



**EUROPEAN COMMISSION**

**EUROSTAT**

Directorate E: Sectoral and regional statistics

**Unit E-3: Transport**

**ESTAT – ITF – UNECE  
COMMON QUESTIONNAIRE ON INLAND TRANSPORT STATISTICS**

**RATIONALE FOR CQ STREAMLINING**

**8 JULY 2024**

**ROAD THEME**

## 1. THE RATIONALE BEHIND THE PROPOSALS FOR NEW AND OLD (ABANDONED) ROAD INDICATORS IN THE CQ – AFIR AND UN CATEGORIES OF VEHICLES

The reduction of the greenhouse gas emissions due to road traffic has to be monitored. The measurement of the number of road vehicles with alternative fuels was already observed but has time to time to be realigned on the new norms and technologies. The policy makers focus now on the related infrastructure, i.e. on the deployment of (alternative) refuelling points. The European [Alternative Fuels Infrastructure Regulation \(EU\) 2023/1804](#)<sup>1</sup> (AFIR) has recently provided new definitions, as well as quantitative targets in terms of numbers of refuelling points and capacity by type of alternative energy, in relation with the numbers of related vehicles. The framework of this new demand for road transport statistics corresponds to the vocation of the Common Questionnaire, theme Road, chapters I - Infrastructure and II - Transport equipment, but new indicators are not enough: slight but systematic adjustments in our definitions of categories of vehicles are necessary, by the way in the direction of more consistency with the worldwide [UN Consolidated Resolution on the Construction of Vehicles \(R.E.3\)](#).

For instance, in AFIR, the articles 3 for light-duty electric vehicles and 4 for heavy-duty electric vehicles have same structure in terms of targets:

### Article 3

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

1. Member States shall ensure that, in their territory, publicly accessible recharging stations dedicated to light-duty electric vehicles are deployed in a way that is commensurate with the uptake of light-duty electric vehicles and that they provide sufficient power output for those vehicles.

To that end, Member States shall ensure that, at the end of each year, starting from 2024, the following power output targets are met cumulatively:

- (a) for each light-duty battery electric vehicle registered in their territory, a total power output of at least 1,3 kW is provided through publicly accessible recharging stations; and
- (b) for each light-duty plug-in hybrid vehicle registered in their territory, a total power output of at least 0,80 kW is provided through publicly accessible recharging stations.

[...]

4. Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to light-duty electric vehicles on the road network in their territory.

To that end, Member States shall ensure that:

- (a) along the TEN-T core road network, publicly accessible recharging pools dedicated to light-duty electric vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 60 km between them:
  - (i) by 31 December 2025, each recharging pool offers a power output of at least 400 kW and includes at least one recharging point with an individual power output of at least 150 kW;

[other targets for other dates, and for TEN-T comprehensive road network]

The article 6 deals with hydrogen refuelling infrastructure of road vehicles, with further deadlines and lower density (maximum distance of 200 km along the TEN-T core network

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<sup>1</sup> applying to EU + EEA + candidate countries on a voluntary basis, Switzerland is not concerned, but the AFIR perspective is indeed common to all countries engaged in the energy transition.

in 2030). The Common Questionnaire on inland transport statistics will of course not deal with the collection of cartographic data, to envisage in parallel<sup>2</sup>.

The article 18 organizes a “progress tracking” at aggregated level (statistics), with categories described in Annex III, while the article 20 enumerates the “data provisions” by each national Identification Registration Organisation (IDRO), with geographical coordinates. The article 15 specifies the “national reporting” by 31 December 2027 and every two years thereafter, with some more details in related Annex I than in Annex III.

