

Report of the 5th Session of the Electric Vehicles and the Environment Informal Working Group (EVE IWG)

Location: Tokyo, Japan

Time / Date: 9:30 – 17:30, April 11th and 12th, 2013

Co-Chairs: Ms. Chunmei Chen (China) and Mr. Kazuyuki Narusawa (Japan)

1. Welcome, Introductions, Agenda

Mr. Kazuyuki Narusawa, Co-Chair of the informal working group, welcomed participants to the meeting on behalf of Japan. In his introduction, Mr. Kazuyuki Narusawa highlighted the importance of the working group given the increasing need in most countries to introduce cleaner vehicles such as EVs to achieve aggressive environmental objectives.

There were 27 participants in the room representing Contracting Parties, vehicle manufacturers and industry organizations from around the world. The Chair, Mr. Michael Olechiw, participated to parts of the meeting by conference call. Mr. Guido Gielen also provided a progress report on the activities of the Environmental and propulsion performance requirements (EPPR) for L-category vehicles informal working group by conference call.

The Agenda for the meeting (EVE-05-02-Rev1e) was reviewed. No changes were made, except that the times for the presentation of Mr. Michael Olechiw and Mr. Guido Gielen were adjusted for their respective time zones.

2. Review of EVE IWG #4 Session Report

The Secretary reviewed document EVE-04-09e covering Agenda item 2 with a focus on action items. The Secretary confirmed that all action items were completed, including:

- EVE-4 Action 1, completed: The definition for vehicle range found under item 3.1 was modified such that the entire scope of vehicles under the mandate of the EVE group is covered. The modifications ensure complete coverage for HEVs, PHEVs and BEV.
- EVE-4 Action 2, ongoing: The EVE IWG has been working with other relevant IWGs to ensure consistency of definitions when these are available. A summary table listing all available definitions from IWGs as well as those created for the EVE questionnaire was developed. The table was shared with VPSD. The EVE IWG will continue to monitor progress of VPSD and adjust definitions as required.
- EVE-4 Action 3, completed: The Consultant's draft proposal to assist developing the reference guide was not posted on the UNECE website. This contract was finally funded directly by Canada
- EVE-4 Action 4, completed: A number of EVE participants submitted contact names for completing the questionnaire to the EVE Secretariat, and subsequently submitted completed questionnaires.
- EVE-4 Action 5, completed: A broad question was added to the questionnaire under each vehicle attribute.

- EVE-4 Action 6, ongoing: There were no proposals from participants to present on benefits of standardization at EVE-05. Participants will again be invited to present at the next EVE IWG meeting.
- EVE-4 Action 7, completed: EVE is proposing two meetings in Fall 2013, one in Beijing (China) in October and one during WP.29 in November.
- EVE-4 Action 8, completed: It was mentioned that the WLTP-DTP is holding a meeting in Tokyo, March 22-25, 2013. The EVE leadership team was asked to consider changing the dates of EVE-05 to accommodate some members participating in a WLTP-DTP meeting on March 22-25, 2013. The final dates of April 11-12, 2013 were presented at the GRPE and consistent with the prior proposal to coordinate with EVS meeting.
- EVE-4 Action 9, completed: The agenda for EVE-05 was modified to switch items 3 and 4.

ACTION 1: The secretary will invite participants to present on standardization at the next EVE IWG meeting.

3. Update on status of EVE IWG Progress Report and ToR for AC.3

The Secretary provided an update on the approval of the terms of reference by AC.3. The Secretary reminded participants that at the 158th session of the WP.29, held in November 2012, the AC.3/WP.29 requested that the Terms of Reference and a Progress Report for the EVE be presented at the 159th session, to be held in March 2013. The EVE Secretariat has submitted and obtained approval of documents GRPE-65-03 and GRPE-65-04 by GRPE in January 2013. The Terms of Reference were subsequently added to the GRPE 65th session report for presentation at AC.3. The GRPE report was, however, not submitted in time for presentation to AC.3 at the 159th session in March and will instead be considered at the 160th session in June.

