

➤ **Implementation principles in line with Understandable, Standardized, Accurate, Discriminating and Auditable Standards**

These criteria should be implemented along with U.S.A.D.A. standards, which means they ought to be **Understandable, Standardized, Accurate, Discriminating** and **Auditable**. The complete PEF methodology is not fulfilling these criteria.

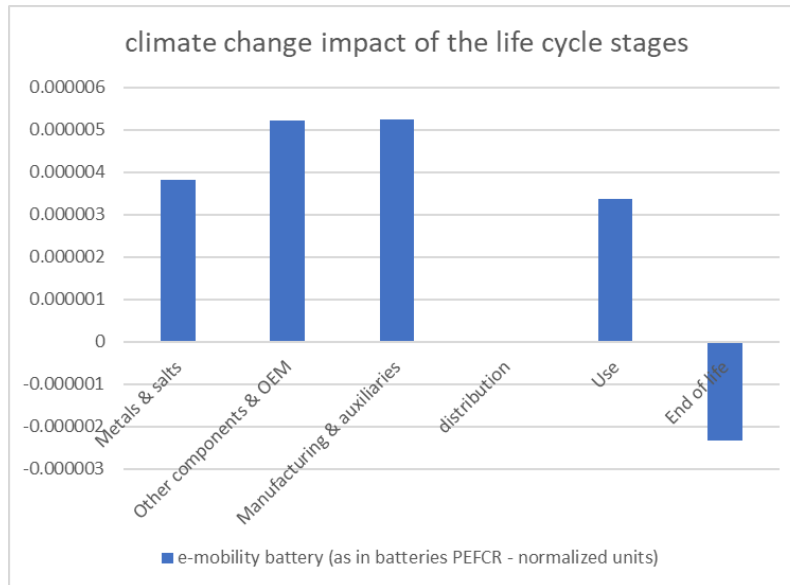
Comments of the proposed policy options of the inception impact assessment are presented in annex.

About

RECHARGE aisbl is the Advanced Rechargeable and Lithium Battery Association representing the specific interests of the Rechargeable Battery Industry in Europe. RECHARGE's mission is to promote the value of advanced rechargeable batteries through their life cycle. RECHARGE's Members include Rechargeable Battery Manufacturers, Original Equipment Manufacturers, Rechargeable Batteries Recyclers and Raw materials suppliers to the Battery Industry.

Contact: Mr Claude Chanson, General Manager | cchanson@rechargebatteries.org | + 32 2 777 05 60 | www.rechargebatteries.org

ANNEX: Batteries climate change impact (based on Batteries PEFCR)



Explanation of graph

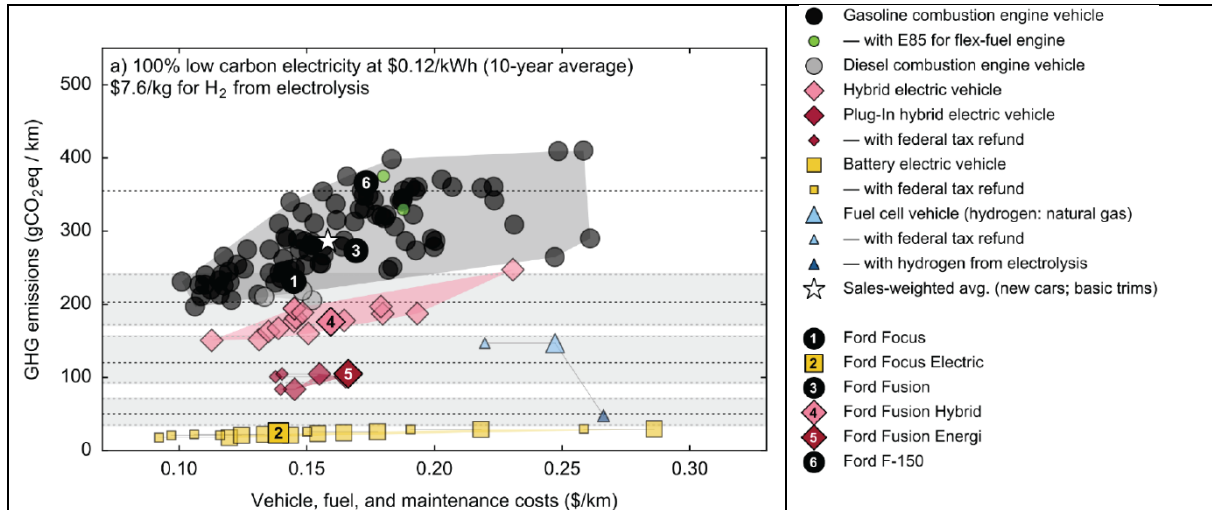
- The climate change impact is measured in “kg CO₂-equivalent”, before normalization (according the batteries PEFCR).
- **Metals and salts:** impact of the acquisition of the raw materials and transformation as batteries active materials (batteries cells material).
- **Other components and OEM:** impact of the batteries components such has electronics for safety protection and management, cooling systems as designed by the OEM (Original equipment manufacturer).
- **Manufacturing and auxiliaries:** impact of the cells and batteries manufacturing and assembly
- **Distribution:** impact of the transport and distribution, including intercontinental transport for the active materials.
- **Use:** impact of the electrical energy used in the battery during the use phase. Only the electrical energy losses of the battery are taken into account: the electrical energy transmitted to the vehicle is used by the vehicle, not by the battery.
- **End of life:** net impact credit of the recycling operation, calculated according the circular economy formula of the PEFCR, after deduction of the impact due to the process of recycling itself.

