

**Report of the 14th Session of the
Electric Vehicles and the Environment Informal Working Group (EVE IWG)**

Location: Teleconference
Time / Date: April 20th, 2015
Chair: Mr. Michael Olechiw (USA)
Co-Chairs: Mr. Kazuyuki Narusawa (Japan)
Ms. Chen Chunmei (China)
Secretary: Ms. Erin Marchington (Canada)

1. Welcome, Introductions, Logistics and Agenda (item 1)

Mr. Michael Olechiw, Chair of the informal working group, welcomed participants to the meeting. The meeting was well attended, with participants from contracting parties, other WP.29 working groups, and industry organizations. In addition to Mr. Olechiw, Ms. Marchington (Secretary), Mr. Narusawa (Co-Chair), and Ms. Chunmei (Co-Chair) were present at the meeting. Ms. Marchington was announced to formally be Secretary of the EVE IWG on behalf of Canada, replacing Mr. Stephane Couroux.

Mr. Olechiw outlined the objective for the 14th EVE meeting, which was to continue work on Part A of the new EVE mandate. Building on the concepts for future work on topic areas outlined during the 13th EVE IWG meeting, lead parties/organizations were to present an update on the status of their work.

The agenda for the meeting (EVE-14-02-Rev3e) was reviewed and accepted by all participants.

2. Review EVE IWG #13 Meeting Report (item 2)

Speaking to agenda item 2, Ms. Marchington also reviewed the action items from the EVE-13 meeting (EVE-13-07e). Most of the 11 action items are ongoing, with the exception of EVE-13 Action 1, 7, 9 (a, The EVE leadership will determine the location (Ottawa or video-conference) and date of the EVE-14 meeting and communicate this to the EVE group by early February 2015), 10 and 11. The ongoing action items are re-named below:

ACTION 1 (EVE-13 Action 2, ongoing): Concerning future work under Topic 2, the EVE group will consider the development of a technical report that could be added into the SR1 and/or RE3 documents and discuss further at the next EVE meeting.

ACTION 2 (EVE-13 Action 3, ongoing): The EVE group will continue discussion with the WLTP IWG and European Commission about potential areas for collaboration in EV work.

ACTION 3 (EVE-13 Action 4, ongoing): All interested parties are encouraged to contribute data to build the database proposed by China by reaching out directly to Ms. Chen Chunmei (chencm@miit.gov.cn).

ACTION 4 (EVE-13 Action 5, ongoing): All interested parties wishing to participate and/or contribute to the literature review proposed by USA and Canada by reaching out directly to Mr. Olechiw (olechiw.michael@epa.gov) and Ms. Marchington (Erin.Marchington@ec.gc.ca).

ACTION 5 (EVE-13 Action 6, ongoing): All interested parties wishing to participate in this work by Germany and Korea should reach out directly to Mr. Holdik (Hans.Holdik@bmvi.bund.de) and Mr. Dongseok Choi (dsechoi@naver.com).

ACTION 6 (EVE-13 Action 8, ongoing): Any interested parties and/or stakeholders wishing to speak to the issue of battery recyclability at future EVE meetings should inform the EVE Secretary ahead of the meeting so they can be added to the agenda.

ACTION 7 (EVE-13 Action 9, ongoing): The EVE group will continue to discuss the location and timing of the EVE-16 meeting and confirm the details during the EVE-15 meeting.

3. Update on subgroup activities for Part A of the new EVE mandate (item 3)

Method of stating energy consumption (EVE-14-03e)

Mr. Cui (China) introduced EVE-14-03e, which outlines a status update of China's work. Task 1, the literature review, is ongoing and is investigating EV energy consumption evaluation methods by main countries. It will cover existing LCA methods, differences in the LCA methods; the GREET Model and application was presented as an example. Task 2, data collection, will be initiated soon and countries were again requested to contribute to this action to build a database (Action 3). A file was provided for data submission (EVE-14-11e). Discussion concerned the availability of the literature review to the group and China indicated it will be presented during the EVE-15 meeting (Action 8).

