

<b>WLTP Sub Group EV</b>	
<b>Date</b>	30 <sup>th</sup> of March 2015
<b>Time</b>	9:00 to 12:00 CET
<b>Location</b>	Web/phone conference
<b>Title</b>	WLTP Sub Group EV Meeting — Minutes
<b>Working Paper Number</b>	WLTP-SG-EV-08-07

### Agenda

	OIL		
1		Welcome and adaption of agenda	
Discussion regarding three issues before the next meeting.			
2	#50 #55	RCB correction CS-Phase specific calculation	WLTP-SG-EV-02
<p>VW did additional simulation to prove the concept presented in Pune. Simulation of vehicle L, vehicle M and vehicle H. for whole cycle and phase specific values. The results show good linearity. This supports the proposed method and confirms validation made by BMW and JP. T&amp;E means that also should show uncorrected values.</p> <p>VW will add these values and circulate the document with this additional information.</p> <p>T&amp;E clarifies comments on GTR from last week. Need to agree on the method and reflect this in the GTR.</p>			
3	#02 #56	Interpolation family for the combined approach Combined Approach	WLTP-SG-EV-04 WLTP-SG-EV-05
<p>#56 Combined Approach:</p> <p>JP JAMA position paper. NOVC-HEV support previously proposal. PEV with small modification.</p> <p>OVC-HEV not positive to apply CA, for whole cycle values due to non-linearity and testing flexibilities. Will ask JP to withdraw proposal SG-EV-06-05. That means that no need to validate CA for OVC-HEV according to current proposal. Open to discuss new proposal. Still needs phase specific values.</p> <p>Presentation of slides with concept to determine phase specific values.</p> <p>ACEA of the opinion that the non linearity is a question of family criteria and cannot be reason to not apply CA for OVC-HEV. Have shown on previously meeting that with changed family criteria can achieve small tolerance.</p> <p>One concern is non linear AER. Where ACEA proposed to use worst case values when this occur.</p> <p>There is also a new proposal from ACEA that is presented. Together with validation of the calculation for phase specific values. Proposes adjustment in calculation formulae for EAER. Gives more linear result, with the exclusion of the transition cycle, since this causes a non linearity problem. Shows results from different cases regarding when ICE starts. Linear behavior within family with proposed family criteria, ratio of EAER and R<sub>cd</sub> from vehicle L and vehicle H. There are three optional solutions for the 2<sup>nd</sup> case. The only case where can see problem.</p> <p>JP concern regarding not use transition cycle because of not reflect CO<sub>2</sub> in that cycle.</p> <p>Proposal to share the two presentations and scrutinize until next meeting.</p>			

<p>#02 Interpolation family criteria          JP proposal for family criteria for NOVC-HEV. Revised after JAMA meeting. No changes of family criteria for PEV.          ACEA proposes for discussion additional criteria for NOVC-HEV and OVC-HEV CA family. And also criteria for CO2. For discussion on the next meeting.          T&amp;E comment regarding the expression permanently in this context.          ACEA is also working on an approach that excludes Rcdc from the criteria.          JP question regarding the need for criteria for range or electric consumption. ACEA thinks that CO2 reflects this already. And CO2 only make sense regarding CS condition.          ACEA also proposes criteria for PEV.          Feedback is welcome before the next meeting. The document will be distributed to SG EV after the meeting.</p>			
4	#51	Mode selectable switch (OVC-HEV)	WLTP-SG-EV-08
<p>Presentation from ACEA. Latest status from the GTR for conventional vehicles. There is a need for two predominant modes. For FC and EC. That is for CS and for CD.          PEV Flowchart for use of pre dominant mode. Dependant on the need for downscaling.          Presentation will be circulated to SG EV after this meeting and discuss further at next meeting. T&amp;E of opinion that pre dominant mode and applicable test cycle should be judged after need for downscaling is clear. ACEA will rearrange the flow chart to reflect this concern.          OVC-HEV flowchart. No dependant of downscaling.          Flowchart makes it easier to understand the process.          JP will consider this proposal to next meeting.          T&amp;E comment regarding the case when no mode that can follow the drive trace. This is a very theoretical case which will probably never occur.          Flow chart for CS condition of NOVC-HEV and OVC-HEV. In principal following the approach for conventional vehicles.          Also includes proposal for GTR text.          DE proposes that also flowcharts are included in the GTR Annex 8. Dr. Kolesa means that this can be redundant information which is not desired. ACEA proposes that can be included in the appendix, along with other pictures with description of test procedure.          This is a question for the drafting SG.          Missing definition of charge balance neutral mode. Should there be a tolerance or zero.          Also regarding vehicles that can follow driving cycle or not the tolerances should be defined.          The GTR text is only a proposal, the concept will be discussed at the next meeting. JP of the opinion that after decision of the concept, it can be started developing draft text. But since time is limited can be good to already now start drafting GTR text.</p>			
5	# 58	PEV shorten test procedure (STP)	WLTP-SG-EV-xx
<p>JP position regarding STP that continuous cycle testing should be an option but not use CA because non linearity.          CSC effect on UBE is less than 1 percent. Proposes that CSC 100 for four phase test and 80 km/h for three phase test.          CSCe distance 3 to 15 km and represent low SOC condition. CSCm the rest.          ACEA of the opinion that CA also applicable for continuous cycle test.          T&amp;E of the opinion that STP should be mandatory above given range. Until next meeting recommends that discuss internally among manufacturer and CP to have a position.</p> <p>VW is working on proposal regarding choice of constant speed in combination with combined approach family and vehicle H and vehicle L. Need to consider battery heating. This will be distributed before next meeting.</p>			

6	Drafting (reviewing items pointed by T&E and drafting coordinator )	
<p>ACEA EV drafting group has reviewed comments from phase 1 a GTR with the aim to have a consolidated version as base for phase 1b development.</p> <p>JAMA proposes issues for reconstruction regarding CO2 calculation. Also need to be in line with SG EV agreement. Per JAMA request, ACEA plan to distribute the draft GTR for OVC-FCHV by 3<sup>rd</sup> April which is a phase 1b issue.</p> <p>After the 1 of April ACEA EV drafting group will include the comments and discuss at the next meeting, after that revised annex 8 phase 1a GTR can be submitted to WLTP drafting SG.</p>		
7	AOB	
<p>No other business.</p> <p>Agenda for WLTP IWG proposal that divide RCB correction in two to make clear that adoption is for CS condition. And also split OI # 50 and OI # 55.</p> <p>Also regarding FCV this might be divided in two parts, FCV and OVC-FCHV.</p> <p>There might be a need for additional face to face meeting before the summer beginning of July. EC will check the possibility in Brussels.</p> <p>The week of 22 of June could be on option.</p>		