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Item 10 of the provisional agenda

Mutual Resolution No. 2 (M.R.2)**Proposal for a new amendment to Mutual Resolution No. 2****Submitted by the expert from the International Organization of Motor Vehicle Manufacturers ***

The text reproduced below was prepared by the secretariat as requested by GRPE during its 82nd session (ECE/TRANS/WP.29/GRPE/82, para. 56). It is a proposal for a new amendment to Mutual Resolution No. 2 of the 1958 and the 1998 Agreements containing Vehicle Propulsion System Definitions. It is submitted to the Working Party on Pollution and Energy consideration at its 83rd session. The modifications to the text are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2021 as outlined in proposed programme budget for 2021 (A/75/6 (Sect.20), para 20.51), 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. Proposal

Section B,

paragraph 1., amend to read:

"1. "Powertrain" means the total combination in a vehicle, of propulsion energy storage system(s), propulsion energy converter(s), **and** the drivetrain(s), providing the mechanical energy at the wheels for the purpose of vehicle propulsion, plus peripheral devices."

paragraph 1.1., amend to read:

"1.1. "Propulsion energy storage system" means an energy storage system of the powertrain **which is not a peripheral device**, whose output energy is used directly or indirectly for the purpose of vehicle propulsion."

paragraph 1.2., amend to read:

"1.2. "Propulsion energy converter" means an energy converter of the powertrain **which is not a peripheral device**, whose output energy is used directly or indirectly for the purpose of vehicle propulsion."

paragraph 1.2.3., amend to read:

"1.2.3. "Fuel cell" means ~~an propulsion~~ energy converter transforming chemical energy (input) into electrical energy (output) or vice versa."

Add a new paragraph 3.1., to read:

"3.1. "**form of energy**" means (i) electrical energy, or (ii) mechanical energy, or (iii) chemical energy (including fuels)."

paragraph 4., amend to read:

"4. "Auxiliary devices" means energy consuming, converting, storing or supplying **non-peripheral** devices or systems which are installed in the vehicle for purposes other than the propulsion of the vehicle and are therefore not considered to be part of the powertrain."

paragraph 5.1., amend to read:

"5.1. ~~"Internal combustion engine vehicle" means a vehicle equipped with a powertrain containing exclusively ICE(s) as propulsion energy converter(s).~~
"Pure ICE vehicle" means a vehicle where all of the propulsion energy converters are internal combustion engines."

paragraph 5.1.1., amend to read:

"5.1.1. ~~"Mono-fuel vehicle" means a vehicle with an internal combustion engine that operates~~ **is designed to run** primarily on one type of fuel."

paragraph 5.1.2., amend to read:

"5.1.2. ~~"Bi-fuel vehicle" means a vehicle with two separate fuel storage systems for different types of fuels and an internal combustion engine that operates primarily on one fuel at a time~~ **that is designed to run primarily on only one fuel at a time; however, the simultaneous use of both fuels is permitted in limited amount and duration."**

paragraph 5.1.4., amend to read:

"5.1.4. ~~"Flex-fuel vehicle" means a vehicle with one fuel storage system for a mixture of fuels and an internal combustion engine that operates on a mixture or on either of those fuels.~~ **that can run on different mixtures of two or more fuels."**

paragraph 5.3.2., amend to read:

"5.3.2. *"Hybrid electric vehicle"* means a hybrid vehicle ~~equipped with a powertrain containing at least one electric motor or electric motor-generator and at least one internal combustion engine as propulsion energy converter~~ **where one of the propulsion energy converters is an electric machine."**

II. Justification

The aim of this proposed amendment is to harmonize the definitions of M.R.2 with the latest definitions contained in Amendment 6 to UN GTR No. 15, as detailed in GRPE-82-28.
