43 rd WLTP Sub Group EV Meeting	
Date	28 May 2020
Time	9:00 to 13:00 CEST
Title	43 rd WLTP Sub Group EV Meeting – Minutes (text in purple)
Location	Web-Audio

0 Revision & adoption of meeting minutes & agenda

- Meeting minutes of web-audio meeting on 14 May 2020
 01 WLTP SG EV Minutes 14 May 2020.pdf → adopted
- Adoption of the agenda
 00 WLTP SG EV Agenda 28 May 2020.pdf → adopted

1 GTR#15 Amd#6 WD: SG EV square brackets topics (Low Temp → EV_LT_#)

Square bracket topics in GTR#15 Amd#6 WD related to Low Temp

The discussion and conclusion of remaining square bracket items will based on the latest version of the following document (managed and updated by the drafting coordinator Rob Gardner):

20xxyy - GTR15 Amnd 6 - updates for Informal to amend GRPE-2020-14e.docx to be found in the UNECE wiki area: GTR15 Amnd 6 Drafting

An overview list of the remaining square bracket items to ease the discussion and conclusion within SG EV is given in the following document (EV related Low Temp topics are labelled "EV_LT_#"):

20xxyy_Status Square bracket topics_Amd#6 WD.xlsx to be found in the UNECE wiki area: Optional annex Low T - Drafting

1.1 | GTR#15 Amd#6 WD: OVC-HEV & PEV battery charging & remaining topics (EV_LT_#)

Information about the drafting status of closed Low Temp topics (including topics from item 1.3 below)

Latest version of draft text (including all received feedback up to now):

200514 Proposed draft text for EV LT (except family related topics) cleaner version.docx

→ Interested SG EV members are asked to review and comment on this draft text version (exchange via e-mail or in dedicated drafting meeting)

The latest version of the draft text(s) for closed EV_LT_#'s can be found in the UNECE wiki area: GTR15 Amnd 6 Drafting

The referenced document above is a cleaner version of the document containing all not family related EV low temp topics. All topics had been already closed by May 14th and that why this document is already in the Amendment 6 drafting folder.

→ Document 1 as input for the drafting coordinator (and the drafting meeting)

1.2 GTR#15 Amd#6 WD: EV Low Temp Family concept

EV_LT_#: 1 / 2 / 14 / 15 / 16 / 17 / 18 / 19 / 20

Link to supporting presentations are including in overview presentation which is uploaded in the UNECE folder of this meeting:

https://wiki.unece.org/display/trans/43rd+Meeting+of+WLTP+Sub-Group+EV
→ 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf

PEV family criteria:

- JP presented their PEV family criteria concept idea replying on EC feedback
- ACEA EV provided some reflections on this updated as well
- → PEV family criteria supported by the group but request to move contents related to vehicle selection from the main body of the GTR to Annex 13 Sub-Annex 1; Nick Ichikawa (Co-TS) will take that into account as he will prepare the updated EV low temp draft text proposal
- → Criteria might need to be adjusted with findings out of validation excercise

Document after discussion on May 28th (as basis for Nick-san): 200528_Low Temp PEV family criteria_after SG EV on May 28th.docx

→ Basis for document 2 which is input for drafting coordinator (and the drafting meeting) as soon as Nick-san finished his work on preparation of EV LT draft

PEV low temp test and calculation scheme:

- JPN presented concept how to test PEVs for Low Temp and which calculation scheme to apply; idea behind proposal from JPN in general in line with the proposal provided by ACEA EV in earlier meetings which is to reduce the testing burden for the manufacturer
- The discussion was fruitful but also showed the complexity of this topic which makes members hesitant in being able to agree on this concept
- → Due to the close deadline and that a decision needs to be made, SG EV agreed on following the concept proposed by JPN as it is in line with the proposal from ACEA EV but also agreed due to the lack of time text need to be finalized until June 3rd
- → Decision was made with the remark that the PEV low temp concept need to be revisited and might be adjusted with findings out of validation exercise
- → Nick Ichikawa (Co-TS) will prepare a draft text proposal as input for the drafting meeting next week which will reflect the SG EV agreement

Document after discussion on May 28th (as basis for Nick-san):

200518 Low Temp EV family_calculation draft text proposal basis_after SG EV on May 28th.docx

→ Basis for document 2 as input for drafting coordinator (and the drafting meeting) as soon as Nick-san finished his work on preparation of EV LT draft

NOVC-HEV and OVC-HEV test vehicle selection:

