

# Incorporating EV charging infrastructure data into Common Questionnaire: opportunities and challenges

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# Content

- Incorporating EV charging infrastructure data into the questionnaire
- Managing data flows planned by the Alternative Fuel Infrastructure Regulation – AFIR (applying to EU + EEA + candidate countries on a voluntary basis, Switzerland is not concerned)

# A streamlining of CQ should take place in 2025, on reference year 2024

- The indicators related to electric vehicles charging infrastructure could be introduced in theme ROAD, chapter Infrastructure:

## Current indicators (10)

Road Transport				2022		
DATABASE CODE	CHAPTER	LABEL	GLOSSARY	VALUE	FLAG	FOOTNOTE
B-I-01-23-0_0-0_0	Infrastructure	Motorways/Length at 31.12 (km)/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-0_0-0_0	Infrastructure	Other roads/Length at 31.12 (km)/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-35_1-0_0	Infrastructure	Other roads/Length at 31.12 (km)/By category/State roads	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-35_2-0_0	Infrastructure	Other roads/Length at 31.12 (km)/By category/Provincial roads	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-35_3-0_0	Infrastructure	Other roads/Length at 31.12 (km)/By category/Communal roads	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-36_1-0_0	Infrastructure	Other roads/Length at 31.12 (km)/Inside built-up areas	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-36_2-0_0	Infrastructure	Other roads/Length at 31.12 (km)/Outside built-up areas	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-37_1-0_0	Infrastructure	Other roads/Length at 31.12 (km)/By category/By surface/Paved roads	<a href="#">Road Transport Infrastructure</a>			
B-I-02-23-37_2-0_0	Infrastructure	Other roads/Length at 31.12 (km)/By category/By surface/Unpaved roads	<a href="#">Road Transport Infrastructure</a>			
B-I-03-23-0_0-0_0	Infrastructure	E roads/Length at 31.12 (km)/Total	<a href="#">Road Transport Infrastructure</a>			

# Let us suppose we exactly add the indicators tested in the pilot survey

## New indicators (13), with usual CQ wordings and codes

DATABASE CODE	CHAPTER	LABEL	GLOSSARY	VALUE	FLAG	FOOTNOTE
B-I-04-01-0_0-0_0	Infrastructure	Number of public recharging pools (locations)/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-04-01-1_0-0_0	Infrastructure	Number of public recharging pools (locations)/restricted access (semi-public)	<a href="#">Road Transport Infrastructure</a>			
B-I-04-02-0_0-0_0	Infrastructure	Number of public recharging stations (devices)/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-04-02-1_0-0_0	Infrastructure	Number of public recharging stations (devices)/restricted access (semi-public)	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-0_0-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-1_0-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-1_1-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Slow AC: $P < 7.4 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-1_2-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Medium-speed AC: $7.4 \text{ kW} \leq P \leq 22 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-1_3-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Fast AC: $P > 22 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-2_0-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Total	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-2_1-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Slow DC: $P < 50 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-2_2-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Fast DC: $50 \text{ kW} \leq P < 150 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-2_3-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Ultra fast - Level 1: $150 \text{ kW} \leq P < 350 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			
B-I-04-03-2_4-0_0	Infrastructure	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Ultra fast - Level 2: $P \geq 350 \text{ kW}$	<a href="#">Road Transport Infrastructure</a>			

B-I: road infrastructure. Sub-chapter B-I-04 to define in the glossary.

