



# POLICY POSITION ON ELECTROMOBILITY

## ENVIRONMENT



### Executive Summary

The FIA European Bureau (EB) supports the approach taken by the European Commission in the European Green Deal to meet the ambitious climate targets set in the European Climate Law.

Electromobility has a significant role to play in delivering a smooth transition to climate-neutrality, and it fits into a global megatrend of electrification, digitalisation, and automation. Already with today's EU27 electricity mix, electric vehicles (EV) constitute an efficient way of lowering emissions from the transport sector.

EV ownership will grow, primarily driven by their lower operational costs in comparison to Internal Combustion Engine (ICE)-powered cars. However, it's important to note that the attractiveness of this proposition relies on the preservation of the current taxation framework applied to electromobility. To empower consumers in making informed decisions, it is imperative to provide clarity regarding the sustainability of reduced taxes or direct subsidies currently offered to new vehicle buyers across most



Member States. The FIA strongly advocates for transparent and reliable information regarding the continuity of these measures, ensuring that consumers have the necessary knowledge to navigate their choices wisely.

The overall objective in the transition to electromobility should be to ensure that motorists enjoy a similar level of convenience as they do with conventional fuels and powertrains, at a comparable cost level, and, most importantly, without leaving anyone behind. Therefore, we call upon legislators to ensure a fair competition among electricity suppliers/operators (e.g., local authorities launching tenders to fill in their charging needs) that would keep electricity prices moderate and allow for more transparency, thus offering consumers to charge their EV at affordable costs.

Important players, such as the International Energy Agency (IEA), have raised concerns about the availability of raw materials (e.g., lithium, cobalt, copper) needed to decarbonize the transport sector<sup>1</sup>. Therefore, as proposed in the Net Zero Industry Act and the Critical Raw Materials Act, the EU should invest into research and development to look for alternatives for the resources currently needed for carbon-reducing technologies. This would decrease the EU energy dependency and reduce the pressure to deplete these resources around the world.

This position paper addresses both the policies and regulatory measures to promote the uptake of vehicles fully powered by an electric motor, using electricity stored in an on-board battery that is charged by plugging into the electricity grid, and the deployment of the related necessary charging infrastructure. It further proposes measures to support the use of electricity produced from renewable energy sources and, where appropriate, highlights the potential to reform and revise applicable EU legislation.

## Electric mobility market

In 2022, despite the overall decline of the EU car market, battery electric vehicles (BEV) accounted for 12.1% of all new car registrations in the EU, compared to a 9.1% market share in 2021. Nevertheless, regional differences exist, with western and northern countries (e.g., Belgium, Denmark, Finland, Luxembourg, Netherlands, and Sweden) showing a much larger penetration of EV in their total fleet than eastern countries (e.g., Bulgaria, Croatia, Czechia, Estonia, Poland, and Slovakia)<sup>2</sup>. On the same period, the market share of vehicles running on petrol dropped to 36.4%, from 39.9% in 2021. Regarding diesel vehicles, the trend is the same, since their market share decreased to 16.4% in 2022, from 19.6% in 2021. Despite the overall decline of car registrations (9.3 million units, the lowest level since 1993) because of component shortages in the first half of

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<sup>1</sup> [The Role of Critical Minerals in Clean Energy Transitions](#)

<sup>2</sup> [Country comparison | European Alternative Fuels Observatory \(europa.eu\)](#)



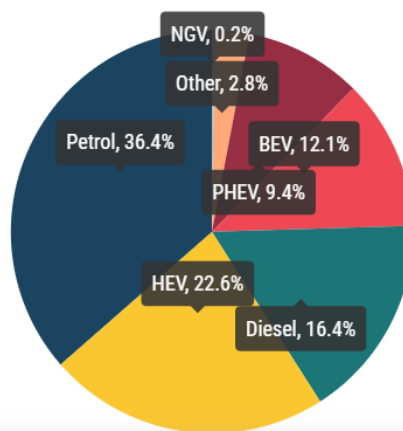
the year<sup>3</sup>, conventional fuel types still dominated EU car sales in terms of market share (52.8%) in 2022, while the share of electrified vehicles has significantly grown in 2021 and 2022<sup>4</sup>.

