

# Report of the 52<sup>nd</sup> Session

Electric Vehicles and the Environment Informal Working Group

Location:	WebEx
Date and Time:	September 8, 2021 at 05:30 – 08:00 EST September 10, 2021 at 05:30 – 08:00 EST
Chair:	Mr. Michael Olechiw (USA) [Present]
Vice-Chair(s):	Mr. Hajime Ishii (Japan) [Present] Ms. Chen Chunmei (China) [Not Present]
Secretary:	Ms. Kendelle Anstey (Canada) [Present]
Drafting Coordinator(s):	Ms. Panagiota Dilara (European Commission) [Present]

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## List of Abbreviations

DPR	Declared performance requirement
EC	European Commission
EVE IWG	Electric Vehicles and the Environment Informal Working Group
HDV	Heavy duty vehicles
MPR	Minimum performance requirement
OEM	Original Equipment Manufacturer
SOC	State of Charge
TAA	Type Approval Authority
UBE	Useable battery energy

**EVE IWG Meeting, September 8, 2021**

	<b>Time</b>	<b>Agenda item</b>	<b>Lead</b>	<b>Working Paper #</b>
1	05:30 – 05:40	Introductions, review of agenda	Chair	EVE-52-01e
<p>Notes:</p> <ul style="list-style-type: none"> <li>➔ UBE breakout group is drafting and discussing solutions on annex 3 and the UBE range calculations.</li> </ul>				
2	05:40 – 06:00	GTR state of play	Chair EVE IWG	
<p>Notes:</p> <ul style="list-style-type: none"> <li>➔ The current EVE IWG meeting is focusing on three significant issues on the in-vehicle battery durability GTR; this includes open issues on the Case A and B flag, V2x and annex 3 concerning UBE. The EVE IWG will also need to consider the definitions section.</li> <li>➔ The additional GRPE session is on Friday, November 12, established for purpose of approving GTR. The submission date prior to the session should be around 2-3 weeks prior to November 12, with no formal date requested by GRPE.</li> <li>➔ EVE IWG’s goal date for EV GTR submission on in-vehicle battery durability is, October 22<sup>nd</sup> for a clean and tracked changes version.</li> </ul>				
3	06:00 – 06:05	Brief update on UBE breakout group	EVE IWG	
<p>Notes:</p> <ul style="list-style-type: none"> <li>➔ The EVE IWG breakout group met a few times over summer. They will present further on day 2 of this meeting.</li> <li>➔ So far the group established an adjustment factor and a parameter to apply to the measured value within the UBE discussions. The breakout group also considered the different calculations in Japan’s versions.</li> </ul>				
4	06:05 – 06:15	Future EVE IWG meetings	EVE IWG	
<ul style="list-style-type: none"> <li>➔ The EVE IWG will need another meeting in October to conclude final drafting points on the in-vehicle battery durability GTR.</li> <li>➔ Dates of October 14<sup>th</sup> and 15<sup>th</sup> were suggested with comments to be received from the EVE IWG by October 8<sup>th</sup>.</li> <li>➔ The EVE IWG will meet again in October depending on the outcomes of the 52<sup>nd</sup> meeting.</li> <li>➔ The EVE IWG plans to also have a future meeting during the week of GRPE in January with the goals of planning the next tasks for the EVE IWG.</li> </ul>				

<p>→ Other plans for future meetings and travel are still uncertain due to the ongoing pandemic.</p>				
5	06:15 – 06:40	Case A and B flag discussion: Japan proposal	Japan	EVE-52-02e
<p>→ Japan presented document EVE-52-02e which accepts the USA, UK and EC proposal with modifications (as indicated in document EVE-52-02e)</p> <p>→ EC and Japan discussed whether verifiability was more appropriate by using the customer vehicle survey or leaving it to the local authorities under a TAA.</p> <p>→ EC and UK have concerns that following an agreement with the TAA could introduce inconsistencies between different TAAs.</p> <p>→ Japan considers that using the survey for technical evidence is not verifiable because a customer could say no even if the case is yes.</p> <p>→ EC and Japan also discussed whether part A would be done by vehicle manufacturer or TAA, and EC indicated that it would not necessarily be completed by the vehicle manufacturer.</p> <p>→ EC and Japan discussed whether Japan wants the customer survey excluded. Japan was under the impression that the survey would be conducted by the vehicle manufacturer. EC does not want the vehicle survey to be excluded due to risk from the manufacturer.</p> <p>→ EC and UK suggest that no exclusion criteria is the best way to proceed.</p>				
	06:40 – 06:50	Coffee break		
5	06:50 – 08:00	Other Case A and B flag discussion items	EVE IWG	
<p>→ This topic discussed was continued after the coffee break.</p> <p>→ U.S. EPA summarised Japan and EC’s views on the survey. Japan wants to keep the survey but does not want to solely rely on it because the customer may not understand the question or may lie on the test. This could mean that in Part A, a vehicle could be selected that’s for example been stored for a long time because the customer didn’t provide appropriate survey answers. Then this vehicle would be tested in Part B and may not meet the durability standards. In this case there would be a lot of risk on the manufacturer. Japan’s main point is to not rely on the survey results but rely on what is understood by TAA for exclusion, in this case for example if it was stored for a long time being an exclusion criteria.</p> <p>→ The EVE IWG discussed that if the survey is not relied on then another criteria is needed that is verifiable.</p> <p>→ EC proposed that verification could rely on values stored in the vehicle such as the last date the vehicle was driven with careful consideration of specifications for the values, how its read and its reliability (ex: when driving to the test site indicates it was last driven recently when it was not used for months).</p>				

- ➔ EC disagrees on the part of Japan’s proposal to move the exclusion from 5% to 7%.
- ➔ Japan accepted EC’s conditions to reduce the exclusion to 5% even under the case A operation. Japan also tentatively agreed to remove the case A flag. Japan mentioned that they wanted to increase it since there is no data and the flag can add uncertainty.
- ➔ Regarding part A frequency of verification section (section 6.3.1), EC suggested with the agreement of all CPs involved that the verification of Part A for vehicles types that are identical may be combined between different Contracting Parties. In such cases the relevant Contracting Parties shall be considered as a single authority for the purposes of this verification.