# From pilot survey to Common Questionnaire

<b>Number of public recharging pools/locations</b>	<b>Number of public recharging pools (locations)/Total</b>
of which: restricted access/semi-public	Number of public recharging pools (locations)/restricted access (semi-public)
<b>Number of public recharging stations/devices</b>	<b>Number of public recharging stations (devices)/Total</b>
of which: restricted access/semi-public	Number of public recharging stations (devices)/restricted access (semi-public)
<b>Number of recharging points/Supply Equipment (EVSE)</b>	<b>Number of recharging points (Electric Vehicle Supply Equipment)/Total</b>
<b>TOTAL AC (Category 1)</b>	<b>Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Total</b>
<i>Slow AC: P &lt; 7.4 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Slow AC: P < 7.4 kW
<i>Medium-speed AC: 7.4 kW ≤ P ≤ 22 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Medium-speed AC: 7.4 kW ≤ P ≤ 22 kW
<i>Fast AC: P &gt; 22 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Alternative Current/Fast AC: P > 22 kW
<b>TOTAL DC (Category 2)</b>	<b>Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Total</b>
<i>Slow DC: P &lt; 50 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Slow DC: P < 50 kW
<i>Fast DC: 50 kW ≤ P &lt; 150 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Fast DC: 50 kW ≤ P < 150 kW
<i>Level 1- Ultra fast DC: 150 kW ≤ P &lt; 350 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Ultra fast - Level 1: 150 kW ≤ P < 350 kW
<i>Level 2- Ultra fast DC: P ≥ 350 kW</i>	Number of recharging points (Electric Vehicle Supply Equipment)/Direct Current/Ultra fast - Level 2: P ≥ 350 kW

# When should we start the data collection?

- Even if the first streamlined questionnaire would be addressed on reference year 2024, would it be possible to create it also for some past years? Back to 2019, for instance (corresponding to the usual 5 previous years included in “static data”) or to 2021 if it is the starting reference year for AFIR? or should we consider 2025 as the first relevant deadline? The starting year is flexible.
- Creating the same questionnaire for 2018 (as in pilot survey) should be avoided because there was already a streamlining of CQ between reference years 2018 and 2019. Hence, it would create too many versions of “CQ ROAD 2018”. We could imagine parallel ways for collecting previous years if it was opportune.

# Quantitative targets in AFIR

- AFIR sets mandatory deployment targets for “light duty vehicles” (LDV) in article 3 and “heavy duty vehicles” (HDV) in article 4, after definitions listed in article 2:

## *Article 3*

### *Targets for electric recharging infrastructure dedicated to light-duty vehicles*

1. Member States shall ensure that:
  - publicly accessible recharging stations for light-duty vehicles are deployed commensurate to the uptake of light-duty electric vehicles;
  - in their territory, publicly accessible recharging stations dedicated to light-duty vehicles are deployed that provide sufficient power output for those vehicles.To that end Member States shall ensure that, at the end of each year, starting from the year referred to in Article 24, the following power output targets are met cumulatively:
  - (a) for each battery electric light-duty vehicle registered in their territory, a total power output of at least 1 kW is provided through publicly accessible recharging stations; and
  - (b) for each plug-in hybrid light-duty vehicle registered in their territory, a total power output of at least 0.66 kW is provided through publicly accessible recharging stations.

We (or who?) have to count the LDV (= M1 + N1), respectively the HDV (= M2 + M3 + N2 + N3), with BEV and PHEV  
=> we probably need to drop “special purpose vehicles” in CQ and to align our kinds of vehicles more strictly on the UN Consolidated Resolution on the construction of vehicles (R.E.3) in the future streamlining

We (or who?) have to count the power output publicly accessible in recharging stations  
But the pilot survey has counted the number of stations.

# Location targets in AFIR

- AFIR sets mandatory location targets along the TEN-T core network and the TEN-T comprehensive network respectively, in same articles 3 and 4:

## *Article 3*

2. Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to light-duty vehicles on the road network in their territory. To that end, Member States shall ensure that:
  - (a) along the TEN-T core network, publicly accessible recharging pools dedicated to light-duty vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 60 km in-between them:
    - (i) **by 31 December 2025**, each recharging pool shall offer a power output of at least 300 kW and include at least one recharging station with an individual power output of at least 150 kW;
    - (ii) by 31 December 2030, each recharging pool shall offer a power output of at least 600 kW and include at least two recharging stations with an individual power output of at least 150 kW;
  - (b) along the TEN-T comprehensive network, publicly accessible recharging pools dedicated to light-duty vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 60 km in-between them:

Should the quantitative data collection be supplemented with geographical coordinates?  
(not in Common Questionnaire framework)



# Who are the actors of the data flows?

- MS have to develop National Policy Frameworks (NPFs), cf. article 13.
- National access points have to make data available at no cost, cf. article 18.
  - (32) ‘national access point’ means a digital interface where certain static and dynamic data are made accessible for re-use to data users, as implemented by Member States in compliance with Article 3 of Commission Delegated Regulation (EU) 2015/962;
- National reporting will occur every 2 years as of 2027, cf. articles 14-16.

