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# Batteries legislative proposal

## Comments from the European metals industry

### Introduction

In December 2020, the European Commission presented the legislative proposal for modernising the current batteries legislation (Directive 2006/66/EU). The proposal brings fundamental changes to the legal basis and the format of the legislation. It also sets objectives for batteries metals to be produced sustainably from both mined and recycled sources, including new measures on due-diligence, chemicals management and carbon footprint.

The provisions of the proposal also connect to various EU pieces of legislation and/or initiatives (e.g. on chemicals, waste) so the importance of keeping a coherent approach and avoiding any unnecessary overlaps, will be key. Additionally, the text foresees numerous secondary acts to establish the methodologies for calculating of e.g. carbon footprint and recycled content.

Our sector recognises there is major work ahead to deliver on EU's ambition for batteries to help achieve the European Green Deal. Eurometaux members, producing and recycling battery metals (e.g. aluminium, cobalt, copper, lead, lithium, nickel, zinc), are committed to provide its expertise throughout the legislative process to establish conditions for a competitive and sustainable EU battery value chain.

Eurometaux promotes the safe use of metals in a wide range of applications/uses, including batteries. Therefore, we build our recommendations for battery metals on our vision for the Chemicals Strategy for Sustainability and Zero Pollution Action Plan, as well as on ECHA's Integrated Regulatory Strategy.

### Key recommendations

- **Responsible and ethical sourcing of battery raw materials** – Consider a transparent and pragmatic approach that leverages internationally recognised standards building on existing voluntary due-diligence schemes. Avoid loopholes by applying value chain thinking and maintain a level-playing field with third countries, offering a smart mix of minimum requirements and incentives.
- **Carbon footprint** – The use of life cycle assessment to assess the environmental performance of products is fully supported. Preparation of the delegated act for the carbon footprint calculation methodology should follow realistic timelines and capitalise on the work done by industry on the initial and currently reworked PEFCR for High Specific Energy Rechargeable Batteries for Mobile Applications.
- **Chemicals management** – Promoting and ensuring the safe use of hazardous substances in batteries should not differ from other applications/uses. Any unnecessary legislative overlap should be avoided by the



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careful execution of a Risk Management Option Analysis (RMOA) to define the most optimal risk management measure. The procedure must follow a risk-based approach, include a socio-economic assessment (SEA) and, if needed, an assessment of alternatives (AoA) considering economic and technical feasibility.

- **Collection and efficient recycling of waste batteries** – Introduce ambitious and realistic collection targets for portable batteries and prevent leakage of waste batteries. Prioritise actions to promote safe and efficient recycling of metals in batteries.
- **Recycled content** – Define a robust methodology and ensure a thorough impact assessment before considering the possibility of introducing the mandatory recycled content targets especially until more information on the evolution of the market is available. In the meantime, effectively implement policy framework boosting collection and sorting of metals-containing products and promoting high-quality end-of-life recycling, ensuring that enough recycled materials is available in Europe.
- **Regulatory coherence** – Avoid overlaps/inconsistencies between various policy instruments (REACH Regulation, OSH legislation, ELV Directive) regulating use of hazardous substances in batteries to provide industry with a more predictable regulatory framework essential for securing long-term investments and maintaining metals production in the EU. Remove shortcomings in the existing waste legislation for shipment of waste batteries to pre-consented recycling facilities.

## Responsible and ethical sourcing of battery raw materials

*Reference in the proposal: Recitals 58 – 71, Art. 39, 72, Annex X*

Eurometaux strongly believes that responsible and ethical sourcing of metals should be an essential part of EU policy. We welcome the Commission proposal to set up entire supply chain due diligence policy in view of the expected exponential growth in battery demand in the EU (Rec. 63). As such, we are aware that at this time not all global supply chains are diversified, sustainable and responsible. However, we recognise the need to ensure the sustainable and responsible sourcing of all materials, imported to and exported from Europe, be they raw or processed in finished products.

With a view to address social and environmental risks linked to the sourcing of materials, including battery metals, the European non-ferrous metals industry has been working with a range of stakeholders on due diligence initiatives to develop comprehensive standards that support responsible business practices. Existing schemes, programmes and standards allow for the implementation of risk-based due diligence in a dynamic way, with a process that can be more easily adapted to real risk profiles on the ground.



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We are glad to see the Cobalt Industry’s Responsible Assessment Framework (CIRAF) mentioned in the legal proposal preamble (Rec. 61). However, there are much more examples of responsible supply chain initiatives and auditing program schemes in which Eurometaux members are increasingly involved, e.g. the Aluminium Stewardship Initiative, the Copper Mark, the Joint Due Diligence Standards for Copper, Lead, Nickel and Zinc, and the Metal Alliance for Responsible Sourcing (Mars), the International Responsible Business Conduct (IRBC) for Metals Sector<sup>1</sup>.

Being highly sensitive to ethical sourcing of raw materials, going into batteries and other applications, Europe’s metals industry is also a contributor to the OECD’s Due-Diligence Guidelines for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

**Our recommendations:**

- Build on existing voluntary due diligence schemes to promote transparency, alignment and cross-recognition of existing multi-stakeholder initiatives, schemes and programs in the metals sector.
- Incorporate a ‘smart mix’ of minimum requirements plus industry initiatives and incentives. This should include clear definitions that encompass environmental due diligence, human rights, health and safety, responsible business conduct obligations and standards in batteries mineral supply chains.
- Leverage internationally recognised standards and instruments (such as the UNGPs, OECD Guidance) on how businesses can identify, prevent and mitigate their risks.
- Avoid loopholes by applying value chain thinking. Value chain thinking does not mean that upstream economic operators should have endless responsibilities vis-à-vis their downstream partners. In addition, maintain also a level-playing field with third countries.
- Consider secondary raw materials separately as they are extremely difficult to trace. Secondary raw materials can only be traced until the collection of waste. Due diligence obligations cannot go beyond that point.
- Avoid overlaps/inconsistencies between various policy instruments including the upcoming due diligence policies to provide actors in the supply chain with a more predictable regulatory framework, essential for securing long-term supply into the EU.

<sup>1</sup> See also: Eurometaux Position Paper on [EU Due Diligence in Supply Chains](#) (February 2021)



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## Appropriate and coherent risk management

*Reference in the proposal: Recitals 15 – 16, Art. 2, 6, 71, Annex I*

Each battery chemistry available today on the European market is based on a combination of metals, for example:

- Lead-acid battery (automotive/industrial) – Lead, antimony, tin, copper, aluminium, calcium, silver;
- Lithium-ion battery (industrial/portable/automotive) – Lithium, nickel, cobalt, manganese, aluminium, copper, silicon;
- Nickel-cadmium battery (industrial) – Nickel, cadmium.

They are used because their physical and chemical properties are critical to the functionality, safety and performance of battery systems. Substituting (i.e. replacing) these materials is not technically nor economically feasible at this stage. It is recognised that many of these substances have hazardous properties which are risk controlled and already regulated under the REACH Regulation, occupational safety and health (OSH) legislation and/or sector-specific environmental legislation.

Although hazardous substances are used in batteries, they do not pose a risk to human health or the environment when manufactured, used and recycled properly. That is because batteries are sealed units, designed to prevent substances from being released during proper use, while manufacturing and recycling operations are conducted by permitted facilities operating under strictly controlled conditions to ensure workers and environmental protection.

As a point of principle, the procedure must follow a risk-based approach, include a socio-economic assessment (SEA), and, in case an assessment of alternatives (AoA) is needed, must consider economic and technical feasibility taking into account the whole life cycle of substances (manufacturing, use phase, and end-of-life recycling). The assessment should consider existing evidence from the REACH registration dossiers, in line with ‘one substance, one assessment’ (OSOA) approach and the best Risk Management option(s), if needed, should be based on a careful Risk Management Option Analysis (RMOA) on the different uses.

### Our recommendations:

The procedure for restrictions on hazardous substances for all applications/uses, shall ensure that:

- Full use is made of the REACH registration files on substances.
- A proper Risk Management Option Analysis (RMOA) is conducted to determine the most appropriate risk management measure under REACH or other, such as OSH or sector-specific legislation.
- Irrelevant double regulatory risk management is avoided.
- Any risk management measure recognises the whole lifecycle of substances and ensures risk-controlled use.
- In case substitution (replacement) is relevant, an assessment of alternatives (AoA) must be conducted, considering economic and technical feasibility.



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## Carbon footprint

*Reference in the proposal: Recital 18, Art. 2, 7, Annex II*

The use of life cycle assessment to evaluate the environmental performance of products is a central tool to avoid making product choices based on single indicators or parts of the lifecycle. We believe that policy has a role to play in driving improvement in the lifecycle performance of products, as long as the method can consistently account for the contribution of products throughout all lifecycle stages to a greener and more circular economy.

We welcome the reference to the Product Environmental Footprint (PEF) methodology (Art. 2) that has been applied by both the non-ferrous metals and batteries sector to create the PEF Category Rules (PEFCR) for Metal Sheets for Various Applications (lead by Eurometaux) and High Specific Energy Rechargeable Batteries for Mobile Applications (lead by RECHARGE).

Carbon footprint is a known indicator that allows to identify very well performing products and gives signal to those of lesser performance to improve. The batteries legislative proposal foresees a mandatory carbon footprint i) declaration, ii) calculation, iii) performance classes and iv) maximum carbon thresholds for EV and rechargeable industrial batteries (Rec. 18, Art. 7, Annex II). As Eurometaux, we would like to voice our concerns on the tight timeline assigned to the adoption of delegated act establishing the calculation methodology. Here, we refer to industry experience from developing the PEFCRs mentioned above, knowing that in both cases it took four years<sup>2</sup> and reflecting on the fact that the PEFCR is only a basis of the methodology. This is particularly important since a number of batteries under the scope of the legislative proposal (Art. 7) do not have an established PEFCR. Currently, the Batteries PEFCR is undergoing a major revision to provide the industry and the European Commission with high-quality tools to assist in implementing the new requirements. Eurometaux is also a part of this work and we are of the opinion that the Commission should provide a full support to this process and recognise its results.

Moreover, the European Commission intends to offer a web-based tool and free access to the secondary datasets to facilitate the process of calculating the carbon footprint, based on the adopted rules. It is not mentioned in the legal text but only in the explanatory note. Moreover, the legislative financial statements accompanying the batteries legislative proposal include subcontracting a development of the PEFCR web-based tool in 2022.

### Our recommendations:

- Adapt the timeline of the secondary legislation to provide sufficient time to develop an adequate LCA-based methodology for the calculation of batteries carbon footprint.

<sup>2</sup> 2016 – 2019 – during the so-called Environmental Footprint Pilot Phase organised by the European Commission



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- Provide full support and recognise industry efforts to update the existing PEFCR for High Specific Rechargeable Batteries for Mobile Applications and take the results into account when preparing the delegated act establishing the methodology (Art. 7) and the carbon footprint web-based calculator.

## Improved collection and efficient recycling of waste batteries

Maximising the collection and recycling of Europe’s portable batteries will be essential. In the next 10-15 years meaningful volumes of new mobility and stationary Li-ion batteries will start reaching their end-of-life. Following the proposed recycling targets, it is imperative that Europe supports industry investments into new capacity for recovering battery metals. We will also need to bridge the supply gap for recyclers of lithium-ion batteries that have yet to reach the end-of-life. At the same time, batteries included in WEEE or ELV must be collected and subjected to the requirements of the batteries legislation. All available waste batteries, of all types, should be separately collected, properly sorted and undergo quality treatment and recycling to get the highest possible yield of recovered metals.

### Batteries collection

*Reference in the proposal: Recital 81, 82, Art. 48, 49, 55, Annex XI*

The EU’s primary aim should be to ensure that all waste batteries of all chemistries are effectively collected and transferred to recycling facilities for safe treatment. All battery chemistries are suitable for recycling and the key differentiator on current performances are the varying waste volumes available in Europe today. We therefore welcome the no-losses policy for automotive, industrial and EV batteries as proposed in the draft Batteries Regulation (Art. 49). It is the right approach to reflect the collection needs based on lifetime and waste volume. For example, some mature battery chemistries are already effectively recycled according to their waste volumes in the EU. This is the case for 99% of automotive lead-acid batteries available for collection in Europe that are recycled in a closed-loop system<sup>3</sup>. In turn, EV lithium-based batteries are still largely in use and will reach their end-of-life in only about 10-15 years’ time. The proposed reporting obligations are an effective mechanism to prevent illegal waste export or incorrect waste disposal (Art. 61).

