Ecodesign Preparatory Study for Electrical vehicles chargers-

Minutes of the 1st Stakeholder meeting

Project	Ecodesign Preparatory Study for Electric Vehicles Chargers
Event	1. Stakeholder meeting
Date & time	25th June 2024; 09:30-15:00
Location	Hybrid: Borschette, Rue Froissart 36, 1049 Brussels & Online
Participants	ISI: Tim Hettesheimer, Antoine Durand, Daniel Speth (online), Clemens Rohde VITO: Paul Van Tichelen, Grietus Mulder, Tatiana Pasquel Garcia, Gabriela Espadas Aldana EC: Eleftheria Vounouki, Davide Polverini (DG GROW); Paolo Tosoratti (DG ENER); Harald Scholz, (JRC) online More than 80 registrations from over 60 institutions

AGENDA

Time	Topic	Presenter/Speaker	Institution
10:00	Welcome & tour de table	Tim Hettesheimer	Fraunhofer ISI
10:10	1. Introductory statement	Davide Polverini	European Commission
10:15	2. Methodology and objectives	Antoine Durand	Fraunhofer ISI
10:30	3. Preliminary results Task 1: Scope	Grietus Mulder	VITO
11:15	4. Preliminary results Task 2: Markets	Tim Hettesheimer	Fraunhofer ISI
13:00	5. Preliminary results Task 3: Users	Daniel Speth	Fraunhofer ISI
13:45	6. Outlook on Task 4: Technologies	Paul Van Tichelen	VITO
14:30	7. Further proceeding, issues, closing	Tim Hettesheimer	Fraunhofer ISI

1. Introductory statement - Davide Polverini (EC)

- EV Chargers are included in the working plan from the ED directive, but the new ESPR will be the framework for this product group.
- The project methodology will be adapted to encompass circular economy principles and DPP considerations.

2. Methodology and objectives - Antoine Durand (ISI)

- ISI presents the ESPR process and the updated MEErP methodology in detail, explicitly addressing the differences between the previous Ecodesign process and ESPR.

3. Preliminary results Task 1: Scope - Grietus Mulder (VITO)

Please find the contents of the presentation in the Task 1 slides provided on the website (https://ecodesign-ev-charger.eu/ecodesign/documents/)

Questions/comments regarding Task 1

- JRC: In the "function state" of DC-EVSEs, also the degree of power delivery (i.e., full nominal load or partial) can play an important role in conversion efficiency (depends of modernity of design).
- RVO: Advocates including Mode 4 due to its consumer product potential.
- JRC: Mode 4 offers significant potential for energy savings and efficiency improvements, which is why it should be included.
- SEAI: B2B losses should be considered within the study.

4. Preliminary results Task 2: Markets - Tim Hettesheimer (ISI)

Please find the contents of the presentation in the Task 2 slides provided on the website (https://ecodesign-ev-charger.eu/ecodesign/documents/)

Questions/comments regarding Task 2

- NVE: Data on the Norwegian market has already been provided and can also be taken into account
  - ➢ ISI will include this information.
- EPBD requirements: Uncertainty about the number of new buildings that will require more than 20 electric vehicle chargers and how these will be taken into account in the forecasts.
  - ➢ ISI emphasizes that the scenarios are intrinsically uncertain, which also includes such aspects. It is unfortunately not possible to carry out detailed modelling in the context of this study, as was done in the EBPD Impact Assessment. Additionally, not all building types that are equipped with a recharging point fall under the EBPD.

5. Preliminary results Task 3: Users - Daniel Speth (ISI) online

Please find the contents of the presentation in the Task 3 slides provided on the website (https://ecodesign-ev-charger.eu/ecodesign/documents/)

Questions/comments regarding Task 3

- *Question about the future truck standards*:
  - ABB: Question whether standards for 350 kW plus will be sufficient for future truck needs.
  - ➢ ISI: the standard (375 kW+) is anticipating that future requirements might exceed 2 MW, also most trucks will still use over 350 kW on average.

- *Question related to energy losses in residential installations/cable issues*
  - International Copper Association Europe: Questions whether energy losses due to additional house installations/cables are taken into account when installing a recharging point.
  - ➢ Vito: Previous studies on electrical cables, which include energy loss evaluations, can be referenced.
  - ➢ EC: Ecodesign studies focus on the product itself (the functional unit) rather than the external cabling.
  - International Copper Association Europe: Agreement with the statements, but the question addresses more the fact that there's a need to lay more cables from the electrical installation to the device.
  - ➢ JRC: upstream cable issue - there are already calculation tools for this issue (cables) - this has already been addressed technically (AC to DC) - hence, this is considered as an intrinsic part of the device.
  - ➢ RVO: this will depend on what product is put on the market. If these (cables) are included, then it should be taken into account, but if not, they are not needed.

- *Comment on product boundaries*:
  - Raecom Oy: To be able to make a compliant product - boundaries are to be defined very clearly, hence suggests following the product approach. Also, keep the test cases simple to reduce the costs reasonable.
  - ABB: For the intrinsic energy assumption for DC products, an active mode operating time of 46% is assumed. Given the low number of charging periods and the charging time, this value seems very high. Please check this figure, as it may assign unrealistic losses to the charger.