## *Article 14*

### *Reporting*

1. Each Member State shall submit to the Commission a standalone progress report on the implementation of its national policy framework for the first time by 1 January 2027 and every two years thereafter.

## *Article 16*

### *Progress tracking*

1. By 28 February of the year following the entry into force of this Regulation and every year thereafter by the same date, Member States shall report to the Commission the total aggregated recharging power output, the number of publicly accessible recharging points and the number of registered battery electric and plug-in hybrid vehicles deployed on their territory on 31 December of the previous year, in accordance with the requirements of Annex III.

# Who are the actors of the data flows? (following)

- EAFO is apparently designated to gather the data

## 5.1. Implementation plans and monitoring, evaluation and reporting arrangements

The revised Regulation's implementation will be monitored using indicators for the physical rollout of recharging and refuelling infrastructure in the EU. Well-established monitoring instruments will be used to follow deployment.

Member States will have to adopt a revised national policy framework to develop the market for alternative fuels in the transport sector and deploy the relevant infrastructure in line with the proposed strengthened provisions. This will enable the Member States to report to the Commission on implementation in a coherent and consistent manner. Data provision to the Member States' national and common access points will follow commonly agreed data quality standards<sup>39</sup>. In addition, the European Alternative Fuels Observatory

will be upgraded and continue to gather and frequently update vehicle uptake and infrastructure deployment in all Member States<sup>40</sup>. The Commission will also continue to work together with its expert group, the Sustainable Transport Forum (and dedicated subgroups), to monitor market developments and identify related policy needs.

A full review of the Regulation is scheduled for the end of 2026 to identify any possible shortcomings and identify future needs for legislative action on emerging technologies. For an overview of operational objectives, indicators and data sources, see Annex 9 to the staff working document on the impact assessment accompanying this initiative.

# Which data exactly?

## Article 18

### Data provisions

1. Member States shall appoint an Identification Registration Organisation ('IDRO'). The IDRO shall issue and manage unique identification ('ID') codes to identify, at least operators of recharging points and mobility service providers, at the latest one year after the date referred to in Article 24.
2. Operators of publicly accessible recharging and refuelling points or, in accordance with the arrangement between them, the owners of those points, shall ensure the availability of static and dynamic data concerning alternative fuels infrastructure operated by them and allow accessibility of that data through the National Access Points at no cost. The following data types shall be made available:
  - (a) static data for publicly accessible recharging and refuelling points operated by them:
    - (i) geographic location of the recharging or refuelling point,
    - (ii) number of connectors,
    - (iii) number of parking spaces for people with disabilities,
    - (iv) contact information of the owner and operator of the recharging and refuelling station.
  - (b) further static data for publicly accessible recharging points operated by them:
    - (i) identification (ID) codes, at least of the operator of the recharging point and mobility service providers offering services at that recharging point, as referred to in paragraph 1,
    - (ii) type of connector,
    - (iii) type of current (AC/DC),
    - (iv) power output (kW).
  - (c) dynamic data for all recharging and refuelling points operated by them:
    - (i) operational status (operational/out of order),
    - (ii) availability (in use/ not in use),
    - (iii) ad hoc price.
3. Member States shall ensure the accessibility of data on an open and non-discriminatory basis to all stakeholders through their National Access Point in application of Directive 2010/40/EU of the European Parliament and the Council<sup>27</sup>.
4. The Commission shall be empowered to adopt delegated acts in accordance with Article 17 to:
  - (a) add additional data types to the ones specified in paragraph 2;
  - (b) specify elements related to the data format, frequency and quality in which these data shall be made available;
  - (c) establish detailed procedures enabling the provision and exchange of data required pursuant to paragraph 2.

# Provisional conclusion

- If the Common Questionnaire is in charge of including these data, we should not only streamline the “Road infrastructure” chapter, but also the “Road transport equipment” one (strict alignment of the kinds of vehicles on M1, N1, M2, M3, N2, N3).
- On the “Road infrastructure” part, we could use the word “connector” as synonym of “recharging point” and measure especially the power output in kW rather than 3 different notions of recharging “units”.
- We will cooperate with EAFO and the countries to see how to optimize the data collection.

# Thank you

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