

ADVANCED RECHARGEABLE & LITHIUM BATTERIES ASSOCIATION

EU Sustainability Legislation on Batteries: Batteries Directive revision RECHARGE Comments to EU Commission stakeholder consultation from April 27 to May 5, 2020



EU SUSTAINABILITY LEGISLATION ON BATTERIES

In October 2017, the European Commission launched the EU Batteries Alliance to create a competitive and sustainable battery manufacturing activity in the European Union, contributing to both growth and sustainability objectives. In parallel, the Commission has initiated the review of Directive 2006/66/EC (the "Batteries Directive").

Under the EU Sustainability Legislation on Batteries initiative, the Commission intends to complement the existing legislation with key sustainability measures as set out by the European Green Deal, and the respective Industrial Strategy, Circular Economy Action Plan and Chemicals Strategy for Sustainability. By the end of 2020, the Commission will publish a proposal for a new battery legislation.

The improved regulatory framework for batteries will be pivotal to address the high goal of establishing a sustainable battery industry and deployment in Europe, while ensuring that the European market can remain competitive at global scale.

A strong supporter of the European sustainability agenda, RECHARGE participates with strong evidence and industry knowledge in the respective institutional work programs to help establish a regulatory framework that will enable European actors to execute on the technological, environmental and social leadership ambitions of the Strategic Action Plan on Batteries. To this end, we need:

- INTERNATIONAL LEVEL PLAYING FIELD: Ensure a level-playing field for the European battery industry by providing legislation supportive of the European Battery Alliance and the Strategic Action Plan for Batteries. The legislation should establish a prosperous European battery industry contributing to the achievements of the emission reduction targets and capable of competition with strong, existing markets outside of the EU, on a fair base.
- COHERENT POLICY FRAMEWORK: As called upon in the 2018 Strategic Action Plan for Batteries, the coherence between the different legislative instruments regulating batteries and their components should be taken into account. A coherent legislative framework is crucial for ensuring the competitiveness of the European battery sector.
- RESPONSIBILITY INDICATORS: It is essential to ensure that the battery industry in Europe is socially and environmentally sustainable throughout its entire value chain. All steps, from materials extraction to manufacturing should ensure human, social, and labor rights as outlined in the fundamental ILO Principles and Rights at Work. A sustainable and internationally competitive industry cannot be provided otherwise.

ABOUT THIS PAPER

The revision of the Batteries Directive will be a key factor determining the success of the challenging task to become a world leader in batteries manufacturing. RECHARGE is convinced that the momentum created by the Batteries Alliance is a unique opportunity to look at the legislative and regulatory landscape impacting batteries and to work towards better coherence and efficiency. The future environmental objectives discussed in the framework of the Batteries Directive revision, such as batteries collection rate and recycling efficiency, should be compatible with the growth objectives set for the battery sector.

Given the current preparatory work on the upcoming Sustainability Legislation on Batteries and the respective revision of the Battery Directive, the present paper lays out RECHARGE's positions regarding the measures presented by DG Environment's consultants during the stakeholder consultation meetings in April and May 2020.

For more information on our policy positions, visit us at <u>www.rechargebatteries.org</u>.



ABOUT RECHARGE

RECHARGE is the European industry association for advanced rechargeable and lithium batteries. Founded in 1998, it is our mission to promote advanced rechargeable batteries as a key technology that will contribute to a more empowered, sustainable and circular economy. RECHARGE's unique membership covers all aspects of the advanced rechargeable battery value chain in Europe: From suppliers of primary and secondary raw materials, to battery, equipment and original equipment manufacturers (OEMs), to logistic partners and battery recyclers.

PUT ON THE MARKET MEASURES

Measure 4 - Restriction of Primary Batteries: While RECHARGE understood from the stakeholder consultation that this measure focused mainly on portable primary batteries, primary industrial batteries are affected too.

In our initial feedback to this consultation, we mentioned technical feasibility, customer expectations, potentially higher environmental impacts as well as job losses as substantial reasons to limit the scope of this measure. We want to highlight that primary batteries, especially in industrial applications, are not disposable products with a short lifetime. Primary batteries in industrial applications can last up to 20 years. Replacing those batteries by rechargeable batteries is often not possible and would not result in a better environmental footprint.

