



Charging Interface Initiative e.V.

Accelerating the deployment of charging infrastructure in Europe through the current revision of the Energy Performance of Buildings Directive

CharIN is dedicated to develop and establish the Combined Charging System (CCS) as the standard for charging Battery Electric Vehicles (BEVs) of all kinds. The availability of charging infrastructure, wherever vehicles are usually parked, plays a pivotal role for the market uptake of electric vehicles, and new technological developments need to be integrated quickly in existing and new buildings and parking lots.

As outlined in the Commission Energy Union Communication (February 2015) and more recent Strategy on low-emission mobility (July 2016), electric mobility can play a pivotal role for the European Union goals on renewable energy, emissions reduction, energy efficiency and energy security. Electric vehicles combined with renewable electricity offer a decarbonized and clean mobility solution for inner-city and long distance travels. Furthermore, electric vehicles are several times more energy efficient per distance driven than their Internal Combustion Engine counterparts¹. Finally, electric mobility offers a compelling opportunity to increase the share of renewable energies in the European electricity mix and to break oil dependency.

The current revision of the Energy Performance of Buildings Directive (EPBD) is a critical opportunity to boost the deployment of recharging infrastructure for the mass adoption of Electric Vehicles. In fact, if the rollout of high power recharging infrastructure is critical to unlock long distance trips with electric vehicles² the deployment of normal power recharging infrastructure within the meaning of Directive 2014/94/EU (in particular 7 to 11 kW), wherever users park their vehicles, is essential to cover the majority of electric vehicles daily charging needs. Much contrary to internal combustion engine vehicles - for which users need to drive to a gas station to refill - electric vehicles can be recharged when parked i.e. at home, at work, at one's destination or even on-street. It offers a much better user experience than conventional vehicles (users do not need to drive to a specific location and wait for a charge), it also provides tremendous potential for additional building or grid services with smart charging (the vehicle's battery is connected to the electricity grid for a longer time than the time needed for a full charge) and can be used to provide flexibility to the energy consumption of a building or to power transmission and distribution markets.

CharIN therefore strongly welcomes the EU Commission's proposal from the EPBD to pre-equip new and renewed buildings for charging infrastructure and would encourage EU Member States and Parliament to endorse this proposal. We have outlined below³ some further improvements to enhance effectiveness of the legislation and maximize the potential that technological developments are bringing, while minimizing constraints and costs to the building sector.

¹The ILUC Directive 2015/1513/EU acknowledges that electric vehicles are at least 5 times more efficient than Internal Combustion Engine Vehicles per km driven.

² CharIN members are strongly committed to the deployment of long-distance enabling charging infrastructure (See Tesla's Supercharger network, the recent Joint Venture announced by major European car manufacturers or the Open Fast Charging Initiative launched by leading EU charging infrastructure operators)

³Supplements and changes to the existing legislation are marked in red

For new/renovated non-residential buildings and parking lots (article 8, paragraph 2, number 2): “Member States shall ensure that ~~in~~ all new non-residential buildings and ~~in~~ all existing non-residential buildings undergoing major renovation with more than ten parking spaces, at least one of every ten is equipped with **at least a normal power** recharging point within the meaning of Directive 2014/94/EU on the deployment of alternative fuels infrastructure, ~~which is capable of starting and stopping charging in reaction to price signals~~. This requirement shall apply to all **existing** non-residential buildings, with more than ten parking spaces, as of 1 January 2025.

Explanation: The installed recharging points should meet at least the characteristics of normal power recharging points within the meaning of Directive 2014/94/EU on Alternative Fuels Infrastructure (i.e. minimum 3,7 kW, but CharIN e.V. would strongly recommend to plan for minimum 7kW or even 11kW).

It is unclear how the characteristic “*which is capable of starting and stopping charging in reaction to price signals*” would translate into practical terms for implementation in e Member States, i.e. when would a charging point be considered compliant? In addition, while the ability to charge electric vehicles according to electricity supply as well as grid parameters in real time is important, requiring each recharging point to be capable of reacting to price signals could significantly increase the cost of recharging infrastructure during market uptake phase. Finally, it does not necessarily require each recharging point to react to price signals. It is actually preferable for recharging points to be integrated in an overall environment that is capable of doing this (e.g. building equipped with a smart meter and control system).

For new/renovated residential buildings and parking lots (article 8, paragraph 2, number 3): “Member States shall ensure that **all** newly built residential buildings **and parking lots** and those undergoing major renovations, ~~with more than ten parking spaces~~, include the **pre-cabling** appropriate conduits to enable the installation of **at least normal power** recharging points for electric vehicles **within the meaning of Directive 2014/94/EU** for every parking space.”

Explanation: The installation of the necessary cableways is a major cost driver when retrofitting existing buildings or garages with recharging infrastructure for Electric Vehicles. The installation of the required conduits during construction or renovation would dramatically simplify and reduce costs (approx. 70% reduction) for later deployment of recharging infrastructure.

In residential buildings, it is essential to pre-equip all parking spaces to avoid arbitrarily preventing certain residents from the ability to transition to electric vehicles.

The pre-installation of “*conduits*” can be done at marginal costs compared to actual “*pre-cabling*” and therefore extended to all new or renovated residential buildings, i.e. not only those with more than ten parking spaces.

The conduits should be dimensioned to allow for the later installation of at least normal recharging points within the meaning of Directive 2014/94/EU on Alternative Fuels Infrastructure (i.e. minimum 3,7 kW, but CharIN e.V. would strongly recommend to plan for minimum 7kW or even 11kW).

For all residential and non-residential buildings or parking lots (article 8, paragraph 2, new number): *“Member States shall adapt permitting and approval procedures for owners and tenants to deploy electric recharging points in existing residential and non-residential buildings or attached parking lots”.*

Explanation: in most Member States, building regulations or approval procedures make the installation of recharging points very complex, uncertain, and long for owners and tenants. This is for example the case in shared residential buildings where majority approval from the board of co-owners is often required and board meetings happen only once or twice a year. Several Member States like Spain or France have already significantly reduced these hurdles by simplifying regulations and procedures specifically for the deployment of recharging infrastructure for electric vehicles. This has had a huge effect on enabling EV-owners to install their charging solutions on their parking spaces.

For new or renewed public car parks in urban agglomerations (article 8, paragraph 2, new number): *“Member States shall ensure that all newly built public car parks in urban agglomerations and those undergoing major renovations, include the conduits dimensioned for the installation of at least normal power recharging points for electric vehicles within the meaning of Directive 2014/94/EU for every parking space.”*

Explanation: EU cities are trying to reduce the use of fossil vehicle and to promote only clean vehicles in the city center. In this regard, renovating or constructing new car parks without preparing those for clean vehicles would be contradictory.

These public car parks can become large recharging hubs in the future, in particular overnight when vehicles are less used. As for residential buildings, we therefore propose to pre-equip all parking spaces with the necessary conduits for later rollout of charging infrastructure.

These conduits should be sized to allow for the later installation of at least normal recharging points within the meaning of Directive 2014/94/EU on Alternative Fuels Infrastructure (i.e. minimum 3,7 kW, but CharIN e.V. would strongly recommend to plan for minimum 7kW or even 11kW).