

Report of the 50th Session

Electric Vehicles and the Environment Informal Working Group

Location:	WebEx
Date and Time:	June 21, 2021 at 05:30 – 08:00 EST June 23, 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]

Agenda Items

List of Abbreviations	ii
Introductions, review of meeting agenda.....	1
Discussion of the terms of reference	1
GTR working schedule, action items, terms of reference.....	1
Discussion of Part A and B flags (in-vehicle battery durability)	1
V2x discussion	2
US EPA presentation on V2x	2
Discussion of UBE.....	3
Case A and B flags	3
Discussion of HDV within EVE IWG GTRs	3
Next steps, confirmation of next meetings, action items.....	4

List of Abbreviations

DPR	Declared performance requirement
EC	European commission
EVE IWG	Electric Vehicles and the Environment Informal Working Group
MPR	Minimum performance requirement
V2x	Vehicle to X, where X can be the electricity grid, home or another interchangeable connected application for an electrified vehicle.

Day 1 meeting

Agenda Item	Time Allocation
Introductions, review of meeting agenda	05:30 – 05:35
Discussion of the terms of reference	05:40 – 06:10
<p>Notes:</p> <ul style="list-style-type: none"> ➔ Discussion of next steps for GTR No 21. <ul style="list-style-type: none"> ○ EVE IWG to consider family concept and candidate method for next tasks ○ EVE IWG to revisit topic on power determination in the fall ○ Timelines for GTR No. 21, November 2021 to June 2024 are indicated in the draft ToR text ○ Recommendation from OICA to revisit and assess the validation program for further robustness with more test samples ○ Recommendation from U.S. EPA for the EVE IWG to monitor related work of the SAE group and ISO, and coordinate as needed. ➔ ToR to expire in 2024 for all tasks specified in text. ➔ GRPE secretariat recommended to add text about current sponsors of the ToR. ➔ EVE discussed incorporating HDV into durability GTR's and how. ➔ For HDVs, EVE discussed that new approaches should be consider for HDVs, since they are structurally different, have larger capacities and have other more complex needs and uses. ➔ EVE IWG further discussed topic on second day of this meeting. 	
GTR working schedule, action items, terms of reference	06:10 – 06:30
<p>Notes:</p> <ul style="list-style-type: none"> ➔ August 20th is the submission date of formal documents prior to the fall GRPE session ➔ EVE has already submitted a formal document in March 2021 and would thus only need to amend the document prior to the November GRPE session. 	
Discussion of Part A and B flags (in-vehicle battery durability)	6:30 – 07:00
<p>Summary:</p> <ul style="list-style-type: none"> ➔ Japan presented a proposal for discussion on the Part A and B flags. There continues to be disagreement however on the use of the Part A flag and whether it is necessary and or risky to include the Part A flag as exclusion criteria for Part B, as it may exclude an exuberant number of EVs. If a significant number of vehicles are excluded from testing due to the Part A flag (by not having completed a full discharge cycle within a certain timeframe) then it could be seen by regulators as risky, in that manufacturers may use the Part A flag as a mechanism to avoid testing in Part B on below standard vehicles. <p>Notes:</p>	

<ul style="list-style-type: none"> ➔ Japan considers that the Part A flag should be excluded in the samples in Part B as currently drafted in the text, but suggests additional information should be taken (ex: virtual mileage information). More information is described in EVE-50-01e. ➔ UK and EC are more inclined to remove the Part A flag criteria all together. ➔ EC suggested to take out the generic clause in the draft so that only the case of the monitor not being valid is applicable. ➔ The U.S. suggested one option could be to assess the SOH of the vehicle if the Case A flag is on and to check if it is within the 5% of SOH displayed to the consumer. EC responded that this would not work. ➔ Japan supports EC's proposal to exclude a maximum of 5% of vehicles from Case B if flagged in Case B. (see document EVE-50-01e, slide 3) 	
Coffee Break	
V2x discussion	07:10– 08:00
Notes: <ul style="list-style-type: none"> ➔ The U.S. EPA proposed the concept of a virtual mileage and provided additional context on how that could be implemented. In theory, all non-driving energy could be accounted for by converting it to a virtual mileage, reflected on the odometer. ➔ Described open issues included the need for a V2x definition and which values to use for energy consumption in the virtual mileage calculations. The worst energy consumption values were suggested to be used for the calculations. ➔ Sweden recommended the virtual kilometres to be reported by the vehicle directly. 	

Day 2

Agenda Item	Time Allocation
US EPA presentation on V2x	05:30 – 06:10
Notes: <ul style="list-style-type: none"> ➔ EVE IWG members communicated their support for implementing a V2X provision with no objections made. ➔ The EVE IWG still needs to evaluate the differences between V2X battery usage and real world driving usage to establish equivalency and ensure consistent degradation is applied. ➔ Considering how to apply bi-directional usage of battery as a V2X provision was listed as an open issues within the V2X provisions. 	

<ul style="list-style-type: none"> ➔ OICA noted that it is possible that the vehicle’s ECU could recognize and optimize the EV V2X usage as long as the EV has plug in capabilities. It was also suggested that grid energy suppliers should be able to obtain and verify this information as well. ➔ The EVE IWG also expressed concerns on how plug-in hybrids fit into the equation. This is a topic still under discussion. 	
Discussion of UBE	06:10 – 06:50
Notes: <ul style="list-style-type: none"> ➔ Breakout group on UBE was suggested due to unresolved open issues. 	
Coffee Break	
Case A and B flags	07:00– 07:30
<p>Summary: Discussions on day 2 reflected further thoughts to Japan’s proposal on the meeting start day. The EVE IWG discussed suggestions and alternatives on how to address the Case A flag criteria.</p> <p>Notes:</p> <ul style="list-style-type: none"> ➔ Suggestions made; <ul style="list-style-type: none"> ○ Remove the Case A flag and add exclusion criteria ○ Consider how many vehicles triggered the flag to consider a pass or fail decisions ○ If a vehicle triggers the exclusion criteria, it could then undergo testing in lieu of the monitoring or only include flag B as described, but if the manufacturer fails then there is the option to perform the physical testing on a significant sample size to refute the results ➔ OICA mentioned that customers are also likely to complain if there are issues with range or performance. ➔ U.S. EPA’s original goal or vision for this section is an over the air solution that considers monitoring and updating mileage. ➔ Sweden suggests to stick to a simple solution as significant testing of vehicles can be difficult and cost prohibitive. ➔ UK supportive of the criteria in annex 1 to remove the flag from Case A. ➔ One con presented to no exclusion criteria is that if there is no flag criteria then regulators would not know why a vehicle is excluded. ➔ Japan mention that if the monitor is not working appropriately then it means the SOC is not updated. So there will be a better SOCE during the Part B ➔ Action: The EVE IWG needs to add definition of full charge and discharge in the draft text. 	
Discussion of HDV within EVE IWG GTRs	07:30 – 07:40
Notes:	

→ **Action item:** EVE to draft paragraph for ToR for EVE to consider HDV options and make recommendations on HDV as part of the next mandate.

Summary:

Next steps, confirmation of next meetings, action items	
---	--