ACEA Position Paper

Revision of the EU Batteries Directive (2006/66/EC)

July 2020
KEY RECOMMENDATIONS

The evaluation of the current EU Batteries Directive (2006/66/EC) has been completed and the proposed measures are currently undergoing an impact assessment. The European Automobile Manufacturers’ Association (ACEA), representing the major players in the global automotive battery market, fully supports the Commission’s initiative to promote more circularity and sustainability. To that end, ACEA would like to contribute to the ongoing and future discussions by offering some key recommendations:

a) The extended producer responsibility (EPR) scheme under the end-of-life vehicles (ELV) directive already applies to batteries used in passenger cars. Private-sector initiatives deliver on similar responsibilities for heavy-duty vehicles (HDVs).

b) Setting collection targets for batteries would be an ineffective instrument to promote their recycling. Therefore, no changes are necessary to the current legislation regarding the collection of automotive and industrial batteries.

c) Harmonisation of the different waste directives is a prerequisite for better recycling. In particular, definitions of ‘second life’ and ‘second use’ should be harmonised across EU waste legislation.

d) The producer or importer of automotive batteries can only be held responsible for the product it initially put on the market.

e) Automobile manufacturers already provide dismantlers with comprehensive information regarding the safe removal of batteries via the International Dismantling Information System (IDIS) or via other channels for HDVs.

f) Any targets for recycling materials only make sense if they are technically, economically and environmentally achievable.

g) Any design-related recyclability requirements would hinder technological neutrality and innovation, without effectively achieving high recycling rates.

h) Life Cycle Analysis (LCA) should remain voluntary for the internal management of environmental improvements. LCA studies shall be based on ISO 14040/44.

i) It is important to note that auto makers already endorsed the proposed OECD guidance on sustainable sourcing and started applying it on a voluntarily basis.

COLLECTION TARGETS

In compliance with Directive 2000/53/EC and private-sector initiatives, automobile manufacturers already fulfil their extended producer responsibility (EPR) for end-of-life vehicles (ELV). That is why very efficient and well-working collection and recycling processes already have been implemented in many EU member states, not only for automotive batteries (eg 12V batteries) and (high-voltage)
traction batteries, but for also vehicles as such. These collection schemes and private-sector initiatives, combined with the ban on landfilling and/or incineration, have ensured that nearly 100% of automotive and traction batteries are collected at the end of their life today.

ACEA therefore believes that no changes are necessary to the current legislation regarding the collection of automotive and industrial batteries.

As for industrial batteries for electric vehicles (EVs), any potential collection target would be a counterproductive instrument for recycling more batteries. Instead, it would lead to premature recycling of these batteries, with negative consequences for the environment, and would contradict circular economic objectives which specify that product-life extension should prevail in line with the waste hierarchy for the efficient use of resources. The owner of an industrial battery should not return it just for the sake of a collection target.

Undoubtedly any collection target can only be effective if it is related to the quantities of waste available for collection and not based on the volume ‘put on the market per year’. A significant share of batteries is exported as part of the original product from the EU (eg in used cars) or re-used within the EU as second-hand or second-life batteries. Hence, these batteries are either not available for collection or just not present in the European Union anymore.

Only by linking any potential collection targets to a database of officially-deregistered vehicles (delivered as a complete vehicle) and by accounting not only for batteries that are collected for recycling but also those for re-use in a car or second use in other applications, it will be possible to measure the performance and the effectiveness of a collection scheme.

SECOND-USE/SECOND-LIFE APPLICATIONS

ACEA strongly supports the second use and re-use of batteries, in line with the principles of the circular economy and the waste hierarchy, which prefer re-use over recycling. However, clear definitions (of ‘second use’, ‘second life’, ‘re-use’ and ‘remanufacture’ for example) that are harmonised with other waste legislation are missing. Under the current legislation, all end-of-life batteries (including non-damaged and non-defective ones) are considered as waste and a very strict protocol therefore needs to be followed when these are transported. This jeopardises the waste hierarchy and hinders the development of cost-effective and environmentally-friendly remanufacturing models as well as second-life and re-use applications.

