

AFID-Position Recharging

Charging Infrastructure for passenger cars and commercial vehicles
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Contact

Claas Bracklo

Summary

The European Commission has also confirmed its plans to revise the Alternative Fuels Infrastructure Directive (AFID) as part of the Green Deal when published on December 11th. The VDA considers the concretion of the targets for infrastructure development and their Europe-wide implementation as a critical part in achieving the decarbonization goals in the transport sector while maintaining the technology neutrality of the drive train technologies. In this position, the requirements regarding the infrastructure requirements for battery-electric electromobility for cars and commercial vehicles are formulated.

The availability of a nationwide, comprehensive public charging infrastructure is of fundamental importance for the ramp-up of electromobility. The goals for the development of public charging infrastructure formulated in the EU directive provide a good orientation framework with a rate of 1 charging point per 10 vehicles. In view of the strong ramp-up of electromobility, it is important to keep pace with this through a forward-looking and sustainable proportional build-up of charging infrastructure. Considering that, binding requirements for implementation and consistent monitoring in the member states are mandatory. National control centers and the generation of national master plans can significantly support the establishment and expansion of charging infrastructure.

Background

As part of the AFID impact assessments, a number of 800,000 charging points (2025) was defined at EU level. Currently only roughly 150,000 publicly accessible charging points are available. There is an urgent, extensive need for action.

The national plans differ in part significantly in terms of the prioritization of the various alternative fuel types and also have very different levels of demand with regard to their future use and the corresponding infrastructure structure. The guideline specifies a general guideline for the ratio of vehicles to charging points of 10 electric vehicles per charging point, which can currently also be seen in the German market, but does not reflect the need for an initial advance factor of approx. 2-3 years. For the Member States that provide forecasts for the market development of electric vehicles, the current ratio is between 5:1 and 32:1.

For the year 2025 a demand of approx. 1 million normal charging points and approx. 100,000 HPC charging points (maximum distance and number of charging points need to be defined, e.g.: 40km/6 LP) is expected, for the year 2030 a demand of approx. 3.5 million charging points. For this scenario, the course must now be created for a swift and secure distribution. The detailing according to regions and use cases must be based on use cases.

The main use cases for passenger cars with its different demands for charging technologies and recharging times will be located @home (10-12 h), @work (5-10 h), @highway (8-10 min) and @public (0-4 hours). The uses cases and recharging demand for commercial vehicles will be @depot (6-8 h) and @highway (45 min)

Demands in General

- Requesting clear commitments to Member States undertaking efforts to align the currently very different national strategy frameworks. Setting mandatory targets for the Member States.
- Ensuring the grid extension - in addition to the construction of publicly accessible charging points - and the necessary investments to ensure an adequate energy supply.
- Promote the development of a public high-performance charging network (HPCCV, Megawatt Charging) for long-distance European freight transport. Equipping the TEN-T corridors and Ten-T locations with HPCCV charging parks. Definition of the EU charging standard based on CCS.
- Establishment of public CCS charging infrastructure (charging parks) for charging heavy commercial vehicles in delivery services.
- Maintain the guideline of 1 charging point for every 10 vehicles as an orientation frame, charging infrastructure should lead 2-3 years ahead of EV volumes.
- Establishment of national control and coordination centers analogous to Germany (master plan, national center for charging infrastructure)
- Demand national ramp-up plans with clear milestones and volumes per member state for 2022, 2025 and 2030
- Simplification of administration/approval procedures also with regard to funding
- Development of funding programs. Also for installation of private charging infrastructure (@home, @work) and charging infrastructure for long-distance freight transport
- Consistent and transparent customer information for all public charging points (geo-coordinates, costs, availability, reservations, services, ...) for all of Europe

Demands Technology

- Support of customer friendly functions (e.g. attached charging cable on the charging station, displays, operating procedures, roofing, ...)
- Implementation of intelligent charging interfaces in all charging points (ISO15118) to support vehicle-to-grid functions and plug & charge
- Creation of a public key infrastructure based on CCS and ISO15118, setting of security standards
- Focus on intelligent charging management. Controlled charging, bidirectional charging, making electricity acquisition more flexible, using battery storage for network optimization, creating customer benefits from the operation of electric vehicles through economical grid integration
- Ensuring interoperability/roaming. Access to all charging points by all users/ contract providers