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## Economic Commission for Europe

### Inland Transport Committee

### World Forum for Harmonization of Vehicle Regulations

#### 177th session

Geneva, 12-15 March 2019

Item 18.12 of the provisional agenda

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

#### **Electric vehicles and the environment**

## **Request for the authorization to develop a new UN GTR on the Determination of Electrified Vehicle Power (DEVP)**

### **Submitted by the representatives of the United States of America\***

The text reproduced below was submitted by the representatives of the United States of America to request the authorization to develop a new UN Global Technical Regulation on the Determination of Electrified Vehicle Power. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Executive Committee of the 1998 Agreement (AC.3) for consideration.

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\* 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 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 Vehicle 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. Several arguments in favour of a standalone UN GTR have been put forward to highlight the benefits of a dedicated UN GTR on the topic.

(a) Internal combustion engines power determination already have dedicated regulatory text (UN Regulation No.85), making the integration of electrified vehicles power determination as part of another text on emission measurement an inconsistent precedent; and

(b) The provisions on system power determination may be used by other legal text in the future, making the link to a standalone UN GTR easier and more practical.

## **III. Areas of work**

6. The work of EVE IWG during Part A of the current EVE mandate (ECE/TRANS/WP.29/AC.3/46) indicates that sufficient knowledge and capability exist 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 have been regularly communicating during Part A of the current EVE mandate to ensure that each group's work is complimentary, and not duplicative. For this reason the EVE IWG is seeking AC.3 authorization to develop a new

UN GTR to establish a procedure for determining the powertrain performance of electrified vehicles.

#### **IV. Existing regulations**

7. A variety of the regional regulations and directives applicable to various M- and N-category vehicles as well as Regulations, 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 an amendment to UN GTR No. 15. After further considerations in its June 2018 session, GRPE agreed to request a modification of this authorization to develop provisions on the determination of electrified vehicle power are included in a new dedicated UN GTR.

#### **V. Timeline**

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

- (a) January 2019: Draft UN GTR available, guidance on any open issues by GRPE;
  - (b) January 2019-May 2019: Final drafting work on UN GTR text;
  - (c) March 2019: Approval of the authorization to develop a new UN GTR on DEVP by AC.3;
  - (d) May 2019:
    - (i) Transmission of the draft UN GTR as an official document twelve weeks before the May 2019 session of GRPE;
    - (ii) Endorsement of the draft UN GTR based on an informal document by GRPE;
  - (e) May 2019: Recommendation of the draft UN GTR by GRPE;
  - (f) November 2019: Vote on the new UN GTR at the AC.3 session of November 2019.
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