



# NEWS EUROBAT

THE QUARTERLY NEWSLETTER OF THE ASSOCIATION OF EUROPEAN AUTOMOTIVE AND INDUSTRIAL BATTERY MANUFACTURERS



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## Batteries – economic factor, high tech and sustainable

From electrification and hybridisation of transport, from storage of renewables & grid stability, from back-up power for telecommunication to energy efficiency of buildings, batteries are at the very heart of the shift towards a low-carbon and sustainable economy.

With this redesigned newsletter EUROBAT, the European Association for automotive and industrial batteries hopes to better inform decision-makers, supply-chain partners and stakeholders about the benefits of batteries in their different applications.

With more than 30.000 employees in Europe, the European automotive and industrial battery sector plays an important role in terms of job creation.

### An omnipresent feature of daily life

Batteries can provide distinctive and important services in numerous automotive and industrial applications:

1. Regarding automotive applications, batteries are used to power hybrid and electric vehicles besides providing SLI (starting-lighting-ignition) functions. The various battery technologies have a well-defined purpose in automotive applications and have an irreplaceable role in reducing CO<sub>2</sub> emissions. Therefore it is not possible to replace this technology by another without an impact on the overall performance and price. The analysis [“A review of battery technologies for automotive applications”](#) gives detailed information.

2. Industrial batteries are widely used in motive and standby applications; for example in forklift trucks and electric wheelchairs,



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as Uninterruptible Power Supply (UPS) for hospitals, telecommunication and IT applications as well as for energy storage purposes. Battery energy storage is an optimum solution to store energy from on-peak renewable energy and discharge it when it is more needed, fostering the use of renewables and improving the stability of the grid.

### Battery technologies for different applications

A broad range of different battery technologies exists today with four chemistry families dominating the market: lead, lithium, nickel and sodium.

1. Lead-based batteries are used in automotive applications for SLI (Starting – Lighting – Ignition) functions. Advanced lead-based batteries in vehicles also provide start-stop and micro-hybrid functionality, reducing CO<sub>2</sub> emissions by five to ten percent. All [hybrid and electric vehicles](#) contain a second, lead-based

battery to supply their electrical components, including safety relevant features. Industrial lead-based batteries are widely used in many applications, from energy storage to telecommunications and are recognized as very reliable and cost efficient solution.

2. Lithium-based batteries are currently the product of choice for plug-in hybrid and electric vehicles. They have high energy and power density, low weight, superior cycling and fast charge ability. They can be used for industrial applications as motive power, domestic and large-scale energy storage.
3. Nickel-Metal Hydride batteries have been the technology of choice in the hybrid vehicles market over the last decade. They offer long cycle life and highest reliability. Nickel-Cadmium batteries are used in industrial applications with difficult environmental conditions.
4. Sodium-based batteries, used for energy storage, heavy duty electric vehicles and public transport (buses, trams, etc.), have a high energy density and high cycle life. They are well-suited for harsh climate conditions.

### Sustainability and closed-loop end-of-life treatment

Sustainability is a key strength of the battery industry. Lead-based batteries, for example, have one of the highest collection and recycling rates: [nearly 100 percent of all automotive batteries are collected and recycled](#). The high collection rate of lead-based batteries is facilitated by the high material value of lead. All materials generated in the recycling process can be used to manufacture new batteries.

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### Imprint

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