Draft meeting minutes
8th Session of the Subgroup 4 (Usage Phase)
of the IWG on Automotive Life Cycle Assessment
(IWG on A-LCA)

Google Meet:
meet.google.com/eih-xxyr-fft

Meeting documents available at:
https://wiki.unece.org/pages/viewpage.action?pageId=226328640

Agenda

Meeting info	
Date	February 7th 2024
Time	11:00am – 14:00pm CET
Venue	Online
Link	https://meet.google.com/fti-dmca-bbt?authuser=0&hs=122

Time		Agenda Item	Lead	Working Paper	Purpose or Target
11:00 ~ 11:05	1	Welcome and introduction	Chair	NA	Introduction
11:05 ~ 11:10	2	Adoption of the agenda	Chair	A-LCA-SG4-08-01	Agreement
11:10 ~ 11:15	3	Adoption of the last meeting minutes	Chair	A-LCA-SG4-07-05	Agreement
11:15 ~ 11:30	4	Discussion starter by Japan (open points of discussion)	Japan	A-LCA-SG4-07-04	Presentation
11:30 ~ 12:30	5	Discussion of open topics: - Boundary condition - Energy consumption - Leakage - Service life - Maintenance - Representative vehicle - Level concept	Chair	Na	Discussion
12:30 ~ 12:45	6	BREAK	Na	Na	Na
12:45 ~ 13:20	7	Continuation of discussion about open topics • Agreement about concept? • If not, how to proceed?	Chair	Na	Agreement
13:20 ~ 13:40	9	Levelling Concept	Chair	A-LCA-SG4-08-XX	Agreement
13:40 ~ 13:50	10	Open points of discussions and questions for other subgroups	Chair	Na	Discussion
13:50 ~ 14:00	11	Any other business & Closing	Participants	Na	Closing

---

Meeting

Agenda Item 1: Welcome and introduction

The chair welcomed the participants to the 8th SG4 meeting and provided some overview of the main topics for today's meeting.

Agenda item 2: Approve agenda

The chair presented the agenda. No comments were made, and agenda adopted.

See document(s): https://wiki.unece.org/pages/viewpage.action?pageId=226328640

Agenda item 3: Adoption of the last meeting minutes

The chair invited the participants to share their comments and remarks about the minutes. No comments were raised.

The meeting minutes have been approved.

See document(s): https://wiki.unece.org/pages/viewpage.action?pageId=226328640

Agenda item 4: Discussion starter by Japan (open points of discussion):

Japan (NI) presented the excel file prepared as discussion starter summarizing all aspects linked to SG4. The document is prepared considering all previous discussion in SG4 and Informal working group.

-Applicable species has already been agreed (GWP_{100}). US EPA has requested to include H_2.

1] Determination of CO_2 equivalent in used phase:

-Maintenance parts consist of 'list of parts', 'conversion factor' and 'frequency of maintenance'.

-There is not much discussion about leakage yet in the SG4. Leakage can be:

- Evaporative emission: Already existing in regulations on hydrocarbon (EU and Japan has same similar requirements but US has additional requirements).
- Other leakage: It seems US EPA is worried about H_2 emission during production and storage, but still, this should not affect use phase (SG4).

Question and remarks:

- The chair and co-chair commented that the excel file summarize well the discussion points and we should start discussing one by one.
- Ricardo: Mentioned that H_2 leakage aspect is a crucial point and more particularly during production pathway. There is a need to confirm whether the fugitive emissions are significant or not. This issue is like other gas filled vehicles.
- Chair: Expressed need to see if existing regulations (measurement procedure) can be

extrapolated to other gases not included yet.

- Japan (Ichikawa san): Raised the issue of, 'how many species' we should consider for leakage and how can we determine the leakage volume.
- Chair: Expressed that he is not aware of any measuring methods but would like to review scientifically the leakage aspects of H_2. When comes to tailpipe emission we can certainly use the existing methods for H_2.

2] Level concept & representative vehicle

-Leveling concept and representativeness is required for each element.

-Energy consumption during use phase. Ichikawa san explained that there are two options:

A. Homologation values with some corrections: This value will be different for different regions. A representative vehicle represents a group/family of vehicle and in this case representative vehicle definition is required.
B. Real world value based on OBFCM: Each single configuration of vehicle has to be considered and hence no need for a representative vehicle.