Industrial primary batteries are selected to power equipment for which a rechargeable battery would not be suitable because it is not possible to connect the appliance to the grid (such as **asset tracking**), to attach a solar panel and a charger (inter alia **IoT**), or to send a maintenance crew to recharge the battery on a regular basis (highly distributed uses). They are also selected when the energy they contain is sufficient to power the equipment for its full use life (as is the case when embedded in **sensors and smart meters** in which they last between 15 to 20 years). They are also the product of choice when a long in situ shelf-life with very high reliability is of main importance (medical equipment such as **defibrillators** or safety equipment such as **maritime beacons**).

Additionally, a number of primary batteries are designed to serve for the entire use life of an equipment. These batteries reach their end of life with (or because of) the end of life of the equipment. For the others, the number of cycles of an alternative rechargeable battery (provided the right battery can be designed) will be very low and will not result in an overall improved battery footprint.

Options:

• Phase out primary batteries

RECHARGE Proposal:

- The proposed marketing restriction should not cover industrial primary batteries.
- Beyond this, the introduction of any primary marketing restriction would require an assessment of the alleged benefits of an alternative secondary battery (should this alternative be technically possible) in light of the realistic number of cycles it would perform.

Measure 13 - Online sales of batteries: RECHARGE recognizes that the size of the online sales market (estimated at 5-10% of the portable batteries market) justifies the clarification of the Extended Producer Responsibility (EPR) implementation rules.

Options:

- Option 1: Monitoring guidance
- Option 2: Duty of examination for online platforms (comply with the rules on intermediary liability in the E-Commerce Directive)

RECHARGE Proposal:

RECHARGE supports the option 2, as proposed by the consultants. RECHARGE has brought forward a similar proposal, enabling online selling platforms to remit fees on behalf of their sellers without becoming an Authorized Representative or Producer, and contributing to the transparency of the declarations through their digital operations.

INFORMATION & LABELLING MEASURES

Measure 15 - Consumer safety and sorting labels: As several other stakeholders, RECHARGE considers that the presented analysis mixes several objectives that really cannot be addressed in the same way: consumer information needs are different from recyclers', applicable legal requirements (REACH) have to be differentiated from information requirements pertaining to the environment, etc.

We also want to stress again that labelling requirements must differ by application. EV battery information and labelling requirements cannot be compared to those of small primary alkaline cells.

RECHARGE also wants to highlight that some of the expected benefits of safety information are clearly overestimated: safety labels on a battery do not effectively prevent from potential fires in WEEE collection, unless effective sorting operations have been set up, possibly based on labels on equipment containing batteries.

Options:

- Option 1: Consumer Labels
- Option 2: Recycling/sorting color identification
- Option 3: 'Digital passport'

RECHARGE supports the general idea of a QR code as well as a virtual database, particularly in those areas where this has already been politically promoted, and proposes that the requirements concerning the content of such a QR code (and database) need to be further developed. Userfriendly information requirements:

- the provided information must create a true value for the targeted group;
- limited information for consumers to be effective;
- relevant information for recyclers that is adapted to their current and future automated sorting technologies. A simple color code does not seem effective.

COLLECTION MEASURES

Measure 1 - **Higher collection targets for portable batteries:** RECHARGE recognizes the benefit of increasing the collection of portable batteries but assumes that the study overestimates the benefits of higher collection targets. Moreover, we believe that increasing the collection target does not effectively help improve actual collection.

Options:

- Option 1: 55% collection target for portable batteries
- Option 2: 65% collection target for portable batteries
- Option 3: 75% collection rate greenhouse gas emissions (t CO2eq/a)

We recommend better analyzing the reasons for why some Member States do not achieve the existing targets. Proposed measures should be built around this analysis. Especially the amount of littering was not quantified or even assessed, and no clear analysis was shown for the flow of batteries in municipal waste, although several studies have been mentioned and published by EUCOBAT https://www.eucobat.eu/downloads/eucobat-mobius-batteries-available-collection.

It would also help to define realistic targets for new measures such as Deposit & Return Systems (DRS) or potential benefits of increasing the CRO spending budget. The presented calculation did not consider the potential environmental benefits of the batteries collected and treated in other flows (municipal waste and WEEE). This should be updated, to provide a correct cost/benefit analysis of the proposed measures.

When it comes to the methodology for the collection calculation, although it is recognized that quality and completion of data is limited, this should not be used as an argument to dismiss new calculation methods as it generates uncertainties for all methods. Finally, the representativeness of the method is also important to achieve public understanding and support of the targets.

