

Report of the 79th session
Electric Vehicles and the Environment Informal Working Group (EVE IWG)

Location: Virtual – Webex
Date: December 17, 2024
Time: 05:30 – 08:00 EST

Chairs: Mr. Michael Olechiw (United States of America)
Ms. Elena Paffumi (European Commission)

Vice-Chairs: Ms. Chen Chunmei (China)
Mr. Nobunori Okui (Japan)

Secretariat: Mr. Leeson Guay (Canada)

Day 1 – December 17, 2024, 05:30 EST

1. Introduction, review of agenda, and meeting recap

Documentation

- EVE-78-06e
- EVE-79-01e

Context

The EVE IWG co-chairs addressed members and welcomed everyone to the virtual meeting.

The co-chairs presented the meeting agenda to EVE IWG members, which can be seen below. The agenda was reviewed and adopted by the EVE IWG prior to beginning discussions.

Day 1 – December 17, 2024, 05:30 EST

- Introduction, review of agenda, meeting recap
- HDV GTR – Specifications of bidirectional power supply
- HDV GTR – Open items and discussion points
- Closing remarks

The EVE IWG secretary briefly reviewed the *Report of the 78th EVE IWG session*, highlighting action items and key decisions from the discussions, held virtually, on December 10-11, 2024.

2. HDV GTR – Specifications of bidirectional power supply

Documentation

- EVE-79-04e

Context

The Japanese delegation offered a presentation outlining proposed specifications and parameters for the bidirectional power supply for test method 2 of the heavy-duty vehicle (HDV) global technical regulation (GTR) draft text.

Discussion

The co-chair asked what the status of this type of equipment is right now. Are these specifications of what the equipment will be able to do or what it is currently able to do. The Japanese delegation stated that if using their proposed values, they feel it would cover the generic equipment and would be sufficient at this time but could require amendment in the future as technology evolves. The drafting coordinator indicated that the text has been updated to reflect the Japanese proposal. The text will not be integrated into the submission document because it will need to be discussed further at our meetings in January or February, to give everyone time to consider the proposal. On the surface 150 kW seems like a reasonable value to use.

3. HDV GTR – Open items and discussion points

Documentation

- EVE-79-02e
- EVE-79-03e

Context

This item was set with the objective of discussing and resolving outstanding topics of the electrified HDV GTR draft text.

The drafting coordinator returned to items that were discussed at the previous EVE IWG session, reiterating what was discussed, what remains outstanding and verifying whether any further developments have been made since the previous session.

Discussion

The drafting coordinator stepped through the clean version of the HDV GTR draft text, showing the group what will be submitted and addressing any last-minute outstanding items.

Scope and application

Text referring to 3,500 kg minimum, maximum laden mass was rephrased and shifted to the end of the paragraph. No comments were received so this text was accepted.

Definitions

Originally installed battery

Text referring to configuration according to the manufacturer's design/certification was added to paragraph. No comments were received so that text was accepted.

Total propulsion energy

The definition was included as a new addition, consequential to developed language and the acceptance of the virtual mileage equation. No comments were received so the new definition was accepted.

PTO and PTO-operation

The European (EU) delegation asked whether there is a need to include the struck text in the clean version of the HDV GTR draft text. The drafting coordinator indicated that the text can be kept or deleted. No further comments were received so the struck text was removed from the clean version of the document. The co-chairs suggested that if any of the options are mutually exclusive, perhaps a comment can be left for the reader to explain that a decision needs to be made.

Total energy throughput during V2X and/or PTO and/or non-traction purposes

The drafting coordinator suggested that since the virtual distance equation that has been chosen only makes use of total energy throughput and propulsion energy, perhaps the definition will need to be revised.

Energy throughput counter

The text made use of the term eventual which was proposed to be deleted. No comments were received so the text was removed.

Abbreviations

DoD – Depth of Discharge

The abbreviation was proposed to be removed, as it is no longer relevant to the text. No comments were received so the text was removed.

Battery performance requirements

The drafting coordinator outlined that the section had been rephrased but the intent remains the same. The EU commented that the inclusion of HD-OVC-HEV and others may not be required since it falls outside the scope of the GTR. Text regarding the installation of the state of certified energy (SOCE) monitor was accepted, having received no comments. Text was also added to reflect similar text that was accepted in the definitions section.

Frequency of verifications

The drafting coordinator highlighted text in square brackets referring to a minimum annual sales volume for monitoring families. No comments were received. The square brackets were removed.

Verification procedure

The drafting coordinator highlighted text in square brackets referring to the different testing procedures for usable battery energy (UBE) determination. No comments were received. The square brackets were removed.

Part B: Verification of Battery Durability

The drafting coordinator drew attention to the reference of regional requirements. No comments were received. The text was accepted.

Part C: Verification of reported virtual distance or Energy throughput counter

The drafting coordinator indicated that this section has many items in square brackets and track changes because the group did not have time to discuss this in detail. No comments were received on the text. The drafting coordinator stated that it will be consolidated according to the language that is currently there.

Annex 1

The drafting coordinator proposed removing the “Battery Electric Vehicle” column from the vehicle examination by testing centre portion of the survey, replacing it with “Electric Vehicle” instead. No comments were received. The column was changed to “Electric Vehicle.”

Annex 2

The drafting coordinator briefly reviewed the section and indicated that it would be desirable to leave it as-is but removing the comments. No further comments were received. The text was retained with square brackets while the comments were removed.