- EC presented updated proposal (taking into account the feedback from JPN)
- ACEA EV had comments which had been based on the assumption that ratios are required for OVC-HEVs as they are required for PEVs; but SG EV agreed already that OVC-HEVs will not apply a ratio approach
- One question has been raised with respect to PMR: why has PMR being introduced and not Power-to-cycle energy demand? → feedback Ricardo (JRC): Power-to-cycle also a possible way forward but has not been discussed yet in the group and due to the deadline next week not possible to be discussed any more; might be a topic to be revisited at a later stage
- Remark Co-TS Matthias: Additional comments from OICA had not been presented during the meeting (although being in the feedback file from ACEA), but as no content change and just clarification, this can be covered in the drafting session
- → SG EV supports the proposal (drafting now)

Document after discussion on May 28th:

200520 Type 6 ICE_NOVC_OVC-HEV test vehicle selection proposal_after SG EV on May 28th.docx

Additional comments from OICA (not discussed within SG EV on May 28th): 200520 Type 6 ICE NOVC OVC-HEV test vehicle selection proposal additional OICA comments.docx

→ Document 3: Input for drafting coordinator (and the drafting meeting)

All draft text proposals related to the Low Temp family concept can be found in the folder of this WLTP SG EV meeting:

https://wiki.unece.org/display/trans/43rd+Meeting+of+WLTP+Sub-Group+EV

1.3 GTR#15 Amd#6 WD: remaining topics EV_LT_#

The latest version of the overview list of the remaining square bracket items:

20xxyy_Status Square bracket topics_Amd#6 WD.xlsx to be found in the UNECE wiki area: Optional annex Low T - Drafting

Minutes:

All topics closed → no discussion during SG EV meeting on May 28th

2 GTR#15 Amd#6 WD: SG EV square brackets topics (non Low Temp → A...E)

Square bracket topics in GTR#15 Amd#6 WD not related to Low Temp

The discussion and conclusion of remaining square bracket items is based on the latest version of the following document (managed and updated by the drafting coordinator Rob Gardner):

20xxyy - GTR15 Amnd 6 - updates for Informal to amend GRPE-2020-14e.docx to be found in the UNECE wiki area: GTR15 Amnd 6 Drafting

Current status of open topics, please check overview table in document **20xxyy_Status Square bracket topics_Amd#6 WD.xlsx** to be found in the UNECE wiki area: Optional annex Low T - Drafting (updated after SG EV on May 28th)

The latest version of the draft text(s) for non-Low Temp topics (A to E) can be found in the folder of this WLTP SG EV meeting:

https://wiki.unece.org/display/trans/43rd+Meeting+of+WLTP+Sub-Group+EV

<u>Discussion/conclusion on topics (links to updated supporting documents including updates can be found in overview presentation of square bracket topics above):</u>

- (1) Proposal 1 in the context of the CO₂ correction factor application of NOVC-HEVs (generic approach; slide 3, topic B)
 - → final status on slide 3 of 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf
- (2) Proposal 2 in the context of the CO2 correction factor application of OVC- and NOVC-HEVs (K_{CO2} correction factor family; slide 4, topic D)
 - → final status on slide 4 of 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf
- (3) Expected number of cycles in CD mode for OVC-HEV (slide 5, topic C)
 - → final status on slide 5 of 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf
- (4) CD fuel efficiency calculation in case of pure electric CD cycles (*slide 6, topic E*) and further amendments to calculation schemes in Annex 8 Chapter 4
 - → final status on slide 6 of 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf

Next meetings (<u>WLTP calendar</u>)	
WLTP SG EV drafting web-audio meeting (EV & ICE) → focus EV:	
2 June 2020 (8:00 to 11:00 CEST)	
WLTP LowT TF drafting web-audio meetings (ICE & EV) → focus ICE:	
3 June 2020 (09:00 to 12:00 CEST)	
31st WLTP IWG web-audio meeting:	
4 June 2020 (08:30 to 12:30 CEST)	
Final drafting web-audio session:	
4 June 2020 (13:30 to 15:30 CEST)	
AOD	
AOB	
Input EC: Text proposals (Amendment#6) for further discussion	
200528 text proposals for GTR15 Amd6 EC after SG EV on May 28th.docx	
→ current status on slide 8 of 200528 Overview square brackets SG EV GTR15Amd6 draft.pdf	
→ Final confirmation by Low Temp TF members required (as on May 28 th discussed in SG EV)	