**EVE IWG Meeting, September 10, 2021**

	Time	Agenda item	Lead	Working Paper #
5	05:30 – 06:20	Case A and B flag discussion	Japan JRC	EVE-52-06e
<ul style="list-style-type: none"> <li>➔ Japan presented a new proposal with some modifications made</li> <li>➔ Japan is okay with only having part 2 incorporated in the GTR text. Part 1b needs more information for further consideration on whether TAA is more appropriate for the exclusions via the vehicle survey.</li> <li>➔ EC suggested that this could be possible left for phase 2 or the flag can be left but without justification. EC see’s Japan’s points of view on section 6.4.1. and suggested that maybe a section of the GTR can be added for exclusion based at the request of the manufacturer with adequate information supporting it. EC also suggested that this would include a maximum exclusion limit all to be reported to the Type Approval Authority.</li> <li>➔ EC cannot reply on accepting results with regards to section 6.3.1 as there are further discussions on practical issues related to engine families to assess.</li> <li>➔ The EVE IWG also discussed minimum SOC swing needed. EVE IWG agreed that charging minimums are more relevant than driving because a vehicle may not need to be charged before it is driven to the test centre.</li> <li>➔ U.S. EPA recommended an SOC swing of at least 50% and to specify the time when this last occurred. An SOC swing including 100% SOC was also recommended to be included in the 50% SOC swing. The EVE IWG will need to discuss an acceptable length of time to which the drafting coordinator noted that the time requirement was already established in the GTR.</li> <li>➔ The EVE IWG discussed whether reaching 100% SOC was necessary. Discussions suggested that it’s not necessary but the batteries will need calibration at some point such as 100% charge.</li> </ul>				

6	06:20 – 07:00	UBE discussion on breakout group solution		EVE-52-04e EVE-52-05e
<ul style="list-style-type: none"> <li>➔ JRC presented on the status of the breakout group session and OICA presented updated to annex 3 of the draft GTR text.</li> <li>➔ The GRPE secretariat asked about the process for countries who have not adopted GTR 15.</li> <li>➔ The U.S. EPA suggested that those countries could write an equivalent process as a solution as long as it is understood that a local jurisdiction that has not adopted WLTP can adopt their own rules related to the suggested process in annex 3.</li> <li>➔ EC is aligned with this view.</li> <li>➔ ACTION ITEM: determine more appropriate wording regarding adoption of this section for countries who have not adopted GTR No 15 at the drafting session.</li> </ul>				
	07:00 – 07:10	Coffee break		
7	07:10 – 07:40	V2X discussion	OICA EVE IWG	EVE-52-03e
<ul style="list-style-type: none"> <li>➔ OICA discussed the need for standardization work for virtual mileage, such as a process backed by ISO.</li> <li>➔ The drafting coordinator included this suggestion in the draft.</li> <li>➔ The EVE IWG had no further comments on this topic.</li> </ul>				
8	07:40 – 07:55	Other GTR draft comments, or comments on technical report	EVE IWG	
9	07:55 – 08:00	Action items, final remarks		
<ul style="list-style-type: none"> <li>➔ Next meeting will be on the 14<sup>th</sup> – 15<sup>th</sup> for drafting. The EVE IWG may or may not need the second day. The drafting will cover</li> <li>➔ Open issues with respect to GTR</li> <li>➔ Open issues with technical report</li> <li>➔ EVE IWG members are asked to submit comments by October 8<sup>th</sup> so changes can be made accordingly.</li> <li>➔ The target date for submission is October 22, for technical report and GTR.</li> </ul>				

- ➔ Everyone to review the technical rationale which will include the current thinking with the last open items.
- ➔ Regarding the EVE IWG leadership going forward, Panagiota Dilara is willing and able to act as a co-chair going forward.

The EVE IWG briefly discussed power determination and the current issues to reflect on. These include:

- ➔ Family definitions and concepts
- ➔ The candidate method originally part of mandate
- ➔ When to focus on power determination. This may be dependent on demand, OEM request and information on the use and experience of the GTR. EVE IWG could consider soliciting feedback from the OEMS on GTR No. 21.
- ➔ Good to get feedback from OEMS on GTR No. 21 to look at confidence in procedure.

The EVE IWG briefly discussed the future of heavy-duty vehicles including:

- ➔ When to start assessing HDVs and how to proceed.
- ➔ The need to gather experts on HDVS and develop a timeline
  
- ➔ The EVE Chair suggested to develop a HDV group within the EVE IWG
- ➔ The EC noted that there are some problems to start looking into this next year as a lot of resources are required. EC recommended that the EVE IWG should put this in the mandate so that everyone can prepare accordingly. EC suggested to start the technical work at the beginning of 2023.
- ➔ Researching the topic of HDV to determine whether a procedure should be developed is recommended as a topic to include in January's EVE IWG meeting agenda.

ACTION ITEMS:

- ➔ Review GTR draft, technical rationale and ToR for October 8<sup>th</sup>