

Level Concept for SG4

USE PHASE	Reference Vehicle	Representativeness	Energy consumption		Maintenance	Service Life	Other
			In-use	Charging			
Level 1	General concept per powertrain tech /energy carrier	Global average	Average homologation value normalized to WLTP corrected for RW (global)	Generic charging efficiency (?)	Generic	Generic/Global	
Level 2	Same as Lv 1	Regional (EU/US/JP /KR/CN...)	Regional RW correction	Regional charging efficiency value (standardised)	Generic/regional	Regional / Unique service life	
Level 3	Representative vehicle for each OEM/powertrain/energy carrier (need to define criteria)	OEM/National	OEM-resolution and assumptions for RW performance	OEM average efficiency (standardised ?)	OEM Specific	Regional with option to declared higher life	
Level 4	Specific OEM's vehicle model	OEM's specific vehicle model	High-resolution RW value (based on OBFCM or similar data)	Vehicle specific charging efficiency (standardised)	Model specific	OEM/Model specific average data	

Level Concept for SG4 – Ricardo

feedback on potential revisions 10/10/23

Up to the relevant CP/
region to decide what
is needed/used or not.

USE PHASE	Reference Vehicle	Representativeness	Energy consumption		Maintenance	Service Life	Other
			In-use	Charging			
Level 1 (Generic)	General concept per powertrain tech /energy carrier	Global average	Average regional homologation value (<i>ideally</i> normalized to WLTP) corrected for RW (e.g. basic global SBTI value of 1.1)	Generic charging efficiency (unless already included in homologation)	Generic by powertrain	Generic/Global	Projected energy mix use (current policy); Default factors fugitive emissions + degradation
Level 2	Same as Lv 1	Regional (EU/US/JP/KR/CN...)	+Regional RW correction (can be =Lv1 if required by specific CP)	+Regional charging efficiency value (standardised)	As for Level 1	Regional / Unique service life	As previous level, plus specific sensitivities?
Level 3 (OEM)	<i>Representative vehicle</i> model variant for each OEM /powertrain /energy carrier (need to define criteria)	OEM's specific vehicle model	OEM model variant, regional RW corr. or optional OEM specific alternative assumptions for RW performance	OEM model efficiency (standardised)	OEM model-specific (for the representative configuration) by powertrain	Regional with <i>option for OEM</i> to declared higher life with evidence	As previous level
Level 4 (OEM+)	None: OEM specific vehicle model and variant /configuration (i.e. engine, battery size, other options, etc)	OEM's specific vehicle model and variant	Specific model/variant EC, plus High-resolution RW value (based on OBFCM or similar data)	As for Level 3, but also by specific model variant (if different)	As for Level 3, but also by specific model variant (if different)	As for Level 3	OEM model-specific fugitive emissions + degradation factors

Level Concept for SG4 – Ricardo simplified alternative 10/10/23

Up to the relevant CP/
region to decide what
is needed/used or not.

USE PHASE	Reference Vehicle	Representativeness	Energy consumption		Maintenance	Service Life	Other
			In-use	Charging			
Level 1 (Generic)	General concept per powertrain tech /energy carrier	Global or regional average (EU/US/JP/KR/CN...)	Average global or regional homologation value (<i>ideally</i> normalized to WLTP) corrected for RW (global, e.g. SBTI value of 1.1, or regional RW if required by CP)	Generic global or regional charging efficiency (unless already included in homologation)	Generic by powertrain type	Generic global or regional	Projected energy mix use (current policy); Default factors fugitive emissions + degradation factors
Level 2							
Level 3 (OEM)	<i>Representative</i> vehicle model variant for each OEM /powertrain /energy carrier (need to define criteria)	OEM's specific vehicle model	OEM model variant + regional RW corr. <i>or optional</i> OEM specific alternative assumptions for RW performance	OEM model efficiency (standardised)	OEM model-specific (for the representative configuration) by powertrain	Regional with <i>option</i> for OEM to declared higher life with evidence	As previous level, plus specific sensitivities (<i>to be agreed</i>)
Level 4 (OEM optimal)	None: OEM specific vehicle model and variant /configuration (i.e. engine, battery size, other options)	OEM's specific vehicle model and variant	Specific model/variant EC, plus high-resolution RW value (based on OBFCM or similar data)	As for Level 3, but also by specific model variant (if different)	As for Level 3, but also by specific model variant (if different)	As for Level 3	+OEM model-specific fugitive emissions + degradation factors