



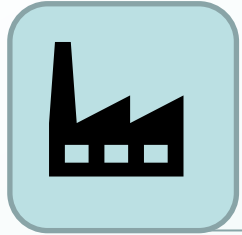
# OICA position on SG4 Activity

Draft version

10-10-2023



# Use phase GHG



In-use consumption



Regular consumptions



Maintenance



*From circulation to end of life*

$$\begin{aligned} GHG_{Use\ Phase} = & \overset{\textcircled{1} \text{ Slide 5}}{\text{Energy consumption}} \times \overset{\textcircled{2}}{\text{Useful Life time [km]}} \times \overset{\textcircled{3} \text{ From SG6}}{\text{Conversion ratio}} \\ & + \overset{\textcircled{4}}{\text{Maintenance parts}} \times \overset{\textcircled{5}}{\text{maintenance frequency}} \\ & + \overset{\textcircled{6}}{\text{Other emissions}} \end{aligned}$$

- OICA will provide in a later stage position on other elements (2,4,5,6)



# Scope

- GHG emissions : Considered the emissions which are measured during homologation
  - Justification : Those emissions which are not measured during homologation will require modification of test procedure and IG- A LCA does have mandate to change GTR15
- Vehicle category : priority category 1-1 ( Passenger cars)
  - Justification : Already decided during 10<sup>th</sup> IG- A LCA meeting
- Powertrain : All powertrain technologies defined in GTR 15 only
  - Justification : GTR 15 covers most of the powertrain technology in the market for category 1-1 vehicles.
- Degradation of powertrain efficiency (Battery durability for EV, Fuel cell efficiency etc.) : To be confirmed on later stage



# System Boundaries

- Charging efficiency of DC charging: Should not be included in 1<sup>st</sup> phase and later SG6 should handle the discussion
  - Justification : Most of the EV homologation values are AC energy at this stage and there are very low/negligeable 'only DC energy charged' vehicles available. Hence its better to exclude in the first stage of discussion.
- Energy consumed in showroom (SG3): Should not be included
  - Justification : Does not contribute significantly
- Second life use of some parts ( battery etc.): To be defined later
- V2X usage of electric vehicles: To be defined later



# In-use energy consumption

Options	Explanation	Pros	Cons	OICA Draft Position
Regional homologation value (WLTP, CLTC etc.)	Use the regional homologation values with out any adjustment	<ul style="list-style-type: none"><li>▪ Easily available with out any further corrections</li><li>▪ Regional homologation values are more coherent with general purpose of LCA (regional data availability)</li><li>▪ Regional cycles are more representative of regional driving</li></ul>	<ul style="list-style-type: none"><li>▪ May not represent the real life values for some regional homologation values</li></ul>	OICA support the use 'Regional Homologation value'
Homologation value normalised to a standard homologation values	Homologation values are adjusted with a normalised factor to	<ul style="list-style-type: none"><li>▪ Different vehicles form different region can be compared</li></ul>	<ul style="list-style-type: none"><li>▪ How to determine the correction factor ?</li><li>▪ If the declarations are regional then does not make sense to have a unique value</li><li>▪ Each model will have their respective homologation value in the market they are sold</li></ul>	Does not support the normalised value
Homologation values normalised to real driving	Use of an additional X% on the top of homologation value	<ul style="list-style-type: none"><li>▪ In the absence of OBFCM data, this can bring use phase consumption closer to real life use</li><li>▪ Can be used before circulation</li></ul>	<ul style="list-style-type: none"><li>▪ How to define the X%</li><li>▪ X% can be different for different country (eg: India max speed for most of the roads are 90 km/h)</li></ul>	Does not support the normalised value in the 1 <sup>st</sup> phase
Real Driving value (based on OBFCM)	Use of OBFCM values for used case energy consumption	<ul style="list-style-type: none"><li>▪ Reflect exact in-use energy consumption of a given vehicle type</li></ul>	<ul style="list-style-type: none"><li>▪ Customer will decide before buying the vehicle. LCA value must be declared before putting the vehicle into service and OBFCM data are not available before hand.</li><li>▪ OBFCM data need authorization to be transmitted. This may result in misleading values for those vehicle types which are more commonly used as company cars, rental cars etc.. where authorization can be easily given, and fuel consumption is less representative of a normal driving behavior</li><li>▪ OBFCM data are not yet available for EV and Fuel cell vehicles</li><li>▪ In-use data is driver/segment influenced and therefore not a vehicle parameter for comparison</li></ul>	Not in favour on OBFCM value



**BACK UP**



# Consumables

		Tyre	Battery	Engine oil	SCR	Freeon		
Powertrain	Gasoline vehicle				?			
	Diesel vehicle							
	CNG Vehicle				N/C			
	NOVC-HEV				N/C			
	OVC-HEV				N/C			
	Pure EV			N/C	N/C			
	Fuel Cell			N/C	N/C			
	OVC-FCHV			N/C	N/C			

To Be provided in a later stage

- Guideline should provide a list of consumable for information purpose and OEM will provide the list and frequency of replacement