Measure 12 - Fair practice minimum standard for Producer Responsibility Organizations (PRO): RECHARGE considers the anticipated benefits of the minimum fee increase as being too ambitious (also see EUCOBAT data). We believe that the potential benefits compared to the cost are overestimated.

Measure 14 - Deposit and Refund System (DRS): We agree with the assessment that DRS systems bring several downsides, such as safety risks, high cost for set-up, feasibility of DRS from batteries contained in equipment, etc. And agree with the consultants' evaluation that DRS may not be the best option to improve collection, especially for products with a long lifetime.

Other DRS systems (e.g. cell phones) have shown a significant hoarding effect despite a relatively high refund fee.

RECHARGE Proposal:

To improve the collection of portable batteries, we recommend further efforts in educating users to return batteries because of the environmental impact.

Measures 2, 11 and 16 aim at better monitoring the collection of certain types of industrial batteries, and thus allowing for a more transparent collection of these batteries. The correct declaration of batteries at end of life is a precondition for the correct collection and waste financing requirements.

Options:

- Measure 2, Option 1: Reporting obligation for industrial batteries, excl. EV batteries
- Measure 2, Option 2: Collection target for industrial batteries, excl. EV batteries
- Measure 11, Option 1: EPR specific collection and cost obligations for industrial batteries "sold to private consumers and used in private homes"
- Measure 16, Option 1: EV sub-category of industrial batteries with new reporting obligations
- Measure 16, Option 2: 2 kg threshold portable batteries (all batteries meeting the threshold would become portable batteries with respective monitoring and collection obligations)
- Measure 16, Option 3: 5 kg threshold portable batteries (all batteries meeting the threshold would become portable batteries with respective monitoring and collection obligations)

To address the challenges associated with the collection of industrial batteries that are used, maintained, and disposed of by private users, RECHARGE suggests the creation of a new subcategory for these batteries, similar to the proposed measure 11, option 1, but based on the following definition: small industrial batteries are "industrial batteries that are used, maintained and disposed of by private end-users". Collection rules should follow those proposed in measure 11, including the fees to CROs and the "available for collection" approach should apply.

RECHARGE cautions against specific weight limits to classify portable batteries. A weight threshold to separate industrial batteries from portable batteries would classify all small industrial batteries as portable batteries and artificially split product lines:

- Several consumer batteries, e.g. in power-tools, heavily differ in weight (from >1kg to <10kg). For the convenience of the consumer, the product line should not be artificially broken into two subsets, and collection systems should be identical across a whole product line.
- Experience from Member States has shown that weight limits cannot effectively address the potential mixing of small industrial batteries with portable batteriesⁱ.
- A weight limit would create incoherence for spare parts (e.g. maintenance work at cell/module level → small cells or modules would become portable batteries) for large industrial batteries.
- The majority of system-relevant small industrial batteries, such as for aircraft safety backup, would be banned if they were classified as portable batteries. These batteries mainly apply the NiCd technology. Portable batteries using Cd are prohibited.
- Finally, a change in definition is not justified anymore should the creation of a subcategory of small industrial batteries be legislated. It would add unnecessary burdens to Producers of industrial batteries having already set up take-back schemes for their small industrial batteries.

RECHARGE Proposal:

RECHARGE recommends keeping the current definitions for portable, industrial and automotive batteries unchanged.

RECHARGE recommends the creation of a mechanism for the identification and reporting of industrial batteries available for collection (excluding the new sub-category of small industrial batteries used, maintained and disposed of by private end-users), based on the already existing obligation to keep a registry of the production of hazardous waste.

Like article 35(1) of the Directive 2008/98 on Waste, the last industrial owner of a battery would declare "industrial battery waste available for collection" (already done for all used Pb/acid and Ni-Cd batteries which are classified as hazardous) and issue a manifest for verification (for comparison see hazardous waste manifest of the WSR 1013/2006). Using this data which would measure industrial batteries available for collection (excluding batteries destructed or discarded by end-users and covered by insurances), RECHARGE would support a 100% collection target.

Due to high secondary export ratesⁱⁱ and widely differing battery lifetimes across the different segments of industrial batteries, reporting of quantities placed on the market (PoM) and collection obligations based on this figure would not be an effective yardstick to measure the collection performance of industrial batteries, and cannot be retained to set a collection target.

RECHARGE Proposal:

Industrial EV batteries (such as cars, heavy-duty and busses) are bound to become such a predominant segment of the industrial family that it is indeed necessary to create a sub-category of industrial batteries specifically for this segment.

