

'Recharge and Refuel' Flagship under the Member States' recovery plans Guidance Note

Introduction

Last year, the electric car market reached a tipping point in the EU with sales surging to 10,5% on average. However, to meet the EU climate goals and achieve the target of 30 million zero emission vehicles on the road in 2030 set by the EU Smart and Sustainable Mobility Strategy, steep the acceleration in the sales of electric vehicles (EV), the deployment of EV charging infrastructure and the extension of public transport is necessary. The European Commission has set the objective to reach one million public chargers in 2025 and three million in 2030 and thus the fair contribution of each Member State (MS) towards reaching that target is key.

As part of the Recovery and Resilience Facility (RRF), the EC strongly encourages Member States to put forward investment and reform plans on the so-called 'Recharge and Refuel' flagship. This flagship is identified as one of the areas for investments and reforms with tangible benefits for economy and citizens across the EU¹.

In order to make climate objectives and tap on the benefits of clean and cheap electromobility, it is essential that Member States place a strong focus on the 'Recharge and Refuel' flagship in their recovery plans. Both private, commercial and public charging infrastructure for cars and vans as well as public transport infrastructure should absolutely be on top of the agenda, while charging infrastructure for heavy commercial vehicles should also be clearly targeted. The electric truck market, from commercial urban vehicles to long-haul trucks, is expected to ramp up quickly in the next years which means that financing and funding support are necessary to support the rollout of the dedicated charging infrastructure: at the depot, at the distribution centre and at public locations, being it urban areas or along highways.

Given that charging infrastructure is disproportionately concentrated in 4 countries, special attention should be paid to ensure that new stations funded under the NextGenerationEU program are more distributed and that the proper ambitions are expressed in all MS proposals. That is the only way to reach the 3 million target in 2030 and ensure there is a truly pan-European network for all EU citizens.

Overall, the principle of cost-effectiveness should steer the support towards increased electrification of road transport across all vehicle segments. From small vehicles to heavy-duty trucks with long-range transport applications, the battery technology is proven to be the cleanest, most energy-efficient and competitive alternative for the long-term and should therefore be prioritised in the road transport decarbonisation plans of the Member States.

This Guidance Paper provides some recommended elements that Member States should prioritise in their recovery plans and that the EU evaluators should look for in evaluating MS plans. The Platform

¹ European Commission (2020), EU Recovery and Resilience Facility: https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en

for Electromobility strongly feels that these elements are key to ensure that the deployments under the RFF meet the needs of EV drivers and public transport users across the EU and to form the necessary trigger for accelerated private investment. It is essential that Member States place a strong focus on the Recharge and Refuel Flagship in their recovery plans and prioritise RRF funds towards charging infrastructure.

To make sure public funds are allocated in the most targeted way, the Platform believes Member States should develop national e-mobility and related infrastructure masterplans, which include ambitious deployment targets for both vehicles and infrastructure and form the basis of the allocation of the public investments. These plans and targets will provide the necessary trigger for private investment.

1. All types of locations and all use cases should be targeted

In order to ensure that the Recharge and Refuel Flagship proposals in the Recovery and Resilience Plans submitted by MS achieve the goals laid out by the EC, it is critical that they look broadly at all the opportunities and locations where charging infrastructure and electric road system can be deployed. Investments should also target national EV charging networks for long distance travel. Specific support should also be considered for operators looking to invest in charging deserts. We elaborate on some specifics in the next two points:

- **Private, semi-public and public charging**

The major growth areas for EV charging are workplace and community locations, including multi-unit buildings and (semi-)public charging in residential neighbourhoods. In many cases, especially shared private facilities, private charging infrastructure performs the same function as public infrastructure, being accessible to multiple users. MS plans must prioritise significant EV infrastructure deployment at these types of locations, based on their national needs' assessment and ambitions. In this regard, a close collaboration between national and local authorities in developing such plans is key to steer recovery funds towards relevant investments needs for charging infrastructure.

- Develop and modify local building codes to provide specific rules and guidance around the deployment of EV charging infrastructure in new and existing buildings.
- Set a pre-installation requirement of EV charging infrastructures in the design of new buildings and a specific requirement for community infrastructures which enable smart charging.
- Support the “right to plug” so that interested tenants in a building have the standing to request an EV charging station in their building/at their parking space and simplify the administrative procedure for the installation burden is on the municipality or other responsible parties to object, and planning funds are available.
- Address the “first mover” problem by earmarking funds to support the wiring and cabling of the shared/communal portions of new and existing buildings.
- Make public funds available for some private and semi-public charging infrastructure, where it supports a whole group of users (such as employees of a company, vehicles in a depot, tenants of a building, visitors to a building, etc) – i.e. more than just the single owner of the vehicle.
- Destination charging at public parking facilities (e.g. shopping malls, sports facilities, restaurants, hotels, etc.) are essential and should also be supported.
- Do tendering processes in a way to support open markets and optimal service delivery and ensure the best companies for installing and operating EV charging infrastructure are selected through a fair and competitive process.
- Take into account the extension of public transport infrastructure (e.g. for electric buses) in MS plans.



