

The European Association
for Electromobility

European Association of Automotive Suppliers

European Association
for Storage of Energy

EUROPEAN BATTERY RECYCLING ASSOCIATION

European Garden Machinery Federation

THE EUROPEAN POWER TOOL ASSOCIATION

ASSOCIATION OF EUROPEAN AUTOMOTIVE
AND INDUSTRIAL BATTERY MANUFACTURERS

European Association of Metals

ADVANCED RECHARGEABLE & LITHIUM BATTERIES ASSOCIATION

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Joint industry position paper on the Batteries Regulation

The industrial associations covering different aspects of the battery value chain, from raw materials supply to battery manufacturing, users of batteries, and recyclers express their concern about key elements considered in ongoing debates in the European Parliament and the Council on the Batteries Regulation proposal, and provide recommendations for achieving shared goals.

Our associations have welcomed the publication of the draft Batteries Regulation in December 2020 as crucial to regulate the battery sector by closing gaps in the existing framework. We support the overarching objective to produce sustainable batteries in Europe, reconciling environmental considerations and competitiveness needs.

As recognized in the EU Strategic Action Plan on Batteries, batteries are a fundamental enabler to the decarbonization of several economic sectors, and an appropriate legislative framework is needed to foster a strong European industry. We are concerned that several items under negotiation on the Batteries Regulation risk slowing down or endangering this needed transition, for reasons further detailed in this paper.

In recent months, we have identified several areas to build upon the European Commission's first proposal, for example to address unrealistic lead times or requirements that would hamper the innovative and fast-paced profile of the battery industry.

We are concerned that in several cases amendments, under discussion by the co-legislators, go in the opposite direction. Several over ambitious proposals – whose intention might be to support a sustainable and competitive EU battery industry – unfortunately overlook specificities of battery types and their applications, or dynamics of the rapidly growing battery market.

Increased targets, proposals for tighter schedules or scope extensions, if not based on impact assessments or some form of in-depth analysis, might have negative effects on the competitiveness of the EU industry and impede the shift towards electrification in the transport, energy and industrial

sectors. Consequently, the result would go against the Strategic Action Plan on Batteries as well the EU Green Deal objectives and the Fit for 55 ambition.

This paper provides five key recommendations of achieving a robust legislation that will embrace future developments of sustainable and innovative batteries:

- 1) Recycled content
- 2) Design requirements and second life
- 3) Material recovery targets
- 4) The scope of carbon footprint and of performance and durability
- 5) Restriction of hazardous substances

1) Recycled content

Article 8 of the proposal requires all electric vehicles, industrial and automotive batteries above 2 kWh to use minimum levels of secondary materials as of 2030. The battery manufacturing industry relies on secure supply of primary and secondary raw materials. The prediction of the amount of secondary raw materials available in 2030 (and later), and whether it will be sufficient to meet the targets, is not clear yet.

In the case of mandatory use of secondary raw materials, shortages of battery materials in the EU might cause production stops in the EU or force European manufactures to source secondary raw materials from non-European producers. This would not support the strategic autonomy on battery raw materials. It would disproportionately benefit the import of batteries from non-EU countries where higher volumes of waste from batteries and other products (including manufacturing scrap) for the production of secondary raw material are available. It may also delay the availability of electric vehicles and other battery-powered applications in Europe. Furthermore, setting targets at this early stage, when the future development of the market and availability of secondary raw materials is still unknown, could lead to a real risk of high price volatility for raw materials, and thus for batteries.

The actual availability of secondary materials depends on several factors like:

- a) The number of batteries in service.
- b) Their lifetime.
- c) The uptake of second life batteries versus recycling.

Recycled content targets incentivize the premature end-of-life of batteries and are in direct opposition to long lifetimes and second life. Conversely, measures promoting re-use, remanufacturing and repurposing would extend the lifetime of the battery and delay their recycling, reducing the total amount of batteries available for recycling and hence decreasing the availability of secondary raw materials.

- d) The export of battery waste fraction outside Europe.

If considered as waste, the recycling outside Europe must fulfill equivalent requirements as in Europe. Verification and enforcement are major tasks to be tackled to ensure a sustainable battery production and recycling of waste batteries globally.

Considering the Commission's inception impact assessment's concluding remarks on the limited environmental benefits of recycled content for batteries for the next decade, it must be stated that

the recycled content obligation currently remains an unjustified burden on the industry and a policy contradiction¹.

The co-legislators' proposals we see on the table right now may even worsen the situation. For instance, extending the scope to **all** batteries, as suggested by the European Parliament, would force the industry to compete for the same amount of available secondary raw materials to manufacture even more batteries.

