EVE IWG	
Date	May 30, 2022
Time	10h30 – 12h30 (CEST)
Title	EVE IWG Session #56
Informal Document	EVE-56-08e

Submitted by the EVE Secretariat

Informal Document: EVE-56-08e

Report of the 56th Session

Electric Vehicles and the Environment Informal Working Group

Location:	WebEx
Date and Time:	May 30, 2022 at 10:30 – 12:30 CEST
Chair and Co-Chair:	Mr. Michael Olechiw (USA) [Present] Ms. Panagiota Dilara (European Commission) [Present*]
Vice-Chair(s):	Mr. Hajime Ishii (Japan) [Present] Ms. Chen Chunmei (China) [Present*]
Secretary:	Ms. Kendelle Anstey (Canada) [Present*]

**Present virtually*

Agenda Items

BD – Battery durability
BMS – battery management system
CARB – California air resources board
EC – European Commission
EPA – U.S. Environmental Protection Agency
HD or HDV – heavy duty vehicles
JRC – Italy's Joint Research Centre
SAE – Society of Automotive Engineering
OICA - Organisation Internationale des Constructeurs d'Automobiles (automobile organisation)

EVE IWG Meeting, May 30, 2022

	Time	Agenda item	Lead	Working Paper #
1	10:30 – 10:50	Introductions, review of agenda, meeting minutes	Chair	EVE-56-02e EVE-55-13e
Went through meeting minutes touched on main highlights. Action and discussion items are in the excel sheet (EVE-55-12e). HDV topics to be added later to the excel sheet.				
2	10:50 – 10:55	Updates on CARB and battery durability	U.S. EPA	EVE-56-06e
Look at link for initial statement of reasons. Official CARB proposal available here: https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/isor.pdf CARB proposed a similar SOCC monitor concept similar to the one for EVE IWG.				

One key difference as shown below between the proposals is only 50% of samples must pass CARB's proposal.

CARB vs GTR No. 22 proposal on SOCC

DURABILITY	% Retention	of	at	Mileage	% of sample must pass
UN GTR #22	80%	SOH (UBE)	5 years	100,000 km	90%
	70%	SOH (UBE)	8 years	160,000 km	90%
CARB ACC II (proposal)	80%	Range	10 years	~ 240,000 km*	50%

WARRANTY	% Retention	of	at	Mileage	Model years
CARB ACC II (proposal)	70%	SOH (UBE)	8 years	~ 160,000 km*	2026-2030
	75%				2031+

*km equivalent of 150,000 and 100,000 miles

EPA – CARB's proposal could change after the hearing.

EPA: To monitor range in field would require testing. CARB is a bit more stringent.
The strategy of range vs UBE is interesting. We were thinking about adopting range and interesting to see how it works out for CARB.

EPA will brief leadership to see what goes in 2027 rule. Not sure if warranty requirements will make it to the EPA rule.

3	10:55 – 11:25	Review of comments on EVE priorities (based on response to EVE-55-12e)	EVE IWG	EVE-56-03e

Chair – we have Japan to thank for this document start.

OICA – could not finalize completely but can do a comment.

Chair – go through and highlight action items by changing box colour.

Chair – other comments on testing needs ?

Japan – we need to decide in the cases and what logistic would flow from that. We also mention number of things for testing in the spreadsheet. Like minimum performance requirements appropriate, MPR for range etc and robustness of test procedure and

verification. Too early to decide on next steps as lots of other things to decide and the need to obtain more experience with the vehicles.

EPA – On the Implementation of the monitoring phase – California will start theirs in 2026. The earliest the U.S. EPA will start will be 2027.

European Commission (EC) – data collection mechanism is more of how with the vehicle technical.

Chair- Customer influences on range would make it hard to control without a laboratory test. Discussions on range have not changed at this time.

EC – Unable to share with data sharing laws but maybe analysis.

Advancing MPR on UBR indicator

Chair – Interesting to have conversation from manufacturers to see how much the GTR is impacting designs. Base GTR on what thought appropriate with better technologies, some modelling, would be interesting to know if GTR is driving a different behaviour going forward.

EC – something to be reviewed much later not now. Important but maybe later when have data.

Item 7 –min working range for cold weather

EC – too much to regulate on it.

Sweden – agree customer is important to take appropriate measures.

Chair – Think this particular item, talk about energy consumption overall. Interesting to have a conversation on this. Lot of thoughts about market driving this.

OICA would not support as energy development to suit data later. Norway , Canada Sweden could be interesting to see.

Canada – noting difference that in hot weather the effect is seen more on energy consumption but in cold weather it's different the electrolyte freezes.

For MPR category 2
EC – Suggestion to make this an important item for the working group.

OICA– before special GRPE in November , for part B indicated in GTR which part for monitoring. OICA recommends to add part A to the list.

OICA discussed integrated systems internally and will provide information for the next meeting

Swappable batteries

Japan – if the customer goes to the manufacturer to change, other GTR requirement. But generally the GTR applies to non-swappable batteries.

OICA– before special GRPE in November , for part B indicated in GTR which part for monitoring. Matthias recommends to add part A to the list.

OICA forward inconsistencies early… something about July. For correcting part A

OICA – Discussed within OICA integrated systems. OICA will provide more information for the next meeting.

Not much time spent on HDV since this topic is in the discovery phase.

	11:25 – 11:40	**Coffee break**		
4	11:40 – 11:55	Proposal from JRC on GTR No. 22 Annex 2	EU JRC	EVE-56-05e

The EU proposed to add energy and capacity throughput and the total time of use to the battery parameters required.

EC - This proposal can be put on the list for HDV

EC- There is an effort to harmonize through battery regulation. Benefit of everyone to include now.

OICA- It's difficult to measure these while in the vehicle. Would need to take the battery out to measure. That would be also good to make clear that the parameters might not apply on batteries in vehicle.

5	11:55 – 12:15	Presentation from Japan on GTR No. 22 Annex 2 Feedback for Japan on SAE	Chairs EVE IWG	EVE-56-04e

Japan provided comments on the lifetime temperature measurement. These comments are namely to re-visit and clarify the purpose of the lifetime temperature measurement and to discuss the definition of "lifetime" based on pros and cons of whether the IG-off time should be included in the definition or not.

Japan showed where the temperature sensor is. Major concerns are how to measure while ignition is off and store the data. To monitor continuously also requires an amount of energy.

Chair- questions come to mind about how the data will be used as thermal latency affects would depend on the ambient extremes. The idea was that this would be actual battery temperature.

6	12:10 – 12:20	Presentation from OICA on HD battery durability input	OICA	EVE-56-07e

Details can be found in the presentation

Questions/comments
EC – in principle follows the same methods as light duty vehicles. Compliance would be assessed for collecting the state of health (UBE)

Lose control of aspects of deterioration

This discussion was tabled for the next meeting.

6	12:20 – 12:30	Action items, schedule of EVE sessions	Chair Secretary	

Chair: Couple of things about future meetings

A face to face meeting is planned for September 21-22 in Brussels21-22 of September (full day for LDV and one for HD). If we need summer meeting schedule for august timeframe.

Thoughts summer meeting July meeting ?
Meeting in middle of July.