

POSITION PAPER: Evaluation of the EU Battery Directive

Background

Batteries and accumulators play an essential role to ensure that many daily-used products, appliances and services work properly, constituting an indispensable energy source in our society.

The Batteries Directive 2006/66/EC lays down rules on placing batteries and accumulators on the market and their treatment in the EU. It intends to contribute to the protection, preservation and improvement of the quality of the environment by minimising the negative impact of batteries and accumulators and waste batteries and accumulators whilst ensuring the smooth functioning of the internal market by harmonising requirements regarding the placing on the market of batteries and accumulators.

Many of the components of these batteries and accumulators can be recycled, avoiding the release of hazardous substances to the environment and, in addition, providing valuable materials to important products and production processes in Europe.

DG Environment is currently reviewing whether the Directive meets its objectives and contributes to the general objectives of the EU environmental policy and is seeking input from interested stakeholders

Our Position

ILA members play a critical role in closing the loop, collecting and recycling lead-based batteries that are still the dominant rechargeable battery chemistry used in automotive and industrial applications.

Batteries are at the very heart of the shift towards a decarbonized society, encompassing several industrial sectors, from energy storage and grid stability to warehouse and port logistics, telecommunication and all modes of transport. This role is set to grow in the future creating millions of jobs and making European industry stronger and more competitive.

We believe that the current review of the EU Battery Directive represents an ideal opportunity for the EU Commission to develop a new legislative proposal that facilitates this goal by encouraging the development of all battery technologies by replacing the focus with substitution of hazardous substances with wider sustainability and circular economy objectives such as design for recyclability, resource availability, and minimizing risk through closed loop recycling using processes that maximise material recovery by establishing high recycling efficiency targets for all chemistries.

We also believe that the review should look to improve coherence between EU legislative instruments impacting the manufacture, placing on the market and recycling of batteries. Significant overlap exists between the existing Battery Directive, End-of-Life Vehicles Directive and REACH Regulation that impedes the development of an independent, domestic battery manufacturing and recycling industry which maintains and creates jobs in Europe.

We have specific comments pertaining to the relevance, effectiveness and efficiency of the Battery Directive that we request that the Commission take into consideration:

1. **Ecodesign/Design for recyclability:** We do not believe that the current Directive adequately considers the optimal design of industrial and automotive batteries to allow safe and easy dismantling to aid economically driven recycling at end-of-life. Many of the newer battery technologies that have grown in market share since the Battery Directive was enacted are extremely complex, lack standardization and are difficult to remove from the technology they are powering. This is an impediment to efficient recycling at end-of-life. The Directive could be used as a regulatory instrument to encourage battery manufactures to better consider eco-design to allow safe and economic recovery of valuable raw materials at the end of (first or second) useful lives of the battery.
2. **Improving efficiency of regulation pertaining to batteries:** There is a need ensure that the revision of the Battery Directive (2006/66/EC) and of the End-of-Life Vehicles Directive (2000/53/EC) strike the appropriate balance between environmental and competitiveness considerations and that the revisions are timely available for safeguarding and strengthening the EU competitive edge in recycling of batteries. In the specific case of automotive lead batteries, they are removed from the application at the end of their useful life and are managed via a separate, battery specific waste stream. It is therefore not appropriate that these batteries are regulated by the End-of-Life Vehicles Directive as well as the Battery Directive (and manufacture potentially also through REACH regulatory requirements). We believe that the review of the Battery Directive should look to improve coherence between EU legislative instruments impacting the manufacture, placing on the market and recycling of batteries
3. **Article 3-Definitions:** The current definition of a “portable battery” is rather ambiguous and has resulted in an inconsistency in reporting of collection and recycling efficiencies by Member States. We would propose that an agreed upper weight limit be applied to enhance consistency in this regard.
4. **Article 4-Prohibitions and Article 5-Increased environmental performance:** We believe that the current assessment of environmental performance has a disproportionate focus on prohibiting or substituting hazardous substance use in batteries and accumulators and that a more holistic assessment of wider environmental sustainability issues should be introduced. To a greater or lesser extent all existing batteries on the market contain or utilize hazardous substances during their manufacturing therefore this should not be used as a surrogate of environmental performance. A wider focus on environmental sustainability of batteries is required that includes consideration of:

- Technical performance-fit for purpose
- Assessment of existing collection rates and efficiency of recycling operations
- Total environmental lifecycle impact/footprint
- Resource availability and use of EU critical raw materials
- Ecodesign and design for end-of-life recyclability
- Replacement of restriction based upon hazard with an assessment of the risk of use of hazardous substances (to workers, communities and consumers)
- Ethical sourcing of raw materials

These would allow for a more balanced assessment of the relative attributes of batteries environmental performance and would avoid falsely stigmatising individual battery chemistries based only on presence of hazardous substances.