4. Update on other GRPE IWGs

Mr. Michael Olechiw, on behalf of the HDH IWG Chair, presented document EVE-05-08e by conference call. The participants were informed of the outcome of the last meeting from March 19-22 in Sweden, which also included the first drafting session for the gtr. The next meetings of HDH IWG are planned for June 4th in Geneva during GRPE 66th session (14th meeting) and October 22nd in San Diego (15th meeting). The 2nd drafting session is planned for June 3rd in Geneva during GRPE 66th session or May 29th in Brussels. The development of a draft gtr is targeted from December 2013 and a final gtr for mid-March 2014. Mr. Michael Olechiw confirmed there was no immediate need for support from EVE IWG.

Mr. Kazuki Kobayashi, the Chair of WLTP-E-Lab Sub Group, presented document EVE-05-13e summarizing the activities of the WLTP and more specifically the test procedure. Mr. Kazuki Kobayashi also reminded participants of the phased approach and timelines for the development of the WLTP gtr. It is expected that a gtr under phase I will be submitted to GRPE in August. Approval of the gtr by GRPE is expected at a special session in November 2013 during the 161st session of AC.3. The gtr would subsequently be submitted to AC.3 in January for approval at 162th session in March 2014. Mr. Kazuki Kobayashi also confirmed the start of work for phase 2 in parallel to the completion of phase 1. The presentation by Mr. Kazuki Kobayashi was followed by substantial discussions on the effect or considerations for a number of attributes that may affect EVs performance differently than ICEs. Mr. Michael Olechiw and Mr. Ed Pike requested clarifications on cold temperature testing for EVs. Mr. William Coleman

confirmed that EVs or ICEs were subject to same test conditions and also clarified that the WLTP test at normal ambient temperatures would be run without operating a heater. Mr. William Coleman also expressed disappointment regarding the consideration of “regional” utility factors and that these factors were more locally than regionally dependant (e.g. city vs. country). Mr. Kazuki Kobayashi expects that all of these issues will be further analysed during phase 2.

The Co-Chair of the EVS IWG, Ms. Chunmei Chen, summarized the activities and next steps. The activities of the group were started in April 2012, with subsequent meetings in U.S. on April 23 - 25, 2012 and Bonn on Oct. 23 - 25, 2012. The 3rd meeting of EVS IWG is scheduled for April 16-18, 2013 in Tokyo Japan. The group is working towards the development of a gtr that would ensure the same safety to EVs and ICEs. The EVS IWG will be considering two options moving forward; 1) a 2-phase approach with gtr using only available information to meet current timelines and 2) develop a complete gtr with a longer timeline. The EVS IWG will be assessing the two options at its next meeting.

Mr. William Coleman, on behalf of the Chair of the VPSD, presented an update on the activities of the group. Mr. William Coleman reported that the group continues to discuss and assess existing definitions. The intent is to continue working in a smaller group given difficulty of task, but that input from other IWGs will soon be required. It is expected that a draft document will be circulated in the coming weeks for discussion at the GRPE 66th session in Geneva.

ACTION 2: The Secretary will coordinate input to the VPSD document from EVE IWG membership.

Mr. Guido Gielen, on behalf of the Chair EPPR IWG, presented document EVE-05-10e to summarize the activities of the group. Mr. Guido Gielen presented an overview of the scope under consideration for the development of a gtr, including EU legislation under development and the classes of vehicles that are covered. Contracting parties were invited to collaborate in harmonising environmental and propulsion performance requirements for L-category vehicles. EC will be hosting 2nd L-EPPR meeting in Brussels, 25 – 26 April 2013. Mr. William Coleman and Mr. Johan Renders strongly recommended a close collaboration of EPPR, WLTP and EVE, which was agreed by all.

