

Electric Vehicles and the Environment (EVE IWG)

1

REPORT TO GRPE 70TH SESSION

Recent Activities

2

1. Completion of the 1st EVE mandate:

- Approval of the EV Reference Guide
 - ✦ Formal document approved during 69th GRPE, June 2014 and transmitted to WP.29
 - ✦ Formal document approved during the 164th WP.29, Nov 2014: ECE/TRANS/WP.29/2014/81
 - ✦ Filing of the EV Reference Guide on the WP.29 website under discussion
 - As proposed by the WP.29 Secretariat, the EV Guide number will be left as is and placed under 'Reference material' and on the WP.29 homepage
- Recommendations in Chapter 5 of the Guide where future work could be completed:
 - ✦ 5.1 – Vehicle range and energy consumption
 - ✦ 5.2 – Method of stating energy consumption
 - ✦ 5.3 – Battery performance and durability
 - ✦ 5.4 – Battery recycling/recyclability

Recent Activities

3

- 2. Approval of the new EVE mandate:
ECE/TRANS/WP.29/2014/88, amended by WP.29-164-15**
- Submitted by Canada, China, Japan, USA and the European Union
 - The mandate has two parts: Part A will involve additional research and information-sharing, and Part B will potentially involve GTR development:
 - ✦ 5.1 – Vehicle range and energy consumption
 - Removed from consideration in Part A or B of the new EVE mandate because it is understood that this issue will be addressed by the WLTP informal working group in future work
 - ✦ 5.2 – Method of stating energy consumption and 5.4 – Battery recyclability
 - Will be addressed under Part A of the new EVE mandate, and thus be considered for further research and information-sharing only, and not considered for GTR development under Part B
 - ✦ 5.3 – Battery performance and durability and “Determining the powertrain performance of EVs”
 - Will be addressed in both Part A and Part B of the new EVE mandate.

Recent Activities

4

- **Approval of the new EVE mandate:
ECE/TRANS/WP.29/2014/88, amended by WP.29-164-15**
 - 69th GRPE meeting (June 5-6 2014, Geneva)
 - ✦ Agreement in principle on the new EVE mandate
 - 163rd WP.29 meeting (June 24 -27 2014, Geneva)
 - ✦ Informal consideration of the new EVE mandate
 - EVE-11 meeting (September 29 2014, teleconference)
 - ✦ Continued discussion on which Guide recommendations should be explored in the new EVE mandate
 - ✦ Identification of leads for the proposed topic areas
 - EVE-12 meeting (October 28-29 2014, Brussels)
 - ✦ Presentations by leads on the proposed topic areas
 - ✦ Finalization of topic areas and scope of the new EVE mandate
 - 164th WP.29 meeting (November 11-14, 2014, Geneva)
 - ✦ Approval of the new EVE mandate: ECE/TRANS/WP.29/2014/88, amended by WP.29-164-15

EVE-13 meeting

(Jan 12, 2015, Geneva)

5

- **Purpose: To discuss detailed proposals for Part A work in each topic area of the new EVE mandate, as presented by leads**
 - Request for participation
- **Proposed work**
 - **Method of stating energy consumption- China (EVE-13-03e)**
 - ✦ **Step1: Literatures review: Study on the electric vehicle energy consumption evaluation method executed by main countries.**
 - ✦ **Step2: Data collection: Build database and conduct comparative analysis on the energy structure for main countries in the world.**
 - ✦ **Step3: Method Development: Discusses the necessity and possibility to standardize the energy consumption method.**
 - **Battery performance and durability- USA and Canada (EVE-13-04e)**
 - ✦ **Literature review to inform the decision of GTR development in Part B:**
 - ✦ **Establish definition of xEV battery durability, factors affecting xEV battery durability**
 - ✦ **Review existing test programs or methodology for evaluating battery durability**
 - **Determining power of EVs- Germany and Korea (EVE-13-05e)**
 - ✦ **Focus on light duty vehicles**
 - ✦ **Clear demand from WLTP EV sub-group, potential collaboration**
 - ✦ **Part A will focus on answering open questions: Which concept to follow for LD HEVs (KATRI, JARI, SAE, new method?), resources, new GTR or UN R85 amendment?, organizational issues**
- **Updates from other IWGs: WLTP, EPPR, EVS, VPSD, HDH**

EVE-13 meeting

(Jan 12, 2015, Geneva)