-Maintenance parts: Can be different for different parts. For example, 12V battery replacement can be defined by different OEMs. Hence, we need to define rules for each item.

Questions and remarks:

- Chair: commented that we should go for a relatively simple approach. We need to give a choice to the user either to use a default value and in this case, we need to explain how these values are obtained or a more precise value and, in this case, we need to precise how these values can be obtained. If we propose complex process than its going to make the application of methodology cumbersome. Hence a balance is required between simplicity and precision. Maybe we can propose two levels: default value and more precise value.
- NI: Supports the idea of Chair. On maintenance parts, expect OICA to develop the methodology.

3] System boundary:

-Presented the list prepared for Informal working group and raised the need to discuss the topics such as energy consumption during transportation.

Questions and remarks:

Chair: invited other members to check and share their views.

See document(s):
-

Agenda Item 5: Discussion of open topics:

1] System boundary:

- Co-chair (GDP) started the discussion with the excel file.

Questions and remarks:

- OICA (ST): Asked for clarification of 'energy consumption during transportation' in the list, whether its during use phase or transportation between production plant to the showroom.
- NI: Clarified that it's during the transportation between production plant to the show room. We need to work with other SGs (3 & 6) on this.
- The chair clarifies that any energy conversion factor should be harmonized and provided by SG6. As SG4 is the last part of a big supply chain we should not develop any methodology on conversion factor. It's a horizontal issue as other SGs are also dealing with transportation of materials or parts.
- NI: Agree to the comments and asked whether to have combined meetings with concerned SGs or raise the issue in the informal working group.
- Chair: Propose to collect all the methodological elements (common concerns) in the limit of SG4 and present them to other SGs. If they have already solved the problem than SG4 can implement and if they recognize the problem or if they don't think it's their issue, then we can raise to the informal group.

2] Energy consumption during in-use:

- Co-chair (GDP) started the discussion with the excel file from Japan.
- Two main options are discussed in the past
    - Option 1: Homologation value X Deterioration factor X Real-life adjustment factor (or discrepancy factor)
    - Option 2: Real life energy consumption (OBFCM data)

Questions and remarks:

- Ricardo (NH): Mentioned that these factors can be specific to powertrains.
- Japan (NI): Commented that this is still under discussion in Japan. As we need to provide LCA value before placing the vehicle into the market, we have only one choice that is to use homologation value on the other hand carbon neutrality should be checked with real world consumption. Japan will provide a clear position after internal discussion in Japan.
- Ricardo (NH): General adjustment factor (discrepancy factor) derived from real world data and can be used for option 1.
- Japan (NI): This discrepancy factor will vary region to region. This is important when it comes to PHEV.
- Co-Chair (ST): Asked will it be OK to go for 'option 1' and allow each region to define the 'deterioration factor' and 'discrepancy/real world adjustment factor'. In this case, if a region has data available, then the factors will have some values. If there is no data available, then these factors can be considered as '1'.
- Japan (NI): Corrected that for some powertrain the 'deterioration factor' can be a part of 'discrepancy factor.'

- OICA (ST): Asked if we can conceptually agree to 'option 1'
- Co-Chair (Giuseppe): Think that in SG4 we have an agreement conceptually on 'option 1'
- Ricardo (Nickolas): Agree to 'Option 1' and wanted to know how to have a formal agreement in SG4.
- Chair: There is a consensus in the SG4 on 'option 1' but agreement can be achieved once we formally write down. Also, some experts are missing in this meeting so we should wait for their comments.

3] Leakage:

- Co-chair (GDP) started the discussion with the excel file from Japan and asked for comments.

Questions and remarks:

- Ricardo (NH): Asked if the leakage of H_2 during production or from the vehicle. For methane it can be possible but for H2 it can be difficult.
- Japan (NI): Suggest that evaporative emission for vehicle with compressed gas can be estimated (emission limits of the region multiplied by service life of the region).
- Ricardo (NH): For methane it can be possible but for H2 it can be difficult. May be we can use some generic assumptions. Leakage aspects are powertrain specific. This can also be different for light duty and heavy-duty vehicles.