5. Reference Guide Development

a. Questionnaire Completion

The Secretary presented documents EVE-05-03e and EVE-05-04e displaying the most recent proposed Reference Guide Outline and Questionnaire. The Secretary thanked all Contracting Parties and industry for the overwhelming responses to the questionnaire. In total, completed questionnaires were submitted by 9 contracting parties/industry.

The Secretary reviewed the most recent draft of the Reference Guide Outline (EVE-05-03e), pointing to changes that were made in responses to previous comments (see responses to action items under Item 2). Mr. Johan Renders requested clarification on the development of a gtr; the secretary responded that according to the Terms of Reference the development of a gtr by EVE IWG would require the EVE IWG to seek a new mandate from AC.3. Mr. William Coleman also suggested the attributes for infrastructure could be better handled under EVS while noting the importance of ensuring that it was covered in either IWG. A discussion led by Mr. Johan Renders also followed on the attributes that did not exactly fit the mandate of WP.29. The Secretary confirmed these attributes were covered in Terms of Reference and also reminded

participants of decision to include these attributes in an appendix. The participants agreed.

ACTION 3: Participants were invited to submit any further comments to the Reference Guide Outline to the Secretary prior to the next meeting of EVE IWG planned for June 3rd during the 66th session of GRPE.

The discussion on the Reference Guide Outline was followed by presentations by Contracting Parties on their completed questionnaire. Ms. Chunmei Chen (China), Mr. Stéphane Couroux (Canada), Mr. Nobutoshi Horie (Japan) and Mr. Michael Olechiw (U.S.) presented documents EVE-05-11e, EVE-05-07e, EVE-05-09e and EVE-05-12e, respectively. A number of technical questions followed each of the presentation. Mr. Stéphane Couroux confirmed the financial allocation for electrified vehicles ranged depending on the type of vehicle (from hybrid to full electric having higher incentive). It was also confirmed that labelling was a voluntary agreement in Canada, whereas it was a regulatory requirement in the U.S. Mr. Nobutoshi Horie confirmed that Japan would need further consideration before adopting WLTP, and that it would not be earlier than 2016. Mr. Michael Olechiw confirmed equivalent units of energy were used for label for EVs, but not for diesel. Mr. Michael Olechiw also confirmed that PHEV vehicles were required to run full cycle charge sustaining at best effort.

ACTION 4: Mr. Michael Olechiw to provide further clarification on utility factors for California in response to a question by Mr. Kazuyuki Narusawa.

Mr. Ed Pike, a consultant from Energy Solutions hired by Canada to support the development of the Reference Guide, subsequently presented document EVE-05-05e. The presentation summarized input from contracting parties and also served to highlight requirements that are different in one or more countries. The presentation also sought input from participants on attributes that could merit further analysis to inform the development of recommendations for the Reference Guide and/or eventually the development of future gtr. While it is recognized that a number of gtr are under development, and with more or less consideration for EVs, participants were asked if there is need to conduct limited research or recommend further research under the Reference Guide for one or more attributes that can affect EVs differently from conventional vehicles. For examples, participants were asked whether heating or A/C were believed to have a significant effect on EVs efficiency and range determination as indicated by certain data; and are thermal stand-by battery thermal management losses significant, does battery state of charge affect battery efficiency, etc.? Participants were also asked if there was interest in further researching information on charging infrastructure, battery recycling or incentives. Similarly, it was also asked if greater efforts should be made to collect information on motorcycles, medium- or heavy-duty vehicles.

The presentation was followed by substantial technical discussions on a number of the above listed topics. While there were no recommendations or agreements to further research any given topics, all participants agreed that it would be important to prioritize activities. Mr. Johan Renders indicated that all participants are working in an environment with budgetary constraints, and would then expect results of the meetings. Mr. Michael Olechiw reminded participants that only task for this group is to determine if one or more of the discussed topics is important enough to warrant a recommendation

for further research or recommendation in the Reference Guide. If we do not know, we need to conduct minimum research or testing prior to finalizing the Reference Guide.

