

OICA-position on FSC-chair request: 4 key decisions on FRPC

@ Issue #4: Battery SoC determination

Issue # *	Title	Description
4	Battery SoC determination	The 11 September meeting has shown consensus amongst the participants on the usage of the <i>displayed state of charge</i> for measurements and KPIs. However, to ensure that the displayed SoC sufficiently represents the actual physical state of the battery, a verification is being considered. A further decision thus needs to be made on the need for verification and the verification method.

*corresponding with drafting team outline numbering

Proposal: OICA agrees to Option A

Requested adaptations:

- Recording SoC during homologation not mandatory
- SoC reading can be done during a separate WLTP charge-depletion test
- Allow use of vehicle internal sensors for energy determination
- Measurement tolerance tbd

Options	Consequences
A. Verification required, monitor Discharged Battery Energy against SoC in WLTP charge depletion-test	<ul style="list-style-type: none"> • This ensures that the displayed SoC is accurate and trustworthy. Therefore, a verification would ensure that the displayed SoC is not used to improve performance indicator without actual performance improvements for the end-users. The KPI's become more accurate and comparable. • The verification possibility currently under review is to monitor SoC in WLTP during the charge-depleting test. This would allow an efficient test procedure, lowering the test burden of verification. • GRPE would need to agree to start registering SoC during the WLTP charge-depleting test • Further research is needed to check to what extent SoC hysteresis between charging and depleting occurs and how that would impact the accuracy of the verification. • Testing takes more effort. • However, there is no need to determine the Recharged Energy which would give additional test burden.

@ Issue #5: Kex performance indicators

Issue # *	Title	Description
5	Key performance indicators	<p>The KPI's are the information that is presented to end users to understand how a vehicle performs with regards to fast charging. Different KPI's display different aspects of recharging and can therefore also inform different use cases.</p> <p>Selecting a limited amount of KPI's will improve simplicity and therefore accessibility to the information provided. At the same time, having more KPI's will allow end users more options to compare vehicles according to the performance indicator they deem most important. Selecting KPI's will also impact test requirements and test burden.</p> <p>As some KPIs represent similar performance a selection criterium could be to prevent overlap in KPI's.</p>

*corresponding with drafting team outline numbering

Proposal:

- **OICA agrees to Option A, C, F, G in the SoC range from 10-80%**
- **Argument „Pro“ Max. Charging Power:** Max charging power provides the user with information on which HPC charging station is required (200kW, 300kW or 400kW...) to obtain the EV's charging performance.
- **OICA disagrees to Options B, D, E**
- **OICA proposal regarding Option F and G: One out of these options shall be chosen.**

Options:

- A: Maximum charge power in kW during SoC window x – y %
- B: Average charge power in kW during SoC window x – y %
- C: Charging time in minutes from SoC window x – y %
- D: Average charging speed in recharged distance in kilometre per minute from x – y % SoC window
- E: Charging efficiency in % during SoC window x – y %
- F: Recharged range (km/miles) during the first ten minutes of charging from SoC start x%
- G: Recharged energy (kWh)during the first ten minutes of charging from SoC start x%

@ Issue #7: Method for preconditioning

Issue # *	Title	Description
7	Method for preconditioning: soak of the vehicle, mandatory drive and battery preconditioning	<p>A typical use case for a vehicle on its way to the fast-charging facility looks as follows: driving on the highway at high speed, with battery preconditioning on. At the same time, the test procedure for the FRPC could also cover more types of user behaviour.</p> <p>Testing should also be reproducible and repeatable, meaning that the condition for the vehicle at the start of the test should always be identical. The objective is therefore to develop a preconditioning procedure which stays close to the most common use cases, while ensuring the reproducibility and repeatability of the test.</p> <p>The discussion focusses on two elements of the pre-conditioning:</p> <ol style="list-style-type: none">I. Is battery pre-conditioning allowed? (A or B)II. At what speeds should the conditioning drive take place and what testing equipment is required? (C, D or E)

*corresponding with drafting team outline numbering

Proposal:

- **OICA agrees to Option B: Battery pre-conditioning is allowed**
- **OICA kindly requests time to discuss Options C** (Driving at a fixed high speed in a limited range such as 100-105 km/h, on a chassis dynamometer.), **D** (Driving at a fixed and mixed speed profile, on a chassis dynamometer.) and **E** (Driving at a low speed of 25-30 km/h, the chassis dynamometer is optional. Public recharging facilities may be used. → ISO12906 Definition)
- **OICA disagrees to Options A**

@ Issue #11: SoC measurement and KPI range

Issue #	Title	Description
11 <i>(not marked as an issue in the outline)</i>	SoC measurement and KPI range	<p>For some of the KPIs a State of Charge measurement range is to be determined. Choosing the measurement range impacts representativeness of the KPI and the test procedure (burden).</p> <p>In the cluster meeting of 11 September 2025 it was already agreed that to prevent difficulties in the testing procedure a close to zero SoC would not be chosen.</p> <p>Annex A displays the current common start and stop SoCs behaviour for fast charging along European highways.</p>

Proposal:

➤ OICA agrees to Option A

Options	Consequences
A. 10% - 80%	<ul style="list-style-type: none">• This range results in the highest performance displayed as with current battery chemistry the highest recharging speeds are typically achieved within this range. As such, the KPI promotes electromobility when compared to ICE refuelling.• Measuring up to the 80% end SoC represents a majority of the sessions: 65%• Performance between models will differ below 10% or beyond the 80% SoC. Competing and innovating beyond the 10% or 80% interval is not rewarded by better performance statistics.

➤ OICA disagrees to Options B, C, D, E

@ Other decisions for 14 October

1. and 2. - Scope

- The test procedure and KPIs concern vehicles that at any point during the selected State of Charge measurement and KPI range (issue 11) reach at least 50 kW charging power. Wireless charging is excluded.

3. Family criteria

- The test vehicle with the expected worst-case performance is chosen to represent the family. The family itself is restricted by certain family criteria (yet to be determined, but including e.g. battery chemistry, capacity and pre-heating system). At the option of the manufacturer the family may be split into smaller subgroups.

9. Test vehicle criteria

- F&SC supports adding an eligibility requirement for the test vehicle, for example a State of Certified Energy (SOCE) indication which shows that at least 98% of the original capacity is available.

Proposal:

- **1. and 2. – Scope: OICA proposes to change „50kW at any point“:**

→ Small vehicles may otherwise be excluded

OICA proposes to change wording to **„minimum „max charging power“ of 50kW**

OICA proposes to **add „DC-Charging“ to the Scope.**

- **OICA agrees in general to 3. Family criteria**

Worst case principles must be **specified** by the **drafting team.**

Family criteria adaptations for fast charging already **prepared** by OICA.

- **OICA agrees to 9. Test vehicle criteria for „new vehicle“**