

EUROBAT Comments on 18 Recommendations for EU Battery Alliance

A variety of commercialized lead, lithium, sodium and nickel based battery chemistries and technologies exists today. They are all complementary, answering to different demands in terms of performance and other capabilities to fit the right applications. Batteries play a key role in the development of cleaner road vehicles, from start-stop technology to various degrees of powertrain hybridization and the emergence of full electric passenger vehicles, trucks and buses.

A variety of battery technologies is also employed in applications other than road vehicles, which represent a market with similar order of magnitude.

Batteries play a key role in the development of cleaner motive power applications, such as forklifts, agriculture and building machinery, vessels etc. This market is large but with very diverging battery products. To note that the EU battery manufacturers are serving and strongly dominating current markets because of the quality of the tailored batteries.

Batteries play also a key role in the development of stationary applications, such as on-line, line interactive and double conversion UPS for power, communication and data center purposes but also in a multitude of other stand-by applications. More recent developments is the emergence of the electricity generation and transmission/distribution sector, where batteries offer fundamental energy storage and grid balancing services, allowing the integration of renewables into the energy mix and the stability of the electricity grid.

The EU battery alliance should therefore be opened to all current and future battery technologies.

From a regulatory perspective, EU policy-makers should address, as a matter of priority, the legislative overlaps that exist between the Battery Directive, End-of-Life Vehicles Directive and REACH Regulation needs to be addressed. Europe needs a regulatory framework that ensures a further development of all existing and new battery technologies without jeopardizing or even banning one or another technology. We therefore suggesting adding this as priority number 19.

Whilst we believe that there are measures of regulatory and policy-making nature that can be taken to implement the recommendations, some developments should be left to the markets.

Our specific comments on the 18 recommendations are as follows

#	Objective	Recommendations	Priority (1 highest - 4 lowest)	EUROBAT comments
1	Securing security of supply of raw materials to Europe, at reasonable costs	Securing (from EU and outside) sustainable and responsible raw material supply chain is key. Establish a European raw material pool, set targets for European content and establish a European investment fund.	1	Securing security of supply of raw materials to Europe should be addressed through the EU Raw Materials initiative. We support the objective and the recommendation.
2	Ensure effective use of limited raw materials and sustainability in production through circular economy	Recycling and 2nd life need to be fully integrated from scratch. Set targets for share of recycled material	2 -1	We support the objective and the recommendation to integrate targets for recycled materials, and the question should be addressed during the revision of the Battery Directive. However, we do not understand the relevance of EV battery 2 nd life for the efficiency of the use of raw materials. It is always more efficient to make a new stationary or EV battery from recycled materials. 2 nd life might actually have the effect of slowing down the development of recycling facilities, because high volumes of waste batteries are needed to create a business case for recycling and secondary use would postpone the moment the battery enters the waste stream (we partially disagree “2nd life batteries may represent also an opportunity in certain application”).
3		Re-collection mechanism/processes must be developed (e.g., by tax reduction as a	3 -2	This question should be addressed during the revision of the Battery Directive (<i>attached EUROBAT input to EC</i>