#### ANNEX III

#### Reporting requirements on deployment of electric vehicles and publicly accessible recharging infrastructure

1. Member States must categorise their reporting on the deployment of electric vehicles as follows:
  - battery electric vehicles, separately for categories M<sub>1</sub>, N<sub>1</sub>, M<sub>2/3</sub> and N<sub>2/3</sub>
  - plug-in hybrid vehicles, separately for categories M<sub>1</sub>, N<sub>1</sub>, M<sub>2/3</sub> and N<sub>2/3</sub>
2. Member States must categorise their reporting on the deployment of publicly accessible recharging points as follows:

| Category        | Sub-category                                   | Maximum power output                       | Definition pursuant to Article 2 of this Regulation |
|-----------------|--|--|---|
| Category 1 (AC) | Slow AC recharging point, single-phase         | $P < 7,4 \text{ kW}$                       | Normal-power recharging point                       |
|                 | Medium-speed AC recharging point, triple-phase | $7,4 \text{ kW} \leq P \leq 22 \text{ kW}$ |   |
|                 | Fast AC recharging point, triple-phase         | $P > 22 \text{ kW}$                        | High-power recharging point                         |
| Category 2 (DC) | Slow DC recharging point                       | $P < 50 \text{ kW}$                        |   |
|                 | Fast DC recharging point                       | $50 \text{ kW} \leq P < 150 \text{ kW}$    |   |
|                 | Level 1 - Ultra-fast DC recharging point       | $150 \text{ kW} \leq P < 350 \text{ kW}$   |   |
|                 | Level 2 - Ultra-fast DC recharging point       | $P \geq 350 \text{ kW}$                    |   |

3. The following data must be provided separately for publicly accessible recharging infrastructure dedicated to light-duty vehicles and heavy-duty vehicles:
  - number of recharging points, to be reported for each of the categories under point 2;
  - number of recharging stations, to be reported for each of the categories under point 2;
  - total aggregated power output of the recharging stations.

### EV charging infrastructure to be collected by CQ

UNECE and ITF launched a pilot survey in June 2022, which reflected this framework for electric vehicles charging points, and got a positive feedback from non-European countries such as Japan.

Since this exercise, slight adjustments were discussed in WP6 meetings: power output, detail of EV charging points dedicated to heavy-duty vehicles.

### Other refuelling infrastructure

The other alternative fuels than “battery-electric” are a little less strategic. Anyway, in order to be more comprehensive on these targets enumerated in article 17 of AFIR, we propose to also collect the number of publicly accessible hydrogen refuelling points, as well as their capacity in terms of tonnes per day in a common logic of “Zero emission vehicles”. One

<sup>2</sup> In parallel, but probably with a certain delay of some months, according to the observation by some European countries.

step further, we propose to collect the number of publicly accessible refuelling stations for liquefied methane (= LNG + similar) and CNG respectively.

The collection of these statistics will of course not form the official transmission of data between the EU Member States and the EU Commission (AFIR has planned a much more demanding volume of data reporting), but will constitute an interesting benchmark for them, and in any case will establish a framework at international level for comparability between countries and between transport statistics by type of energy, which are currently the main topic of interest for policy-makers.

### **UN Consolidated Resolution on the Construction of Vehicles (R.E.3)**

The Annex III also asks a detail of the fleet by the categories of the [UN Consolidated Resolution on the Construction of Vehicles \(R.E.3\)](#): M1, M2+M3, N1, N2+N3, which does not exactly match CQ categories because of the “Special purpose vehicles” (put apart in CQ).

It is proposed that CQ sticks to UN categories, “of which” special purpose vehicles, rather than current definitions in the glossary that make sense, but are less comparable with other statistics (ACEA, EAFO...), Open Data, and probably between countries. The current work of the task force “odometer readings for ROADVKM” has revealed that the treatment of “special purpose vehicles” was not identical between CQ-ROAD and CQ-ROADVKM, which is problematic. It is certainly easier to converge toward AFIR and UN (R.E.3) than toward the current glossary for transport statistics (5<sup>th</sup> edition, 2019), as the UN (R.E.3) categories are usually present in the national road vehicles registers, which is not necessarily the case for all the characteristics of the “special purpose vehicles”.

For the mopeds and motorcycles, which correspond globally to UN category “L”, we propose to keep the current sharing with sub-categories L4 to L7 assimilated to “motorcycles”, but in 2016 grants for road traffic, L6 was assimilated to “mopeds”, not to “motorcycles”.