3] Maintenance:

- Co-chair (ST) started the discussion with the summary of discussion from the previous SG4 meeting.
- There is a consensus in SG4 on how to calculate the emission from maintenance parts (list of parts X frequency X carbon emission). At present SG4 is working on developing the 'list of parts'.
- Co-chair asked the group if we conceptually agree to*: "Guideline will provide a recommended list of parts /powertrain (non-exhaustive) then OEM need to provide a complete list with frequency of maintenance (with justification). The emission factors we need to go with SG3 recommendations."* If the conceptually we agree, then we can complete the list and develop methodology on using default data or more precise data. Also develop a guideline on frequency.

Questions and remarks:

- Ricardo: Agree on the concept and suggest that we may make some assumptions on default values.
- NI: Commented that carbon emission related to part production will improve each year. For example, carbon emission of tyre production will improve, and the 2nd or 3rd tyre will have lower carbon emission. So how SG3 will provide such energy consumption. Of course this impact will be very low.
- Co-Chair (Sam): commented that even if its negligible we should write down in technical

justification that we have considered and we assume it to be negligible.

- Ricardo: Agree to proceed in that way as it seems to be a practical approach. Exception can be change in 'traction battery' (energy consumption is not negligible)
- Chair: Recognize that there is a consensus on this issue.

4] Service life:

- The chair reminds us that this topic will be separately discussed in a smaller group.
- Co-chair (ST) mentioned that no formal meeting has started on this issue yet and will organize soon with ICCT, Ricardo and Emisia. Request Emisia to drop a mail with the name of the expert.

Questions and remarks:

- Japan (Ichikawa): Wanted to confirm if the discussion is specific to Europe or all regions.
- OICA (ST): confirmed in positive if no objection. On which Japan agreed

5] Representative vehicle:

- Co-Chair reminds that of the last OICA presentation on compromise between precision and administrative burden.

Questions and remarks:

- OICA (ST): commented that calculation burden will be more for SG3 (upstream emission) than that of SG4 (downstream emission).
- Co-Chair (): Reminded that there was a decision in the last IWG meeting that SG4 in collaboration with SG3 for the representative vehicle definition.
- Ricardo: commented that 'Representative vehicle' definition will be different for different LCA levels.
- Chair: Recognize that we don't have a formal 'Representative vehicle' definition. Intuitively we know that on which vehicle we need to perform the calculation. Asked if OICA propose to use 'vehicle High configuration.'
- OICA (ST): OICA is still discussion this topic and recognize that vehicle high can be used for calculation as this is the worst-case approach.
- Japan (NI): asked that worst case can be Ok for in-use consumption but how to handle maintenance parts. Worst case in-use consumption vehicle may not have worst case maintenance.
- Chair: Commented that these are two different issues. If an OEM can define maximum level of information than we should consider that. For other emissions (maintenance, evaporative emission etc.) we can go one step down and define a broader definition to simplify things.
- OICA (ST): Agree with Japan on maintenance part and request for further ideas to simplify.
- Japan (NI): Depending on level default value can be defined. Most frequent interval can

be the worst case.

- OICA (ST): Suggest that we can define some rules in the guideline on which criteria to choose (most frequent or something else)
- Chair: asked OICA if they can gather some examples to show what is the contribution of maintenance
- OICA (ST): this will vary from OEM to OEM. OICA can present some numbers by March end.
- Chair: Suggest that we can start with 'vehicle high' for in-use consumption while for other consumption we can take simpler criteria.
- OICA (Filippo): the concept is OK for regions using WLTP (interpolation family concept) but may not fit to regions which do not use WLTP.
- Chair: Replied that principle is to consider a vehicle with highest emission from a group of vehicles and similar approach can be used in other parts.
- Emisia (SM): Do we have information about representative vehicle from production side. On this chair mentioned that this is not yet defined.
- Chair (GF): requested Emisia if they can prepare a table comparing other methodologies on this issue. On this Emisia agreed.

6] LCA Level:

- Will be discussed in a later stage

Agenda item 7: Any other business & Closing

The chair invited the participants to share their AoB.

- .

The chair thanked all the participants for their participation and formally closed the meeting.

ANNEXES

Participants list: