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Batteries Directive – Inception Impact Assessment

Comments from the European metals industry

Introduction

Batteries are key enablers of the European Green Deal ambition for achieving a climate-neutral economy by 2050, and particularly the mobility and clean energy sectors' transformation.

Europe's non-ferrous metals industry is the key supplier and recycler of metals for portable, automotive and industrial batteries. The World Bank in 2017 projected that 1000% more metals will be needed for batteries on a global scale. Our industry has a capacity to meet those growing demands provided that an international level playing field and coherent EU regulatory framework are complementing our leading sustainability standards and high circularity.

The EU is modernising its battery legislation at an important time, after adopting the Strategic Action Plan on Batteries and announcing the success of the EU Battery Alliance. This process will not only need to address the developments of the battery sector since the 2006 Batteries Directive, but it will also need to embrace the ambition of EU Green Deal and Circular Economy Action Plan to support conditions for a competitive, circular and sustainable EU batteries value chain.

This paper presents our recommendations to the Inception Impact Assessment entitled 'Modernising the EU's batteries legislation'.

Key recommendations

- **Responsible and ethical sourcing of battery raw materials** – consider a transparent approach that follows on from OECD guidelines work and evaluates the issue of ethical sourcing across applications and materials. Examples of industry best practice, including voluntary due diligence schemes and value chain platforms should be considered in parallel.
- **Appropriate chemicals management** – focus on controlling any potential outstanding risks metals in batteries may pose for human health and the environment, without considering only their hazardous intrinsic properties. Avoid disproportionate chemicals management measures (e.g. bans) that can disrupt the EU battery value chain.
- **Improved collection and efficient recycling of waste batteries** – introduce ambitious collection targets for portable batteries and prevent leakage of waste batteries. Prioritise actions to promote safe and efficient recycling of metals in batteries.
- **Ensure regulatory coherence** – avoid overlaps/inconsistencies between various policy instruments (e.g. Batteries & End-of-Life Vehicles Directives and REACH/OSH) 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.



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Responsible and ethical sourcing of battery raw materials

Some metals used in batteries come from parts of the world that currently do not have such well-developed conditions for protecting social and human rights, environmental impact, occupational health and safety as we have in Europe. Nevertheless, it is essential that the raw materials imported to Europe are produced ethically and sustainably. European metals companies are increasingly involved in several responsible supply chain initiatives and auditing program schemes, which have achieved measurable results in improving supply chain transparency, like for example the [Cobalt Industry's Responsible Assessment Framework \(CIRAF\)](#).

Being highly sensitive to ethical sourcing of battery raw materials, Europe's metals industry is a contributor to the OECD's due-diligence guidelines and related activities. Moreover, Eurometaux is an active stakeholder in the Dutch Government's [International Responsible Business Conduct Agreement for the Metals Sector](#). Together with policymakers, industry partners and NGOs, we are working through this platform to intensify a joint communication that can contribute internationally to raising awareness about supply chain due-diligence in the metals sector.

Our recommendations:

- Build on examples of industry best practice, including transparent due diligence schemes and value chain platforms to tackle responsible sourcing adequately.
- Consider how to address batteries imported into Europe as we have no control whether they include ethically and responsibly sourced materials. Ethical sourcing requirements focusing only on upstream metals smelters will not address this gap. Initiatives such as a battery passport could be a mean to prove that the battery contains materials coming from the right sources, but it should ensure a level playing field.

Appropriate and targeted chemicals management

The revision of the Batteries Directive needs to pave the way for a sustainable and competitive batteries value chain addressing developments of the sector while further considering, supported by the existing legislation, the potential environmental benefits and impacts of the increased amount of batteries present in the society via, for example, the fast-growing volumes or electric vehicles.

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;
- Lithium-ion battery (industrial/portable) – Lithium, nickel, cobalt, manganese, aluminium, copper, silicon;
- Nickel-cadmium battery (industrial) – Nickel, cadmium.

Several metals are used to produce the precursor chemicals and other materials used in batteries (including cobalt and cobalt salts/oxides/etc., nickel and nickel compounds, lead and lead compounds, cadmium and cadmium compounds etc.). They are used because their physical and chemical properties are important to the functionality, safety and



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performance of battery systems. These substances, due to their hazardous properties, are already regulated under the EU REACH Regulation (EC 1907/2006), OHS and environmental legislation. Measures to further restrict or ban these metal compounds would be disproportionate and disrupt Europe’s battery value chains, without significant benefits in terms of environmental and health protection. Identifying and analysing the possible options to manage exposures/risks where they occur, e.g. via a regulatory/risk management options analysis (RMOa) will increase the efficiency and efficacy of risk management whilst ensuring protection.

Although hazardous substances are used in batteries, they do not represent a health or environmental risk during battery use. That is because they are contained in the battery within sealed units, designed to prevent substances from being released during proper use. Moreover, production and recycling operations are conducted under strict conditions to ensure worker and environment protection.

