STATUS OF THE GRPE INFORMAL GROUP ON HEAVY DUTY HYBRIDS (HDH)

The Informal Group on Heavy Duty Hybrids (HDH) held two meetings since the 60th GRPE session. The 3rd meeting took place on 25 and 26 October 2010 in Brussels and was dedicated to a detailed technical discussion of the work program. The 4th meeting took place on 10 January 2011 in Geneva.

The Terms of Reference (ToR) as laid down in Informal Document GRPE-60-11 have been confirmed by the Informal Group.

With respect to the question of establishing an amendment to gtr n°4 or a separate gtr, the Chairman's proposal to work on the basis of an amendment to gtr n°4 (WHDC) as the first option has been agreed. However, the group will further consider this issue during the course of the work program and report back to GRPE at a later stage.

The framework of hybrid certification has been defined by the HDH group, as follows. The certification procedure must

- cover a wide range of RESS (battery, capacitor, hydraulic accumulator, kinetic storage device, flywheel capacitor, fuel cell)
- account for RESS and engine power
- allow for technology development
- include provisions for transmission, gearing and rear axle ratio
- account for benefits of hybrid PTO operation
- account for vehicle regenerative energy gained or lost during testing
- minimize discrepancy between certification and real world CO₂ and criteria emissions

It has been agreed that the first step of the research work will be the evaluation of the HILS method. Japan has meanwhile provided the open source HILS model for further consideration by the group. Assessment of the chassis dyno method will be done in parallel. Assessment of the powerpack method (testing of the complete hybrid drivetrain) as presented by Cummins at the 3rd meeting is currently not within the mandate of the HDH group. The group is asking GRPE to extend the mandate under the provision of sufficient manpower and budget resources.

As required under item 7 of the ToR, the secretary presented a proposal of the roadmap of the work program. The proposal was slightly modified (see page 2), and has been agreed by the Informal Group. GRPE is asked to approve the roadmap.

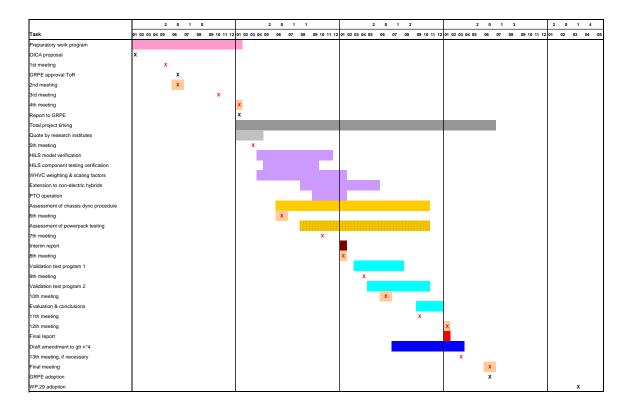
OICA offered a 200.000 €budget for the research work. The EU Commission is considering to contribute, too, but other contributions have not yet been indicated by the Contracting Parties. Given the complexity of the issue, chair and secretary are asking CP's to seriously consider contributions (budget or testing facilities), if not for now then for the validation test programs in 2012.

Four research institutes have indicated their interest in conducting the work program: Technical University Graz (Austria), Chalmers University Gothenburg (Sweden), INSIA (University Institute of Automobile Research) Madrid (Spain), Technical University Vienna (Austria). The secretary will contact them and ask for quotes. From the three validation test programs, one is suggested to be run at JRC (EU COM research lab), pending COM approval. For the two other ones, offers from CP's are welcome.

The next meetings are scheduled as follows:

- 5th meeting: 16, 17, (18) March 2011, Ann Arbor (EPA Lab), USA
- 6th meeting: 06 June 2011, Geneva (GRPE approval is kindly asked for)
- 7th meeting: October/November 2011, Japan (date and place to be confrmed)

Roadmap & Project Planning:



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