A very cautious approach is necessary on recycled content, including strong review clauses and safeguard measures against the risks connected to ex ante specified minimum recycled content targets. The entire process should also be simplified to reduce administrative burden, for instance by making enforcement possible by monitoring the total amount of secondary materials (lead, lithium, cobalt and nickel) used by each company every year as an aggregated amount, instead of the recycled content of each individual battery.

2) Design requirements and second life

Prescriptive pre-imposed design requirements threaten the innovation we need across a nascent European battery industry. They would also limit the EU's domestic efforts to meet EU battery demand and compete globally. **Requirements to design batteries in a specific way, as proposed for instance in Article 11, could lead to several major negative consequences that seem so far underestimated or unassessed, e.g. limits to necessary safety, lifetime or performance requirements. EU regulation should reflect and keep pace with evolving technological progress, including chemistry improvements, and should avoid technical lock-in effects, especially as the sector quickly develops. The Regulation should set the general targets, while it should leave the design-choices on how to get to those targets to the industry.**

In the same vein, the possibility of reusing, remanufacturing or repurposing batteries is certainly an interesting option to decrease the total carbon footprint of certain types of battery across its lifetime and can bring environmental or economic benefits in those cases. However, this is not applicable to all batteries: lithium-ion batteries for electric vehicles and large grid-connected energy storage batteries are more suitable for reuse, repurposing and remanufacturing compared to other battery types and technologies.

The Commission proposal correctly recognized that the current legislative framework could limit the development of the second life business model, but the amendments proposed are also applied to batteries which are not suitable for second life, potentially resulting in a waste of resources and serious safety risks. **Therefore, several measures, such as the obligation to store data on state of health as well as requirements for repurposing and remanufacturing (Art. 14 and 59), should be applied to EV and stationary energy storage batteries above 2 kWh only, while proposed parameters should be technically feasible and harmonized internationally.**

Besides, the fact that a battery is technically suitable for second life does not imply that there will be a demand for that battery. This will depend on the evolution of the EV and stationary storage market, on the ability of the stationary storage market to absorb large shares of repurposed batteries and on the future performance level of repurposed EV batteries compared to new stationary storage

¹ Öko Institute, 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'*¹

batteries. **The regulation should clarify the liability and conditions to reuse, remanufacture or repurpose a battery, but the decision to apply second life provisions should be left to the market and should not be mandated by the regulation.**

3) Material recovery targets

Article 57 of the proposal describes the rules for recycling efficiencies and material recovery, with the Annex XII setting the minimum targets for 2025/2026 and 2030.

The proposed measures and targets should avoid setting back European efforts to create a thriving battery ecosystem and should be designed to benefit the environment without unduly increasing the carbon footprint of batteries put on the market. In fact, too stringent material recovery targets – as we have seen being suggested by the Members of the European Parliament – can be in contradiction with measures aiming at lowering the carbon footprint of batteries placed on the EU market.

Measures to drive best practices in battery recycling can help to create the conditions for business cases to emerge and improve across Europe. Ambitious yet realistic levels of recycling efficiency and metal recovery rates as proposed by the Commission can help to create open and fair competition between operators and maximise the circular economy and economic potential of spent batteries.

However, excessive requirements beyond optimised recovery targets increase the global carbon footprint, as they will imply the use of additional resources to conduct recycling processes, with negative environmental effects. Recycling targets should be defined based on state of the art and optimised environmental criteria.

Especially the 2030 material recovery targets should be subjected to a mandatory review based on the best available recycling techniques and actual flows of product chemistries sent to recycling. Unjustified targets can result in negative environmental impacts as well as in unjustified economic burdens.

4) The scope of carbon footprint and performance and durability

Article 7 on carbon footprint and Article 10 on performance and durability will be applied to all EV and industrial batteries above 2 kWh. Several proposals go in the direction to extend the scope to more batteries, while the current scope is already problematic. Both the carbon footprint and the performance and durability criteria need to be applied to the specific battery technology and application. **It is not possible to define one-size-fits-all criteria and thresholds for all batteries, or even for the same battery type, since they deliver extremely different services and have vastly different technical requirements.**

The Batteries Regulation should follow a similar approach to the eco-design framework, which identified product groups based on their similarities. Unfortunately, this did not happen for industrial batteries: hundreds of completely different products fall under this category, including batteries for stationary energy storage (for large installations, at grid level, or at commercial / household level), batteries for back-up used in hospitals and data centers, batteries for motive power applications (including for instance forklift trucks, ground support equipment, medical wheelchair, golf carts,

cleaning equipment, material handling, etc.). **The functional unit², the minimum performance and durability of these various industrial batteries cannot be the same of those used in electric cars, and need to be tailored to the application.** To make things more complicated, in some cases, certain criteria which are fundamental for one application are fully irrelevant for another application³. The Regulation also neglects that battery and application design are still in development. Too stringent criteria would jeopardize innovative or safety-relevant design improvements.