LIFETIME & PERFORMANCE MEASURES

Measure 3 - Removability, replaceability and interoperability: RECHARGE supports the general principle of removability and replaceability but opposes a default removability/replaceability requirement:

• We recognize the benefit of the proposed concepts of increased removability and replaceability, under the condition that they are applicable to specific products. To identify the suitability of removability/replaceability, each product type must be analyzed, and benefits have to be compared to potential downsides. Especially the impact on the relative life duration of the product and the battery must be analyzed. In some cases, the requirement of a replaceable battery could offset anticipated environmental benefits because the life duration of the product may decrease.

- RECHARGE must stress that there is no direct link between the removability of batteries and recorded fires in WEEE collection. The matter of fires is related to sorting and handling conditions and not to the removability of the battery from WEEE.
- Safety risks: to apply a default right for end-users to replace their battery may result in uncontrollable safety risks. Unprofessional handling, the use of unsuitable batteries or batteries designed for another application as well as combining different batteries, can decrease the safety of the battery or the battery-powered equipment. Especially low-cost suppliers with no or little qualification (often also through online sales) add on to the safety risks. Fires from e-cigarettes, for example, have already shown the risks associated with such unprofessional handling. For more information, also see https://be-cigarettesafe.org/#partners.

Options:

- Option 1: Provisions to require increased removability from all appliances
- Option 2: Provisions to require increased removability from product groups where explosion and fire incidents are more common

Measure 10 - Second life: Batteries can, under certain conditions, be suited for refurbishment for second life use or repair. However, safety must be a key criterion for defining this suitability. Indeed, the reuse of batteries should not come at the expense of safety.

In this regard, RECHARGE supports the transfer of EPR of the first to the new Producer, at the end of life of the first life, and that a new warranty on performance and safety of the new battery is to be issued by the new Producer.

RECHARGE opposes however the automatic transfer of minimum information from the initial Producer to the new one because of risks associated with safety and performance as well as IP issues. Automatic access to information may also lead to an overestimation of the feasibility of repurposing/remanufacturing/repair and may open this market to a number of unqualified, unprofessional organizations. The battery industry is very concerned about such a market development because of the safety and reputational (and consequently insurance and financial) risks associated with badly handled 2nd life batteries.

RECHARGE Proposal:

- Analyze options for the EPR transfer without having to apply the waste status first. A clarification of the definition of "purpose" for the battery could be a potential path.
- Information transfer should be managed through B2B contracts, as done in the first Producer market today.

RECYCLING MEASURES

Measure 9 - Setting minimal levels of recycled content: The consultants' study assumes that an increase in the demand for secondary materials would trigger the improvement of recycling technologies and activities, thus leading to lower environmental impacts associated with the usage of resources.

RECHARGE advocates the benefits of recycling and supports a circular economy. Recycled content obligations, however, do not add on to the environmental benefits of our products. The carbon emission credit from using secondary raw materials is accounted for independently of the product (closed vs. open loop).

A closed-loop approach would substantially jeopardize the competitiveness of European batteries: in the coming ten to fifteen years, battery waste quantities would be too low to implement a minimum recycled content obligation, especially for new, developing or emerging battery technologies. Moreover, a large percentage of the battery cells manufactured in Europe are exported to non-EU countries, further losing access to the raw materials used in those batteries. This includes NiCdⁱⁱⁱ batteries for which the consultants' study proposes a 100% recycled content target. The expected cost burden of a recycled content obligation would additionally undermine the competitiveness of European batteries, as would insufficient monitoring and enforcement for imported batteries.

Last but not least, the consultants' study concludes that it is not clear whether closed-loop recycling has advantages over open-loop but it will entail "probably higher costs with an unclear environmental effect". In fact, a 2019 RICARDO study estimated the CO₂ reductions linked to the electrification of the EU car fleet to be 20M tons by 2030. The potential benefit calculated under Measure 9 (about 10k tons) would be offset should the EV market reduction due to cost increase be larger than 0.05%.

Before further considerations, RECHARGE encourages an impact assessment of Measure 9 on the potential increase of carbon emission from fewer EVs.

Options:

- Option 1: Minimal levels of recycled content for active materials used in batteries PoM in the EU
- Option 2: Minimal levels of recycled content for active and other materials used in batteries PoM in the EU
- Option 3: Open-loop recycling of recovered materials

RECHARGE Proposal:

With regard to improved recycling and the further development of a circular economy, RECHARGE proposes to develop and improve the open-loop recycling of recovered materials, as outlined under option 3. On a long-term basis, recycled content requirements on selected battery elements could be envisaged provided that strict conditions of implementation apply, so as not to harm European industry.

