

# Public consultation on sustainability requirements for batteries

Fields marked with \* are mandatory.

## Introduction

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Battery technologies play a key role in decarbonising the road transport sector and strongly contribute to energy storage solutions, both for domestic and grid applications. Their large-scale deployment has the potential to make a substantial contribution to the Energy Union and sustainable mobility policies. At the same time, the production and use of batteries can induce negative environmental impacts, notably in terms of energy and resource use.

The Strategic Action Plan on Batteries announced an action for the Commission to put forward requirements for sustainable battery design and use for all batteries placed on the EU market. The initiative “sustainability requirements for batteries” is the implementation of this action and may result, if justified, in regulatory intervention setting out minimum sustainability requirements.

The main objective of this initiative is to foster the production and placing on the EU market of high performing, safe, sustainable and durable (i.e. long-lasting) battery cells and battery packs/modules, produced with the lowest environmental footprint possible in a way that is cost-effective. At the same time, this initiative ensures a level playing field for economic operators.

### About this public consultation

Given the above policy context, this public consultation aims at offering general public and relevant stakeholders (in particular those active in the sector of batteries) the opportunity to contribute to the exercise and at providing relevant and robust information in a structured way. The responses will contribute to the analysis, together with evidence from different sources, including desk research and other consultations.

The questionnaire is divided into the following parts:

- part 1: information about the respondent
- part 2: market trends and existing policies
- part 3: specific questions

The deadline for replies is 05.08.2019.

You can send any additional information that you consider relevant to this consultation to the mailbox [GROW-CODESIGN@ec.europa.eu](mailto:GROW-CODESIGN@ec.europa.eu), indicating 'Public consultation sustainable batteries' in the subject of your email.

Thank you for your cooperation.

## About you

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\*Language of my contribution

- Bulgarian
- Croatian
- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- Gaelic
- German
- Greek
- Hungarian
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

\*I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

First name

\*Surname

\*Email (this won't be published)

\*Scope

- International
- Local
- National
- Regional

\*Organisation name

255 character(s) maximum

European trade association; Orgalim represents Europe's technology industries – innovative companies spanning the mechanical engineering, electrical engineering and electronics, and metal technology branches. Together they represent the EU's largest manufacturing sector, generating annual turnover of around €2,000 billion, manufacturing one-third of all European exports and providing 11 million direct jobs. Please see <http://www.orgalim.eu>

\*Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision- making.

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\*Country of origin

Please add your country of origin, or that of your organisation.

- Belgium

### \*Publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only your type, country of origin and contribution will be published. All other personal details (name, organisation name and size, transparency register number) will not be published.

Public

Your personal details (name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

\*I agree with the [personal data protection provisions](#)

Which of the following activities are performed by your company/business association? (more than one choice is possible)

Battery cell manufacturing

Cell components manufacturing (cathode materials, anode materials, electrolytes, separators, etc.)

Raw materials and/or processing materials (cobalt, natural graphite, lithium, etc.)

Battery pack manufacturing for mobility applications

Battery pack manufacturing for stationary applications

Electric vehicle manufacturing

Second life applications / repurposing of battery packs

Recycling

My company is not involved in any of the activities listed above

How would you qualify your knowledge on batteries?

a) I have a very limited knowledge

b) I know the general aspects allowing me to have an informed opinion

c) I am familiar with the specific technical details/aspects of these products

## Market trends and existing policies

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According to some forecasts, Europe could capture a share of a global battery market of up to €250 billion per year from 2025 onwards. How do you see the future development of the European market for batteries manufacturing?

a) I think that Europe will be an important player in the global market

b) Europe will not play a big role in the global market

c) I have no opinion

What will be the main driver for Europe being an important player?

a) Having a strong battery value chain in the EU is of strategic importance to our industry

b) Batteries are key to sustainable mobility and to the integration of renewable electricity generation in the grid

c) The market will develop without the need for regulatory intervention

What are the reasons why you think that Europe will not be a significant player?

a) European manufacturers will not be able to compete with Asian ones

b) It will be cheaper for European car makers and utilities to buy the batteries elsewhere

- c) Reduced access to raw materials for EU battery manufacturers
- d) Insufficient policy support (e.g., R&D funding, state aid, skills building) to get the value chain off the ground
- e) Upfront investments and risks to start production are too big
- f) Other (please explain)

Other, please explain

Different interpretations of the definitions in the UN Transport Guidelines are reported as a barrier to trade.

