

**EUROBAT** 

*The Association of European Automotive  
and Industrial Battery Manufacturers*

**EUROBAT** 

**M A N I F E S T O**

**2 0 1 9 - 2 0 2 4**



# BATTERIES FOR EUROPE: POLICY RECOMMENDATIONS

**2 0 1 9 - 2 0 2 4**



# 01

## WHAT IS EUROBAT?

EUROBAT is the Association of European Automotive and Industrial Battery Manufacturers. Its 50-plus members comprise more than 90% of the automotive and industrial battery industry in Europe.



MORE THAN

30

battery manufacturing plants



16

research centers



OVER

€ 6.5<sub>BN</sub>

annual turnover



MORE THAN

50

Manufacturers and Associate members from across the value chain

# 02

## APPLICATIONS

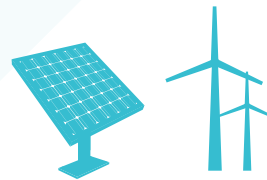
### AUTOMOTIVE

Batteries contribute to the decarbonisation of the European transport sector - reducing CO<sub>2</sub> emissions via start/stop batteries and innovative solutions in mild and (plug-in) hybrids and full electric vehicles.



### ENERGY

Batteries are indispensable for storing renewable energy coming from solar and wind farms. They also contribute to a more stable and reliable grid.



### MOTIVE POWER

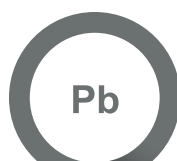
All four battery technologies available are a perfect fit for powering industrial vehicles such as forklifts and cranes, while also reducing noise and emissions.



# 03

## ALL BATTERY TECHNOLOGIES

EUROBAT represents the manufacturers of all four existing battery technologies: **Lead-, Lithium-, Nickel- and Sodium-based**. Each chemistry has its own advantages and is best suited for specific applications.



### LEAD BASED ADVANTAGES

Low production cost, proven technology, sustainability



### LITHIUM BASED ADVANTAGES

High energy density, low weight



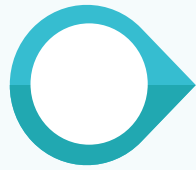
### NICKEL BASED ADVANTAGES

Long life, reliability



### SODIUM BASED ADVANTAGES

High energy density, low weight



# EXECUTIVE SUMMARY

We the **European battery industry** believe that for the **2019-2024 legislative term** the focus of officials and newly elected Members of the European Parliament should include:

01

**Recognition and promotion** of the role played by **all battery technologies** in the decarbonisation of our mobility and energy systems.

02

**Promotion and stimulation of battery production in Europe**, ensuring a stable business environment and fair competition among technologies.

03

**Creation of a coherent and supportive regulatory framework** for sustainable batteries, in line with the principles of circular economy and wider EU decarbonisation objectives.

Batteries are critical to the fight to **decarbonise our economy and tackle climate change**. All battery technologies - **lead, lithium, nickel and sodium** – are needed to support the decarbonisation of the transport, energy, logistics, production and telecommunications sectors. **No single** battery technology can meet all the challenges of end-user demands and combine high power and energy density, long life, low cost, excellent safety and minimal environmental impact.

Europe must take a lead in **designing and building the most environmentally sustainable energy storage solutions** and supporting the **development of its battery industry**. To do so, policy makers, citizens, associations and industry **must work together** to remove legislative and market barriers. They must instead promote the development of a **favourable environment** in which the European battery industry can flourish, delivering growth, room for innovation and increased employment.

**This Election Manifesto** provides an overview of the status of the industry, and most importantly looks ahead to identify the **challenges and opportunities** which the sector faces. It details the regulation we would like to see in order to **safeguard the EU battery sector** and allow it to play its role in combatting the global and pressing problem of climate change.



## 01

## SUPPORT BATTERY TECHNOLOGIES AND MANUFACTURING TO HELP DECARBONISE EUROPE

### WHAT WE ASK OF POLICY MAKERS

01

Create a **positive environment** and **regulatory framework** that enables **all electrification technologies** to play a role.

