

EuropeOn recommendations for the shift to electro-mobility

EuropeOn, the European Association of Electrical Contractors, supports the full decarbonization of the transport sector in view of climate neutrality objectives, through electrification as the most efficient way to power clean vehicles. [Electrical contractors represent the companies carrying out electrical works and installations, including on electro-mobility infrastructure such as charging points.](#)

With ongoing discussions on the precise shape of the Recovery Plan aiming to deal with the aftermath of the Covid19 pandemic, it should be noted that e-mobility is an ideal candidate for recovery funds thanks to the ensuing creation of mainly local jobs and involvement of SMEs in the installation of charging infrastructure.

EuropeOn hopes the renewed 2030 emissions targets and the EU Green Deal will induce drastic reductions in related emissions and a shift towards clean mobility. Accounting for almost 30% of the EU's CO₂ emissions and the only GHG source actually rising, the planned actions to address the transport sector should be ambitious and support zero-emissions solutions wherever possible. That means putting electro-mobility at the centre of this transformation.

Fostering sector integration, electricity should be extended to all modes of transport that can be electrified. As outlined in the Green Deal, existing solutions such as shore-side power should be incentivised to immediately address maritime emissions. The reviewed Alternative Fuels Infrastructure Directive (AFID) should therefore exclude fossil infrastructure and provide for the deployment of electric, and thus zero-emissions, infrastructure only.

The user experience is paramount to a successful switch to e-mobility. This entails providing for harmonised and clear payment solutions and pricing, even territorial coverage of charging points, a road pricing framework (i.e. Eurovignette) reflecting transport's external costs. Crucially, user trust hinges on dependable charging infrastructure. Public contract should have strict maintenance requirements mandating that charging points have to be operational 95% of the time, with a minimum response time of 24 hours.

Local and public authorities have a significant role to play. Public bodies should lead by example and procure electric vehicles and transport services, for both passenger cars and buses or heavy-duty vehicle fleets. Local authorities should also seek to incentivize the uptake of e-mobility in their area through demand-driven schemes for public charging points (e.g. Amsterdam). Finally, more R&I is still needed to efficiently extend electricity in transport (e.g. dynamic charging, electric roads).

Electrical contractors are in a unique position to offer insights from the situation on the ground and collect first-hand feedback from end-users, leading to the following recommendations:

The job potential of transport electrification

While job losses will gradually occur at the manufacturing stage, they will be outbalanced by the numerous e-mobility jobs. In 2018, we found that [200.000 net jobs will be created with the switch to e-mobility](#), with over half in the operation, maintenance and installation of infrastructure. And this projection is limited to 2030 and to passenger cars. The 2050 time horizon and the inclusion of heavy-duty and maritime transport has the potential to further raise job creation considerably.



As e-mobility has already experienced a rise in the past year, it is critical at this juncture to invest heavily in e-mobility and in its workers. The shift is coming and it is up to current policymakers to ensure a competitive and sustainable transition.

Indeed, the deployment of charging infrastructure will have to be scaled up considerably to meet 2030 targets and human capital considerations have thus far been overlooked. A holistic approach to the mass deployment of charging infrastructure, comprising and assessing the adequacy of skills and training, is necessary for the sufficient workforce to be available with the adequate skills-base to face this growing demand. For instance, this approach would encompass the re-skilling of traditional automotive manufacturing workers. Additionally, the dynamic evolution of technology and corresponding skills calls for even more lifelong training and private sector involvement.

EuropeOn's recommendations to unlock the job potential of transport electrification:

- ➔ Policymakers should provide for a strong regulatory framework for e-mobility, fostering a European electro-mobility value chain, which will offer the predictability EU businesses need to realize its job potential
- ➔ Implement a holistic approach to infrastructure deployment, that considers workforce availability and needed policy response following the [Skills4Climate recommendations](#)

A sound policy framework for home charging

As 80% to 95% of charging is done at home, buildings are the main enablers of e-mobility but suffer from a lagging policy framework concerning e-mobility.

The Energy Performance of Buildings Directive took a first step in the right direction facilitating the installation of EV chargers, but the “right to plug” needs to be bolstered. Approval periods are still dauntingly long, lasting a full year in some cases, acting as a strong deterrent. And this comes on top of the potential costs to strengthen grid connections or the building’s electricity system, raising the needed investment exponentially. Further, a swift deployment should not overlook the safety of home electrical installations and the latter should always be carried out by qualified professionals.