The situation is different for the collection of portable batteries, e.g. from mobile phones and other types of consumer electronics, which remains very low. The data presented by Eurostat for years 2009 – 2018 indicate that collection of waste portable batteries and accumulators is considerably lower than sales. Thus, the proposed minimum collection targets to be achieved by Member States (Art. 55), excluding waste batteries from light means

<sup>3</sup> Eurobat report ‘[Availability of Automotive Lead-Based Batteries for Recycling in the EU](#)’



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of transport, may not be reached. A continued action on raising awareness and educating consumers to properly dispose of their end-of-life battery-containing equipment would be highly recommended but is not sufficient in the view of the role that end users play in waste management. To really achieve the collection targets, the calculation methodology must better reflect lifetime, export as well as disposal via WEEE or other product streams.

Most of the collection, treatment and recovery (recycling) operators in Europe are independent. They all have a permit for their activities which ensure, that batteries are collected, stored, treated and recycled in an environmental sound manner. The new proposal contains a series of new definitions such as 'independent operators', '(independent) waste management operators', 'authorised waste management operators', 'recycler' and 'permitted facilities' which bring changes to the current situation that has a more balanced approach for the roles and rights of independent waste management operators.

**Our recommendations:**

- The calculation methodology for collection targets of portable batteries must better reflect their lifetime, export as well as disposal via WEEE or other product streams.
- Improve collection rates of portable batteries from used mobile phones and other type of e-waste by enforcing the obligation to remove batteries from waste electronics (WEEE).
- Educate consumers to return their end-of-life equipment (mobile phones & electronic devices) to dedicated collection infrastructure.
- Formulate new definitions in a clear way to allow independent waste management operators continuing their activities in parallel, and as a support, to producer responsibilities.

**Recycling efficiency and materials recovery**

*Reference in the proposal: Recitals 19, 72, 86, Art. 2, 57, Annex XII*

High-quality recyclers, who follow the EHS standards, labour and social conditions and use state-of-the-art technologies, are equipped to recover metals from batteries safely and without harm to human health or environment.

Measures proposed by the Commission (Annex XII) cover both material recovery rates (%) for Pb, Co, Cu, Li, Ni and min. recycling efficiencies for Pb-acid and Li-ion batteries. It is relevant to highlight that the recycling of other battery elements is also important. However, we are concerned that targets are proposed in the Regulation before a detailed methodology for the calculation of such targets is established.



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Any targets should be ambitious but at the same time realistic and achievable, and based on existing and proven recycling technologies in use today at an industrial scale alongside new technologies under development. It should also take into consideration the complexity of the metals recycling business, confidential business information as well as the market economics driving the efficient recycling of battery raw materials.

#### Our recommendation:

- Proposed targets should be realistic and underpinned by a methodology that considers the existing and proven recycling technologies, the complexity of the metals recycling business as well as the market economics driving the efficient recycling of battery raw materials.

### Minimum recycling standards

*Reference in the proposal: Rec. 87, Art. 58*

Complex battery types should only be treated by high-quality recyclers who use state-of-the-art processes to maximise the recycling efficiencies and recovery of valuable metals while ensuring safe treatment of hazardous substances. Currently there is no specific requirement for recyclers of these batteries, in or out of Europe, to meet the minimum standards needed for effective recycling, which increases the likelihood of improper treatment.

The situation is even more unclear when spent batteries are sent for recycling outside the EU. In order to count this activity under the official recycling targets, the [Waste Framework Directive \(Art. 11a\)](#) requires that the sender makes sure that the receiving facility offers conditions that are 'broadly equivalent' to the EU ones. Unfortunately, it is nowhere specified what minimum level of EHS, social responsibility and quality standards should be met and this risks leakage of waste batteries out of the EU to facilities that do not meet the EU standards. Hence, a timeline to establish these criteria, shall be included. Furthermore, the import of waste batteries into the EU should be facilitated under the Waste Shipment Regulation.

#### Our recommendations:

- Define 'equivalent conditions' for treatment of waste, including spent batteries, exported outside the EU for recycling.
- Take the upcoming Waste Shipment Regulation and batteries legislation reviews as a starting point to complement this shortcoming of the Waste Framework Directive.
- Facilitate the import of spent batteries into the EU.





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## Recycled content

*Reference in the proposal: Rec. 8, 20, Art. 8*

While the minimum mandatory recycled content is helpful for other materials to boost their circularity and improvement in their recycling technologies, it is not appropriate for metals. Non-ferrous metals already achieve high recycling efficiency and their demand is constantly growing, especially with the view of the EU Green Deal ambition, so the mandatory recycling content proposed in Article 8 is not necessary to boost their uptake. Besides, primary and secondary metals have an identical quality and price (which is not the case for other materials), and they are often mixed together in metallurgical processes, due to technical reasons.

