Progress report of Sub Group EV

(WLTP-20-16e)

20th WLTP IWG

28 September 2017

1. Summary

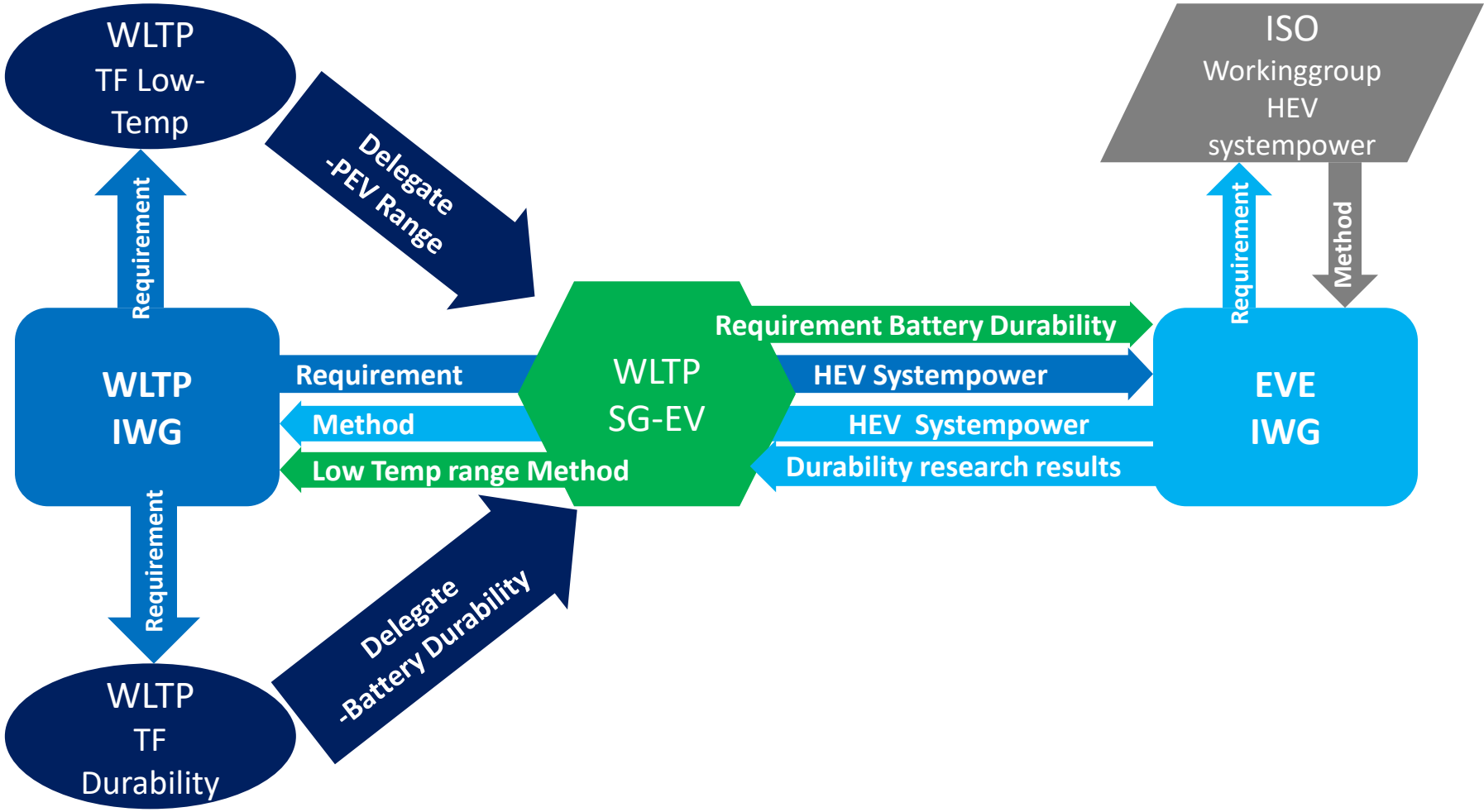
#	items	RESULTS	Status	remarks
EV_1	HEV system power	EVE procedure to be based on ISO procedure. Validation test by EVE IWG will be active until fall in 2018. WLTP IWG and SG EV wait for system power draft gtr. SG EV continues to collaborate with EVE and support wherever necessary and asked for	OPEN	Classification, Downscaling
EV_2	Drive Trace Indexes	SG EV confirmed calculation method on DTI for EVs. Also phases with a deviation shall be included in the calculation with target speed in the case a wide open throttle operation (WOT) can be proved.	OPEN	Study the applicability to HEV
EV_3	Supplemental Test (low temp. considering auxiliary devices)	SG EV is still in an open discussion. There are several ways (physical test, empiric simulation approach, de-rating factor) to approach this topic on which there will be further discussions in the upcoming SG EV meetings.	OPEN	Handle EV unique portions