		share of product cost; and establishing recollection services) already for battery use outside automotive and power to stimulate the recycling industry since these sectors only will give sufficient stock beyond 2025.		<p><i>consultation on the Battery Directive (December 2017))</i></p> <p>We support the recommendation and have the following comments:</p> <ul style="list-style-type: none"> - It is not the collection process that is the “bottleneck” - Tax reduction should be a high priority as it is an important product cost - The prioritization level should be the same as for recycling because only collected batteries can be recycled
4	Ensure sustainability in Battery manufacturing	Declaration of CO2 footprint of batteries will give European industry a competitive and commercial edge versus competitors.	4 2	<p>We agree that environmental considerations, including end-of-life, should be factored in. We support the objective and the recommendation. As Europe has more renewables in the energy mix, and this share will grow according to EU 2030 targets, batteries produced in EU should have a lower CO2 footprint. It would also allow to compare battery technologies as it will also consider the quality of the product, such as life time etc... We do not understand why the priority is only at level 4 and we would advise to bring it at much higher level, since this could clearly represent a competitive advantage for the European industry.</p>
5	Ensure maximum safety for European citizens and create competitive advantage through standardization.	Standardize storage related installations including charging infrastructure, safety rules, active load compensation and enable vehicle to grid solutions	1	<p>We support the objective and the recommendation. The European Battery manufacturers have many years of expertise in developing both safety and performance standards in a variety of applications. This work should be led by the existing battery committees; worldwide by the IEC TC 21/SCA and at European level by the Cen/Cenelec TC 21x, creating official liaisons to the respective application-oriented TCs. The purpose is to rely on existing work, to avoid duplication of work and to maintain unambiguity.</p>

6	Supporting European Battery manufacturing in order not to miss the hockey stick phenomenon in market demand (250B€/year in 2025)	Front loading financially, e.g. IPCEI (important projects of common European interest) and/or other financial instruments such as tax incentives, the needed investments is a must for not missing the demand uptake.	1	This is a key objective, and it should be clear that the financing mechanisms should be available for all battery applications and technologies, not limited to EV battery markets. The purpose must be to provide incentives to the EU battery industry which will allow battery producers to extend the use of new technologies also to other areas than EV, including the stationary and motive power markets where the European battery industry is strong. The EU battery industry is serving current markets and therefore cannot entirely focus on future EV markets only.
7	Accelerate time to market to meet market demand and Asian competitors	“Fast track” permitting (environmental, manufacturing, construction) process is crucial for developing an European mining, refining and cell manufacturing supply chain.	2	We would support the objective and recommendation if Europe can guarantee the functioning of a free battery market in order to ensure the competition inside Europe in all applications and not to install a “fast track”, permitting the EU automotive market to dominate the entire value chain (all applications), given the fact that Europe is already strong in specific battery markets.
Re 8	Create and support new markets for Batteries in order to support sustainable solutions for power, transportation and industry sectors which is in line with EU climate goals and winter package.	The function of batteries and battery systems must be seen pluri-functional, in a context of both power and transportation sectors.	3	We agree with the objective, however we strongly disagree with the recommendation. Developing ‘universal’ battery product serving both the EVs and the power sector applications is not the solution, and does not reflect the reality of the battery market, where batteries are designed to be fit to specific applications. We understand the logic because of the economy of scale but this is a too simple approach. If Europe wants to develop energy efficient products, in line with EU climate goals, it will have to optimize battery systems to fit the application to increase the energy efficiency. EV batteries might support grid functionalities at a certain extent, however, developing ‘universal’ EV battery products is conflicting with energy efficient products. There

				are batteries and other systems specifically targeted to serve these markets, and they can do that in a much more efficient way. It is also questionable that developing universal EV battery system would also increase growth and sustainable jobs in Europe, given the current market situation and developments in a multitude of other applications.
9		We must not ignore batteries for industrial vehicles (yellow machines where Europe is leader) and busses, which adds to the total transport related CO2 emissions .	2	We strongly agree with this recommendation. It is an important point that should be considered when taking decisions for further developing the battery manufacturing industry in Europe. Motive power off-road markets is what European Battery manufacturers did not ignore. They are heavily engaged with R&D and strongly leading the current EU markets over the last 20 years. Also to note that motive power markets are strongly electrified in Europe compared to the Asian and US markets, driven by the severe emissions, noise and air pollution incentives in Europe. All battery technologies have their role to play and are complementary. The total motive off-road battery market is significant compared to the automotive/road battery market. EU battery manufacturing represents a 90% share of the total EU market. Reference document: EUROBAT publication on Motive off-road Power applications 2017 available at https://eurobat.org/
10	Reshape grid planning process to become more sustainable and cost effective.	Incentivize storage as alternative to conventional grid reinforcement.	3	We support the objective and recommendation. However, it will be important to clarify when DSOs and TSOs can use, own and operate storage as tool for grid reinforcement, to really push for this solution to be adopted and don't create legislative barriers. The Clean Energy Package should be considered in this debate.
11	Enable integration of	Sustain incentivization of electric vehicles	3	We agree with the objective. We do not agree with the