### **Types of motor energy**

The plug-in hybrid vehicles, petrol and diesel together but separated from other hybrid vehicles, take nearly same importance in [AFIR](#) than battery-electric vehicles (with a ratio 0.8 kW vs. 1.3 kW in terms of targeted power output). We propose to keep the current observation with primary energy petrol and diesel apart, but the plug-in hybrids should be systematically distinguished from other hybrids for all kinds of vehicles, and in case it is not possible to know the primary motor energy, the countries should make some hypotheses in order the total number of plug-in vehicles is reported correctly.

Apart these types of motor energy involved in the targets of power output, the article 2 of [AFIR](#) subdivides the alternative fuels into “zero emission”, “renewable fuels” and “non-renewable alternative fuels and transitional fossil fuels”, structural breakdowns.

Electricity, hydrogen and ammonia are the three components of the “zero emission” vehicles. As the use of ammonia is linked to fuel cells, it is proposed to go on with the two current indicators “battery-only electric” and “hydrogen and fuel cells” (even if this latter represented in 2022 about 0.1% of the former) and to ask them for all kinds of vehicles (in one category only for 2 or 3-wheels vehicles, see below) because they are strategic stakes.

Bioethanol and biodiesel, parts of “renewable fuels”, have not achieved significant market shares when sold in “pure” form. Instead, they are typically blended in certain proportions with “conventional” petrol or diesel fuels, which is another issue. We propose to go on following them together only, with potential synthetic and paraffinic fuels, under the label

“renewable fuels”, systematically. This “new” indicator will be calculated retroactively on 2013-2023 as “bioethanol”+“biodiesel”.

The category “bi-fuel” for passenger cars was probably not a good idea, because it does not allow to separate the uses of Natural Gas from Liquefied Petroleum Gas, which is still the vision of the market and AFIR, and was still asked for other kinds of vehicles. The “synthetic and paraffinic fuels produced from non-renewable energy”, third category of “non-renewable alternative fuels and transitional fossil fuels”, would be reported in “Others”. Another solution would have been to aggregate “NG”, “LPG” and “bi-fuel” together into a category “non renewable and transitional”.

For the mopeds and motorcycles, where it does not appear opportune to follow too many types of motor energy, we propose to introduce the notion of “other alternative fuel” after “fossil fuel” and “Zero emission”.

## 2. THE RATIONALE BEHIND THE PROPOSALS FOR NEW AND OLD (ABANDONED) ROAD INDICATORS IN THE CQ – OTHER

### Non-motorized transport infrastructure

It is proposed to observe the length of the cycle tracks apart from the cycle lanes, as a minimum. But a specific consultation of countries should be organized, in common with ITF and UNECE, in order to get a little more.

The document “[Data collection on cycling infrastructure](#)” communicated to UNECE WP6 statistics meeting in April 2024 (by WP5 / G.E.5) presents many possible indicators, but confesses the definitions are not yet standardized: *“The diversity of terms and definitions related to cycling infrastructure, such as “non-compulsory cycle track”, “advisory cycle lane”, “cycle street”, and “cycle highway”, presents a significant challenge for consistent data collection and analysis. These varying terminologies can lead to confusion and inconsistencies in both national and international contexts. The lack of a standardized lexicon hinders the effective comparison of cycling infrastructure data across different regions and countries.”*

Our suggestion for this specific consultation is at present the following, with indicative translations in French:

| DATABASE CODE     | CHAPTER        | LABEL   | LIBELLÉ   |
|-------------------|----------------|---|---|
| B-I-05-01-0_0-0_0 | Infrastructure | National cycling infrastructure/Length at 31.12 (km)/Total                    | Aménagements cyclables/Longueur au 31.12 (km)/Total                               |
| B-I-05-01-1_0-0_0 | Infrastructure | National cycling infrastructure/Length at 31.12 (km)/By category/Cycle lanes  | Aménagements cyclables/Longueur au 31.12 (km)/Par catégorie/Pistes cyclables      |
| B-I-05-01-1_1-0_0 | Infrastructure | of w hich length of mandatory cycle lanes at 31.12 (km)                       | dont pistes cyclables obligatoires/Longueur au 31.12 (km)                         |
| B-I-05-01-2_0-0_0 | Infrastructure | National cycling infrastructure/Length at 31.12 (km)/By category/Cycle tracks | Aménagements cyclables/Longueur au 31.12 (km)/Par catégorie/Itinéraires cyclables |
| B-I-05-01-2_1-0_0 | Infrastructure | of w hich length of cycle tracks inside built-up areas                        | dont longueur des itinéraires cyclables en agglomération                          |

