

Meeting Minutes
37th Meeting of the Informal Group on Gaseous Fuelled Vehicles (GFV)
13th January 2015
Palais des Nations
Geneva
09.30-12.30

I. Welcome and Introduction

1. Mr. Rijnders, GFV Chairman welcomed the participants to the meeting. He then recognized the recent incidents in Paris and the attack on the French journal Charlie Hebdo, saying that the incident represented an attack on freedom and democratic values as well as on the ability to have open discussions and freedom of opinions. Accordingly, he stressed the high value of the open dialogues that are possible at the United Nations.

II. Agenda for today (changes/additions)

2. There were no changes or additions to the day's agenda. Mr. Rijnders noted that there is an additional opportunity to add issues at the last part of this meeting under item VII, Any Other Business.

III. Adoption of minutes of the 36th GFV on 3 December 2014 (Brussels)

3. There were no comments on the minutes of the last meeting and they were adopted as presented.
4. The mandate for the GFV to continue its work was extended through June 2016 by the 163th session of WP.29 in June 2014.

IV. Gaseous fuel issues at the UNECE

5. Regulation 49 amendments have been tabled on the 06 series and brought in line with European regulations. Addendum 1 to the June session of GRPE dealt with a variety of issues. There also was a need to add dual-fuel vehicles into the requirements and descriptions. There are no new elements in gaseous D-F amendments. If there are any other issues on the latest proposed amendments these should be brought forward.
6. Light duty test procedure applicable to gaseous fuel vehicles, informally referred to as 'the 80% rule' are specifically for LPG. Mr. Rijnders informed WLTP IWG that there would be no changes needed on the 80% rule with the WLTP implementation.
7. There is a new working group, Task Force D, in the Group of Experts on Gas (GEG - within the Sustainable Energy Division at the UNECE) to deal with NGV commercialization. Lennart Pilskog, director of the NGVAE will chair this TF D dialing with removing barriers to the use of natural gas as a transportation fuel. This work is to be carried out in close collaboration with the ECE Working Party on Pollution and Energy (GRPE). Mr. Rijnders will participate in the GEG on the 20/21st January in order to see what they are doing and to ensure good cooperation with the work of GFV.
8. François Guichard (UNECE-GRPE secretariat). Before making further remarks on the GEG, Mr. Guichard thanked Mr. Rijnders for his comments about the terrorist attack in Paris and on the loss of French citizens' lives.
9. The Group of Experts on Gas's new Task Force D will be looking at barriers related to the use of gas as a vehicle fuel in general. If there are some specific points raised by Task Force D potentially affecting type approval regulations or other aspects, cooperative actions will be promoted. He suggested that it would be useful if the GFV/GRPE could get periodic reports on the Task Force D's most current activities. The

secretary, Branko Milicevic has been contacting various GRPE members to see if there is interest in joining the work effort of the Task Force D.

V. Information on the state-of-play of drafting a new UNECE Regulation on the type approval of Retrofit Heavy Duty Dual Fuel (HDDF) systems.

Mr. Dekker presented the PowerPoint document GFV 37-02, HDDF Retrofit Regulation Status.

Discussion/Questions

10. The GHG emissions and pollutant emissions should perform better on D-F than diesel only, even when CH₄ equivalent emissions are taken into account. This is a goal and there is an on-going discussion on this point.
11. Question: Will this presentation be made to the full GRPE? No. This is a GFV document and the discussion of the issues and resolutions is developing. But the topic will be mentioned within the GRPE and Mr. Rijnders will present a brief summary of the key HDDF-TF issues resulting from this and recent meetings.
12. Referring to slide 3, at this stage, instead of talking about CH₄ emission *limits* the discussion should be referring only to CH₄ *emissions*.
13. Comment from the manufacturer's perspective is that there is no GHG emission regulation at this time and GHG is a very large and important issue. Clarification is made that CH₄ is a GHG but not necessarily a pollutant, as such.
14. A good solution needs to be found to the challenge of reaching a regulatory solution to the GHG position and also one that will not necessarily place burdens on manufacturers of retrofit systems (particularly related to the use of methane catalysts).
15. We need to recognize that D-F systems have a dual-fuel mode and a diesel mode, also with new vehicles and not just retrofit so there is sensitivity to the GHG issue.
16. The HDDF TF (retrofit) is working to have its informal document on the regulation prepared for the June 2015 GRPE and a Working Document by January 2016.
17. The structure now is to have only one application range for one technology but, considering selective catalytic reduction (SCR) and exhaust gas recirculation (EGR), in future there might be different technologies that will justify having an engine test. We want to avoid having different application ranges for this potential. Ultimately one application range for one type approval should be needed. A new extension range for a new technology might be required, but this is a discussion for the Task Force in the upcoming future. A decision should not be made in the GFV for future regulation but in principle it should be sound enough and robust enough.
18. Suggested change in Slide 14 the to change 'shall' into 'may' in the sentence, "In this case a new application range shall be initiated. An engine bench test procedure will be required." The participants are reminded that this is only a presentation and not regulatory language so this change is not appropriate or necessary.
19. The discussion of 'application range,' be it a single application range or multiple ranges should not be discussed at this time at GFV. The 'system' will be designed to cover SCR and EGR technologies.
20. The 'family' definition was taken on board to avoid confusion. There is one application range that covers engine families.
21. The wording of 'application range' is difficult and somewhat complex. The HDDF TF should work on a draft text to determine if this reflects the testing effort for type approval and extension of the application range. But some additional testing might be required.
22. We should avoid complicating the testing based on the application range extension. This should be discussed in the next meeting of the HDDF TF.
23. It is suggested that in Slide 14 the sentence "*In this case a new application range shall be initiated. An engine bench test procedure will be required*" can be removed at this point. Only the first sentence is required: *An application range shall not be extended*