1. Summary

#	items	RESULTS	status	remarks
EV_6	Durability	SG EV discussed answers of questions from EVE IWG. SG EV will discuss more in advance of the next EVE IWG (the end of Oct.) and prepare input for this meeting.	OPEN	study on battery durability
EV_8	FCHV	OVC-FCHVs proposal from ACEA is still under discussion No update at the moment.	OPEN	OVC-FCHV Flow Method
EV_9	gtr amendment	- REESS definition in GTR (see report from drafting coordinator) - Issues under discussion: - Charging - SG EV will continue discussions.	OPEN	

2. Collaboration with IWG EVE

EV Communication in the UNECE Framework



2. Collaboration with IWG EVE

EV_6 Durability

Matrix of durability requirements from EVE for WLTP to consider

	air pollutants	CO_2/energy consumption	range
HEV	Is requirement for in-use compliance sufficient? (5 year, 100,000 km already in place in EU)	???	X
PHEV	Is requirement for in-use compliance sufficient? (5 year, 100,000 km already in place in EU	???	???
PEV	X	???	Is WLTP goal to regulate range maintenance of PEVs, or is this a manufacturer/customer satisfaction issue only?

CPs have different requirements respectively at this moment.
WLTP IWG needs further discussion.

JAPAN POSITIONs on **battery durability** requirements

	air pollutants	**CO2/energy consumption**	**range**
HEV	• Tested after 80,000km running at type approval in Japan. • When discussing about the influence of the durability of the battery, Japan needs scientific data.	• will be determined along with discussion under EVE IWG collaborating with WLTP SG EV	NA
PHEV	• Tested after 80,000km running at type approval in Japan. • When discussing about the influence of the durability of the battery, Japan needs scientific data.	• will be determined along with discussion under EVE IWG collaborating with WLTP SG EV	• will be determined along with discussion under EVE IWG collaborating with WLTP SG EV
PEV	NA	• will be determined along with discussion under EVE IWG collaborating with WLTP SG EV	• will be determined along with discussion under EVE IWG collaborating with WLTP SG EV

Table from IWG EVE to IWG WLTP

(forwarded to WLTP Subgroup EV)

EC proposal (under discussion)

	air pollutants	CO_2/energy consumption	range
HEV	(5 year or 100,000 km must meet EU standards)	(max + 10% from certified values within 5 year or 100,000 km)	X
PHEV	(5 year or 100,000 km must meet EU standards)	(> 90% of certified Charge Depleting values within 5 year or 100,000 km)	X To develop a methodology to verify the durability of battery under real-world usage, and estimate the range decrease. This aims at: (1) Guarantee the customer with a minimum durability; (2) Set comparable conditions to estimate the overall performance of vehicles.
PEV	X	X	(> 90% of certified range within 5 year or 100,000 km) It is necessary to develop a methodology to verify the durability of battery under real-world usage, and estimate the range decrease. This aims at : (1) Guarantee the customer with a minimum durability; (2) Guarantee the minimum environmental performance of the vehicle; (3) Set comparable conditions to estimate the overall performance of electric vehicles.

3. Next Actions