Battery performance and Durability (EVE-14-04e, EVE-14-08e)

Mr. Olechiw and Ms. Marchington introduced EVE-14-08e, which reviewed the status of the USA and Canada's work. Mr. Tom Casciani, the FEV consultant who is leading the literature review on battery durability was introduced to the group, presented EVE-14-08e and discussed the project timeline, structure of the literature review, resources, some literature examples, a preliminary list of factors effecting EV durability, test methodologies for EV batteries, and next steps. The review should be completed in mid-July 2015. A request was made to the group to provide additional international sources of literature on this topic, as the consultant is US-based (Action 9). Discussion focused on whether or not test programs were part of this research; Mr. Olechiw clarified that FEV will be offering recommendations that could include i.e. a specific test to be further developed, but right now were just conducting a literature review. Mr. Olechiw also clarified that this work was vehicle-level. Several comments were made about long-term aging factors, changing battery technology in the future, battery recyclability and concern over limiting technology. Mr. Olechiw noted that these were important considerations and that there would be no recommendations on introducing abuse criteria; rather, the purpose of the study was to inform the development of a standardized procedure to evaluate EV battery durability that reflects normal operation of vehicle, because this would ensure the vehicle would provide environmental benefits over a lifetime of operation.

ACTION 9: All EVE group members are encouraged to provide additional international sources of literature on EV battery performance (email: Mr. Olechiw, olechiw.michael@epa.gov, cc: Mr. Tom Casciani, Casciani@FEV.COM).

Determining power of EVs (EVE-14-05e, EVE-14-07e, EVE-14-10e)

Mr. Holdik introduced EVE-14-05e, which outlines the status of Germany and Korea's work. A review of the agreements made during the EVE-13 meeting to focus work on EVs and passenger cars (M1, N1) and a proposed timeline was presented, as well as a draft questionnaire (EVE-14-07e) that aims to inform political and technical questions related to this work. Discussion focused on the content of the questionnaire, which will be distributed for formal review by the EVE IWG at the end of April or early May 2015, after accepting comments from the group. Mr. Michael Duoba from Argonne National Laboratory also gave an update on the work of the SAE J2908 group (EVE-14-10e), which is investigating hybrid system power rating. ISO will contribute to this topic and present the current status at future meetings. There was some discussion of this work and its relationship to the WLTP IWG, with Japan informing the group that their preference is for the EVE work on this topic to focus on WLTP demands only.

Battery recyclability

The EVE leadership did not receive any new information on this topic or requests to discuss this further, so no discussion on battery recyclability occurred, but Action 6 will remain ongoing for future meetings.

4. Update on other GRPE and WP.29 IWGs (item 4)

Mr. Olechiw led a roundtable discussion of work related to EVs occurring in two other WP.29 and GRPE IWGs, with a focus on the WLTP work: an update was given by Mr. Per Ohlund on the Worldwide harmonized Light vehicles Test Procedure (WLTP) IWG using document EVE-14-09e, by Mr. Guido Gielen on the Environmental Propulsion and Performance Requirements (EPPR) IWG (additional resource here:

https://circabc.europa.eu/d/a/workspace/SpacesStore/a504e2b7-7762-4dfd-be1d-7c20a3a10f74/2015_04_14%20EPPR%20update_Chairman_MCWG%202015.04.14.pdf), and by Mr. Kazuyuki Narusawa on the Electric Vehicle Safety (EVS) IWG. Discussion focused on current EV-related issues the groups were facing and whether or not coordination with the EVE IWG was desired or necessary.

5. Discuss next EVE meetings (item 5)

Ms. Marchington did not present document EVE-14-06e in detail due to limited time, however the group was informed that the EVE-15 meeting would take place on June 8, 9:30am -12:30pm in Geneva alongside the June 2015 GRPE session. The EVE-16 meeting will occur in Ottawa during the month of October, 2015 and the precise date of the meeting will be communicated to the EVE IWG during the EVE-15 meeting (Action 7).

ACTION 10: The EVE Secretary will revise and post the draft agenda and related documents for the EVE-15 meeting on the UNECE EVE website.

6. Concluding remarks, Closing (item 6)

Mr. Olechiw closed the meeting by thanking participants for attending.