	ESS on all levels of power system including behind the meter.	including working machines.		<p>recommendation as this is much too narrow. Incentives to enable integration of ESS on all levels of the power system, including behind the meter, should be applicable to <u>all</u> ESS facilities, not limited to EV and motive power batteries only, but in particular to focus on the stationary ESS, which are primarily designed for grid application functionalities and which will be available 100% of their time.</p> <p>EV and motive power batteries might also contribute but they will not solve the issues in the electricity grid efficiently, and will have anyway to compete with other technologies in competitive balancing markets.</p>
12	Enable integration of ESS on all levels of power system including behind the meter	For ESS, regulation (or absence of it) enabling of right business models is crucial	2	
13		Establish regulations that incentivize power based tariffs and allow storage owners on all levels in the system	3	We support the objective and the recommendation
14	Develop and strengthen skilled workforce in all parts of the value chain	Sufficient and key human capital skills are missing in Europe especially on applied process design. Lighthouse projects for cell manufacturing will attract worldwide talent.	3	Agreed. Cooperation with academia and labour unions is necessary here.
15	Grow the European R&D&I capacity. Make Europe attractive for world class experts and create competent workforce.	Constant incremental (Lithium ion) and disruptive (e.g. solid state) R&I connected to industrial ecosystem in all the steps of the value chain (advanced materials, new chemistries, advanced manufacturing process, BMS, recycling, business model innovations) will create competitive advantage.	2	We strongly agree with this point as this is very important. But this should not be explicitly limited to li-ion technology only. All other existing battery technologies, i.e. lead-, sodium- and nickel-based batteries have also this potential and they have already proven that they are constant incremental optimizations and improvements are possible. They should all benefit and will result in a growing R&D&I capacity and make Europe attractive for world class experts in order to be further developed.
16		Conduct advanced research in battery	2	Agree. Applicable to all technologies

		chemistry, battery systems, manufacturing, recycling and increase university output in these areas.		
17	Create the best impact oriented innovation ecosystem for electrochemical storage	Create and operate a dedicated ecosystem for mining, refining and recycling related to batteries within EU, encouraging cross-functional initiatives between academia, research, industry, entrepreneurs and financial community.	4	Several battery technologies are used depending on the application. Such an ecosystem should therefore be open to all battery manufacturers.
18	Involve the EU citizens in the journey.	At the end of the supply chain there is always a B2C transaction. Public efforts (education in schools, role modelling, ...) should be spent on citizen awareness of the whole valuechain, so there is a societal appropriation from the start. Fighting for keeping the supply chain in Europe will definitely help to bridge the gap citizen-politics.	2	Agree.
19	Coherent regulatory framework for batteries	Minimize legislative overlaps by regulating battery related issues under the regime of the EU Battery Directive. Take benefit from the current review and revision process of 2006/66/EU to do so.	1	Europe needs a regulatory framework that ensures a further development of all existing and new battery technologies without jeopardizing or even banning them. All end-of-life considerations of batteries should be addressed under the Battery Directive, which also means that batteries should be removed from the review scheme under the End-of-Life Vehicles Directive. All battery technologies use hazardous substances. The different life stages of batteries are regulated by existing EU legislation. The interplay of REACH and OHS legislation shall be assessed for the specific case of substances used for batteries. Where existing legislation provides binding and enforceable minimum requirements for the control of risks from the industrial use of the substances in battery



				manufacturing, the uses of these substances shall be exempted from REACH requirements that go beyond registration.
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