Annex 3

Test procedures

The drafting coordinator proposed removing the square brackets in the introductory portion of the section. No comments were received. The square brackets were removed in the introductory paragraph.

The Japanese delegation commented that in the UBE testing methods table, the text between the columns should be the same. For example, moving the charging text in method 2 to the end of the paragraph like the rest of the methods and removing the reference to charging stations. No further comments were received on this, so it was agreed to modify the table text to have similar language and structure.

The EU asked what higher tolerances mean in the context of method 1b and should method 1a be included as a reference point. The drafting coordinator indicated that this makes sense and proposed to modify the text accordingly.

The Secretariat for the Working Party on Pollution and Energy (GRPE) suggested that the term discharge should be used in the alternative method description to align with the rest of the UBE testing method descriptions. The drafting coordinator indicated that this would be included with the alignment that was previously agreed.

OICA commented that the table now looks to be clear and perhaps the paragraph above the test method table, referring to the testing method applied at certification and in-service testing, can be discussed further. In United Nations (UN) Global Technical Regulation (GTR) No. 22, there is a sentence that enables the authority to authorize and recognize a combination of testing methods. Perhaps this could be included as part of the text as well. The drafting coordinator highlighted that similar text has already been included under section 6.3.1. of the draft text. The Secretariat for the GRPE expressed confusion with how this might work. The drafting coordinator clarified that the text

allows the recognition of testing down in another jurisdiction, to alleviate repetitive testing by the manufacturer. The Japanese delegation request clarification on what OICA's intention might be with this request. The drafting coordinator suggested that due to time constraints, perhaps this discussion could take place later.

General test requirements

The drafting coordinator proposed removing the term dry from the description of the road surface to ensure that testing can be done when the forecast includes rain. No comments were received so the text was removed. The Japanese delegation expressed that they do not see the value in having clean in the description either. The co-chairs stated that the term "clean" may be useful in climates where there is snow. The drafting coordinator suggested that the text could be aligned with the on-road testing criteria. The EU suggested putting the whole definition in brackets for the moment and coming back to it when there is more time to discuss.

Driver breaks

The EU quickly mentioned that the reasoning for the short breaks here is not only to allow for a switch in drivers but also to maintain the condition of the battery. The part that is struck through is still relevant so perhaps this should be kept. The drafting coordinator indicated that the text has been rephrased to improve clarity and intent. The deviations regarding temperature fluctuations during breaks have not yet been decided on, so this will stay in brackets, for now.

Method 1a test

The Japanese delegation stated that they have some issue with the proposed 40 km/hr minimum speed or 30 kW minimum power requirements and that it may be difficult to assign a power value that covers all HDVs. The American delegation thought that the proposed values may cover larger vehicles but if there is a concern that 30 kW is not a large enough value, then perhaps it could be changed to the largest value between the two requirements. The Japanese delegation asked if a specific power demand was needed for method 1a and method 1b. The American delegation stated that the values were only for the auxiliary portion of the test, to complete full battery depletion and find the break-off point. The Japanese delegation stated that these values would not be necessary for method 2. The American delegation indicated that the power estimates between the two jurisdictions (Japan and U.S.) seem to be aligned and there is a potential issue for a manufacturer to designate a power value that is too low. For now, the original text is sufficient, or we can lower the power value to 15 kW and indicate in the procedure to use whatever value between 40 km/hr and 15 kW which results in a bigger auxiliary power draw. There is an alternative to put placeholders but maybe it is best to specify values so that others can specifically respond to a proposed value. The drafting coordinator included text on minimum speed and power in method 1a and method 1b tests, ensuring alignment between the two methods.

Decisions

- Text referring to 3,500 kg minimum, maximum laden mass was rephrased and shifted to the end of the paragraph.
- Text was added to the definition of an originally installed battery, referring to configuration according to the manufacturer's design/certification.

- Total propulsion energy definition was included as a new addition, consequential to the acceptance of the virtual mileage equation.
- PTO and PTO-operation definitions that included struck text was removed from the clean version of the document.
- The term “eventual” was removed from the energy throughput counter text.
- Depth of discharge abbreviation was removed from text, as it is no longer relevant.
- Text regarding the installation of the SOCE monitor was accepted, text was also added to reflect similar language that was accepted in the definitions section.
- Square brackets around the minimum annual sales volume for monitoring families were removed.
- Square brackets around the outline of different testing procedures for usable battery energy (UBE) determination were removed.
- Reference to regional requirements for part B verification of battery durability was added to the text.
- The battery electric vehicle column in the vehicle survey of Annex 1 was changed to electric vehicle.
- The square brackets were removed in the introductory paragraph of the test procedures section of Annex 3.
- It was agreed to modify the UBE testing methods table to have similar language and structure between the different methods.
- The terms “dry” and “clean” were removed from the test road surface description of the general testing requirements section.

4. Closing remarks

Context

This item was set with the objective of closing the meeting and looking forward to the next, addressing logistics and miscellaneous topics.

Discussion

The drafting coordinator explained that the final version of the HDV GTR draft text will be circulated to the group before submission so that everyone has a chance to see what will be provided to the GRPE for consideration.

Action items

- Drafting coordinator to provide the final draft to the Secretariat of the EVE IWG for posting.
- Drafting coordinator to send the final version of the HDV GTR text to the Secretariat of the GRPE before the December 31, 2024, deadline.