Hence, ACEA proposes not to treat nor transport a used (non-damaged and non-defective) battery as waste at the end of its first use, as long as there is or can be an intention for re-use, second use or second life. A flowchart explaining ACEA’s position on second-use can be found in the Annex at the end of this position paper.

Second use/re-use of rechargeable batteries poses many questions regarding the EPR. The automobile industry calls for a clear definition of what the responsibility of vehicle manufacturers is when it comes to collecting batteries that they have put on the market for their initial use. The
producer or importer of automotive batteries and accumulators cannot be held responsible for second-use batteries put on the market by third parties. It is the producer of a battery for second-life utilisation that should hold product liability and extended producer responsibility. Furthermore, when a battery is used for second-life applications, the producer of the second-life product must install labels and ensure that the new product is clearly identified as a second-life product.

**USE OF RECYCLED MATERIALS AND END-OF-LIFE RECYCLING**

ACEA believes that the use of recycled materials in new batteries should not be regulated by fixed quota, as this may impede innovation in both recycling technology and battery chemistry/technology.

Recycling or recovery of specific materials or metals is driven by free market forces, ie the value of and the demand for secondary raw materials, as well as recycling technologies. Moreover, these market forces are controlled by economic operators (in charge of different treatment technologies and operating procedures) with whom vehicle manufacturers have no direct relations. This may lead to the treatment of a mix of batteries for different applications and with a different material composition, outside of the control of automobile manufacturers.

For traction batteries, material recycling should be based on the input at the recycler’s facility and calculated at pack level (ie including the external casing). Any material-recycling target only makes sense if it is technically and economically achievable. Recycled materials can only be used in new batteries if recyclers can guarantee that recyclates have either the exact same technical and quality properties as virgin material, or consistent properties. The supply of recycled content must also be guaranteed throughout the whole production period of the battery or the entire vehicle, this in order to avoid production coming to a halt. If that is not the case, it becomes technically impossible for manufacturers to meet any quota.

Furthermore, a harmonised EU methodology should be introduced that accounts for the use of recycled materials. Today it is also close to impossible to predict in which quantities a recycled material will be available 15 years from now, when EV batteries come back for recycling (or even later when it includes second-use batteries). Likewise, it is very difficult to predict what new technologies will be on the market by then, and how this will influence demand for and supply of virgin and recycled material. Indeed, the overall goal must be to create a level playing field for all market operators and to prevent a shortage in supply of recyclates.

The development of battery technology continues at a fast pace, and the composition of batteries can and will change. Material-related recycling targets would therefore be a disadvantage, as they are complex and risk becoming outdated when changes/innovation in the chemistry or composition of batteries occur. The calculation of recycling efficiency at process level is easier to understand and implement, providing much clearer indications of where exactly further optimisation of recycling can be realised throughout the process.
DESIGN REQUIREMENTS

The recycling of passenger cars in the European Union is regulated by Directive 2000/53/EC. The average recycling rate of >85% for a complete vehicle confirms that environmentally-sound vehicle design practises and strong recycling processes are in place in the EU today. Already now, compliance with the European ELV Directive must be assured by means of recycling concepts with high rates of re-use, observance of prohibited substances and the further optimisation of the product concept with a view to recycling-compliant design. Europe's automobile manufacturers are actively facilitating this by providing dismantlers with comprehensive information regarding the safe removal of batteries from cars via the International Dismantling Information System (IDIS).

The recycling of heavy-duty vehicles (HDVs) is driven by market forces through various private-sector initiatives, including those set up by the automotive sector itself as part of its production systems. The dismantling and recycling phases are incorporated into the design and production of new trucks.

