



“ACTION PLAN TO FACILITATE GRIDS ROLLOUT”: THE EV CHARGING PERSPECTIVE

ChargeUp Europe calls for:

- ⚡ Fixing permitting: EU legislation should establish a dedicated, permanently simplified permitting procedure for EV charging projects, including: a/ a mandatory permitting framework; b/ simplified permitting processes; c/ binding deadlines to public authorities delivering permits; d/ a one-stop shop concept. In addition, a regulatory framework allowing DSO to prioritise grid connection requests coming from some actors (meeting defined climate and social criteria) must be established, reforming the “queue” system by creating a parallel, “fast lane” for them.
- ⚡ Updating governance: Energy governance needs to evolve, with a/ more direct role on steering implementation from the EU level; b/ a High Representative for Electrification and Grid Modernisation in the new Commission; c/ a Joint Office of Transportation and Energy (as in the US); d/ a regulatory framework requiring National Regulatory Authorities (NRAs) to step in to design national solutions.
- ⚡ Designing pragmatic workarounds to alleviate labour shortages: NRAs should provide for the expansion of certified parties (e.g. technicians and electricians) allowed to work independently on grid connected infrastructure, as a stop-gap measure until more staff are available at DSOs to perform technical tasks such as connections.

Why EV charging?

EV charging, even among Distributed Energy Resources (DER), is perhaps the most distributed. Normal and high power charging locations are deployed all over – public parking lots, highway rest areas, hotels and restaurants, homes and apartment buildings, gyms and malls, logistic or sports centres, etc. Unlike even rooftop solar and heat pumps which are connected to a house or construction site which may take a year or two to build, EV charging stations can be installed and connected in far less time (not counting the associated grid connection work). Due to this extremely distributed nature and relatively short project timeline (from the CPO side) the permitting and process needs of EV charging are different from those of energy generation projects and even other DERs. Properly enabling this sector to scale widely and rapidly is essential to the EU meeting its climate targets. This paper outlines recommendations for the “Grid Action Plan” to do just that.

1. Introduction

a. What is at stake?

The European Commission will release an “Action plan to facilitate grids rollout” on November 29, 2023. The plan is an opportunity for the current slate of EU Leaders to “fix” the processes and governance which limit grid-adjacent actions and connections. Much of the EU’s policymakers’ attention thus far has been directed at electricity *generation*; the Action Plan should primarily focus on *distribution*¹, where bottlenecks, both physical and digital, are becoming more severe today.

b. How bad is the situation for charge point operators?

The largest bottlenecks that charge point operators (CPOs) face today relate to grid

connections and capacity: lack of transparency on the available grid capacity and on application procedures, the procedural complexity of the process, the amount of time it takes to establish a grid connection point, and lack of access to sufficient grid capacity². Delays can add years to a project; the situation is worsening as more projects are deployed with higher powered connections.

These difficulties are amplified by market structures. Procedures vary greatly from one DSO to another, and with more than 2400 DSOs throughout the EU today, this hampers CPOs efforts to scale infrastructure in a single country, much less work across multiple markets. And this, just when the EV charging industry must take off to accompany Europe’s climate goals.

Case study 1: a CPO facing lack of power availability

Site Location	Province/Region	No. of chargers	No. of Charging Bays	Power capacity required	Regional DNO	Current Challenge to build	Projected Power availability timeline
Charging Hub	Noord Brabant	7	14	1.75 MVA	Enexis	Power availability	2026
Charging Hub	Noord Brabant	5	10	1.75 MVA	Enexis	Power availability	2026
Charging Hub	Noord Holland	6	12	2 MVA	Liander	Power availability	2026
Charging Hub	Noord Brabant	7	14	1.75 MVA	Enexis	Power availability	2026
Charging Hub	Utrecht	6	12	1.75 MVA	Stedin	Power availability	2027

Case study 2: a CPO cannot build or expand fast-charging locations due to grid-related constraints

- Issue 1: the CPO is unable to build new stations or construct new grid connections. The CPO is not able to draw any power from the grid -> currently impacting 19 projects in one country.
- Issue 2: the CPO is unable to expand stations, upgrade chargers or upgrade grid connections. The CPO cannot provide more (fast-charging) power, or extra charging spots or extra chargers because it cannot get any more power from the grid than it has contracted -> currently impacting 23 projects in several countries.

¹ As VP Sefcovic rightly highlighted in his European Parliament hearing

² The European Parliament has proposed tangible, meaningful improvements on this front in the context of the EMD; these must

be supported by the European Commission in the context of the EMD trilogue.

2. Three things the “Action Plan” must get right: permitting, governance, and skills

Renewable Energy, EV charging, and the grid: Win win win What EVs and EV charging can bring to the grid

Distributed storage assets, such as EV batteries, and EV charging, can bring direct benefits to Europe’s electricity grid. EVs are batteries on wheels, so highly mobile storage devices. EV charging is the bridge between (renewable) energy, the grid, and those batteries:

- They can offer considerable flexibility and balancing solutions to the grid, e.g., by means of storage, demand side management or peak shaving, and through aggregation. They have the potential to act as real-time demand response assets, integrating EV drivers as mobile prosumers to the grid, generating benefits to the grid and customers.
- They can fully contribute to the system integration of renewable electricity, allowing reaching higher shares of renewable electricity (RE) in a cost-optimal manner. EVs can absorb renewable electricity at times when it is abundant (via charging), acting as an islanded solution first, and feed it back into a grid when there is scarcity, contributing to the system integration of variable RE.
- They can drive costs down for ALL consumers, not just EV drivers. Distributed, large-scale, aggregated flexibility available to the power system from EVs can drive down costs for operating networks and the energy system, thereby reducing costs for all users (not just those with smart charging EVs), as average electricity costs in wholesale electricity markets passed on to consumers through retail prices are lowered if consumption of electricity during peak hours is reduced and if more electricity is being consumed during periods of low or negative prices. This in turn reduces the need for (expensive) additional generation capacity, and helps MS meet their RED and AFIR targets.

