

Terms of Reference for the validation phase 2 of WLTP

This table below addresses important issues to be discussed, which are relevant for the planning and realization of validation phase 2.

Once agreed by WLTP secretary, DHC & DTP chairs and WLTP members on these terms, a call for interest and a guidance can be worked out for the testing laboratories as soon as possible.

	Item	Description	Comments
1	Objective	<p>Test the new drafted WLTP driving cycle and test procedure concerning measurement of CO₂, air pollutants and electric energy consumption in terms of:</p> <ul style="list-style-type: none"> - driveability of the test cycle (DHC) - operability of the measurement procedure (DTP) AP are excluded, but can be included by labs depending on availability. NO₂ should be included. - repeatability of the results (criteria should be specified before) - comparing the cycle emissions with the current regulations (EU, US, Japan, ...), needs to be reconsidered - evaluating the influencing factors on emissions - first findings concerning real world representativity - evaluating the interpretation and flexibility margins of the draft regulatory text - consistency and robustness (what does robustness mean?) - identifying problems and addressing them <p>The validation test is clearly not a correlation exercise.</p>	<p>for background information see</p> <p>Technical report GTR no. 2:</p> <p>http://live.unece.org/fileadmin/DAM/trans/main/wp29/wp29wgs/wp29gen/wp29registry/ECE-TRANS-180a2app1e.pdf</p> <p>Technical report GTR no. 4:</p> <p>http://live.unece.org/fileadmin/DAM/trans/main/wp29/wp29wgs/wp29gen/wp29registry/ECE-TRANS-180a4app1e.pdf</p> <p>Need for some assessment on inter-lab reproducibility as well but this will require someone to supply and circulate a reference vehicle and may add time to the programme (Chris Parkin).</p>
2	Time frame	Starting from 30th September 2011 and ending on 02.04.2012.	
3	Different energy sources and power-trains to be tested	<p>Diesel / Gasoline / Ethanol / CNG / HEV / EV.</p> <p>For ICE, test manual and automatic gearbox if possible.</p> <p>At least 2 vehicles tested in each laboratory.</p>	

4	Organization, coordination and evaluation of the validation phase 2	Proposal of mandating JRC (like in PMP)	close cooperation with the GTR-drafting manager In principle JRC would consider to accept this mandate.
5	Regions and countries resp., in which the tests are being conducted	Focus on Europe, Japan, India and ev. other regions if interested	
6	Kind of testing laboratories	Technical Services, Governments, Industry, Technical Universities and other independent laboratories	
7	Number of testing laboratories	Approximately 6 to 8	
8	Reference Fuels	To be defined by DTP	
9	Test Procedure	Draft GTR for WLTP Driving Cycle and Measurement Procedure	asap development of a list of parameters which needs to be determined for the validation phase 2 (e.g. see document WLTP DTP LabProcICE-057) and identification of parameters to be investigated during validation phase 2 (e.g by variation tests)
10	Acceptance criteria	Not necessary not be defined for the time being. The new WLTP test procedure will be evaluated primarily in a qualitative way, in order to improve it for the successive confirmation test.	
11	Number of test repeats	5 to 8 for each vehicle (good assessment of repeatability).	Need an outlier assessment procedure at some stage. Get statistical advice on these issues (Chris Parkin).
12	Procuring of the test vehicles	By the testing laboratories themselves. Cost shall be estimated. Who is going to provide the budget?	

13	Funding	Each laboratory is self-funded (on national basis). No funding from WLTP available. Cost shall be estimated. Who is going to provide the budget?	

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