02

**Decarbonise the transport sector** by promoting **electric vehicles and all forms of hybrids**.

03

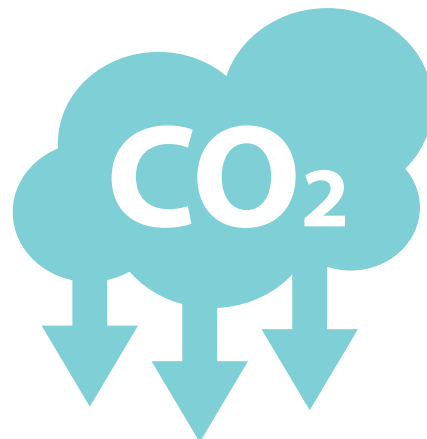
**Harmonise grid charges** and taxation for storage across the EU, removing double grid fees and ensuring a level playing field for storage services.

04

Actively support **motive power electrification** through public procurement and dedicated emissions reduction measures.

In November 2018 the Commission presented its strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050<sup>1</sup>, in line with the need to respect the **UN Paris Climate Agreement** target of 1.5°C agreed in 2015.

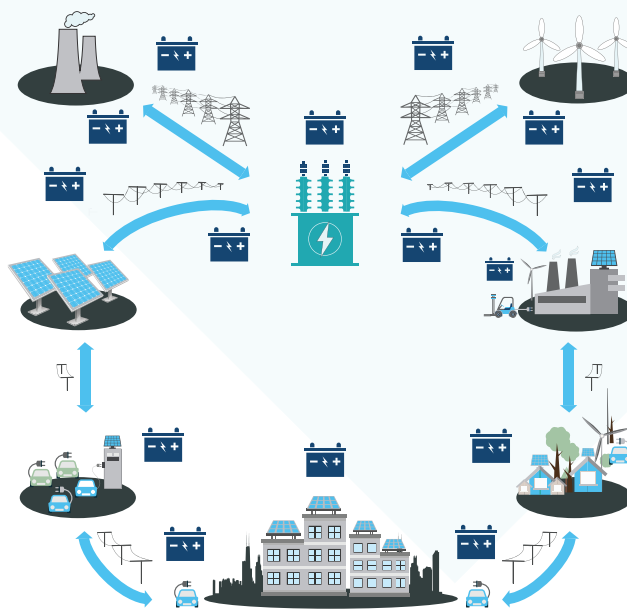
The strategy culminates a legislative term where the need to reduce CO<sub>2</sub> emissions was highly debated and resulted in two, additional packages to decarbonise the transport and energy sectors: **the Clean Mobility Package** and the **Clean Energy Package**. Batteries are fundamental to the success of both.



1. [https://ec.europa.eu/clima/sites/clima/files/docs/pages/com\\_2018\\_733\\_en.pdf](https://ec.europa.eu/clima/sites/clima/files/docs/pages/com_2018_733_en.pdf)



Advanced batteries are revolutionising the transport sector with various degrees of **hybridisation and electrification** – from start/stop to mild hybrid, plugin hybrid and full battery electric. **Electric and plug-in hybrid vehicles** will be a cornerstone of the strategy to decarbonise the transport sector, with a 35% benchmark for newly sold passenger cars by 2030<sub>2</sub> as agreed by the EU institutions. However, cars equipped with **internal combustion engines (ICE)**, are projected to still have a market share of around 60% by 2030<sub>2</sub>. It is therefore crucial to continue improving the **efficiency of ICE vehicles with start/stop, 48v and hybrid technologies.**

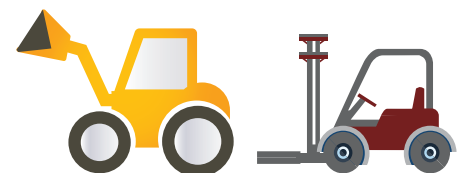


Batteries as electricity grid stabilisers

In the **energy sector**, batteries **store renewable energy** and discharge it when needed at every level of the grid, enabling the growth of renewables in the energy mix and providing important **stability services** for the electricity grid.

**The Clean Energy Package** finally recognised the importance of **battery energy storage**, providing a definition, clearer ownership rights and in general a role in the energy system. However, some barriers still exist and must be addressed in the next term: for instance, **full harmonisation of grid charges and taxation** for storage across the EU has not yet been achieved.

