

**DRAFT Minutes of the 1st Meeting**  
**UN-ECE/GRPE ad hoc WG "Hydrogen Vehicles – Onboard Storage Systems"**  
**29.11.2001 in Bonn**

- Agenda item 1  
"Greetings" Dr. Huber, Head of Department "Road Construction and Road Traffic" (Division "S") welcomed the members of the meeting and handed over to Mr. Christoph Albus, the chairman of the ad hoc Working Group
- Agenda item 2  
"Agenda" The chairman presented the agenda
- o the members agreed, that only **results and agreements** of the meetings to be included in the minutes
  - o End of meeting was scheduled for 4:00 pm
  - o Meeting minutes to be written by Mr. Udo Klein (Ford)
  - o No further comments or proposals were raised, therefore agenda was agreed as distributed
- Agenda item 3  
"Member-list / Attendance-list"
- o The members list was discussed. Canada, Italy, Russian Federation and the United Kingdom was not represented at the meeting.  
The chairman will contact these nations again and make sure that meeting minutes are distributed to their representatives correctly
  - o The list itself was adopted by the meeting members
  - o E-mail addresses to be checked and any changes/alterations to be fed back to the chairman
  - o An attendance list was circulated and copies given to the attendees during the meeting
  - o It was agreed to issue the minutes and all further information to the members and the individual attendees of the meeting(s) as well
- Agenda item 4  
"Documents"
- o The chairman presented the documents available for the WG. Hardcopies were available for the 1<sup>st</sup> meeting as well
  - o No questions were raised regarding the documents
  - o Mr. Dieter Stool (BMW) proposed to put all documents of this WG including meeting minutes into a "Special Section" of the EIHP 2 – Homepage (public section), so anyone can have access at any time.  
EIHP 2 – URL : <http://www.eihp.org>  
Agreed by the meeting members.  
Mr. Dieter Stoll to follow up with Mr. Rainer Wurster, the EIHP 2 coordinator.
- Agenda item 5  
"General Remarks"
- The chairman explained the role of the ad hoc WG in general and the major task to develop consensus on the drafts for LH2 and CGH2 onboard storage systems, so they can be forwarded to the GRPE to apply for new ECE's. It is essential to develop new legal requirements in this area to ensure necessary safety standards. He concluded that international regulations are missing. There are of course lots of national requirements and standards available, which are not sufficient to register vehicles running on hydrogen (see also ECE R-67 and ECE R-110).

Agenda item 5  
"General Remarks"  
- continued

Mr. Andre Rijnders (M.O.T. – RDW, NL) asked for a time plan and if it was intended to apply for GTR's as well.  
It was expressed by the OEM's, that new regulations/legislation have to be in place as soon as possible, considering the "Hydrogen powered Vehicle" implementation plans of the OEM's and that it is the ultimate goal of EIHP to apply for GTR's on the background of a "Global Harmonization".  
It was noted that the LH2 timing could differ from the CGH2

Mr. Robert Hay (ISO TC 197) presented the ISO TC 197 activities and stated that they have resources and mechanism's available to support this group.

On request of the chairman, Mr. Robert Hay together with the representatives from ISO TC 22 – Mr. Aldo Bassi and Mr. Gilles Van Eegher – will establish an overview of the ISO activities and present at the next meeting (separate agenda item)

Mr. Dieter Stoll (BMW) presented the EIHP approach (file attached)

**The following was concluded:**

- o Develop the two drafts for LH2 and CGH2 to apply for ECE Regulations as a first step
- o In a second step develop a process to apply for GTR's
- o Develop closer relationship between ISO / ad hoc WG / EIHP
- o Write to ISO TC197 and ISO TC22 and express the need for their review/input of the two drafts and ask for closer cooperation

Again it was expressed, that it is the ultimate goal of the EIHP to obtain GTR's, preferably applied for at the same time as for the new ECE's in order to avoid double work. Buy-in particularly from ISO is essential to ensure adoption of these GTR's by parties signatory to the 1998 agreement (basically those that can not adopt ECE's for their national certification process).

Mr. Robert Hay ensured that he would support the letter and request from the ad hoc WG in terms of GTR and discuss the needs within ISO TC197.

Agenda item 6  
"Draft Regulation  
(liquid hydrogen)"

Mr. Dieter Stoll (BMW) presented the latest status on the LH2 draft (file attached) and the next steps planned:

- o BMW will have vehicles ready in a view years, running on LH2
- o in the framework of EIHP, they will present vehicles build to the draft specification to various approving authorities ( e.g. F, J, NL, USA etc.) to verify the draft and obtain homologation

Agenda item 6  
"Draft Regulation

The presentation was followed by a lively discussion with the following **conclusions:**

- continued

- o Further detailed discussion is required before we present to GRPE
- o Attendees are requested to distribute the LH2 draft within their organizations/companies and ask for comments in preparation of the next meeting
- o All comments/remarks/questions to be delivered to the chairman by end of January in the "standard format" – file attached
- o BMW will organize a "Workshop" at BMW in Munich with "Hardware" mid February 2002
- o Rationales for the individual requirements of the LH2 draft to be made available for the "workshop"

Agenda item 7  
"Draft Regulation  
(compressed gaseous  
hydrogen)"

Mr. Paul Adams (Volvo) presented the latest status on the CGH2 draft (file attached). Annex 7, which currently is based on ISO text, has to be re-drafted, completion scheduled for April next year.

**Conclusion:**

- o Similar "Workshop" as for LH2 to be organized – Mr. Rainer Bauer (DaimlerChrysler AG) to investigate and advise the chairman
- o Attendees are requested to distribute the CGH2 draft (rev. 8) within their organizations/companies and ask for comments in preparation of the next meeting. It also should be considered, which items can be removed from the draft, since this relates to OEM's only and not to "aftermarket installation" companies as ECE-R 110 (CNG)
- o All comments/remarks/questions to be delivered to the chairman by end of January in the "standard format" – file attached
- o Mr. Paul Adams to forward "standard format" to the chairman
- o Status report on CGH2 to be presented at the next meeting (BMW-Workshop – separate agenda item)

Mr. Junichi Sato (JASIC/Japan) presented the JASIC comments on the drafts. Answers to the general comments could not be given on the same day, whereas some specific comments could be cleared.

Agenda item 8  
"Further Action"

The following actions were agreed by the meeting:

- o The minutes of the meeting will be circulated for comments prior to final issue
- o Comments on LH2 and CGH2 to be forwarded to the chairman by end of January
- o The chairman will prepare a report for the GRPE meeting in January
- o Next meeting at BMW in Munich (Workshop), final date to be advised
- o Letter to ISO TC197 & ISO TC22 a.s.a.p.
- o Timetable to be developed at the next meeting

15:30 pm end of meeting