TAKING AMBITIOUS CLIMATE ACTION
Decarbonising inland transport by 2050

Electric Vehicle Charging Infrastructure Data Collection
Fadiah Achmadi, UNECE
Timeline

**OCT 2022**

Pilot survey by the secretariat, Eurostat, ITF on statistics production

**MAY 2023**

At its 74th session, Working Party agreed to circulate pilot questionnaire

**JUNE 2023**

Pilot questionnaire by the secretariat, Eurostat, ITF

**NOV 2023**

Roundtable on EV Charging Infrastructure Data Collection

**2024**

Refined questionnaire to test acceptance of countries

Do you do any measurement of EV charging infrastructure? (66% produced the data or had plans to do so)
### June 2023 Pilot Questionnaire

<table>
<thead>
<tr>
<th>Number of public recharging pools/locations</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>of which: restricted access/semi-public</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of public recharging stations/devices</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>of which: restricted access/semi-public</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of recharging points/Supply Equipment (EVSE)</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL AC (Category 1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slow AC: P &lt; 7.4 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium-speed AC: 7.4 kW ≤ P ≤ 22 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast AC: P &gt; 22 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL DC (Category 2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slow DC: P &lt; 50 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast DC: 50 kW ≤ P &lt; 150 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1- Ultra fast DC: 150 kW ≤ P &lt; 350 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2- Ultra fast DC: P ≥ 350 kW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

32 Countries responded

23 Provided data
Number of countries reporting 2022 data

Number of public recharging pools/locations
  of which: restricted access/semi-public

Number of public recharging stations/devices
  of which: restricted access/semi-public

Number of recharging points/Supply Equipment (EVSE)
  TOTAL AC (Category 1)
    Slow AC: P < 7.4 kW
    Medium-speed AC: 7.4 kW ≤ P ≤ 22 kW
    Fast AC: P > 22 kW

  TOTAL DC (Category 2)
    Slow DC: P < 50 kW
    Fast DC: 50 kW ≤ P < 150 kW
    Level 1 - Ultra fast DC: 150 kW ≤ P < 350 kW
    Level 2 - Ultra fast DC: P ≥ 350 kW

- Not all countries track/report “Restricted access/semi-public” category
- Disaggregated AC and DC charging infrastructure data are not always available
- Countries provided data as of Dec 31, Jan 1, June 30
- Some countries have different power categorizations, e.g.:
  - Level 1 – Ultra fast DC: 150 kW – 250 kW
  - Level 2 – Ultra fast DC: > 250 kW
Our data vs EAFO (German case)
Findings and next steps

Diverse approaches by countries
- Refining international definitions
- Identifying suitable indicators for consistent measurements

Strategic approach for data collection
- Starting in 2025 for CQ reference year 2024
- AFIR’s mandates for **power output**
- UNECE Consolidated Resolution on the **Construction of Vehicles** (R.E.3)

Revised questionnaire
- Integrate new definitions discussed at the roundtable
- Follow-up questionnaire in 2024 to test the updated definitions and refinements
Refined Questionnaire

Number of public recharging pools/locations at 31.12
of which dedicated to heavy-duty vehicles

Number of public recharging stations/devices at 31.12

Number of public recharging points/Supply Equipment (EVSE) at 31.12

Alternative Current
- Slow AC: $P < 7.4 \, \text{kW}$
- Medium-speed AC: $7.4 \, \text{kW} \leq P \leq 22 \, \text{kW}$
- Fast AC: $P > 22 \, \text{kW}$

Direct Current
- Slow DC: $P < 50 \, \text{kW}$
- Fast DC: $50 \, \text{kW} \leq P < 150 \, \text{kW}$
- Level 1- Ultra fast DC: $150 \, \text{kW} \leq P < 350 \, \text{kW}$
- Level 2- Ultra fast DC: $P \geq 350 \, \text{kW}$

Power output installed in public recharging points (kW) at 31.12
of which dedicated to heavy-duty vehicles

<table>
<thead>
<tr>
<th>Type</th>
<th>Power Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL AC (Category 1)</td>
<td></td>
</tr>
<tr>
<td>Slow AC</td>
<td>$P &lt; 7.4 , \text{kW}$</td>
</tr>
<tr>
<td>Medium-speed AC</td>
<td>$7.4 , \text{kW} \leq P \leq 22 , \text{kW}$</td>
</tr>
<tr>
<td>Fast AC</td>
<td>$P &gt; 22 , \text{kW}$</td>
</tr>
<tr>
<td>TOTAL DC (Category 2)</td>
<td></td>
</tr>
<tr>
<td>Slow DC</td>
<td>$P &lt; 50 , \text{kW}$</td>
</tr>
<tr>
<td>Fast DC</td>
<td>$50 , \text{kW} \leq P &lt; 150 , \text{kW}$</td>
</tr>
<tr>
<td>Level 1- Ultra fast DC</td>
<td>$150 , \text{kW} \leq P &lt; 350 , \text{kW}$</td>
</tr>
<tr>
<td>Level 2- Ultra fast DC</td>
<td>$P \geq 350 , \text{kW}$</td>
</tr>
</tbody>
</table>
Navigating Sustainable Development Goals Progress with Reliable Transport Data

Palais des Nations, Geneva
24-26 April 2024
Thank you!

Fadiah Achmadi
Secretary, WP.6

UNECE
Date 12 I 04 I 2024, Paris