### New passenger cars by fuel type in the EU

% SHARE

2022 ▾

Petrol Diesel Battery electric (BEV) Plug-in hybrid (PHEV) Hybrid electric (HEV)  
Natural gas (NGV) Other



Source: ACEA

## Infrastructure

Studies show that, for many users, charging mostly takes place at home or at the workplace<sup>5</sup>. Authorities should ensure that tenants have the possibility to install charging infrastructure for private use in a simple and uncomplicated way. Therefore, the FIA EB supports co-legislators' commitments to set, in the revision of the Energy Performance of Buildings Directive (EPBD), a minimum amount of mandatory recharging points, and infrastructure (e.g., pre-cabling, ducting) for new residential buildings and residential buildings undergoing major renovation. Furthermore, we welcome the current approach of co-legislators willing to remove regulatory barriers, such as permitting or approval procedures, to the installation of recharging points in residential buildings.

<sup>3</sup> [Passenger car registrations: -4.6% in 2022; +12.8% in December - ACEA - European Automobile Manufacturers' Association](#)

<sup>4</sup> [Fuel types of new cars: battery electric 12.1%, hybrid 22.6% and petrol 36.4% market share full-year 2022 - ACEA - European Automobile Manufacturers' Association](#)

<sup>5</sup> [Some studies indicate that as little as 5% of charging takes place in public locations. \(Hardmen et al, A review of consumer preferences of and interactions with electric vehicle charging infrastructure, 2018\).](#)



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The possibility of charging at the workplace should also be promoted with incentives; therefore, ambitious recharging points and infrastructure targets for new non-residential buildings and non-residential buildings undergoing major renovation are also praised by the FIA EB.

By implementing comprehensive planning and streamlining processes and approvals, EU Member States should prioritize the installation and maintenance of appropriate charging infrastructure at key public locations in accordance with demand. While slow speed charging options suffice for home and work charging, fast charging options are necessary for long-distance travel, urban areas, and popular tourist destinations. Therefore, the FIA EB warmly welcomes the Alternative Fuels Infrastructure Regulation (AFIR), which aims to establish at least one electric recharging station with a minimum output of 400kW for light-duty vehicles every 60km along the core TEN-T network by December 31, 2025, and 600kW by December 31, 2027. The provisions for derogation from these targets in terms of output and distance for TEN-T roads with low total annual average daily traffic is a positive step toward accommodating the needs of the growing EV fleet and ensuring adequate charging capacity on EU roads.

However, Member States should also address the specific requirements of urban nodes in their national policy frameworks, going beyond the minimum requirements outlined in the AFIR. This will ensure that the number of publicly accessible recharging stations is increased in line with the increasing adoption of EVs, providing the necessary infrastructure and supporting market development. Urban nodes, in particular, will require a dense charging infrastructure, including fast and ultra-fast charging options, to facilitate a seamless transition to EVs.

Furthermore, it is essential that motorists have easy access to information about the locations, condition, and availability of charging points, as, in some cases, stations can be occupied for extensive periods of time and/or out of service, which will obviously be inconvenient for users. In that vein, the list of data, laid down in the Article 18 of the AFIR, to be made available in a free and unrestricted manner through an Application Programme Interface by operators of publicly accessible recharging points is fulfilling a long-standing demand from the FIA EB. Equally, the requirements for Member States to make those data accessible on an open and non-discriminatory basis to all data users through their National Access Points by 2025, and then through a common European access point by 2027, should favour a smooth use of the public charging network. We expect these and other aspects to be further developed in the upcoming Commission's proposal for a Mobility Data Space.

Finally, we regret the absence of provisions requiring Member States to cooperate with third countries in which transit corridors connecting Member States are located, to ensure that EU citizens can benefit of a convenient level of charging infrastructure when transiting.