Several proposals go in the direction of even extending the scope to batteries below 2 kWh, including batteries for light means of transport, ride-on lawn mowers but also batteries for mild hybrid applications in vehicles or small industrial batteries used for instance in lighting and alarm systems. It will be simply impossible to develop appropriate functional units (for carbon footprint), performance and durability criteria for all these products groups respecting the short timeline mandated by the Batteries Regulation. One-size-fits-all requirements would seriously damage several segments of the battery industry, which would have to comply with requirements designed for other products. In addition, no cost-benefit analysis has been conducted to explore the GHG reduction potential of regulating these product groups. Finally, the requirement for a declaration for the thousands of battery models in the scope would make the measure impossible to control, among others for imported batteries, opening the door to green washing and weakening enforcement on the ground.

For these reasons, it would be preferable to develop fit-for-purpose product category rules for the carbon footprint calculation of EVs and stationary battery energy storage⁴ and assess the possibility of regulating other products and applications at a later stage, following a cost-benefit and GHG emissions saving potential analysis similar to those mandated by the eco-design framework.

Furthermore, the parameters meant to determine the performance, durability and state of health of EV batteries should only correspond to those used in the UNECE Global Technical Regulation on In-Vehicle Battery Durability developed by the Working Party on Pollution and Energy. This means that the proposed parameters in Annex IV and VII are not suitable for industrial or electric vehicle batteries (both light-duty vehicle batteries or heavy-duty electric vehicle batteries) either as they do not represent actual performance characteristics, and therefore need to be changed as well.

5) Restriction of hazardous substances

Art. 6 of the proposed Regulation includes a new, parallel process to regulate hazardous substances used in batteries, duplicating the existing and well-established REACH restriction process set out in Annex XVII of Regulation (EC) No 1907/2006.

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

- Lead-based (automotive/industrial) – Lead, antimony, tin, copper, aluminum, calcium, silver;
- Lithium-based (industrial/portable/automotive/EV/light means of transport) – Lithium, nickel, cobalt, manganese, aluminum, copper, silicon;

² The functional unit is used to calculate the carbon footprint of a battery, and it is defined as the “qualitative and quantitative aspects of the function(s) and/or service(s) provided by the product being evaluated”. Batteries with different function(s) and service(s) require different functional units.

³ For instance, energy round trip efficiency is totally irrelevant for back-up batteries, since these batteries don’t have to do frequent cycles of charge-discharge but simply stand idle and be ready to be used in case of power outages in hospitals and data centers.

⁴ As defined by the Batteries Regulation in Article 2.13

- Nickel-based (industrial) – Nickel, rare earths, cadmium;
- Sodium-based (industrial/EV) – Sodium, nickel.

Some of the battery metals have hazardous properties. However, **batteries are sealed articles with no risk of exposure for end-users or consumers under normal use conditions and collection through take back and collection systems.** Landfilling, incineration and improper disposal of batteries is already illegal under the Batteries Directive.

The risk of exposure for employees along the value chain is already addressed through the successful enforcement of the existing EU legislative framework (e.g. REACH and Occupational Health and Safety legislation).

REACH and OSH incorporate mechanisms which allow for the creation of risk management measures targeted at the use of all substances at every stage of the battery life, including the waste phase.

The duplication of procedures to regulate these substances is therefore unnecessary, and it would create additional regulatory uncertainty for the industry.

Article 6 should be amended to make reference to the already existing REACH, OSH and IED processes and therefore benefit from existing horizontal legislation rather than to create additional product specific requirements. This would also allow the deletion of Article 71 from the Commission proposal.

Conclusion

The new Batteries Regulation is considered as a blueprint for other initiatives and includes several completely new measures, from recycled content to due diligence and carbon footprint. We believe that the battery sector is too important and strategic to make it a test case. All measures should be designed and implemented with an acknowledgement of the complexity involved in their delivery over the next decade.

In this paper we have identified five key risk areas from current discussions in the co-decision process, which might endanger the competitiveness of the EU industry and the electrification of the transport, energy and industrial sectors. We call on co-legislators in the European Parliament and Council to consider fully the global battery market's diversity and fast pace, and to only introduce new ambitions if their impacts have been fully assessed.

The current direction witnessed in the co-decision process, highlighted in this paper, shows that the nascent EU battery industry will face major risks of multifaceted burden, innovative "test" measures with limited foundations. This ultimately threatens Europe's strategic autonomy in that field and risks slowing down the much-needed shift to zero emissions set out under the Fit for 55 package and the EU Green Deal.

