

# eLCAr

## E-MOBILITY LIFE CYCLE ASSESSMENT RECOMMENDATIONS

### Electric vehicles and LCA

Electric vehicles do not cause any direct emissions by fuel combustion. Therefore is often assumed that they don't have an climate impact. But of course other life cycles phase like raw material production, fabrication, supply of energy, infrastructure and final disposal do cause impacts. Life Cycle Assessment (LCA) is widely used as an instrument to access the ecological impacts caused over the entire life cycle of a product. Applying this method on electric vehicles, various challenges have to be faced (e.g.):

What are the System boundaries of electric vehicles and their basic components? What about energy production and infrastructure for charging of batteries? What is the functional unit? How to balance the effect of more efficient electric engines and longer lasting batteries? Many methodological questions need to be answered. Finally all derived results should of course be reliable and comparable – an agreed guideline for LCA studies of electric vehicles and their components is necessary.



### The eLCAr Project

The eLCAr project (E-Mobility Life Cycle Assessment Recommendations) aims at the preparation of guidelines for conducting LCAs on electric cars and their components.

Building on the existing ILCD handbook, all issues concerning LCA are addressed with focus on the specifics requirements of electric vehicles and their components.

Starting with the definition of goal, scope and an appropriate functional unit, methodological aspects will be addressed for all life cycle stages of electric vehicles.

The guideline will be developed on a modular approach, which allows assessing the impact of the complete electric vehicle by changing parameters of the components e.g. a battery with improved recycling characteristics.

### Why are the guideline needed?

The ILCD Handbook does not sufficiently address all relevant aspects for electric vehicles and their components (e.g. the definition of system boundaries).

Tailored guidelines will enable more consistent results of LCA conducted in different projects or by different stakeholders as.

A comprehensive comparison of specific components in the context of the full electric vehicles will be enabled.



## Interaction with Stakeholders

The recommendations developed by the project consortium will have a strong impact on the results of Life-Cycle-Assessments of electric vehicle and their components. A wide range of technologies and industries have to be considered.

In order to develop universally accepted guidelines that address all difficulties of conducting LCAs on electric vehicles and their components, the input and active participation of all affected stakeholders is crucial.

The main stakeholders are ECGI Projects with an embedded LCA analysis of electric vehicles and/or their components. Besides them important stakeholders are from the automotive industry, energy suppliers and research institutes.

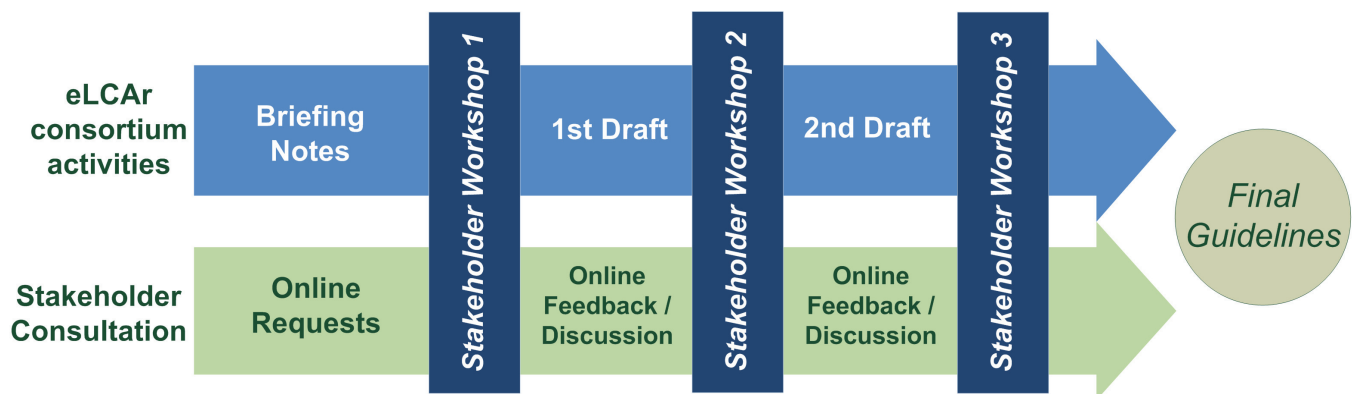
## How to participate

If you are interested in interacting there are various possibilities of getting involved:

- Download the current draft version of the guidelines on the project website and comment it directly via a feedback form or discuss your concerns with other stakeholders in the forum.
- Join our stakeholder workshops. Dates and further information are available online or via the newsletter.
- Sign up for the newsletter for up-to-date information

## What are your benefits from participation?

1. Find your specific concerns adequately addressed in the guidelines.
2. Bring in your expertise.
3. Learn from other stakeholders in an open communication process.



Visit the project homepage for further information, links, access to the forum and contact opportunities.

[www.elcar-project.eu](http://www.elcar-project.eu)

## Consortium



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