What type of policy and regulatory measures would be most appropriate for the promotion of batteries manufacturing in Europe?

- a) No regulatory intervention is necessary
- b) R&D funding
- c) Financial instruments (preferential loans, grants)
- d) Training
- e) Requirements on ethical sourcing of raw materials and social protection of workers
- f) Limiting unfair competition from third countries
- g) Strict sustainability requirements (durability, low carbon footprint, reusability, recyclability, etc...)
- h) Encourage industry self-regulatory efforts
- i) Other (please explain)

Other, please explain

Are you aware of barriers (either between Member States or with third countries) for the manufacturing and/or trading of new or used batteries?

- a) Yes
- b) No
- c) I have no opinion

If yes, please explain

Different interpretations of the definitions in the UN Transport Guidelines are reported as a barrier to trade. Different types of certification requirements apply in different regions for the placing on the market of batteries integrated into equipment. As regards recycling of batteries included in equipment, also recycling requirements vary depending on the country/region, including within the European Union.

In relation with this section, please provide, if possible, evidence (e.g. by quoting an existing report/study) in support of your reply

## Specific questions

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If a regulatory proposal was made to make batteries more sustainable, do you think that batteries for electro-mobility applications and batteries designed for stationary use as energy storage should be regulated together?

- a) Yes, they have enough aspects in common
- b) No, these applications are too different
- c) I do not have an opinion

### Free Text Question

There may be synergies between the application of batteries in electro-mobility applications and batteries designed for stationary use, especially when it comes to the second-life use of electro-mobility batteries for stationary applications. However, in general terms the applications are different and should, if regulated, be addressed separately taking into account these possible cross sectorial synergies.

Amongst the most relevant social and environmental impacts in the production of batteries are the use of raw materials and climate change. Would you be in favour of setting reporting obligations and/or thresholds on these impacts?

- a) Yes, reporting obligation on the climate change impact only
- b) Yes, reporting obligation on all environmental impact categories (including climate change)
- c) Yes, reporting obligation on responsible sourcing of raw materials
- d) Yes, maximum allowable thresholds on the climate change impact only
- e) Yes, maximum allowable thresholds on all environmental impact categories (including climate change)
- f) No reporting obligations or thresholds
- g) Other (please specify)

Other (please specify)

Companies are subject to reporting obligations related to the procurement of raw materials, such as the OECD guidelines. The annual financial statements of large companies include the (voluntary) environmental report, indicating the environmental impacts (e.g. CO<sub>2</sub> emissions) of production. Double regulation should be avoided.

There is an emerging market for second life applications of batteries after their first use in electric vehicles. Do you consider that the generalization of second-life batteries would have positive economic and environmental impacts?

- a) Yes, the generalization of second life applications of batteries should have a positive economic and environmental impact
- b) No, recycling batteries after their first use would be more efficient in economic and environmental terms
- d) I don't know, it is too early to say

If yes, please explain

The generalisation of second life applications should indeed result in positive economic and environmental gain. First, resource-efficiency should be pursued, in particular considering the negative impacts of raw material exploitation and the scarcity of certain raw materials. In addition, the profitability of for example a PV-system can often be materially improved when adding a stationary battery because of the raise of the

degree of self-consumption and the possibility of additional earnings (e.g. swarm storage for grid-stability services). The cheaper the stationary battery (second life-product), the better the business case for a PV-System and therefore its economics.

If it were compulsory that only batteries with minimum performance requirements could be placed on the EU market, which would be in your opinion the most relevant parameters to be used for this purpose? Please rate the parameters listed in the table below from not relevant to very relevant.