- **Dedicated focus on electric trucks, which yield the greatest synergies**

Fully electric heavy-duty vehicles (HDVs) are very much a reality and already driving on European roads. The number of these will rise quickly in the years to come. Member States must plan for this by deploying the proper infrastructure.

By planning for the growth of the battery electric vehicles (BEV) HDV's, Member States can also generate the greatest infrastructure synergies, as in some cases these hubs can support a range of high and lower power users.

- Funds should be used to encourage the creation of high-powered charging hubs to support HDVs and other users should be planned and developed on main roads and highways, at rest areas, near off/on ramps around logistics hubs, and at depots
- Funds and plans must consider the state of the electricity grid and the need to either extend or upgrade it or provide options for local onsite generation from renewable energy sources coupled with onsite storage.
- Grid capacity should be factored in decisions to build or upgrade a truck resting area to facilitate such high-power charging (e.g. megawatt chargers). This could help lower deployment costs and accelerate grid readiness for e-trucks to come.

2. Deployment and investment decisions should be based on data and real conditions

Proper planning for charger deployment and (possible) grid improvements require data to inform those decisions. Data on existing charging stations and grid conditions should be made promptly available (to municipal, regional authorities and relevant industry actors).

- **To prepare such a plan properly, data is needed to understand the situation now, needs and gaps**
 - Funds must be made available to support MS in gathering this data.
 - The capacity building of grid operators to be part of local infrastructure planning should be enlarged. The process of involving DSOs could include municipal, regional and highway charging infrastructure planning, the development of best location-plans with information on grid capacity and reinforcement needs, with information on costs being made available to all relevant industry actors directly involved in establishing the business case of the operation of the infrastructure, while respecting all data privacy requirements.
- **For proper infrastructure deployment planning purposes, data is needed to map:**
 - Current infrastructure (in Charge Point Equivalent terms)
 - Geographic coverage and gaps
 - Available power levels
 - Accessibility of stations
 - Grid capacity (overall and at precise locations)

3. The grids should be prepared for increased EV integration

The MS plans should require distribution grid connections and available capacity to be future proof, by defining minimum standards which will be necessary for the upgrading and the extension of the infrastructure network, both in urban and rural areas.



- Grid capacity upgrade support should be factored into decisions to build hub areas, commercial parking spots, or resting areas to facilitate high power charging. This could help lower deployment costs and accelerate grid readiness for different types of vehicles, from ride-hailing vehicles to e-trucks.
- Sufficient tools should be given to distribution network operators to operate the grid in the smartest way possible; time-varying network tariffs aimed at shifting EV network use away from peak hours in order to reduce the need for grid reinforcement for example can help to address grid capacity or congestion challenges at particular locations.

4. Interoperable infrastructure should be embedded and roaming enabled

The adoption of open, non-discriminatory and interoperable communication standards in EV charging infrastructure as a key requirement is fundamental to facilitating a seamless charging experience for the driver across national EV charging networks, but also across borders.

Publicly accessible charging infrastructure at commercial or public locations should never be locked into an equipment or network provider, either commercially or technically. Any publicly financed charging stations under the RRF should therefore require open protocols and standards for the backend communications and for enabling smooth roaming. This will help to encourage and accelerate the uptake of EVs and address availability concerns by EV drivers.

At the same time supporting infrastructure that enables roaming on publicly accessible charging stations will allow drivers to charge at stations belonging to the network of another operator (not their “home” operator) with a single subscription provided by a mobility service provider. This applies both within and across national borders. The MS recovery plans should therefore steer eligible publicly accessible charging stations to require the use of the open, roaming communication protocols to facilitate roaming agreements.

5. Smart-charging should be future-proof

EVs could help realising the EU’s renewable energy objectives by increasing the share of RES in the network through smart charging. Future charging stations should be prepared to deliver a basic level of smart charging services, e.g through load balancing and time of use, in particular in regard to private charging at home and/or in residential areas when there is not possibility for EV users to install a charger in the building. It will be important to work towards a situation in which smart and bi-directional charging are standards applied in practice in the coming years. The plans should therefore include smart charging incentives:

- Incentives should focus on supporting the business case for smart charging, for instance by facilitating variable time-based pricing policy, but not prescribe technical means to achieve this additional capability. These facilitating measures should focus on increasing the willingness of consumers and their ability to participate in smart charging.
- Support could also cover the risks in business cases of market parties in the roll-out and/or the operation of smart- or bi-directional charging infrastructure.
- Support should be steered towards future innovations, such as smart charging and state of the art system integration technologies, including vehicle-to-grid (V2G) capability.



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