6. Outlook on Task 4: Technologies - Paul van Tichelen (VITO)

Please find the contents of the presentation in the slides provided on the website (https://ecodesign-ev-charger.eu/ecodesign/documents/)

Questions/comments regarding “Outlook on Task 4”

- *Question on the inclusion of small trucks in metro areas*:
  - EC: Noted that the scenario involving small trucks used in metro areas, such as those for garbage collection, has not been considered. These vehicles often use depot chargers, which offer significant potential for energy savings.

  - VITO: Depending on the data (if available) this could be included, but it is currently unclear if it can be included as a base case. It is challenging to wrap up the results of Task 1 and 2 in an adequate number of base cases.
- *Question on improvement options and data sources*
  - RVO: Highlighted that data for improvement options, particularly regarding efficiency and repair, must not necessarily come from manufacturers. Instead, it might also be derived from information on the availability of repair parts in the market, possibly referencing data from around 2019.
  - RVO: Inquires about the consideration of the DPP in the analysis.
  - EC: This is one of the first studies to be in the transition phase from ED to ESPR, so this aspect has not yet been analysed in detail. In T5 and T6, this aspect will be examined in more detail and we will see how it can be made feasible. It may be worth isolating certain parts of the supply chain to see this – however, as we are in a transition phase, we may also need to adapt our methods (i.e. are there actors that provide information on these environmental impacts).

- *Request for Data on Spare Parts*
  - VITO: Encouraged stakeholders to provide data on spare parts for repair to inform the analysis effectively.

- *Challenges in Assessing Reparability and Lifetime:*
  - ECOS: Expressed concerns about the repirability and lifespan of devices, specifically pointing out that power electronics are often the system's weak point. It is questioned whether integrators possess adequate information on this aspect.
  - EC: Acknowledged that environmental factors, such as weather conditions, will also impact device longevity, necessitating more frequent repairs.
  - Schneider Electric: Suggest that the power electronics used in inverters for PV, and electricity grids could serve as inputs fo reparability calculations in EV infrastructure.

- *Inclusion of DPP and Substances of Concern:*
  - BEUC: Does the study include considerations for the DPP and substances of concern, given that this is the first product under the ESPR framework?
  - EC: For the ESPR methodology, specific answers cannot yet be provided as they are being prepared. For the Methodology for Ecodesign of Energy-related Products (MEErP), recently updated methods can simulate recycling options and assess the relevance of specific materials. Further insights will emerge from Tasks 5 and 6.

- *Additional comments from the chat (not addressed during the meeting):*
  - Raecom Oy: The report refers to the French PEP. Have the consultants also looked at the other LCA methodology like EPD or using Level(s). Producers should have clarity on the required environmental output data regardless of the scheme.
  - Raecom Oy: Asks about the threshold of projected energy savings or environmental impacts for adopting this Ecodesign regulation.

7. Further proceeding, issues, closing - Tim Hettesheimer (ISI)

- Slides will be made available on the online platform (https://ecodesign-ev-charger.eu/ecodesign/documents/)
- The extended deadline for providing inputs is 23 July.
- Please provide feedback via the form in the platform (https://ecodesign-ev-charger.eu/ecodesign-wAssets/docs/2024_06_10_Ecodesign_EV-Chargers_Template_for_Comments.docx)
- Next (2nd) Stakeholder meeting will probably be around end 2024/beginning 2025.
- EC: all Stakeholders are invited to send input via the study platform.

Annex: List of attendee organisations

ABB E-Mobility
ADEME
Alfen
Alfen NV
Alliance of European Car Dealers and Repairers - AECDR
Alpitronic
AVERE
BEUC
BMWK Germany
Bundesanstalt für Materialforschung und -prüfung (BAM)
Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz - BMUV
Bundesverband Möbelspedition und Logistik e.V.
Cefic
ChargePoint
CharIN
CLASP
Danish Energy Agency
Danish Technological Institute
Deutsche Umwelthilfe DUH
Eaton Corporation
ECOS
Ekoenergetyka-Polska S.A.
Energy Authority of Finland
Federal Public Service Health, Food Chain Safety and Environment
FIRE-Italia
Fraunhofer ISI
FRENCH MINISTRY IN CHARGE OF ENERGY
Fronius International GmbH
German National Centre for Charging Infrastructure (NLL)
GEWISS S.p.A
Honda
Hubject
ICCT
IEP - Portuguese Electrotechnical Institute
International Copper Association Europe
Jungheinrich AG
Legrand Finland Oy
LG Electronics
Ministerstvo hospodrstva SR
Motus-e
NABU
NVE Norges Vassdrags og Energidirektorat
organisation
Panasonic Europe B.V.
Raecom Oy

Schneider Electric
SEAI
smartEn
Star charge europe gmbh
Swedish Energy Agency
Swedish National Electrical Safety Board
Swiss Federal Office of Energy SFOE
The Netherlands Enterprise Agency
TotalEnergies Charging Services
Transport & Environment
Tukes
Turvallisuus- ja kemikaalivirasto
Umweltbundesamt
VDA
VITO
Wall box Chargers SLU