-shipment

¹⁰ The Future of European Competitiveness, Report by Mario Draghi, September 2024, Part B, Section 1, Chapter 2, priority action 8, last bullet p64 https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en#paragraph_47059

controls and quality verification, channelling every tonne into domestic recycling streams and upholding both the EU's environmental ambition and the integrity of its circular-economy objectives.

We do not view the measures as “either/or” options but also see combinations of the measures as an effective tool for restricting exports of copper and copper alloy scraps. We strongly advocate for eliminating or tightening of the EoW criteria combined with an export duty.

Taking into consideration the political decision expressed in the joint statement that “the EU and the US commit to strengthen cooperation and action related to the imposition of export restrictions on critical mineral and other similar resources by third countries, we are looking forward to the relevant measures taken by the authorities and with immediate effect.

Annex

This paper is signed and supported by the following enterprises and organizations that are users of copper and copper alloy scrap in the EU:

(by alphabetical order)