a. Fixing permitting, once and for all

The EU has been tackling the issue of permitting in a piece-meal fashion (RED, Repower EU, Wind package etc), dealing with lengthy permitting timelines in *some* sectors (solar, wind) but not *all*. The EV charging sector still faces unacceptably lengthy and complex permitting procedures. A horizontal approach (with binding timelines appropriate for each use case) is needed, so that DSOs can quickly connect (EV charging) projects to the grid, drawing on the recommendations of the Sustainable Transport Forum (STF) on grid connection and permitting processes³.

Recommendation: EU legislation should establish a dedicated, permanently simplified permitting procedure for EV charging projects (as well as other grid technologies), including: a/ a mandatory permitting framework, with a unique

permit format and procedure; b/ simplified permitting processes; c/ binding deadlines or key performance indicators applicable to public authorities delivering permits; d/ a one-stop shop concept to reduce administrative burden and lack of capacity in public authority departments⁴ dealing with permits.⁵ e/ The possibility for CPOs to present a self-liability insurance/declaration to accelerate the issuance of construction and environmental permits for the installation of charging points should also be examined. f/ A regulatory framework allowing DSO to prioritize grid connection requests coming from some actors (e.g., meeting some climate and social criteria) should also be established, reforming the “queue” system by creating a parallel, fast lane for these actors.

³ Developed under the aegis of DG MOVE.

⁴ “Skills shortage is delaying the green transition”, EIB Municipality Survey, July 2023

⁵ Echoing recommendations from Eurelectric’s “Power System of the Future”, September 2023

b. Modernising energy governance

The State of the Energy Report 2023⁶ states that “The EU climate and energy governance and policy architecture may need to be revisited.” Indeed, the EU is facing the uncomfortable situation of having determined energy goals at EU level, while implementation remains national. This is no longer a sustainable set-up, when the track record of national implementation of key EU frameworks is poor⁷.

Recommendation: Without Treaty change, evolution could include:

- **A more direct role on steering implementation from the EU level:** the Commission should take on a more active, directive role in ensuring that EU frameworks (such as the Electricity Market Design or the Renewable Energy Directive) are properly implemented. Benefits introduced by these frameworks (e.g., on flexibility) will otherwise not be reaped. Developing guidance and investing in capacity-building for National Regulatory Authorities (NRA) would also help. Lastly, a more decisive use of infringement procedures could be explored.
- **Setting up a High Representative for Electrification and Grid Modernisation in the new European Commission:** A high-level political venue is needed to ensure transversal political coordination, which is lacking today⁸.
- **Emulating the US Joint Office of Energy and Transportation:** This office combines staff from the Department of Transportation and from the Department of Energy into a central planning and execution unit for the Administration’s EV charging priorities. Because 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 with energy system realities and needs in a streamlined and proactive fashion.
- **A regulatory framework requiring National Regulatory Authorities to step in to design**

national solutions: NRA are at the forefront of designing the conditions under which DSOs operate locally. They are the primary actor for change on grid matters (e.g., approving terms and conditions of DSOs): they must be given the room and active mandate to better fulfil this role. When an NRA designs an innovative solution⁹, there should also be stronger mechanisms to coordinate the deployment of this solution across other EU countries – otherwise these remain national success stories.

c. Labour shortages: finding pragmatic workarounds

The hard truth about skill shortages or lack of skills is that these can neither be fixed quickly, nor can they be fixed at the EU level, as training and active labour market policy tools are in the hands of the Member States. **There are however regulatory levers that could be mobilized to shorten grid connection delays rapidly.** Public chargers cannot go “live” until a DSO-certified electrician has visited the site in some Member States. This can take weeks, a pinch point that will increase as electrician shortages are expected to worsen. This situation may ease over time – in the meantime, pragmatic workarounds are needed, providing immediate alleviation of pressure points.

Recommendation: National Energy Regulators should provide for the expansion of certified parties (e.g., technicians and electricians) allowed to work independently on the network of network operators, as a stop-gap measure until more staff are available at DSOs to perform technical tasks such as connections and network expansion.

NB: while not covered in this paper, which focuses specifically on the EV charging perspective, ChargeUp Europe supports calls from other organisations (such as Eurelectric) regarding setting-up a regulatory framework that allows for anticipatory investments, as well as additional funding for grid expansion and grid upgrades.

⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A650%3AFIN&qid=1698237100377>

⁷ For instance, dynamic tariffs were supposed to be established across the EU by the Electricity Market Design. They are only offered in 9 countries today – 2/3 of Member States are not correctly implementing these provisions. See “The time is now: smart charging of electric vehicles”, Regulatory Assistance Project, Jaap Burger, Julia Hildermeier, Andreas Jahn and Jan Rosenow, April 2022

⁸ See joint industry statement, “[Call from the economy to the grid: the new highways of Europe](#)”, ACEA, AVERE, EHPA, SolarPower Europe, smarten, EUBAC & ChargeUp Europe, October 2023

⁹ See national solutions designed by NRAs to support the deployment of EV charging: “CEER Report on Electric Vehicles: Network Management and Consumer Protection”, Council of European Energy Regulators, August 2023



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