
Batteries are a key enabling technology in the fight against climate change

Batteries are critical to the fight to decarbonise and tackle climate change and Europe should lead the way by supporting environmentally sustainable energy storage. All battery technologies will be needed to support the huge growth in demand for rechargeable energy storage between now and 2030. At COP24 the EU must make a commitment to continue supporting investment in research and innovation in these technologies if we are to meet the demanding targets set in Paris to tackle global climate change. It remains critical that the EU regulatory framework is consistent with these aims and allows continued access to the primary and secondary raw materials needed to deliver a sustainable battery value chain in Europe.

The latest IPCC report represents the latest wake-up call on the need to decarbonize our economies and keep global warming below 1.5°C, as agreed at COP21 in Paris in 2015. The report shows us again the terrible consequences of insufficient actions for the entire humanity: in view of the upcoming COP24, taking place in Katowice in December 2018, it is imperative for all States to renew their commitment and step up their efforts to decarbonize their economy and mitigate climate change.

The good news is that we have already have many tools that will facilitate the route of decarbonisation: the share of renewables in the energy mix is growing worldwide, and these sources of energy are already now competitive on international energy markets. Batteries of different technologies (lead, lithium, nickel and sodium) will support the growth and utilization of renewables, and they will be the cornerstone of the efforts to electrify the transport, energy, logistic and telecommunications sectors.

Electricity sector:

At every level of the grid, batteries drastically increase the share of renewables in the energy mix. If coupled with solar panels or wind power, batteries can store electricity that would have otherwise been wasted due to overproduction, and inject it into the grid when it is more needed. Batteries can be coupled with large renewable installations, but also with small solar PV on the roof or PV and wind farms, dramatically increasing the share of self-produced and consumed electricity from renewable sources.

More robust and resilient transmission and distribution grids will also be needed to accommodate this growing share of renewables. **Batteries can ensure grid stability** providing

fundamental ancillary services such as voltage control and frequency regulation, ultimately ensuring that the “lights stay on”. These type of services could also be offered by new actors, such as private consumers (the so-called “prosumers”) and aggregators, making the participation of individual citizens to the energy transition possible.

Logistic, construction, telecoms sectors:

Batteries are used also in all sectors where motion is needed. For instance, forklift trucks, cranes and off-road machines can all be electrified; again decreasing our carbon footprint.

Finally, batteries support the functioning of telecommunication towers and installations, allowing the transition towards 5G and the internet of things.

Mobility sector:

The e-mobility revolution is already happening today, and batteries are at the very heart of this revolution. With increasing levels of renewables in the energy mix, and the progressive improvements in battery capacity, performance and production, hybrid and electric vehicles will considerably reduce the carbon footprint of the transport sector. The share of these vehicles is still quite reduced in most countries, but technological advancements in the battery sector and cost reductions are making electric and hybrid vehicles an increasingly interesting option for consumers. Governments can do their part supporting the transition to hybrid and electric mobility by creating a favorable investment environment for companies working in this sector and promoting the use of low-carbon vehicles.

The battery sector has been working on low-carbon technologies already for decades: **batteries are already smoothing the transition in the transport sector** through improvements of existing technologies. A good example is the advanced lead battery start-stop technology, which is delivering CO₂ savings of 5-7% in more than 50% of new cars sold in Europe. New and advanced auxiliary 48v battery systems will further reduce CO₂ emissions of conventional cars by up to 15%.

These advancements will be of particular relevance in the coming years: if we look at the targets on electro-mobility currently under discussion at EU level, by 2030 35-40% of newly sold cars will be electric. This leaves a considerable amount of vehicles on the road still running on an internal combustion engine until at least 2040. It is therefore imperative to keep working on these vehicles to further reduce their emissions, and batteries can do that.

Batteries are therefore formidable tools to fight climate change across different sectors. Of course, further technical development is needed to have batteries with even better performances, longer lifetime, and reduced footprint. We should also consider circular economy, and sustainability considerations, and several existing battery technologies exhibit are at a high recyclability. Customers expect and continue to count upon an entire range of battery technologies to accommodate the specific needs of each application. The battery industry is already investing heavily to provide the batteries customers need now and into the future.

About EUROBAT:

EUROBAT is the association for the European manufacturers automotive, industrial and energy storage batteries. EUROBAT has over 50 members from across the continent comprising more than 90% of the battery industry in Europe. The members and staff work with all stakeholders, such as battery users, governmental organisations and media, to develop new battery solutions in areas of hybrid and electro-mobility as well as grid flexibility and renewable energy storage.

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