We intend to organize in parallel a geographical data collection, as indeed some countries would derive these national figures from maps.

### (Non-motorized) active mobility

We have envisaged to collect also an estimate of the (self) transport of passengers by bicycles (including e-bikes and PA-bikes) and by other micro-mobility devices with auxiliary motor in terms of passenger-kilometres. The data could only come from National household transport survey. But they would be a pure repetition of the traffic of such vehicles on the national territory (with the hypothesis of 1 passenger only, 1 vkm = 1 pkm) and it has been judged that ROADVKM theme was more adequate.

### **Of which “used by businesses” or “by transport activity (NACE section H)”**

The addition of the type of use seems of interest in ROAD and ROADVKM themes, and can support some studies on the Light Utility Vehicles, or on the commercial fleets, as well as the road freight market. We propose these indicators in the fleet part, not in the new registrations. In particular, we are interested by the share of the business fleet of passenger cars that is “Zero Emission.

### **Euro emissions standards for passenger cars**

For the sake of emissions estimates, we propose to add a breakdown of passenger cars by Euro emissions standard, from Euro 1 to Euro 7 and more. Only the fleet is concerned.

### **Consistency with ITF “Transport infrastructure investment and maintenance spending” survey**

The current indicators on investment and maintenance expenditure are often not filled in, and there can be an ambiguity on the source of financing (all or General Government only). ITF has developed a parallel questionnaire on “Transport Infrastructure Spending” with a highlight on “motorways” and a restriction to “public administrations” for the maintenance expenditure. There is no utility of two parallel data collections on similar issues, therefore we suggest a strict alignment.

### **Withdrawal of tramways**

The RAIL theme is now more logical to welcome indicators related to light rail.

### **Withdrawal of traffic**

The chapter “traffic” was in principle redundant with ROADVKM indicators since its creation in 2013, but this latter was initially a pilot survey only.

### **Withdrawal of accidents**

Eurostat (CARE), ITF and UNECE all cover in parallel and disseminate from other sources the statistics on road accidents. Hence, it seems useless to go on with this chapter in ROAD.

### **Withdrawal of poorly or wrongly filled-in and/or less useful indicators**

Very few countries are able to dissociate “buses”, “motor coaches”, “trolleybuses” and “mini-buses and mini coaches”.

The load capacity was poorly or wrongly filled in, and correct estimates can be made from the numbers of vehicles by permissible maximum gross weight.

The expenditure on road transport vehicles has a low completion rate, and it is rather a matter of observation for Structural Business Statistics.


### **Number of indicators after proposals are implemented**

The current CQ collects 362 indicators in ROAD theme. The proposed additions concern 76 indicators (26 in infrastructure, 47 in transport equipment, 2 in economic performance, 1 in transport measurement). The proposed withdrawals concern 102 indicators (54 in transport equipment, 3 in economic performance, 10 in traffic, 10 in transport measurement, 25 in accidents). The proposed CQ would therefore collect 336 indicators (-26) in the ROAD theme.