with an engine with EGR technology when the already approved application range includes engines with SCR technology, or vice versa.

VI. Retrofit HDDF open issues list

24. At this time we will reserve this rather long list of issues for the next meeting of the HDDF-TF

VII. Any Other Business

25. **Vehicle Propulsion system Definitions:** Mr. Rijnders introduced the request from the Vehicle Propulsion System Definitions (VPSD) group to come up with recommendations for definitions of bi-fuel and dual-fuel engines/vehicles. The request was made only last week so this is very short notice to finalize specific definitions. The GFV leadership has created some suggestions, which also were reviewed by a number of NGV stakeholders, some of whom returned comments and suggestions. The GFV will consider these for discussion purposes but today a final proposal to the GRPE is not anticipated given the high sensitivity and challenges of creating good definitions. (See Document GFV 37-3)
26. There are a wide range of definitions between VPSD and various NGV stakeholders including NGV Global members and the Contracting Parties (especially the Netherlands). This issue will be raised again at the next GFV meeting so a good recommendation to the VPSD can be developed. The key is, what do we want to address in the definitions. Mr. Albus indicated that if we put a recommendation in the VPSD it doesn't mean that all the definitions in the existing regulations have to be changed (i.e. R.49, R.83, etc.)
27. When discussing mono, bi-, and dual-fuel in the HDDF TF the concept of 'modes' was raised (i.e. "dual-fuel mode" and "diesel-mode"). Considering the number of fuels as well as the operating modes of the engines, the concept of 'mode' needs to be included in the definition.
28. Mr. Rijnders will request participants to provide definitions very soon so they can be discussed in the next GFV. We are open to all suggestions and proposed definitions.
29. There are no further remarks from the group on this topic at the moment.

VIII. Review of Planned Meetings of GFV & HDDF TF

30. HDDF TF 28 January Brussels (European Commission, DG Enterprise Brey building); 25th February (HDDF TF and possibly a GFV); and 25 March in Brussels (HDDF TF and GFV).

IX. Closing

31. Mr. Rijnders thanked the group for their participation, with the hope that the HDDF retrofit regulations informal document can be finalized for the June 2015 GRPE.

PARTICIPANTS

André Rijnders (RDW, Chairman)
Jeff Seisler (NGV Global/Clean Fuels Consulting, Co-Secretariat)
Leif-Erik Schulte (TUV Nord)
Klaus Richter (MAN Truck & Bus)
Alexey Tezenchenko (NAMI) (Russian Federation)
Andrey Kozlov (NAMI) (Russian Federation)
Adrian Burrows (UK Department for Transport)
Guogang Qiam (CATARC)
Ge Yunshan (Ministry of Industry and Information Technology, China)
Francoise Wierzbicka-Lahcen (TRW/CLEPA)

Dimitris Vartholomaios (DENSO/Clepa)
Pierre Laurent (CLEPA)
Dirk Bosteels (AECC)
Milan Woitsch (DEKRA, CZ)
Sung Bok Eom (KATRI, Korea)
Alexander Stöhr (AEGPL)
Krisztian Uhlik (KTI, Hungary)
Takatoshi Sakai (JAMA/Isuzu)
Alberto Castagnini (Landi Renzo-AEGPL)
François Guichard (UNECE)
Jean-François Renaudin (OICA/Volvo Group)

By telecom:

David Castro Moreira (MAN)
Henk Dekker (TNO)