

SG 6: Energy & Fuel Cycle

3th meeting

29/08/2023

*Welcome, we will start at 12h05 sharp!
Please make sure to mute when not speaking.*

Agenda

Meeting info	
Date	August 29 th 2023
Time	12:00noon - 01:00pm CEST
Venue	Online
Link	Webex: https://meet.google.com/zbb-syis-wft?hs=122&authuser=0

Time		Agenda Item	Lead	Working Paper	Purpose or Target
12:00 ~	1	Welcome and introduction	Chair	NA	Introduction
~ 12:10	2	Adoption of the agenda	Chair	A-LCA-SG6-03-01	Agreement
~ 12:15	3	Adoption of the last meeting minutes	Chair	A-LCA-SG6-02-04	Agreement
~ 12:40	4	Scope and definitions (draft proposal) >Controversial topics list >Overview of fuels >Discussion	Chair Concawe Participants	A-LCA-SG6-03-xx A-LCA-SG6-03-xx	Presentation
~ 12:50	5	Timeline	Participants	NA	Agreement
~ 12:55	6	Any other business	Participants	NA	Notification
~ 13:00	7	Closing	Chair	NA	Closing

Scope & definitions

SG6 goals and objectives:

- A. Co-develop (and collect) different LCA methodologies for different types of fuels and energy
- B. Align/translate the different methodologies into the levelling concept as defined by IWG A-LCA, submit this to the IWG A-LCA


Scope & definitions

Overview of fuels & methodologies

Terminology:

DISI: Direct Injection Spark Ignition **DICI:** Direct Injection Compression Ignition
HEV: Hybrid Electric Vehicle **MHEV:** Mild Hybrid Electric Vehicle (48v)
PHEV: Plug-In Hybrid Electric Vehicle **REEV:** Range Extender Electric Vehicle
BEV: Battery Electric Vehicle **FCEV:** Fuel Cell driven Electric Vehicle
LPG: Liquefied Petroleum Gas **CNG:** Compressed Natural Gas
FAME: Biodiesel (B100) **DME:** DiMethyl Ether
FT-Diesel: Paraffinic diesel (EN15940) **HVO:** Hydro-treated Vegetable Oil
Note.

BEV range: 150km (2015), 2 variants (2025+) 200km and 400km
PHEV EV range: 50km (2015), 100km (2025+)
REEV EV range: 100km (2015), 200km (2025+)

2025+ Powertrain Variants															
 EUCAR V5: 2025+ Investigation Matrix	DISI	DISI MHEV	DICI	DICI MHEV	Hybrid DISI	Hybrid DICI	PHEV100 DISI	REEV200 SI	PHEV100 DICI	REEV200 DICI	BEV200	BEV400	FCEV	PHEV100 FC	REEV200 FC
Gasoline (E5)															
Gasoline E10 market blend															
Gasoline high RON (var. 1)															
Gasoline high RON (var.2)															
Diesel (B0)															
Diesel B7 market blend															
LPG															
CNG															
E100															
FAME (B100)															
DME															
FT-Diesel*															
HVO*															
Electricity															
Hydrogen (CGH2)															

Scope & definitions

Overview of fuels & methodologies

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REEV EV range: 100km (2015), 200km (2025+)

	Existing methodology?	Links & sources	Comments & remarks (production, transport, ...)	Approved?
Gasoline (E5)				0
Gasoline E10 market blend				0
Gasoline high RON (var. 1)				0
Gasoline high RON (var.2)				0
Diesel (B0)				0
Diesel B7 market blend				0
LPG				0
CNG				0
E100				0
FAME (B100)				0
DME				0
FT-Diesel*				0
HVO*				0
Electricity				0
Hydrogen (CGH2)				0

Scope & definitions

Controversial topics list:

1. Allocation. Simplified, do we consider ISO 14040 sufficient with regards to the priority when assessing emissions from multifunctional processes:

- Avoid allocation by system expansion.
- Allocate according to physical quantifiable unit (MJ, kg etc.)
- Allocate according to other quantifiable unit (economical or other).

Since the 1st priority should always be to avoid allocation (and expand system boundaries instead), then applying with the ISO standards is quite uncommon?

2. Intermittency. How is storability to be methodologically considered in LCA. Currently modelled by either using average/marginal values for electricity. Opportunity for SG6 to at least clarify the discussion (this is where we are today) or to highlight which questions are not addressed in the LCA of today.

3. Product economic status i.e., is it by-products or determining products? Not considered in ALCA today which reduces the accuracy (though the precision is high) if consumer compares a by-product with a determining product. See for instance (Krantz, 2022).

4. ILUC. Whether or not this is included can often shift a renewable fuel from preferable to non-preferable.

Timeline

Draft Timeline for the coming months

September-December 2023:

- Approve goals and objectives
- Agree on fuels list and methodologies
- Finalize and solve controversial topics

January-March 2023:

- Agree and draft methodology-ies

April 2023:

- Draft, discuss and agree on draft methodology for fuels & energy

Next IWG LCA (10/09)

Open questions to the IWG A-LCA

1. Where do we the system boundary and cut-off point between fuel and energy SG and other subgroups? (mostly SG3 & 4)
 - Charging equipment and fuel stations
2. Which leveling approach should we take?
 - SG-members of SG6 are willing to go for level 4 but we should align with other SG's
3. ... (?)

AOB & next meeting

Any other business?

Suggestion: at 12:00h-13:00h CEST
Still looking for additional co-chairs!

For any questions or remarks, please contact the SG-chair:

romain@avere.org

Thank you!