Comments on Batteries climate change impact

- The impact of the use phase represents only around 20% of the total impact throughout the product life cycle.
- The main sources of impact are the materials and components acquisition, as well as the manufacturing phase.

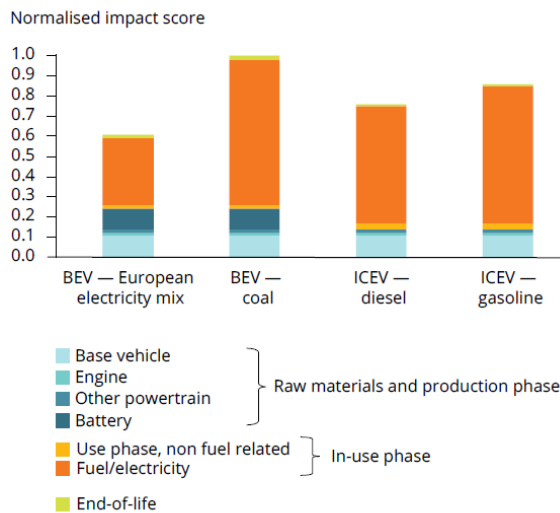
Vehicles climate change impact

On a full lifecycle basis and decarbonized grids (24 gCO₂e/kWh), electrification is the THE ONLY known technology to meet the 2050 climate target of 80% reduction vs. 1990.^{2 3}



TODAY, on a full lifecycle basis, EV lifecycle emissions are better than all other options, at EU average mix (276 gCO₂e/kWh).

Figure 6.1 Climate change impacts: example comparison of BEVs with ICEVs



Note: See footnote 8 for a description of the study system.

Source: Hawkins et al., 2013.

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² Trancik, J.E. et.al, Personal Vehicles Evaluated against Climate Change Mitigation Targets, Environ. Sci. Technol. 2016, 50, 10795–10804

³ European Environment Agency (EEA) 2018: <https://www.eea.europa.eu/data-and-maps/indicators/overview-of-the-electricity-production-2/assessment>

⁴ <https://www.eea.europa.eu/publications/electric-vehicles-from-life-cycle>

Analysis and proposals for the policy options

As a general comment on sustainability requirements, RECHARGE stresses that the Ecodesign Directive should **avoid any overlaps with the Battery Directive** and any **specification of a technical solution**, but should rather focus on the criteria rewarding environmental and social performance of the product. Moreover, the selected **criteria should be evenly applicable to all batteries** in the scope which are used in Europe, **including the imported products**.

Consequently, RECHARGE supports the implementation of a combination of targeted parts of the policy option outlined in the European Commission's Inception Impact Assessment:

Option 1 *No EU Action*

- RECHARGE does not consider option 1 is an efficient way to reach the objective, due to the high competition in battery manufacturing which does not leave room for a fair development of best social and environmental practices if not rewarded.

Option 2 *Self-regulation by industry on the performance and sustainability of batteries*

- RECHARGE considers crucial to only propose regulation whereby economical competition does not drive the product design and manufacturing in a 'sustainable direction'.

Option 3 *Minimum energy performance requirements*

- RECHARGE stresses the importance of a differentiated approach for the battery performances requirements: some of the suggested life duration measures are not applicable due to the different nature and combination of the performance criteria depending on the application.
- Requirements for energy efficiency performance can be considered, as long as they provide potential benefit for a recognized environmental impact: the climate change. In this case, RECHARGE recommends creating a criteria for climate change impact of the complete life cycle, based on CO₂ eq content of finished e-mobility batteries, normalized by total kWh provided.

Option 4 *Minimum sustainability requirements*

- As in option 3, RECHARGE stresses the importance of a differentiated approach. In case of recyclability, there are already existing criteria in the Batteries Directive. To avoid any overlaps, RECHARGE suggests redefining the **criteria for recycling only in the Batteries Directive**, if changes are needed.

Option 5 *Criteria on ethical sourcing of raw materials for the production of batteries*

- RECHARGE supports the set-up of a criteria for Corporate Social Responsibility, such as the ILO standards, in particular for raw material sourcing but not limited to it.