

## SMART CHARGING INFRASTRUCTURE: A PREREQUISITE FOR CLEAN MOBILITY

### SUMMARY

- Road transport is the biggest CO<sub>2</sub> emitter in the EU, accounting for more than 70% of all transport modes and 30% of the EU's total CO<sub>2</sub> emissions.
- To meet the goals of the Paris Agreement and to deliver the promises of the European Green Deal, the EU needs an ambitious regulatory framework to enable a rapidly growing market of Electrical Vehicles (EVs). This requires developing an ambitious European network of charging stations.
- The revision of Directive 2014/94 on alternative fuels infrastructures, possibly completed by other accompanying measures, should **(1)** set common minimum requirements on charging points' connectivity and features, **(2)** improve consumer information and price transparency, **(3)** harmonise rules on charging contracts, user authentication and payments, and **(4)** organise a strategic repartition of a European network of charging stations.

### I. Charging points: classification, features, connectivity

**Charging points' categorisation as set in Directive 2014/94 does not properly reflect the variety of the needs to be met in developing publicly accessible charging points.** Instead of setting two categories (normal power charging points and high power charging points), we recommend that the high power category should be divided into three segments (DC 22-50 kW, DC 50-150 kW and DC 150 kW+) to which specific technical requirements could apply. This refined segmentation could also facilitate more relevant implementation of supporting public policies taking into account specificities of different markets (including ultra-fast charging).

Legislation should set **ambitious objectives for the deployment of publicly accessible smart charging points that can (1) produce and transfer data about their availability status and (2) provide an easy access to a payment terminal.**

Many publicly accessible charging points currently in use do not offer such functionalities, which is why **an appropriate transition period is necessary to enable the deployment of hardware upgrades by operators on existing charging points.** Public-private investments should be encouraged, e.g. in partnership with cities and local/regional authorities.

**Access to battery-related data needs to be tackled by legislators and improved.** Full access to data is necessary in order to fully harness the potential of smart charging infrastructures (be it publicly accessible or not) , in particular with a view to improving power peak management and grid stability.

### II. Consumer information and price transparency

**Consumers need to be provided with clear, relevant and comparable information on publicly accessible charging points.** The available information should include in particular (1) charging stations' location, (2) their technical characteristics (type, power and payment methods) and (3) availability status.

**Pricing information must be improved, as the price displayed on charging points rarely matches the price really paid by the consumer.** Consumers should have access to all the price components that make up their final bill. It should be a minimum requirement that the ad-hoc price for charging should be made public for all publicly accessible charging points.

**Consumers' access to relevant information should be easy.** We recommend that all the information related to charging stations, including their pricing, should be available on mobile phones. Consumers should be able to transfer data from their phone to their car's screen in order to access it while driving.

### III. Charging contracts, user authentication, payments

**Minimum requirements for harmonising payment methods across the EU should be pursued.** Payment methods often vary across countries, e.g. with a more frequent use of credit card payments in France or cash payments in Germany, which makes it more difficult for consumers to pay as they drive (and charge) abroad. In addition to **ad-hoc payment**, we recommend to support the development of **mobile phone payment**. These solutions provide a high level of flexibility and harmonisation to a very high proportion of European consumers.

**Ensure flexible billing.** With the development of car-sharing services and company-owned cars, the car driver is not systematically the car owner; individual billing should therefore always be available. Future versions of ISO 15118 standards should further enable flexible billing as the current version does not provide appropriate support.

### IV. An efficient rollout strategy for the European network of charging points

An efficient rollout strategy for the European network of publicly accessible charging points should be based on the combination of the following approaches:

- **A demand-driven approach:** EV drivers should be empowered, within certain limits, to request the deployment of charging points in uncovered areas, such as home and office. This is an effective approach in the early adoption phase, and it has shown promising results in many European cities (e.g. Amsterdam).
- **A public planning approach:** the network should be deployed in key areas, using the information collected from the "demand-driven approach" and taking into account relevant factors such as (1) the number of EVs in use, (2) the number of private charging points in use, (3) demographic and traffic density. This is crucial in order to solve the current deficit of charging points in urban and peri-urban areas.

The EU should also require its Members States to define **regional and local objectives** for the deployment of charging points **in their official town planning schemes**.

In most Member States, the **development of non-publicly accessible charging points, especially in multi-dwelling buildings is also a real obstacle to a more efficient roll-out of electric vehicles**. European legislation could provide a common basis to address this concern and guarantee an effective right-to-plug at home to all European citizens.

## About EdEn

---

Created in 2011, EdEn (Equilibre des Energies) is a transversal platform gathering a broad range of actors from the energy, construction and mobility sectors with a common goal: **making a better energy society**.

### ACTIVITY SECTORS



Construction



Energy



Mobility

### MEMBERS

EdEn membership includes institutional actors, consumer associations, trade-unions, professional federations, industrial groups, SMEs and artisans.

All our members contribute to the energy transition and are directly involved in the economic and societal realities of their sector.

### STRATEGIC OBJECTIVES

- ✓ To promote technologies that help **reduce greenhouse gas emissions**
- ✓ To support the growing use of **renewable sources** in the energy mix
- ✓ To encourage **energy efficiency** improvements of buildings
- ✓ To stimulate the development of **clean mobility** technologies
- ✓ To consolidate **energy independence**, both at national and European levels



EdEn | 10 rue Jean Goujon, 75008 Paris, France  
Secretary General: Gilles Rogers-Boutbien  
[g.rogers@equilibredesenergies.org](mailto:g.rogers@equilibredesenergies.org) | +33 (0)1 53 20 13 70  
[www.equilibredesenergies.org](http://www.equilibredesenergies.org) | © EdEn, October 2019