**Motive power batteries** are deployed in several sectors - from ground support at ports, forklifts, warehouse to agricultural machines, and from construction to mining equipment. Their improved performance will be fundamental to achieving additional energy savings and reduced emissions, as well as to delivering noise reduction.



## 02

## CREATE THE BEST CONDITIONS FOR BATTERY TECHNOLOGIES TO GROW - GENERATING JOBS AND SKILLS IN EUROPE

### WHAT WE ASK OF POLICY MAKERS

01

The **Battery Action Plan**, which succeeded in breaking through silos, needs to include **all battery technologies** – lead, lithium, nickel and sodium.

02

Europe must further expand its funding schemes for **all battery technologies**, ensuring the **competitiveness of the EU battery industry**.

03

The EU should work further on **standardisation**, reflecting the **latest trends and applications**.

04

**All different risk management options** for strategic battery materials should be considered before REACH authorisation, such as binding **occupational exposure limits (OEL)** for instance.

Back in 2017, EUROBAT called on policy makers to come up with a “**2030<sub>3</sub> Battery Strategy for Europe**”, ensuring **coherence** between the several EU initiatives to promote and support the production of all battery technologies in Europe. We therefore welcome and support **the European Battery Alliance and Battery Action Plan**, which have now put batteries high up on the political agenda and should continue to do so.

Lithium-based batteries have been the focus of the Battery Alliance, and for good reason: today, lithium-based batteries are the dominant technology for battery electric vehicles and come in a range of different types. However, now and in the future, **a variety of battery technologies (lead, lithium, sodium and nickel)** will serve diverse market segments thanks to their different features. There is no such thing as a one-size-fits-all battery: Europe must create a positive environment for investments in the battery sector, **ensuring plannability and a level playing field, and scaling up EU R&D funding for all battery technologies**.

As we expect all battery chemistries to grow significantly in the coming years, **keeping and expanding their production in Europe** is therefore fundamental to the future of the European automotive sector, and for a just transition to a low carbon economy that safeguards **jobs and growth for Europeans**.

3: [https://www.eurobat.org/images/170224\\_EUROBAT\\_Battery\\_Strategy\\_for\\_Europe.pdf](https://www.eurobat.org/images/170224_EUROBAT_Battery_Strategy_for_Europe.pdf)



There is also a growing need for the development of **standards** - particularly **safety and recycling** for new products and technologies. For instance, this applies to the growing use of lithium in electric vehicles (EVs), which in the future will increasingly need to be recycled.



*All technologies contain chemical substances*

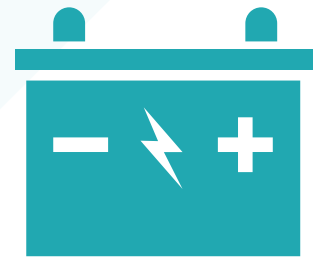
One of our key concerns is the EU **chemicals and substance policy**, based on the ban or restriction-of-use of **hazardous substances**. This approach poses a **constant threat** to investments in Europe, as investors lack certainty as to the long-term possibility of using fundamental substances in the production of batteries.

**All battery technologies** contain or use **hazardous substances**: this is the case, for instance, for lead metal and lead compounds, cobalt and cobalt compounds, nickel and nickel compounds, NMP (solvent) and others.

**REACH authorisation** of chemicals used in battery manufacturing could place EU manufacturers at a **competitive disadvantage** compared with companies situated outside of Europe who will not have to comply with this requirement. We believe that the Commission must **consider all available risk management options** and **not only** REACH authorisation.

**As batteries are sealed articles, with no risk to consumers**, we believe that more targeted risk management measures – such as **binding occupational exposure limits or sectorial restrictions** – will allow EU producers to maintain access to critical battery materials while better guaranteeing protection of both the environment and human health.

Finally, the EU needs to ensure **access to key raw materials for battery production** through trade agreements with third countries and the boosting of recycling of new battery technologies in Europe.



