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Work of GRPE on environmental aspects of Electrified Vehicles (EV's)

At GRPE work on environmental aspects of electrified light duty vehicles (EV comprising PEV, HEV, FCV)¹ currently is performed by the "*Electric Vehicles and the Environment (EVE)*" and the "*World Light duty Test Procedures (WLTP)*" informal working groups. The EVE is preparing a reference guide on existing technical regulation for EVs (excluding FCVs) and potential future needs. The WLTP, notably its sub-group WLTP-DTP-EV, has already developed a number of technical elements in relation of the WLTP GTR phase 1a and is about to continue this work in WLTP GTR phase 1b for other technical elements already defined. The WLTP work should extend to phases 2 and 3 covering further environmental aspects of EVs, which are not defined yet in detail.

For the sake of efficiency it is essential that any double developments by EVE and WLTP are avoided and available expert resources are used in the best manner. While at a first glance it might appear as appropriate to perform all respective future work by the WLTP, the wish of contracting parties not implementing the WLTP GTR in the near future to develop a separate GTR for those environmental aspects of EV's, which are not directly linked to a specific test cycle, has to be acknowledged. It is therefore suggested to develop several complementary GTRs dealing with EV environmental aspects:

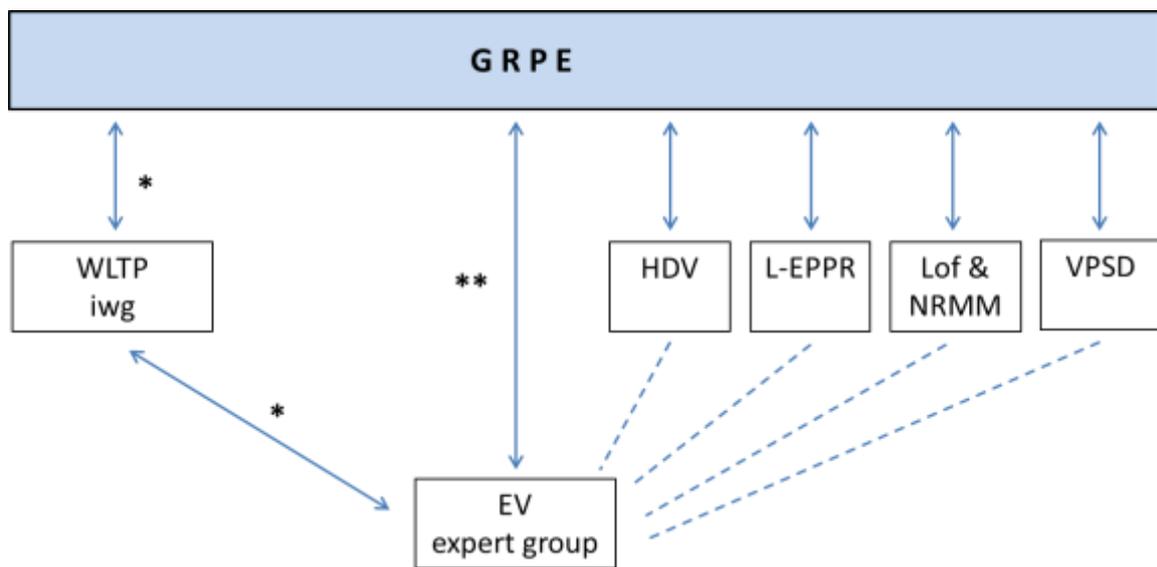
- (1) WLTP GTR covering all environmental aspects of EVs related to the characteristics of a particular test cycle, such as the determination of the electric range. In particular all elements covered by WLTP phase 1a and 1b should be exclusively included in the WLTP GTR.
- (2) EVE GTR(s) covering all environmental aspects of EVs, which are not related to the characteristics of a particular test cycle, such as certain battery tests (durability, charging performance, etc.). The procedures in the EVE GTR(s) could then be referenced by the WLTP GTR, where necessary, and transposed into regional regulations using other test cycles.

The GTRs should be developed by a single EV expert group, which can designate specific task forces if necessary. The figure below illustrates a possible structure of the process. For all elements to be integrated into the WLTP GTR the EV expert group should report to the WLTP iwg. The EVE GTR(s) should be drafted by the EV expert group independently and be proposed to the GRPE for adoption.

¹ EV = electrified vehicles, PEV = pure electric vehicle, HEV = hybrid electric vehicle, FCV = fuel cell vehicle.

The attribution of certain concrete technical elements to either an EVE or the WLTP GTR should be proposed by the particular (co-) sponsor(s), confirmed by GRPE and mandated officially by WP.29/AC.3, taking into account the views of the EV expert and WLTP informal working group (if applicable). In the interest of a smooth and timely process the EV expert group can already start working on such technical elements before its final attribution to a specific GTR is decided.

The concrete items to be developed in a GTR on the basis of the recommendations of chapter 5 of the reference guide and the possible time schedule needs to be further considered by the involved parties.



* amendments/new annexes to WLTP-gtr [gtr no. 15]

** development of other EV related new gtr(s) – (light duty vehicles)