



EV CHARGING INFRASTRUCTURE

An agenda for the next European Commission

ChargeUp Europe calls for shifting the EU policy focus from EV charging infrastructure targets to enabling conditions, by:

- ⚡ Leveraging the growth-inducing power of the single market, by introducing a type-approval for EV chargers and implementing a regulatory simplification effort (“refit 2.0” for the twin green and digital transitions).
- ⚡ Building an EU grid fit for the electrification agenda, supporting investments in grids and fully leveraging the benefits of smart charging to accelerate the integration of the energy, transport and digital sectors.
- ⚡ Integrating widely accepted open, EU-industry led standards and protocols OCPP and OCPI into EU legal frameworks, emulating the US.
- ⚡ Alleviating pressure on staff shortages by implementing an ambitious standardisation and regulatory simplification agenda to maximise efficiency gains along the value chain.
- ⚡ Supporting system integration (in particular energy, digital and transport) with a reformed institutional set-up, building on the successful US example of the US Joint Office of Transportation and Energy.

Introduction

The European Union has set out to be the first climate-neutral continent by mid-century, with an ambitious decarbonisation pathway by 2030.

The transport sector, the second sector responsible for GHG

emissions in the EU, is on course to transform rapidly to contribute to these objectives. The primary engines for the sectoral transformation of transport, as defined by the EU’s European Green Deal, are mandates

(CO2 standards), CO2 pricing, and legislation to define minimum levels for the rollout of alternative fuel infrastructure, including EV charging infrastructure, both in public and private environments.

While these steps have set the policy direction, given clear signals to investors, and allowed companies to plan internal investments accordingly, they are not sufficient to bring about the vision of zero-emission road transports that is a critical condition for success for the EU's deep decarbonisation effort.

With respect to EV charging infrastructure in particular, the preliminary policy steps taken under the Van der Leyen Commission will need to be deepened and complemented by the next Commission. **This paper sets out what the agenda of the next European Commission should be for a truly European, future-proof, user-centric rollout of charging infrastructure to take off over the coming years.**

1. The task: from setting targets to putting in place enabling conditions

The EU policy approach that has prevailed so far has been to define a minimum level of EV charging infrastructure rollout across Europe, both **public** and **private**, in particular through targets enshrined in [EU legislation](#). Public funding is available, e.g. via AFIF, but is reportedly underused due to impractical conditions.

While targets have a role to play to define the direction and pace of

travel for EV charging sector, they do not put in place the enabling conditions for the rollout of infrastructure on the ground. **It is this critical pivot from targets to enabling conditions of the targets that the next Commission will have to achieve.**

2. Leveraging the single market by introducing a type approval for EV chargers

The EU has successfully placed a strong internal market at the heart of its economic prosperity. **Unfortunately there is no single market for EV charging today. Removing regulatory and trade barriers are critical enabling conditions for the sector to thrive.**

The growth-enhancing power of the single market must be harnessed with the introduction of a type-approval for EV chargers. This would also provide a strong boost to the manufacturing of EV chargers in the EU. Today the proliferation of national regulatory requirements for technologies that are still new, and evolving fast, is a source of fragmentation, costs, and delays, working against the aim of the fast deployment of EV charging infrastructure across all of Europe.

Targets – which aim to accelerate the deployment of infrastructure – must be complemented by a parallel regulatory simplification effort, a “refit 2.0. for the twin green and digital transitions”, to reduce administrative requirements (including national requirements that fragment the single market) for product

development, validation, certification and placing on the market to make them faster and simpler. It is important to include under this effort a wide range of sectors (not just the energy sector).

3. Building a grid fit for the electrification agenda, leveraging the benefits of smart charging

Investments into the EU's distribution grids to make them fit-for-purpose in an increasingly decarbonised, decentralised and digitalised power system are estimated at [€375-425 billion](#). There will be no EU electrification agenda without these investments, and **there will be no EV charging infrastructure at the scale and speed that is needed without a massive shift in gear on grid upgrades and grid investments.**

While the EU has taken steps to enhance funding into grid upgrades and interconnections (e.g. through [Connecting Europe Facility](#) or the [Net Zero Industry Act](#)), and will hopefully support these investments in the context of the reform of the [Electricity Market Design](#), the effort pales in comparison to the volume of investments needed. **What is missing is not recommendations on how to make these investments happen, they are available – it is the determined effort to drive that as a cohesive EU policy focus**

That said, the potential of EV charging to minimize investments into the grid, via smart charging, has been consistently overlooked by EU policy-makers. Smart charging does

not happen on a broader scale today because there is not the regulatory and taxation framework, market conditions, and legal certainty necessary to have a business case for broad deployment.