Smart charging and smart systems can help overcome capacity issues. Grid operators recently found that smart charging is the key solution to integrate EVs in their system¹ and offers drastic cost reductions². By redistributing loads over time, smart charging can curb peak demand and avoid strains on electricity networks and building electric systems.

Smart charging will also enable the activation of EVs as energy assets and empower consumers to become prosumers. The aggregation of EVs or EV fleets and their on-board batteries has great potential to offer flexibility services thanks to Vehicle-to-Grid (V2G) technology, and EVs can also enable the efficient integration of renewables, both in our electricity networks and in buildings.

EuropeOn's recommendations for a sound home-charging framework:

- ➔ Approval procedures for home charging infrastructure must be streamlined

¹ RTE, *Enjeux du développement de l'électromobilité pour le système électrique*, 2019, retrieved from : https://www.rte-france.com/sites/default/files/rte_-_mobilite_electrique_-_principaux_resultats_-_vf.pdf

² IRENA, *Innovation Outlook: Smart charging for electric vehicles*, 2019, retrieved from: https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/May/IRENA_Innovation_Outlook_EV_smart_charging_2019.pdf



- ➔ The Renovation Wave should feature requirements for smart capabilities in renovated buildings, incentivising the integration of renewables and EVs
- ➔ The Renovation Wave should also provide adequate funding schemes for unaffordable grid connections or upgrades to electrical systems in single buildings

Data & standards

Vehicle data is critical when it comes to making smart and V2G charging a reality. As highlighted by the Sustainable Transport Forum³, relevant market actors will need access to different types of data relating to the charging and battery of the vehicle. An open data system, without proprietary vehicle data, is necessary to reap the full benefits of e-mobility. The user should be the owner of this data and should be able to decide on its usage, based on personal preference and market opportunities, which, as any financial incentive, will lead to higher e-mobility uptake.

Finally, charging points must come with adaptable communication protocols and standards. This will allow extra chargers to be added to a system through time without vendor lock-in and thus ensure load-sharing capability throughout the building's life-cycle.

EuropeOn's recommendations on the role of data and standards in the development of e-mobility:

- ➔ Ensure competitive energy service models are not hampered by proprietary vehicle data
- ➔ Set up a regulatory framework where consumers decide how their vehicles' data is used
- ➔ Mandate open communication protocols and standards for charging infrastructure

The role of regulated entities

While the role of grid operators and utilities has been the subject of regulatory attention, their access to the e-mobility market still needs to be assessed to safeguard competitiveness and a level playing-field. Indeed, they can easily be in a dominant position in the charging infrastructure market and in some cases distort competition by leveraging reduced utility bills or leasing solutions in their marketing tactics.

Additionally, better and more streamlined communication procedures must support the installation process. Grid maps should be made available to installers as a way to accelerate approval procedures. This process can sometimes take several months and potentially result in a negative answer, acting as a strong deterrent to potential EV users.

Finally, network tariffs should send the right price signals to consumers and contribute to the uptake of e-mobility. Tariffs should be dynamic (time-of-use) and reflect the contribution of flexibility providers such as EVs to the grid. Dynamic pricing also works well with solar PV installations.

EuropeOn's recommendations on the role of regulated entities in the switch to e-mobility:

- ➔ Ensure grid operators or utilities are kept away from dominant positions
- ➔ Enable a framework for better and faster communication with grid operators
- ➔ Reform network tariffs to accommodate and incentivize energy services and e-mobility

³ Sustainable Transport Forum, *Report: Analysis of stakeholder views on key policy needs and options for action in Alternative Fuels Infrastructure deployment and consumer services*, 2019, retrieved from: <https://ec.europa.eu/transport/sites/transport/files/2019-stf-consultation-analysis.pdf>



About EuropeOn

EuropeOn, originally formed as “AIE” in 1954, is the European voice of the electrical contracting industry. With 1.8 million professionals in over 300.000 businesses and with a turnover of over EUR 200 billion, electrical contractors provide electrical installations for buildings and infrastructure (such as charging points), enabling cities and citizens to take part in the Energy Transition. Addressing energy, climate, mobility, building and skills policies, EuropeOn is engaged at EU level to foster synergies between the electrical contracting sector and European policymakers. EuropeOn is, among others, member of the E-mobility Platform and campaigning in favour of Skills4Climate. www.europe-on.org