Throughout the 19 years that HDVs have been outside the scope of the ELV Directive, the vehicle recycling industry has handled, treated and de-polluted trucks and buses in a way similar to passenger cars. In other words, in practice existing environmental legislation is already being applied to HDVs.

ACEA believes that a motor vehicle must always be considered as one single product, as every single part has a dedicated function in the overall vehicle concept. Designed in large batteries is a complex process and design standards are closely linked to battery functionality and high safety requirements. Any design-related requirements that only focus on recycling would impede the technological neutrality principle and hamper the very innovation that is so essential to such a dynamic technology. Innovation in recycling technologies and the economic application of those innovations are therefore considered crucial and more effective in achieving higher recycling rates than design requirements.

The ongoing acceleration of the mobility sector's electrification requires as much flexibility as possible for the design of batteries. This will help the automobile industry to further reduce CO₂ emissions from vehicles, thereby contributing to achieving the Paris climate goals and the EU's objective of reaching climate neutrality by 2050.

Although the batteries fitted to electric vehicles can and will be used as energy storage batteries for stationary applications in a second life, any new regulatory proposals should only focus on their primary application, i.e., the propulsion of electric vehicles. The primary application requirements for electric vehicles should always take precedence. Consequently, it must be guaranteed that regulation for stationary uses does not impose any restrictions on the development or design of batteries that are initially used in mobile applications.
SUSTAINABILITY REQUIREMENTS

Vehicle manufacturers acknowledge and fully endorse the European Commission’s efforts towards a sustainable industrial policy for batteries.

To secure effective and efficient legislation, sustainability requirements for automotive batteries shall be tailored to the installed battery capacity, putting more emphasis on higher levels of vehicle electrification, as proposed in the Commission’s eco-design study.

ACEA recognises the Life Cycle Analysis (LCA) as an important methodology that will further support reducing the environmental impact (eg carbon footprint) of motor vehicles. The automotive industry already uses LCA as an internal tool for monitoring and reporting on resource consumption and environmental impact throughout a vehicle's life cycle. LCA is also considered a methodology supporting strategic decisions regarding product development.

However, the Life Cycle Analysis should remain a voluntary tool based on ISO 14040/44 (the only methodology that is globally used and accepted). The complexity of automobiles – and the impact this has on strategic decisions regarding certain technologies; high-voltage batteries for example – does not allow for making comparisons between different automobile manufacturers in the framework of a mandatory reporting scheme.

ACEA acknowledges the necessity to comply with rules for the responsible sourcing of materials in the global battery value chain. Since 2012, vehicle manufacturers are jointly developing actions to voluntarily improve the social, ethical and environmental performance of automotive supply chains under the umbrella of the Drive Sustainability\(^1\) initiative. These activities already include guidelines and requirements for the responsible sourcing of raw materials for batteries.

Regarding battery performance requirements, ACEA recommends to avoid assessing batteries as an isolated component. Instead, requirements should consider the battery as an integrated product in the vehicle, as this would also be more representative of actual customer use. That is why performance requirements, as well as information related to on-board diagnostics (OBD) and battery management systems (BMS), should be treated outside the review of the Batteries Directive.

\(^1\) https://drivesustainability.org/
ABOUT THE EU AUTOMOBILE INDUSTRY

- 13.8 million Europeans work in the auto industry (directly and indirectly), accounting for 6.1% of all EU jobs.
- 11.4% of EU manufacturing jobs – some 3.5 million – are in the automotive sector.
- Motor vehicles account for €440.4 billion in taxes in key European markets.
- The automobile industry generates a trade surplus of €84.4 billion for the EU.
- The turnover generated by the auto industry represents over 7% of EU GDP.
- Investing €57.4 billion in R&D annually, the automotive sector is Europe's largest private contributor to innovation, accounting for 28% of total EU spending.

ACEA MEMBERS

ACEA represents the 16 major Europe-based car, van, truck and bus manufacturers

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