6

● Roadmap, Part A, Jan 2105-Jan 2016: EVE-13-06e

Task	start date	end date	status	--	EVE-13	--	EVE-14	EVE-15	--	EVE-16	--	EVE
				Nov-14	Jan-15	Mar-15	Apr-15	Jun-15	Jun-15	Fall-15	Nov-15	Jan-
				WP.29	GRPE	WP.29	TBD	GRPE	WP.29	TBD	WP.29	GRPE
Approval of EV Regulatory Reference Guide by AC.3/WP.29 (ECE/TRANS/WP.29/2014/81)			completed									
Approval of new EVE mandate by AC.3/WP.29 (ECE/TRANS/WP.29/2014/88, WP.29-164-15)			completed									
(i) Conduct additional research to support Guide recommendations:	Nov-14	Jun-16	on-going									
Battery performance and durability												
Literature review	Jan-15	Dec-15	started									
Determining power of EVs	XXXX	XX	XX	xx								
Method of stating energy consumption	XXXX	XX	XX	xx								
Battery recyclability	XXXX	XX	XX	xx								
Status report from each subgroup	--	Jan-16										
(ii) Identify which recommendations are suitable for the development of GTR(s)	Jan-16	Mar-16										
(iii) Draft workplan developed by subgroups, EVE group	Jan-16	Mar-16										
Consultation, discussion within the EVE IWG	Jan-16	Mar-16										
Consultation, discussion with other GRPE IWGs: WLTP (E-lab sub-group), EPPR, HDH experts	Jan-16	Mar-16										
(iii) Draft requests for GTR development prepared by appropriate subgroups	Apr-16	Jun-16										
Consultation, discussion within the EVE IWG	Apr-16	Jun-16										
Consultation, discussion with other GRPE IWGs: WLTP (E-lab sub-group), EPPR, HDH experts	Apr-16	Jun-16										
Informal GRPE discussion on workplan and requests for GTR development	--	Jun-16										
Informal WP.29 discussion on workplan and requests for GTR development	--	Jun-16										
Finalize workplan and requests for GTR development	Jul-16	Nov-16										
Formal AC.3 consideration and approval	--	Nov-16										
EVE Part B and GTR development initiates	--	Nov-16										

EVE-13 meeting

(Jan 12, 2015, Geneva)

7

● Roadmap, Part A, Jan 2016-Nov 2016: EVE-13-06e

Task	start date	end date	status	EVE-17	--	EVE-18	EVE-19	--	--
				Jan-16	Mar-16	Apr-16	Jun-16	Jun-16	Nov-16
				GRPE	WP.29	TBD	GRPE	WP.29	WP.29
Approval of EV Regulatory Reference Guide by AC.3/WP.29 (ECE/TRANS/WP.29/2014/81)			completec						
Approval of new EVE mandate by AC.3/WP.29 (ECE/TRANS/WP.29/2014/88, WP.29-164-15)			completec						
(i) Conduct additional research to support Guide recommendations:	Nov-14	Jun-16	on-going						
Battery performance and durability									
Literature review	Jan-15	Dec-15	started						
Determining power of EVs	XXXX	XX	XX	xx					
Method of stating energy consumption	XXXX	XX	XX	xx					
Battery recyclability	XXXX	XX	XX	xx					
Status report from each subgroup	--	Jan-16							
(ii) Identify which recommendations are suitable for the development of GTR(s)	Jan-16	Mar-16							
(iii) Draft workplan developed by subgroups, EVE group	Jan-16	Mar-16							
Consultation, discussion within the EVE IWG	Jan-16	Mar-16							
Consultation, discussion with other GRPE IWGs: WLTP (E-lab sub-group), EPPR, HDH experts	Jan-16	Mar-16							
(iii) Draft requests for GTR development prepared by appropriate subgroups	Apr-16	Jun-16							
Consultation, discussion within the EVE IWG	Apr-16	Jun-16							
Consultation, discussion with other GRPE IWGs: WLTP (E-lab sub-group), EPPR, HDH experts	Apr-16	Jun-16							
Informal GRPE discussion on workplan and requests for GTR development	--	Jun-16							
Informal WP.29 discussion on workplan and requests for GTR development	--	Jun-16							
Finalize workplan and requests for GTR development	Jul-16	Nov-16							
Formal AC.3 consideration and approval	--	Nov-16							
EVE Part B and GTR development initiates	--	Nov-16							

Next Steps

8

- **April, 2015: EVE-14 meeting (TBD)**
 - Teleconference or face-to-face meeting (Ottawa, Canada)
 - Status report of Part A research
- **June, 2015: EVE-15 meeting and GRPE session**
 - Status report of Part A research
- **Fall, 2015: EVE-16 meeting (TBD)**
 - Teleconference or face-to-face meeting (China)
 - Status report of Part A research, preparation for Jan GRPE discussion