Such conditions would have to follow at least these principles:

- A recycled content requirement should only apply to products sold to and used on the EU market but should avoid a "sub-design" for exported products,
- Imported batteries should be held to the same standards as European batteries. Enforcement of harmonized import control across the Member States would have to be ensured,
- Such enforcement would be required to avoid abuse and misreporting. However, this would be very difficult as technically a recycled metal cannot be distinguished from a virgin material, and auditing of non-EU secondary material supply chains would be very challenging,
- Minimum recycled content levels would have to reflect actual waste volumes to ensure technical feasibility.

Measure 5 - Change in calculation methodology of recycling efficiency: RECHARGE supports a plantspecific recycling efficiency, as targeted by option 1.

Options:

• Option 1: Plant-specific recycling targets

- ensure that targets are harmonized across the EU
- ensure that the reporting organization is clearly identified (the first recycler)
- ensure that companies' data confidentiality is respected (apply a process approach, not a plant approach)

Measure 6 - Control and auditing system for recycling of batteries: RECHARGE supports an auditing system for battery recycling organizations but recommends that the practicalities, including cost, for setting up such a system need to be clarified first.

Options:

• Option 1: Control and auditing system

Measure 7 – **Recycling efficiencies and material recovery rates:** RECHARGE supports minimum requirements for specific metals identified as being relevant for the battery industry as well as the mandatory separation of the casing, as an additional target for large batteries. RECHARGE endorses a global, combined-metals target to ensure the recycling of high-impact materials. The global approach offers the necessary flexibility for technical optimizations, innovations as well as adaptions to future chemistry developments. Overall, RECHARGE believes that the currently targeted recycling target for lithium is too ambitious and recommends reassessing its feasibility.

Options:

- Option 1a: Recycling efficiency Li-ion; development of a recycling efficiency target for Li-ion batteries
- Option 1b: Recovery rates Li-ion; development of targets for material recovery of specific battery materials of Li-ion batteries
- Option 2a: Recycling efficiency Pb-acid; adaption of the recycling efficiency target of Pb-acid batteries
- Option 2b: Recovery rates Pb-acid; development of targets for material recovery of specific battery materials of Pb-acid batteries
- Option 3: methodology of recycling efficiency; new approaches or changes of the methodology of the recycling efficiency

- Global combined-metals target to ensure the recycling of high-impact materials
- Encourage further developments and innovation in the recycling industry to provide for the technical optimization as battery technologies evolve.

Measure 8 - Problems to establish end-of-recycling criteria: RECHARGE wants to stress the need to clarify and harmonize the rules on end-of-waste, slags as well as on black mass. To that end, RECHARGE has proactively prepared a clarification method for the "quality of recycling" of the multiple output fractions of a recycling process, based on scientific principles and allowing a standardized approach for multiple cases.

RECHARGE has been working on an own recycling efficiency methodology to better address questions regarding the quality and scope of recycling. The RECHARGE methodology provides for a comprehensive, technology- as well as process-neutral approach. It aims at establishing a viable circular economy as well as minimizing environmental risks associated with the use of our resources.

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GRAPHS & REFERENCES

ⁱ DEFRA in the UK launched in 2016 a study and public consultation about the issue of lead acid portable batteries collection largely exceeding the declared quantities placed on the market. As a conclusion, the existing Guidance was amended to solve the issue, and a 4kg threshold was retained to create a presumption of industrial status (for heavier batteries) or portable (for lighter ones). The reporting of the collected batteries in 2018 and 2019 clearly demonstrate that the weight limit had no influence on the result: the collected quantities of portable lead acid batteries still exceeded by 400% the quantities placed on the market.

ⁱⁱ Secondary exports are exports conducted by legal entities which do not have Producer status in the country from where they export.

ⁱⁱⁱ Calculation of the possible recycled content for Ni-Cd batteries: For confidentiality reasons, all is standardized to 100% which is the amount of cadmium present in batteries placed for use in the EU market in 2019



This diagram shows that it is technically impossible to find enough recycled cadmium on the market both for:

- all batteries manufactured in the EU and sold to the world (need is approx. 500%),
- all batteries manufactured in the EU and sold only to the EU, when we already know that the flow of recycled cadmium from
 used portable batteries will dry out around 2025 (placing on the market was banned a few years ago already).