



# CHARIN

## CharIN commenting on the revision of the Alternative Fuels Infrastructure Directive (2014/94/EU)

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The availability and accessibility of a customer-friendly Europe-wide and cross-border electric vehicle charging infrastructure is of fundamental importance for the mass adoption of electromobility in Europe.

CharIN e.V. with its international members covering the entire electric vehicle value chain is supporting the growth of electric mobility by drafting recommendations to ensure the interoperability of vehicles and charging infrastructure and provide guidance to all market players for the further development of CCS charging globally. To strengthen uniform, cross-industry solutions on electric vehicle charging, the CharIN e.V. will intensify its connections to European stakeholders using the power of its members and the common voice. Moreover, CharIN will cooperate with initiatives that support complementary topics connected to electric vehicle charging.

CharIN e.V. welcomes the opportunity to comment on the revision of the Alternative Fuels Infrastructure Directive. The following main messages explain what CharIN wants to achieve and where political support is needed to open the market and pave the way for the future of electric mobility. Availability of adequate and customer-friendly charging infrastructure – public and private – is one of the key factors for the decision to buy an electric vehicle. Customer-friendly charging requires the charging operation to be simple and comfortable and any customer should be able to recharge at any recharging point in Europe knowing it will work.

### **Political framework:**

- Harmonise and clarify the European regulatory framework.
- Clearly defined roles and requirements across Europe would increase interoperability and investments in charging infrastructure. This would also significantly improve the customer experience, as operators and service providers are able to provide the same offer all over Europe. Clarifications should be established especially for:
  - Pricing framework harmonisation (e.g. Energy, Time, Flat fees, flexible combinations)
  - DC metering requirements
  - Energy regulation applicability
  - Public and private charging infrastructure requirements
- Charging Infrastructure for electric vehicles should be regulated separately from other alternative fuels as the opportunities and ecosystem differ from most other fuels, e.g. private charging infrastructure (at home or workplace) is only feasible for electric vehicle charging. The

correlation between public and private charging infrastructure needs to be taken into account when drafting regulations. It is also important to establish a clear distinction between energy regulation and charging infrastructure regulation.

- Charging infrastructure is a key factor for the decision to buy an EV. It is therefore essential for the mass adoption of EV that adequate charging infrastructure is available and visible on the streets. A challenge is that there is a gap between installing charging infrastructure and sufficient electric vehicles in the market to achieve a sustainable business case. This gap needs to be addressed by easily accessible funding for all market players investing in the installation of charging infrastructure.
- The volumes of EV are expected to rise significantly over the next years, in order to support these EV, the charging infrastructure needs to be available. Administrative processes can slow down the installation of the infrastructure, potentially leading to slower uptake of electric vehicles in Europe. Administrative barriers should be removed, and the overall processing speed should be improved (e.g. creating fast lanes).

#### **Technical framework:**

- CCS is the standard for Europe and CharIN is supporting its further development based on ISO 15118 to maintain long-term technological competitiveness, including new functionalities such as Plug and Charge. Compatibility to prior published versions of ISO 15118 as well as DIN SPEC 70121 needs to be maintained.
- To enable pan-European travel, it is important to come to a common understanding of how to implement roaming between operators and countries.
- An independent and secure Public Key Infrastructure (PKI) process needs to be developed, taking European requirements into consideration. CharIN members cover the entire value chain and is well positioned to serve as platform for the technical alignment across the industry.
- The electrification of heavy-duty vehicles requires the development of adequate charging solutions. CharIN is coordinating the industry specification for solutions capable of charging commercial vehicles (trucks, busses, etc.) as well as marine and air transportation.
- Automated charging systems can significantly improve the customer experience when charging, especially in combination with increasingly autonomous vehicles. A successful implementation requires supportive regulation and incentives for wireless, robotic and pantograph charging solutions. Standardized interoperable comfort charging solutions should be based on the main CCS building blocks, including its safety concept, communication, mechanics, and testing.

- CharIN is performing industry-wide Testing events (“Testivals”) to ensure interoperability and conformance of electric vehicles and charging equipment (EVSE).

### **Grid and power supply:**

- Creation of appropriate rules to enable access of electric vehicles (sole and aggregated) to grid services/energy markets alongside with the incentives/monetization of electric vehicles providing it. This will accelerate and foster Smart Charging and V2G (featured by CCS). These technologies enable more intermitted renewable energy integration which reduces grid extension investments and ultimately reducing the Total Cost of Ownership (TCO) of electric vehicles.
- New charging infrastructure should be future-proof and smart in the sense of connected charging technology that can communicate with both local energy management and electricity grid interfaces.
- Renewable energy should be the main source for EV charging, hence the regulatory framework for the use of renewable energies and resulting levies need to be revised. Local energy storage should be incentivized as it can support the grid with the uptake of renewable energy.

### **Glossary**

CCS	Combined Charging System
EV	Electric Vehicle
EVSE	EV Supply Equipment (EV charger)
PKI	Public Key Infrastructure
TCO	Total Cost of Ownership
V2G	Vehicle to Grid