	Not relevant	Somewhat relevant nor irrelevant	Neither relevant nor irrelevant	Rather relevant	Very relevant
a. Energy density			X		
b. Energy efficiency (e.g., round-trip efficiency)			X		
c. Durability (e.g., minimum number of charging cycles)			X		
d. Capacity (e.g., total number of ampere hours or C-rate)			X		
e. Storage or charge retention			X		
f. Access to relevant usage data history (e.g., cell impedance, conductance, self-discharge) to facilitate State of Charge and State of Health determination			X		

Please explain your reply further

Performance requirements depend on the use of battery and the type of battery, which is why there is no single standard requirement for batteries. For example, energy density is very relevant for electric car batteries, but it is less relevant for stationary storage. Minimum power requirements should be aimed at battery type and use. In general, battery capacity is rather a product characteristic than a performance. A case by case approach of minimising life cycle impacts of batteries based on scientific evidence is essential if minimum performance requirements were to be set.

The Batteries Directive 2006/66/EC sets minimum recycling efficiency targets by average weight (65% for acid-lead, 75% for nickel cadmium and 50% for other waste batteries including lithium ion ones). Do you consider that design requirements on batteries could help Europe achieve higher recycling efficiency rates? Please rate the different options below from "Don't agree" to "Completely agree"

	Don't agree	Partially disagree	Neither agree nor disagree	Partially agree	Completely agree
a. No further action is needed for this aspect				X	
b. "Design for recycling" requirements could help increase the efficiency of recycling plants (e.g., easy dismantling)		X			
c. Minimum weight based recyclability targets at product level could help increase recycling efficiency rates				X	
d. To achieve higher recycling efficiency rates, recycling technology and economics are more important than design requirements					X

Please explain your reply further

As previously mentioned, this depends on the type of battery. While lead acid batteries are almost completely reused, the recycling efficiency of lithium ion is lower. Recycling is less attractive from an economic point of view especially for lithium ion batteries, due to lower material flows. Quantities and applying innovative recycling technologies in our view bear higher potential than eco-design requirements.

Some of the raw materials used in battery manufacturing (like cobalt, manganese, nickel and natural graphite) have economic importance as well as high supply risk (the are monitored by the European Commission as Critical Raw Materials – CRMs). In your opinion, should there be specific requirements to guarantee a minimum recovery rate of the CRMs contained in the batteries?

Please rate the different options below from "Don't agree" to "Completely agree"

	Don't agree	Partially disagree	Neither agree nor disagree	Partially agree	Completely agree
a. I think that there is no need to focus on CRMs		X			
b. Specific criteria to facilitate the recovery of CRMs should be established (e.g., design for recycling)	X				

c. Minimum recyclability targets for CRMs at product level should be established	X				
d. Although it is important to recover CRMs, minimum requirements for product design are not the right way to address this question (please explain below who else this could be addressed)					X

How to address the recovery of Critical Raw Materials otherwise

The security of supply of (critical) raw materials is very important for the companies-the availability of raw materials and their price are crucial for the economic success of a company. Securing the availability of raw materials, by recycling them among other, should therefore be in the company's own interest. Depending on the type of battery, recycling also takes place on a large scale.

The traceability of batteries can have a positive impact in many areas of the batteries value chain: from provision of information about the origin of the raw materials to identification of the chemistry and hazardous materials contained, which is useful for the EoL treatment. If a traceability system was to be developed for batteries, which would be in your opinion the key information to be provided and which would be the most appropriate format (e.g., product passport, QR code, etc...)?

Proper handling at the end of life stage is important. Recycling information and labelling of chemicals are of importance to the end user. These are regulated under the Batteries Directive and should continue to be regulated under this Directive.

Are there further comments you would like to make on anything that is not covered above?

Would you like to share with us a study or a position paper?

- Yes  
 No

Please upload your file

The maximum file size is 1 MB

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Do you agree that this study/position paper is made publicly available?

- Yes  
 No