*A battery is a sealed box with no risk of exposure*



*EU access to raw materials is crucial*



## 03

### ADOPT LEGISLATION THAT SUPPORTS SUSTAINABLE EUROPEAN BATTERY VALUE CHAINS

#### WHAT WE ASK OF POLICY MAKERS

01

**Remove barriers and overlaps between existing regulations** - particularly the **Battery Directive**, **End-Of-Life-Vehicles (ELV) Directive**, **Waste Shipment Regulations** and **REACH**.

Policy decisions on the regulatory framework for batteries must also take into **consideration jobs, growth and innovation**.

02

The **Battery Directive** must be revised and focused on the **environmental sustainability of batteries**, not on the hazardous properties of substances.

03

The scope of the **Eco-design Regulation** on batteries must be **limited to e-mobility applications**.

04

Current **waste shipment rules** to re-import batteries must be **simplified**.

We must produce batteries with a **low environmental footprint**, protect workers and the environment from hazardous substances, and ensure proper recycling. In order to really develop green batteries several **overlaps of current EU legislation** that regulate the batteries sector need to be clarified - notably the **End-of-Life Vehicles Directive**, the **REACH Regulation** and the **Battery Directive**.

Proper **end-of-life management for batteries** is a prerequisite to defining a battery as **green**. Today, all batteries available on the market are **recyclable**: lead-based batteries, for example are collected and recycled at the end of their life and the recycled lead is used to produce new batteries. In fact, lead-based batteries are the most recycled article in the EU, and a clear success story for the **circular economy principle**.

Similarly, sodium and nickel-based batteries are also perfectly recyclable. Lithium-based batteries are also recyclable but the relative scarcity of these batteries entering the recycling stream is currently preventing the development of a business case for recyclers. Lithium-based batteries are therefore a net “taker” of raw materials.





Two directives address this subject: the **Battery Directive** and the **End-of-Life Vehicles Directive**. The revision of the Battery Directive will provide an opportunity to make it more reflective of technological developments and the **environmental sustainability** of batteries rather than focused disproportionately on **the hazardous properties of substances**. The Directive will have to take the growth of lithium-ion



batteries into account, including specific targets for this family of products.

New developments, such as the possibility of second life and the importance of some key raw materials, will also need to be considered.

Requirements on recycling in the **End-of-life vehicles (ELV) Directive** have resulted in some **overlap** with those presented in the **Battery Directive** and we believe that only the latter should be the reference on this topic. The ELV Directive also introduces a prohibition on the use of hazardous substances in vehicles, with exemptions given in the case that substitution is not technically feasible.

In future, wider socio-economic factors and sustainability considerations must also be among the criteria for these exemptions.

The European Commission has initiated the review of both the End-of-life vehicles and Battery Directives, with legislative proposals likely to be published at the start of the next European Parliament term. Against this backdrop, we **ask that the European Commission takes no new decisions on existing exemptions to restrictions listed in the End-of-life vehicles Directive until the revision of the Directive is completed.**



Regrettably, batteries may be lost from EU closed loop recycling through shipment of end-of-life vehicles to other parts of the world. The review of the ELV Directive presents an **opportunity** to stop this activity and ensure that the EU retains waste batteries that could be recycled under more environmentally responsible conditions. Amending the **Waste Shipment Regulations** to facilitate imports of waste batteries into the EU could also help in this regard.

The **Eco-design Regulation on Batteries** will also be very important in clarifying what constitutes a green battery and establishing minimum requirements for batteries to be placed on the EU market. However, we believe that the scope should be **limited to e-mobility applications** due to their decarbonisation potential and growth forecasts for the coming years.



# A SUSTAINABLE INDUSTRY

*Towards a circular economy with responsible end-of-life treatment of automotive and industrial batteries*

*Take back and recycling of all battery technologies lowers CO<sub>2</sub> emissions and improves resource efficiency*

**99%** of all automotive and industrial batteries are taken back at their end-of-life for further processing

**90%** average recycling efficiency for lead-based batteries in Europe. Recovered materials are used to manufacture new batteries.

**75%** of lead in European lead-based batteries is now produced from secondary sources

Highly efficient recycling of nickel- and sodium-based batteries with recycling processes for lithium-ion batteries developing strongly in line with growing markets for e-mobility and storage




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