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Progress on the development of new UN GTRs and of amendments to established UN GTRs

Draft UN GTR on determination of electrified vehicle power (Electric vehicles and the environment)

Request for authorization to continue development a new UN GTR on the Determination of Electrified Vehicle Power (DEVP)

Submitted by the Working Party on Pollution and Energy*

The text reproduced below was prepared by the Informal Working Group (IWG) on Electric Vehicle and the Environment (EVE). It was adopted by the Working Party on Pollution and Energy (ECE/TRANS/WP.29/GRPE/79, para. 56). It is based on ECE/TRANS/WP.29/AC.3/53. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Executive Committee (AC.3) of the 1998 Agreement for consideration at their November 2019 sessions.

* In accordance with the programme of work of the Inland Transport Committee for 2018–2019 (ECE/TRANS/274, para. 123 and ECE/TRANS/2018/21, Cluster 3), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Mandate and Objectives

1. In the framework of the 1998 Agreement, the main objective of this proposal is to seek authorization for the continued development of a new UN GTR on the Determination of Electrified Vehicle Power, based on the work performed under the auspices of the Informal Working Group (IWG) on Electric Vehicles and the Environment (EVE), together with the IWG on World Light vehicles Test Procedure (WLTP).

II. Introduction

2. The IWG on EVE was set up in June 2012 following the approval by the Executive Committee (AC.3) of the 1998 Agreement of ECE/TRANS/WP.29/AC.3/32. This document established two distinct IWGs to examine environmental and safety issues related to EVs (IWGs on EVE, reporting to the Working Party on Pollution and Energy (GRPE) and the IWG on Electric Vehicle Safety (EVS), reporting to the Working Party on Passive Safety (GRSP)). As the two groups were formed at WP.29, they also reported to this forum directly. The proposal was supported by the European Commission, Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW), the National Highway Traffic Safety Administration (NHTSA) and the Environmental Protection Agency (EPA) of the United States of America, the Ministry of Industry and Information Technology (MIIT) of China, and Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT).

3. At its 171st session in November 2016, AC.3 gave the mandate to develop an amendment to UN GTR No.15 containing provisions on the determination of electrified vehicle power (ECE/TRANS/WP.29/AC.3/46), the “system power determination”. The IWG on EVE was tasked to deliver the draft text proposal, in close collaboration with the IWG on WLTP.

4. At its seventy-seventh session in June 2018, GRPE expressed the will to consider a standalone UN GTR for system power determination (ECE/TRANS/WP.29/GRPE/77, para. 51), requesting guidance from AC.3 on a potential modification to the authorization to develop an amendment to UN GTR No. 15.

5. At its 177th session in March 2019, AC.3 modified the mandate to develop the UN GTR on the determination of electrified vehicle power as a standalone UN GTR, rather than an amendment to UN GTR No. 15 (ECE/TRANS/WP.29/2019/33)

6. The need for additional validation testing to address open issues identified in the first phase of validation testing will require an additional 1 year to complete the new UN GTR.

III. Areas of work

7. The work of EVE IWG during Part A of the current EVE mandate (ECE/TRANS/WP.29/AC.3/46) indicated that sufficient knowledge and capability existed to develop a suitable procedure for determining powertrain performance of electrified vehicles. Additionally, a procedure for determining powertrain performance has been requested by the WLTP IWG, and the membership of both IWGs regularly communicated during Parts A and B of the current EVE mandate to ensure that each group's work is complementary, and not duplicative. For this reason the EVE IWG sought AC.3 authorization to develop a new UN GTR to establish a procedure for determining the powertrain performance of electrified vehicles.

IV. Existing regulations

8. A variety of regional regulations and directives are applicable to various M- and N-category vehicles, such as UN Regulation No. 85. However, there are very few which apply explicitly to electrified vehicles. At this time both the EVE and WLTP IWG agree that a procedure for determining powertrain performance specifically for electrified vehicles should be incorporated as a new dedicated UN GTR, and supported by validation testing.

V. Timeline

9. The timelines below are target timelines. The plan will be regularly reviewed and updated to reflect progress and feasibility of the timeline.

- (a) May 2019: GRPE endorses new timeline to complete second round of validation testing and complete a standalone UN GTR;
 - (b) October 2019: Completion of validation testing work and modification of draft UN GTR based on test results;
 - (c) November 2019: Approval of new timelines to develop a new UN GTR by AC.3;
 - (d) January 2020: Draft UN GTR available, guidance on any open issues by GRPE;
 - (e) January 2020-May 2020: Final drafting work on UN GTR text;
 - (f) June 2020:
 - (i) Transmission of the draft UN GTR as an official document twelve weeks before the June 2020 session of GRPE;
 - (ii) Endorsement of the draft UN GTR by GRPE;
 - (g) June 2020: Recommendation of the draft UN GTR by GRPE;
 - (h) November 2020: Vote on the new UN GTR at the AC.3 session of November 2020.
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