*Table 1: schematic changes proposed to CQ ROAD theme*

| <b>Chapter</b>       | <b>Labels</b>  | <b>Rationale</b>                                   |
|----------------------|--|--|
| Infrastructure       | Number of publicly available recharging locations, devices or points (15)                                    | EV charging points pilot survey                    |
| Infrastructure       | Power output installed in publicly available recharging points (2)   | AFIR – monitoring of the related infrastructure    |
| Infrastructure       | Number of hydrogen refuelling points and capacity, number of liquefied methane and CNG refuelling points (4) | AFIR – monitoring of the related infrastructure    |
| Infrastructure       | Cycling infrastructure (5)   | Observation of active mobility                     |
| Equipment            | Special purpose vehicles (12)  | Sticking to UN categories                          |
| Equipment            | Of which used by businesses, households or by transport activities (6)                                       | Interest for ROADVKM and other studies (LUV, RFTS) |
| Equipment            | Systematic observation of PHEV (10)  | AFIR – rationalization of types of energy          |
| Equipment            | Systematic observation of hydrogen and fuel cells (6)  | AFIR – rationalization of types of energy          |
| Equipment            | Systematic observation of renewable fuels (6)  | AFIR – rationalization of types of energy          |
| Equipment            | Breakdown of passenger cars fleet by Euro emissions standard (7)   | Interest for emissions estimates                   |
| Equipment            | <del>Breakdown of buses, motor coaches, etc.</del> (8)   | Poorly filled in                                   |
| Equipment            | <del>Special purpose vehicles</del> (2)  | Sticking to UN categories                          |
| Equipment            | <del>Tramways</del> (2)  | More logical in RAIL now                           |
| Equipment            | <del>Streamlining of renewable fuels</del> (10)  | AFIR – rationalization of types of energy          |
| Equipment            | <del>Load capacity</del> (32)  | Poorly or wrongly filled in                        |
| Economic performance | Of which in motorways (2), restriction of maintenance to public expenditures                                 | Alignment on ITF survey                            |
| Economic performance | <del>Expenditures on road transport vehicles</del> (3)   | Poorly filled in, SBS more adequate                |
| Traffic              | <del>Motor vehicles mov. on national territory</del> (10)  | Redundant  |
| Transport meas.      | Passenger transportation: “others” (1)   | Rationalization                                    |
| Transport meas.      | <del>Goods transp.: detail by gross weight</del> (8)   | Poorly filled in                                   |
| Transport meas.      | <del>Useless totals</del> (2)  | Rationalization                                    |
| Accidents            | <del>All indicators</del> (25)   | Substituted by CARE or other                       |

### Alignment on AFIR and UN Consolidated Resolution on the Construction of Vehicles (R.E.3) for categories of vehicles

| Current instructions for reporting to CQ-ROAD and CQ-ROADVKM                       |        |  |                |                 |                        |               |               |                            |                          |   |   |
|--|--------|--|----------------|-----------------|------------------------|---------------|---------------|----------------------------|--------------------------|---|---|
|  | Mopeds | Motorcycles  | Passenger cars | Buses & coaches | Light lorries          | Heavy lorries | Road tractors | Trailers and semi-trailers | Special purpose vehicles | Other motorized vehicles (for CQ-ROADVKM) | Other non-motorized vehicles (excluded)                       |
| L1-L2  | X      |  |                |                 |                        |               |               |                            |                          |   |   |
| L3-L5  |        | X  |                |                 |                        |               |               |                            |                          |   |   |
| L6-L7  |        | X  | X              |                 |                        |               |               |                            |                          |   |   |
| M1   |        | motor homes are included (B.II-11), theoretically all camper vans too (most camper vans are in M1, but some are in M2-M3, N1 or N2-N3) | X              |                 | few                    |               |               |                            | ?                        |   |   |
| M2-M3  |        |  | few            | X               |                        |               |               |                            | very few                 | → very few                                |   |
| N1   |        |  | few            |                 | X                      | should be 0   | few           |                            | some                     | → some                                    |   |
| N2-N3  |        |  | few            |                 |                        | should be 0   | X             | X                          | X                        | → X                                       |   |
| O  |        |  |                |                 |                        |               |               | X                          | X                        |   | caravans<br>agricultural trailers                             |
| T  |        |  |                |                 |                        |               |               |                            |                          | agricultural and forestry tractors?       | not clear if they are to be counted as "motorized" (UN R.E.3) |
|  |        |  |                |                 |                        |               |               |                            |                          |   |   |
| New instructions for reporting to CQ-ROAD and CQ-ROADVKM                           |        |  |                |                 |                        |               |               |                            |                          |   |   |
|  | Mopeds | Motorcycles  | Passenger cars | Buses & coaches | Light utility vehicles | Heavy lorries | Road tractors | Trailers and semi-trailers |                          | Other motorized vehicles (excluded)       | Other non-motorized vehicles (excluded)                       |
| L1-L2  | X      |  |                |                 |                        |               |               |                            |                          |   |   |
| L3-L5  |        | X  |                |                 |                        |               |               |                            |                          |   |   |
| L6-L7  |        | X  |                |                 |                        |               |               |                            |                          |   |   |
| M1   |        |  | X              |                 |                        |               |               |                            |                          |   |   |
| M2-M3  |        |  |                | X               |                        |               |               |                            |                          |   |   |
| N1   |        |  |                |                 | X                      |               |               |                            |                          |   |   |
| N2-N3  |        |  |                |                 |                        | X             | X             |                            |                          |   |   |
| O  |        |  |                |                 |                        |               |               | X                          |                          |   | caravans<br>agricultural trailers                             |
| T  |        |  |                |                 |                        |               |               |                            |                          | agricultural and forestry tractors        |   |