Recycled content is very sector-specific and it needs to be supported by a mature market. For EV Li-ion batteries for example, the market is constantly growing and they will only come to their end-of-life in 10-15 years' time. In practice, reaching targets prescribed for 2030 and 2035 will not be realistic and it is also confirmed by the conclusions of Öko Institute in the Batteries Regulation Impact Assessment: *'Especially, for critical metals needed in rapidly growing markets, e.g. Li, Co in lithium ion batteries, not enough secondary materials will be available up to 2035 to specify relevant shares of recycled content in batteries placed on the market'*<sup>4</sup>. Moreover, it is equally difficult to assess the feasibility of those targets if a methodology to calculate the amount of recycled content is not available.

EU mandatory minimum recycled content can also create a split of materials with manufacturers using available secondary material for the batteries sold in the EU and more primary materials for those sold to non-EU markets. Similarly, material available for recycling could be redirected to batteries sector for increasing recycled content in batteries and at the same time lowering recycled content elsewhere.

Furthermore, the implementation of a mandatory recycled content would result in a significant challenge for compliance verification of imported batteries. A large number of certificates would be required to be verified while it is not technically possible to undertake testing to distinguish between primary and recycled metals used in batteries.

The overarching aim of the future batteries legislation must be to maximise recycling efficiency of metals-containing products coming to the end-of-life while at the same time assuring that the products are safe, high performing and competitive. An adequate policy framework needs to be developed, boosting collection, guaranteeing high-quality recycling and ensuring that enough recycled materials is available in Europe. Such a framework will automatically trigger conditions for a future potential development of recycled content concept.

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<sup>4</sup> Similar conclusion can also be found in the section 3.8 of the JRC Technical Report 'Analysis of sustainability criteria for lithium-ion batteries including related standards and regulations', 2021



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**Our recommendations:**

- Define a robust, verifiable methodology and ensure a thorough impact assessment before considering a possibility of introducing the mandatory recycled content targets especially until more information on the evolution of the market is available.
- Adapt the timeline for the development of the methodology and involve all relevant stakeholders in the process.
- Promote the role of multiple recycling (referred to in the [Waste Framework Directive, Art. 8](#)) as the best option for handling materials in waste batteries.
- Effectively implement policy framework boosting collection & sorting of metals-containing products and guaranteeing high-quality recycling, ensuring that enough recycled materials is available in Europe.

**Regulatory coherence**

**Coherence for use of metals in batteries**

The use of metals in batteries is already regulated under several EU policies, including the Batteries Directive, End-of-Life Vehicles Directive, REACH Regulation and the Occupational Health & Safety (OSH) Framework. We recommend that the European Commission identifies regulatory overlaps/inconsistencies to ensure a coherent and simplified legislative framework that will support the development of a competitive EU battery value chain.

Any future decision to substitute one battery chemistry for another must include an evaluation of required levels of performance, risks to human health and the environment, lifecycle environmental impact, socioeconomic considerations, and wider sustainability objectives (including circularity and durability).

**Our recommendation:**

- Improve regulatory coherence between the proposed batteries legislation and existing measures already implemented through the REACH Regulation, ELV Directive, OSH framework etc. to make sure that risks of metals in batteries are consistently regulated, minimising unnecessary burdens on the EU battery value chain.

**Coherence for shipment of waste batteries**

Shipping waste batteries to the recycling facilities is a challenge. Currently, it can take several months for a planned intra-EU shipment to receive an approval from all concerned authorities, and over a year if the waste



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batteries come from outside Europe. Moreover, shipments may get further delayed by a lack of harmonised definitions across Member States regarding classification of waste as ‘hazardous’ or ‘non-hazardous’.

**Our recommendation:**

- Use the upcoming Waste Shipment Regulation review to create conditions for facilitating shipment of waste batteries by harmonising Member States classification ‘hazardous’ vs. ‘non-hazardous’ waste and introducing a fast-track notification procedure for intra-EU waste shipments to pre-consented recycling facilities.

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**About Eurometaux:** Eurometaux is an industry association representing the collective European non-ferrous metals industry, including smelters, refiners, fabricators and recyclers of all non-ferrous metals produced industrially in Europe. In total the industry employs 500,000 people across over 900 facilities, with an annual turnover of €120bn.

