

Proposal for subgroup structure

3rd A-LCA IWG

2023. 01. 09

A-LCA subgroup structure

» Proposal by Korea

work elements work areas		common	specific each area	common	specific use area
Life stages	Material production	overarching aspects	activity item and data	Fuel Cycle*	
	Parts production and vehicle assembly		activity item and data		
	IV6 or SG_5 Use				
	SG_3 End of Life		activity item and data		
Verification Methodology transparency and consistency, data qualification and plausibility					
SG_4 Drafting					



work areas		work elements	common	specific each area
Life stages	Material production	SG_1 Material classification/Database (incl.recycled materials) & End of Life (incl.recycle)	overarching aspects	activity item and data
	Parts production and vehicle assembly	SG_2 Parts & Vehicle production		activity item and data
		SG_3 Use Phase		activity item and data
Verification Methodology transparency and consistency, data qualification and plausibility				
SG_4 Drafting				

A-LCA subgroup structure

» Proposal regarding SG #1

Summary of Working Structure (Proposal of Korea)

work areas		work elements		common	specific each area
		Material production	Parts production and vehicle assembly		
Life stages	Material production	SG_1 Material classification/Database (incl.recycled materials) & End of Life (incl.recycle)		overarching aspects	activity item and data
	Parts production and vehicle assembly	SG_2 Parts & Vehicle production			activity item and data
		SG_3 Use Phase			activity item and data
Verification Methodology transparency and consistency, data qualification and plausibility					
SG_4 Drafting					

» Prior discussion needed regarding material classification

- Material classification and corresponding database should be determined and harmonized prior to discussing materials and parts production as levels of material classification vary among supply chains and OEMs
- It could encourage supply chains and OEMs to be involved in the same subgroup sharing their status and ideas which could lead intimate cooperation with SG #2

» Organizing Materials and End of Life in the same subgroup

- Material acquisition and processing phase have significant impacts on GHG emissions, so vehicle OEMs are aiming to improve carbon footprint by investigating recycled materials
- It would be ideal to discuss End of life phase including recycle in the same subgroup of material production, so as to reflect carbon reducing activities by using recycled materials which could be possible to be aligned with primary materials in terms of material quality and usage ratio

A-LCA subgroup structure

» Proposal regarding SG #2

Summary of Working Structure (Proposal of Korea)

work areas		work elements		common	specific each area
		Material production	Parts production and vehicle assembly		
Life stages	Material production	SG_1 Material classification/Database (incl.recycled materials) & End of Life (incl.recycle)		overarching aspects	activity item and data
	Parts production and vehicle assembly	SG_2 Parts & Vehicle production			activity item and data
		SG_3 Use Phase			activity item and data
Verification Methodology transparency and consistency, data qualification and plausibility					
SG_4 Drafting					

➤ Separating Materials and Parts production

- There are significant differences in characteristics of processing and GHG emissions between material production and parts production
- GHG emissions of producing materials could be significant than parts production as material processing is generally accompanied by operating process of creating high temperature (steel/naphtha production process), whereas parts production process is relatively simple (forging/assembling)

➤ Combining Bought & Inhouse parts production

- Configurations of bought & inhouse parts could vary among vehicle manufacturers and even among vehicle models in the same OEM
- So, it could be critical that system boundary should be clearly defined for both bought & inhouse parts for LCA purpose
 - After discussing overarching aspects on scope and balance between accuracy and workload, we might come up with generic boundary of vehicle manufacturers

A-LCA subgroup structure

» Proposal regarding SG #3

Summary of Working Structure (Proposal of Korea)

work areas		work elements		common	specific each area
		Material production	Parts production and vehicle assembly		
Life stages	Material production	SG_1 Material classification/Database (incl.recycled materials) & End of Life (incl.recycle)		overarching aspects	activity item and data
	Parts production and vehicle assembly	SG_2 Parts & Vehicle production			activity item and data
		SG_3 Use Phase			activity item and data
Verification Methodology transparency and consistency, data qualification and plausibility					
SG_4 Drafting					

➤ Discussing Use phase in subgroup not in IWG

- Fuel cycle could have larger environmental burden than vehicle cycle from a LCA perspective, and it has complicated fuels/electricity production pathways in energy sectors which would vary among countries
- As there have been substantial advances of fuel technologies including renewable energy, more detailed and sophisticated approaches towards individual energy sources may have to be considered
- Thus, fuel cycle should be discussed in detail in a subgroup with external experts in this area, such as fuels/electricity production related industry

✓ Korea would like to recommend two experts of fuel cycle specialized in petroleum fuels as well as renewable fuels from SK Innovation in Korea.

Thank you!!

INJI PARK

<coolinji@kotsa.or.kr>