

# SG 6: Energy & Fuel Cycle

**Status update for the A-LCA IWG**

09 January 2024

# Calendar



# Goals of the subgroup

## **Main goals**

1. Provide a global methodology for fuels & energy cycle
2. Define a scope and boundaries in order to collect and set up a methodology
3. Define a methodology and/or plug-in which could be used by all subgroups

# Scope & boundaries

## Scope of emissions

- Agreement: *consider the latest GHG IPCC AR6 emissions (or the main three)*
- Agreement: *All levels should have the same impact assessment methodology*
- Important: *SG agreed that it should be AR6 'or a later version'*
- Under discussion: *inclusion or not of hydrogen (linked to IWG discussion)*

# Scope & boundaries

## Leakage

- AGREEMENT: Average/secondary or detailed/primary data → To be solved via de levelling concept
- AGREEMENT: Include methane leakage in all situations where methane is used, produced or emitted.
- AGREEMENT: All other forms of emissions linked to leakage will be taken into account (SF6, ...).

# Scope & boundaries

Losses (after the plug) in the vehicle should be tackled by SG4

UP FOR DISCUSSION

## Losses

AGREEMENT: Losses taken into scope by this SG are:

- Energy/fuel producing plant
- Transport- and conversion-losses
- Refueling station/charger/...

AGREEMENT: Boundary for each fuel should be considered in the upstream: (important to have an objective measurement without overburdening)

↔ Everything upstream of the vehicle. (when the energy 'enters' the car at the plug, fuel nuzzle, refueling system, ...)

# Scope & boundaries

## Infrastructure

AGREEMENT: We include all emissions linked to the construction and maintenance of the **following infrastructure** as long as they contribute to **5%** or more of the well-to-tank emissions of the fuel or energy pathway.

- Emissions linked to infra for energy and fuel production (energy generation, power plant, refinery, ...)
- Emissions linked to infra for transport of energy and fuel (powerlines, pipelines, ...)
- Emissions linked to the infra of devices that can produce energy and fuel (solar panels, electrolyse, ...)

*UP FOR DISCUSSION: The % and the implementation of the percentage to the entire methodology or just the SG6 cycle (the second point requires a IWG approval)*

# Scope & boundaries

## **Bidirectional charging - V2X/V2G**

No formal agreement on how to take this into account... or if we should take this into account.

QUESTION: does this fall into scope of the IWG?



# Scope & boundaries

## Indirect Land Use Change

General belief is that some consequential elements could be considered  
No agreement at this stage.

The SG agreed that 3 proposals would be submitted to the IWG for advice:

1. Include a qualitative analysis based on existing sustainability factors
2. Include a qualitative analysis based on the free choice between existing models
3. Include a qualitative analysis based on the most complete models existing

# Functional Unit

## **Draft proposal**

IWG will ultimately decide, but this SG would like to propose how this can be used within this subgroup (and other subgroups who would like to include energy and fuel consumption during the life cycle of their SG responsibility.

**AGREEMENT: SG6 will consider delivered energy (in MJ) as functional unit within the SG6 (up for discussion with other SG's)**

# Future points of discussion

## **Levelling Concept**

### **SCOPE**

**Carbon Feedback**

**Allocation and Co-products**

**Future projections of carbon intensity of energy & fuel**

# Thank you!

The latest version of our ongoing discussions 'guidelines' is available here:  
<https://wiki.unece.org/display/trans/SG6+-+9th+meeting>