ACTION 5: The Secretary will invite the chairs of other IWGs to participate in a discussion on priorities for EVE and the next meeting scheduled for June 3rd during GRPE 66th session in Geneva.

ACTION 6: Mr. Stéphane Couroux will inquire on available EV test data in Canada.

b. Presentation on draft preliminary database to compile questionnaire information

The Secretary presented the general layout and functionality of a database that was developed to assist gathering and analysing information submitted by Contracting Parties. Participants were asked if there would be interest to continue developing this database to make information readily available on the web or others. There could be a benefit to also providing access to Contracting Parties to update with the most current information from time to time. Mr. Johan Renders commented that the mandate of EVE IWG was limited to providing a snapshot in time on EV environmental requirements. Mr. Johan Renders also further questioned if any of the information submitted by contracting parties should be made publicly available under the current mandate of EVE and what would be the resource implications. Mr. Kazuyuki Narusawa suggested to post-pone the discussion on further developing the database to later, while recognizing that there could be merit in principle to such a tool as expressed by a number of participants.

ACTION 7: The leadership committee will discuss what information is/can be made available as part of the Reference Guide.

c. Discuss and initiate the next steps in road map

The Secretary presented document EVE-04-06e, reminding participants of the timelines for completion of the Reference Guide. It was agreed to develop a first draft of the Reference Guide prior to EVE-07 meeting in China which is tentatively scheduled for the fall of 2013.

ACTION 8: The Secretary will modify document EVE-04-06e to include deadlines for submitting draft and final versions of the Reference Guide to EVE IWG, GRPE and WP.29.

The Secretary also informed participants of on-going discussions with the U.S. to continue funding the consultant to support the development of the Reference Guide. The current funding provided by Canada is limited to the compilation, analysis and preparation of a presentation of the completed questionnaire, with additional funding from the International Council on Clean Transportation for a limited transition period. There were no additional proposals at the meeting.

ACTION 9: Participants to respond on request for funding consultant to support development of Reference Guide by EVE-06. The Secretary will send e-mail to seek participation.

The Secretary also informed participants that the leadership of EVE IWG would then turn to volunteers to help draft the Reference Guide if funding was not available. There were no volunteers at the meeting.

ACTION 10: The Secretary will seek the participation of volunteer to develop draft Reference Guide, noting that OICA is planned to review a first draft.

6. Exchange of Information

The representative of the European Commission (EC), Mr. Johan Renders, presented document EVE-05-06e regarding the European Union strategy for clean and energy-efficient vehicles. The presentation included current and forecasted penetration of EVs, EU general policy/strategy on clean vehicles and regulatory framework for EVs. The document also presented a number of useful links on the latter. Mr. William Coleman sought further explanations on limited involvement from EU for the development of EV requirements under WLTP. Mr. Johan Renders explained that legislative requirements and objectives forced the EC to prioritise the use of resources to the WLTP activities for conventional vehicles, but is hoping to participate more actively in subsequent phases of WLTP for EVs.

7. Discuss draft EVE-06 meeting agenda

The co-Chair, Mr. Kazuyuki Narusawa, presented the draft EVE-06 meeting agenda (see document EVE-05-14e. There were no changes or comments to the proposed agenda.

ACTION 11: The Secretary will post and send the agenda to EVE participants ahead of EVE-06. The Secretary will contact GRPE Secretariat to request conference call capabilities.

8. Discuss timing and location of EVE-07 meeting

The representative of China, Ms. Chunmei Chen, confirmed the venue of EVE-07 in Beijing, China. The final dates will be determined in discussion with the EVS IWG, which is also targeting a meeting at the same time location. The tentative period is October 14-25, 2013.

ACTION 12: Ms. Chunmei Chen will inform Secretary of meeting dates.

ACTION 13: The Secretary will inform participants of meeting dates.

9. Concluding remarks, Closing

The co-Chairs, Ms. Chunmei Chen and Mr. Kazuyuki Narusawa, thanked EVE members for their participation.