**Alignment on AFIR for types of motor energy**

|                                | <u>Current instructions for reporting to CQ-ROAD</u> |                 |               |               |               |  | <u>New instructions for reporting to CQ-ROAD</u> |                 |               |               |               |   |
|--------------------------------|--|-----------------|---------------|---------------|---------------|--|--|-----------------|---------------|---------------|---------------|---|
|                                | Passenger cars                                       | Buses & coaches | Light lorries | Heavy lorries | Road tractors |  | Passenger cars                                   | Buses & coaches | Light lorries | Heavy lorries | Road tractors |   |
| Petrol (including hybrids)     | X  | X               | X             | X             | X             |  | Petrol (including hybrids)                       | X               | X             | X             | X             | X |
| Petrol (excluding hybrids)     | X  |                 | X             | X             |               |  | Petrol (excluding hybrids)                       | X               | X             | X             | X             | X |
| Hybrid electric-petrol         | X  |                 | X             | X             |               |  | Hybrid electric-petrol                           | X               | X             | X             | X             | X |
| Plug-in hybrid petrol-electric | X  |                 |               |               |               |  | Plug-in hybrid petrol-electric                   | X               | X             | X             | X             | X |
| Diesel (including hybrids)     | X  | X               | X             | X             | X             |  | Diesel (including hybrids)                       | X               | X             | X             | X             | X |
| Diesel (excluding hybrids)     | X  | X               | X             | X             | X             |  | Diesel (excluding hybrids)                       | X               | X             | X             | X             | X |
| Hybrid diesel-electric         | X  | X               | X             | X             | X             |  | Hybrid diesel-electric                           | X               | X             | X             | X             | X |
| Plug-in hybrid diesel-electric | X  | X               |               |               |               |  | Plug-in hybrid diesel-electric                   | X               | X             | X             | X             | X |
| Battery - only electric        | X  | X               | X             | X             | X             |  | Battery - only electric                          | X               | X             | X             | X             | X |
| Natural Gas Vehicles (NGV)     | X  | X               | X             | X             | X             |  | Natural Gas Vehicles (NGV)                       | X               | X             | X             | X             | X |
| Liquefied Petroleum Gas (LPG)  | X  | X               | X             | X             | X             |  | Liquefied Petroleum Gas (LPG)                    | X               | X             | X             | X             | X |
| Hydrogen and fuel cells        | X  | X               |               |               |               |  | Hydrogen and fuel cells                          | X               | X             | X             | X             | X |
| Bioethanol                     | X  |                 | X             | X             | X             |  | Renewable fuels                                  | X               | X             | X             | X             | X |
| Biodiesel                      | X  |                 | X             | X             | X             |  |  |                 |               |               |               |   |
| Bi-fuel                        | X  |                 |               |               |               |  |  |                 |               |               |               |   |
| Others                         | X  | X               | X             | X             | X             |  | Others   | X               | X             | X             | X             | X |