Any measures proposed, and approved, will need to deliver on advancing the energy transition and ensuring the European batteries value chain becomes a competitive global leader, able to set sustainability standards for the rest of the world.

ABOUT US

ACEA, the European Automobile Manufacturers' Association represents the 16 major Europe-based car, van, truck and bus makers: BMW Group, DAF Trucks, Daimler, Daimler Truck, Ferrari, Ford of Europe, Honda Motor Europe, Hyundai Motor Europe, Iveco Group, Jaguar Land Rover, Renault Group, Stellantis, Toyota Motor Europe, Volkswagen Group, Volvo Cars, and Volvo Group. Visit www.acea.auto for more information about ACEA, and follow us on www.twitter.com/ACEA_auto or www.linkedin.com/company/ACEA/.

AVERE is the only European association representing and advocating for electromobility on behalf of the industry, academia, and EV users at both EU and national levels. Its membership consists of National Associations supporting electromobility across Europe, as well as a variety of companies ranging from carmakers to charging operators. AVERE currently has active members in 21 European countries, and, via its association members, indirectly represents close to 2.300 industry members and over 100.000 EV users. www.avere.org

CLEPA, the European Association of Automotive Suppliers based in Brussels, represents over 3,000 companies, from multi-nationals to SMEs, supplying state-of-the-art components and innovative technology for safe, smart and sustainable mobility, investing over €30 billion yearly in research and development. Automotive suppliers in Europe directly employ 1.7 million people in the EU. www.clepa.eu

EASE, the European Association for Storage of Energy located in Brussels, Belgium, is the leading member-supported association representing organisations active across the entire energy storage value chain. EASE supports the deployment of energy storage to support the cost-effective transition to a resilient, climate-neutral, and secure energy system. www.ease-storage.eu

EBRA, the European Battery Recycling Association, represents the interests of actors involved with sorting, treating and recycling consumer, industrial or automotive spent batteries, whatever the type or chemistry, apart from Lead-Acid automotive batteries, but including E-mobility and stationary batteries. www.ebra-recycling.org

EGMF, the European Garden Machinery Industry Federation, has been the voice of the garden machinery industry in Europe since 1977. With 30 European corporate members and 7 national associations representing manufacturers for garden, landscaping, forestry and turf maintenance equipment, we are the most powerful network in this sector in Europe. Our members are responsible for employing 120,000 people in the EU, and in 2020 sold over 19 million units on the European Market. For further information please visit www.egmf.org

EPTA, the European Power Tool Association, represents the interest of European power tool manufacturers. Our 25 member companies represent approximately 70.000 employees in Europe (170 000 worldwide) and 90% of all corded and cordless power tools sold. Power tools are used by professionals, skilled trades men and DIY consumers. The industry's annual turnover is about €7 billion in Europe. EPTA members are committed to the highest possible standards of quality and safety of their tools. Innovation and advanced technologies as well as customer-friendly applications are key to our companies' economic growth, competitiveness and the creation of jobs. www.epta.eu

EUROBAT is the leading association for European automotive and industrial battery manufacturers, covering all battery technologies, and has more than 50 members. The members and staff work with all policymakers, industry stakeholders, NGOs and media to highlight the important role batteries play

for decarbonised mobility and energy systems as well as all other numerous applications.
www.eurobat.org

EUROMETAUX is an industry association representing the collective European non-ferrous metals industry, including miners, smelters, refiners, fabricators and recyclers. With 500,000 employees and an annual turnover of €120bn, our members represent an essential industry for European society that businesses in almost every sector depend on. Together, we are leading Europe towards a more circular future through the endlessly recyclable potential of metals. www.eurometaux.be

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 by enabling decarbonised electricity and mobility, and cutting-edge consumer products. RECHARGE's unique membership covers all aspects of the advanced rechargeable battery value chain: from suppliers of primary and secondary raw materials, to battery and original equipment manufacturers (OEMs), to logistic partners and battery recyclers. www.rechargebatteries.org

SolarPower Europe is the voice of photovoltaics (PV) in Europe, with members active along the whole solar PV value chain and in neighbouring business sectors. SolarPower Europe's mission is to promote PV electricity in the European market and to give its global membership a strong and unique voice towards European decision makers. It develops targeted business intelligence on markets, industry, and technologies, keeping its members and external stakeholders informed and up to date on the PV industry. The association also communicates the benefits of PV to key stakeholders, including EU decision makers & opinion leaders, the PV sector and the general public. SolarPower Europe is registered as an international non-profit making organisation under Belgian law. www.solarpowereurope.org