5. **Article 8-Collection schemes:** Whilst we understand that Producer Responsibility must remain central to the Directive, it is important to continue to encourage a flexible approach to collection and recycling that reflect differing National circumstances. ILA Member companies operate on behalf of battery producers in many EU Member States to close the loop for lead based battery manufacturers through a highly efficient and effective collection and recycling network that has resulted in close to 100% collection and recycling of automotive and industrial lead-based batteries and recycling efficiencies of lead in excess of 97%.
6. **Article 10-Collection targets:** Collection targets are not required for automotive and industrial batteries as performance is already close to 100%. Given the well-functioning Business-to-Consumer (B2C) and Business-to-Business (B2B) collection systems for automotive and industrial batteries, no changes should be made to the Directive regarding collection targets.
7. **Article 12-Treatment and recycling:** There are a number of aspects of treatment and recycling of automotive and industrial batteries that should be improved;
 - a. **Recycling efficiencies** set out in Annex III part B need to be reviewed in terms of what represents Best Available Technology and in terms of circular economy objectives. Lead-based batteries are the gold standard in this regard with close to 100% collection and recycling and nearly all the end-of-life battery being recycled into valuable products that are re-used in new battery manufacture. Today a new lead battery contains on average 80% recycled content. In contrast, lithium ion batteries are not specifically addressed in Article 12 and this is reflected in the extremely low recycling rates currently seen for large format lithium ion batteries (see Gaines, L., 2014. The future of automotive lithium-ion battery recycling. Charting a sustainable course. Sustainable Materials and Technologies 1-2, p2-7).

If the use of this chemistry is to grow as anticipated, then it is clear that much higher rates of recycling are required to conserve critical raw materials that are used for the manufacture of these batteries. Article 12 should be revised to better reflect this need and encourage manufacturers of this chemistry to better align the need for clean energy with circular economy objectives and the need to conserve critical raw materials through recycling whilst discouraging downcycling into lower value products.

- b. Enhanced focus on **Health, Safety and Environmental performance of treatment and recycling facilities**. The Directive does not adequately describe minimum EHS and quality performance of operators that are involved in the treatment and recycling of batteries. Although Best Available Techniques (BAT) are included in EU legislation for some battery chemistry recycling (e.g lead-notably through the non-ferrous metals BREF or BAT Reference document), this is not true for all. The Battery Directive should encourage adoption of BAT by all players in the collection and recycling of all battery chemistries.
 - c. **A level playing field is required for the calculation of recycling efficiencies**. A more rigorous approach to defining system boundaries for calculating recycling efficiencies reported to Member States exists for used lead batteries compared to others (e.g Lithium ion where battery management and cooling systems can be included in addition to the components of energy cell). This introduces inconsistencies in the reporting of relative recycling performance of different battery chemistry's and is an important consideration if the environmental impacts of battery chemistries are to be compared.
 - d. Article 12 currently permits **disposal of collected portable batteries containing cadmium, mercury and lead in landfill**. This cannot be good practice in terms of recovery of valuable resources or environmental protection and we would encourage the Commission to remove this as an option.
8. **Article 21- Labelling**: With a growing market share of lithium ion batteries in certain segments of the automotive and industrial battery market, a proper separate collection of waste batteries of both battery technologies has become essential. Labelling must be available to better identify automotive and industrial battery by chemistry to allow more efficient sorting. The existing labeling provisions do not allow for effective sorting of these batteries when they have similar size/shape and this has resulted in a number of significant process safety incidents at lead battery recycling facilities resulting from inclusion of end-of-life lithium ion batteries in the feedstock. A battery labeling standard (IEC 62902) is currently being developed by the International Electrotechnical Commission (IEC) to facilitate better identification and we would request that the Commission takes this into consideration in the context of Article 21.

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About International Lead Association (ILA)

The International Lead Association is the trusted global trade association for the lead industry, representing the producers of about 3 million tonnes of lead. Member companies are at the forefront of the mining, smelting, refining and recycling of lead. ILA is working toward a vision of a sustainable global lead industry that is recognised for the positive contribution it makes to society