



UNECE EVE-IWG

In-Vehicle Battery Durability

OICA comments on the draft frame work for phase 1
of the Battery Durability GTR (EVE-36-05)

EVE #37 meeting
08.-09. September 2020

Battery Durability GTR: Draft framework for Phase 1

1. Minimum performance requirement (MPR)
 - Percentage retention of certified range [or capacity] after “x” years ~~and/or~~ ^{or} “y” distance **whichever comes first**
 - MPR is applicable to all manufacturers
 - Individual manufacturers can declare a better performance (declared PR, or DPR)
2. Onboard battery state-of-health (SOH) metric
 - Definition of SOH = (Remaining range / certified range) [or based on capacity?]
 - OEMs responsible for their own algorithm
 - Readable by responsible authority (via OBD or similar)
3. In-service conformity (ISC) and data collection
 - Part A: Establish reliability of SOH metric
 - Small sample of 3-10 vehicles via ISC
 - Use checklist/survey to exclude vehicles with abnormal usage
 - Measure range via range test used for type approval (commonly, WLTC)
 - Verify accuracy of SOH metric by comparing to measured range
 - Part B: Determine conformity with MPR / DPR
 - Large sample of unspecified number of vehicles (large sample may remove need for NUIs or survey)
 - Routine collection of SOH metric, e.g. at safety inspections or via telematics
 - Determine conformity by reference to collected SOH
4. Establish mechanism for ongoing data collection to inform Phase 2
 - Primarily SOH collection
 - Identify simple NUIs that can be implemented now, if any
 - Discussion may be started in Phase 1 under limited samples



- 1. Minimum performance requirement (MPR)
 - Percentage retention of certified range [or capacity] after “x” years ^{or} ~~and/or~~ “y” distance **whichever comes first**
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<u>To be decided:</u>	<u>By when?:</u>
➤ For MPR:	_____
• What level (XX%)?	_____
• How many years?	_____
• What distance?	_____
➤ Will it be harmonised and written down in GTR?	_____
➤ Any limitation on the manufacturer’s declaration?	_____
➤ How will the base for the MPR decision derived?	_____

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To be decided:

By when?:

➤ SOH metric based on range or capacity?

- In case of capacity: UBE or E_AC or other?

- In case of range: Which range for PEV and OVC-HEV?

➤ Any limitation/standardisation of the algorithm?

➤ Readout protocol for authorities?

- Readout ability for 3rd party or customer?

- Data protection?



3. In-service conformity (ISC) and data collection

- Part A: Establish reliability of SOH metric
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To be decided Part A:

- ISC / SOH metric family definition
- Final version of the survey
- Test conditions for the range and capacity test
- Tolerance for the test result

By when?:

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<u>To be decided Part B:</u>	<u>By when?:</u>
➤ Will every vehicle in the market be checked?	<hr/>
➤ How to determine readout intervall?	
→ Periodical inspection is not harmonised in Europe	<hr/>
➤ Over The Air (OTA) read out not standardised	
→ Data security and data protection must be ensured	<hr/>
➤ Which vehicles are relevant for MPR conformity?	
• All from a family?	<hr/>
• Only MJ in the range of X years / Y km?	<hr/>



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