Recommendations have been developed by independent outfits to accelerate smart charging, minimizing grid investments. **Making smart charging the default, empowering consumers to make informed choices, improving rewards for consumer flexibility, stacking multiple services for smart charging to increase individual and system benefits and making local grids 'smart charging ready' [are all critical levers.](#)**

4. Unlock interoperability by integrating open standards and protocols into the EU's legal framework

It is crucial for the EV charging infrastructure industry that a robust "chain of trust" around data flows is built, all along the value chain. Open standards and protocols are the foundations for this "chain of trust".

The EU is about to embark on a far-reaching effort to adopt technical acts implementing regulations applicable to the EV charging sector, such as AFIR. The EV charging industry relies heavily on open standards and protocols that are widely adopted across the EU market, namely [OCPP](#) and [OCPI](#). Yet in effect the has been requesting EV standards based on IEC and Cen/Cenelec mandates, with a *de facto* chilling effect on

developments around OCPP and OCPI. **In practice, although widely adopted by market participants today, OCPP and OCPI are not accepted as valid and ready standards.**

The US, which is also [seeking](#) to accelerate the rollout of EV charging infrastructure, announced in March 2023 that from now on, all charging infrastructure used in the US must comply with OCPP and OCPI – two standards ironically developed in Europe – as a guarantee that different systems can communicate with each other in a uniform manner through a specially developed [standard language](#). The EU also has a role to play in building an IP policy environment which supports innovation and legal certainty (e.g. for patents use, with availability to market participants under fair and transparent terms).

Europe should recognize it is leading on open standards and protocols that guarantee interoperability, and emulate the US by integrating OCPP and OCPI into EU legal frameworks rather than develop new standards.

5. Mitigating labour shortages with efficiency gains from underleveraged standardisation and regulatory simplification

Labour shortages in sectors that are critical for the twin green and digital transition are [well documented](#). For the EV charging sector, an expected increase of [+250% of workers](#) is expected by the end of the decade.

Solutions put forward typically seek to encourage the development of a strong pipeline of engineering and manufacturing-focused students from universities and technical colleges, combined with training and reskilling. Expanded education, training and certification feature as [primary tools](#).

Labour shortages will also be mitigated by making better use of existing resources. Yet, two powerful levers to gain efficiencies in the use of these resources are overlooked today in the EU: standardisation and regulatory simplification.

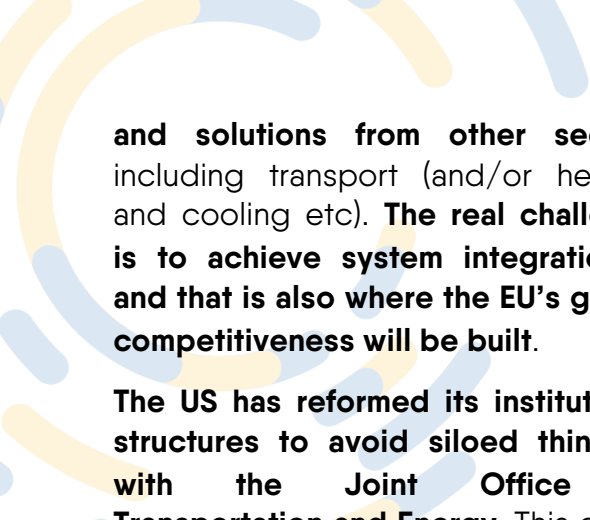
Standardisation is the foundation not just of interoperability, but also replicability; it allows efficiency gains across the value chain, making a more productive use of scarce human resources.

Regulatory simplification as a lever for management of labour scarcity is also underleveraged.

Implementing an ambitious standardisation agenda (cf. section 3) and regulatory simplification agenda (cf. section 2) will help alleviate pressure on labour resources in the EV charging sector in the EU.

6. An EU institutional set-up that supports system- and sector-integration

The EU is often approaching the green transition on a sector-by-sector basis. **However the green transition is not a sectoral endeavour – it will happen at the convergence of energy systems, digital innovation,**



and solutions from other sectors including transport (and/or heating and cooling etc). **The real challenge is to achieve system integration – and that is also where the EU’s global competitiveness will be built.**

The US has reformed its institutional structures to avoid siloed thinking, with the Joint Office of Transportation and Energy. This office combines staff from the Department of Transportation and the Department of Energy into a central planning and execution unit for the Administration’s EV charging priorities. As they are

familiar with different ways of thinking, come from different departments and can draw upon different groups of colleagues, they are able to help align transportation objectives and resources (such as the federal interstate highway corridors) with energy system realities and needs in a more streamlined and proactive fashion. **The European Commission should take advantage of the upcoming renewal in EU leadership to bring about an institutional reform, drawing on the successful model of the US Joint Office of Transportation and Energy.**

