

EUROBAT + E

The Association of European Automotive and Industrial Battery Manufacturers

Promoting European manufacturing of batteries for a competitive and sustainable Europe



www.eurobat.org
eurobat@eurobat.org
@eurobat_org
tel: +32 7611653

EUROBAT REPRESENTS THE MANUFACTURERS OF ALL BATTERY TECHNOLOGIES

Pb	Li	Ni	Na
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
APPLICATIONS			

EUROBAT + E

Promoting European manufacturing of batteries for a competitive and sustainable Europe

- MORE THAN 30** battery manufacturing plants
- 16** research centers
- OVER € 6.5 BN** annual turnover
- MORE THAN 50** Manufacturers and Associate members from across the value chain
- OVER 30.000 EMPLOYEES** IN EUROPE
- 90%** OF THE AUTOMOTIVE AND INDUSTRIAL BATTERY MARKET

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 CO2 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 treated in Europe, with materials used to manufacture new batteries and other applications

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

High recycling efficiency for nickel and sodium-based batteries, with recycling process for lithium-ion batteries developing strongly in line with growing markets for e-mobility and storage

1000s of tonnes of nickel, silver, copper, cobalt and rare earth elements are recovered from these battery technologies, and transformed into new applications (e.g new batteries, stainless steel, road pavement)



ADVANCED BATTERIES FOR THE DECARBONISATION OF TRANSPORT

All battery technologies contribute to the decarbonisation of the European transport sector

Lead-based batteries are the only viable mass market for starting lighting and ignition functions, as well as start-stop systems. Micro hybrid start-stop systems **IMPROVE FUEL EFFICIENCY BY 5-10%**, contributing to **700-1600 KG OF CO2 SAVINGS** across the vehicle lifecycle.

HYBRID VEHICLES use batteries of various technologies to provide regenerative braking and electric propulsion

Plug-in hybrid and full electric vehicles provide partial or full electric propulsion, **ALLOWING ZERO TAILPIPE EMISSIONS IN ELECTRIC MODE**

BATTERY ENERGY STORAGE & SERVICES

Batteries can store renewable energy and offer several services at every level of the electricity grid

BATTERIES CAN STORE ENERGY PRODUCED BY SOLAR AND WIND FARMS and release it into the grid when it is needed

BATTERIES OFFER ANCILLARY SERVICES to stabilize the grid (e.g. voltage control and frequency regulation), making it more stable, reliable and fit for renewables

At household level, a battery connected to a photovoltaic panel **CAN INCREASE THE PERCENTAGE OF SELF-CONSUMED ELECTRICITY FROM 30 TO 70%**.

MOTIVE POWER BATTERIES

An innovative sector with a potential to become even bigger

- Lead, lithium, sodium and nickel-based batteries with their own specific features that are fit for specific types of applications
- Emission and noise reduction
- Total installed capacity of more than 20 GWh in Europe: possibility to provide services to the electricity grid
- Europe leading these markets and constantly innovating

BATTERY FOR EMERGENCY BACK UP AND DIGITALISATION

TLC/UPS

Telecommunications - Uninterruptible power supply

A major market is the **emergency back-up power batteries** in a variety of applications with reaction time below 20 ms, including for instance conventional power plants and hospitals

AC stand-by, line interactive and double conversion UPS with reaction times below 20 micro seconds, **can be sized from 1,5kVA to tailored systems over 200 kVA** providing back-up for 5 minutes to several hours or days

Providing additional services to the owners such as **autonomy and electricity quality control**

Europe leading these markets providing constant technological innovation