Our recommendations:

- Avoid that chemicals management could be hindered by rushed scrutiny under chemicals legislation and make sure that the shift is made from hazard to exposure and hence risk control.
- Avoid inadequate chemicals management measures (e.g. bans) that can disrupt the European battery value chain.
- Focus on proportionate actions to control any potential outstanding risks metals in batteries may pose for human health and the environment.
- Select the best risk management option to address concerns where they occur: e.g. use of EU-wide binding Occupational Exposure Limits (OELs) when workplace exposure is the target of the risk management measures to implement.

Improved collection and efficient recycling of waste batteries

The Circular Economy Action Plan, published in March 2020, lists batteries among seven key product value chains that require comprehensive and coordinated actions to contribute to the climate emergency and the EU Industrial Strategy.

Considering the EU plans to mass-produce batteries especially for the booming electric car applications, Europe will need to increase home-grown production of strategic and critical battery metals to strengthen its strategic autonomy. This will be a focus in the European Commission’s upcoming Action Plan on Critical Raw Materials. Increased EU mining, refining and recycling, plus secure global supply, will be required together to strengthen Europe’s resilience.

The EU has the potential to further increase metals recycling volumes and this is perfectly addressing the provisions of the Circular Economy Action Plan on the Batteries Directive revision, namely to improve the collection, treatment and recycling of waste batteries and ensure recovery of valuable materials.



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Batteries collection

The EU's primary aim should be to ensure that waste batteries are collected effectively and transferred to high-quality recyclers for safe treatment. Some mature battery chemistries are effectively recycled in the EU. For example, 99% of automotive lead-acid batteries available for collection in Europe are recycled in a closed-loop system¹.

The situation is different for the collection of portable batteries from mobile phones and other types of consumer electronics that remains very low. We understand that the measures proposed by the Commission's consultant consider higher collection targets for this type of batteries. However, the reality shows that some Member States do not even achieve the existing targets. In that case, an in-depth analysis of the reasons behind this situation should be done to propose ambitious targets.

Moreover, a continued action on raising awareness and educating consumers to properly dispose of their End-of-Life battery-containing equipment would be highly recommended. This would be essential considering that 1.5 billion mobile phones were sold worldwide in 2017. Collectively, they contain 15.000 Mt of copper and 15.000 t of cobalt. If those phones were recycled properly, it would be enough to supply copper for production of 240.000 e-cars and cobalt for 1.5 million of electric car batteries.²

Our recommendation:

- Focus on improving 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.

Efficient recycling

High-quality European recyclers are equipped to recover metals from batteries safely and without harm to human health or the environment.

We understand that the measures proposed by the Commission's consultant cover recycling targets (material recovery rates and recycling efficiencies) for Pb-acid and Li-ion batteries that should be adapted or yet to be introduced. Practice shows that specialised metals recyclers have already developed technologies to recover metals from emerging battery segments (i.e. Li-ion batteries in electric vehicles), where the business case allows. Recycling targets should be well

¹ Eurobat report '[Availability of Automotive Lead-Based Batteries for Recycling in the EU](#)'

² [Circular Economy Policy Sheet, Eurometaux](#)



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defined, with a clear focus on battery elements that matter due to their economic value and/or scarcity (e.g. cobalt, lithium, nickel).

Our recommendations:

- Prioritise actions to promote safe and efficient recycling of metals in batteries.
- Propose well-defined, realistic recycling targets with a clear focus on battery elements that matter (e.g. Co, Li, Ni).

Minimum recycling standards

Certain battery types (i.e. electric vehicle batteries) should only be treated by EU 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, increasing 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 and quality standards should be met.

Our recommendation:

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

Recycled content

The discussion on the Directive revision also revolves around setting a minimum level of recycled content for active and other materials used in batteries. While that would be helpful for other materials to trigger improvement in their recycling technologies, it would not be for metals as the active battery materials. Primary and secondary metals have an identical quality and price, and they are often mixed together in metallurgical processes, due to technical reasons, before reaching the market.

Non-ferrous metals already achieve high recycling efficiency and their demand is growing. Thus, the aim must be to improve recycling efficiency of metals-containing products while assuring that they are safe, performing and competitive.

Our recommendations:



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- 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.
- On a long-term basis, recycled content requirements on selected battery elements could be envisaged provided that strict conditions apply.

Ensure regulatory coherence

Coherence for use of metals in batteries

The use of metals in batteries is regulated under several EU policies, including the Batteries Directive, End-of-Life Vehicles Directive and REACH Regulation. We recommend that the European Commission identifies regulatory overlaps/inconsistencies to ensure a coherent and simplified legislative framework impacting EU battery technologies.

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

Our recommendations:

- Improve regulatory coherence between the Batteries Directive, REACH Regulation & ELV Directive to make sure that metals in batteries is consistently regulated.
- Use upcoming policy reviews to bring in concrete actions and improvements in Batteries and End-of-Life Vehicles Directives and Waste Shipment Regulation to maximise recycling and recovery of battery metals to contribute to the objectives of the EU Circular Economy.

Coherence for shipment of waste batteries

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

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