## Consumer needs

The FIA EB can still notice a general lack of knowledge about electric vehicles and the charging procedures and infrastructure; barriers frequently cited by consumers are the lack of charging infrastructure, the lack of knowledge of charging protocols, as well as of EV, and the high price of EV. In particular, the European Commission, in its impact assessment of the "Fit for 55" package, assumed that the price of EV would decrease over time; however, recent literature argued that many EV are currently sold below production costs and that, even when production costs decline, manufacturers will keep prices high to recover the high investment costs<sup>6</sup>. Moreover, manufacturers are currently mainly building premium EV models, unaffordable for many consumers, whereas medium and small size vehicles are lacking in the market. EV must become affordable soon for all citizens to speed-up the uptake of EV and meet the EU climate ambition without leaving anyone behind; to achieve the affordability of EV, the FIA EB recommends legislators to gear incentives as mentioned next.

## Incentives

To facilitate the uptake of EV in their markets, several countries are providing incentives, including the exemption of purchase and yearly ownership taxes or VAT, lower road tolls, free parking, or use of dedicated lanes. Purchase incentives were found to be the most effective means to lower the purchasing barrier until EV total cost of ownership becomes even more competitive. FIA demands clarity for consumers concerning the upkeep of these measures: consumers must benefit from these incentives until EV have fully penetrated the market at an affordable price. For instance, in Norway, the different state incentives used to boost the share of EV started to be reduced in January 2023, but only after BEV reached 20.9% of all passenger cars in the country and 79,3% of new car sales in 2022<sup>7</sup>. However, current incentives could be better targeted towards the second-hand market to develop this market and ease the access to EV to the most vulnerable households. Incentives towards new EV purchase could also be limited to small and medium-size vehicles, to incentivise consumers to buy those models. Indeed, since incentives are currently designed towards the purchase of new EV, and these are mainly premium models, they create a distortion of the market since affluent consumers are tempted to sell their current cars to buy heavier and less energy efficient vehicles, and manufacturers are encouraged to produce such expensive cars to maximise their profit. Incentives could also be geared to boost the use of refurbished batteries or single cells for second hand vehicles, in view of keeping vehicles longer on the road and reducing the need for critical raw materials. Finally, we believe that the Social Climate Fund should grant a maximum support to measures and

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<sup>6</sup> [EXPERT STUDY ON AFFORDABILITY OF CAR OWNERSHIP - FIA Region I \(fiaregion1.com\)](#)

<sup>7</sup> [2022: 79.3 percent of all new cars sold in Norway were fully electric \(elbil.no\)](#)





investments enhancing the uptake of electric vehicles, such as financing the installation of pre-cabling or ducting in residential buildings.

## Advertisement

To make wise choices when buying an EV, consumers must be able to rely on standardised information that allows them to compare among models from different brands.

Specifically, and in terms of range, a mixed driving range should be established as a standard and be displayed as "from x to y", instead of the current claimed maximum range. Moreover, a standardised winter range should also be displayed to reflect the variation of the actual range under cold ambient temperatures. Eventually, the WLTP combined range should be used, instead of the city range, since the tests used for achieving the combined range are reflecting more the conditions that a vehicle might face on EU roads. Therefore, the newly proposed EURO 7 legislation should mandate that all this information is clearly indicated in the environmental vehicle passport, which manufacturers must deliver to the buyer of the vehicle.

In what concerns the advertisement of the battery capacity, the net capacity should be used instead of the gross capacity, which does not reflect the real available capacity of the battery. In addition, minimum durability requirements of the battery should be set in the EURO 7 proposal, ensuring that, after 16 years of use or 240 000km, 80% of the net battery capacity is still available for users.

In addition, the charging speed of the battery (time needed to charge the battery from 10 to 80% of its net capacity on a charging station with a given power output), should be showed as a standard time, while the charging curve should also be presented. Finally, consumers should also be informed about the effects of extreme temperatures (e.g., very hot or cold weather) on the charging speed.

Awareness-raising efforts and driving training activities can also help alleviate consumers' concerns. In the short term, specific driver training could be offered to new EV owners and those driving for business and commercial purposes, to raise their awareness of the specificities of electric propulsion, and provide targeted advice, e.g., to maximise the energy regenerating features of their vehicles and increase the driving range.

## Tariffs, transparency, and payment methods

Drivers must understand the price of charging in advance of using a charging point, as recharging an EV should be simple and transparent for consumers.

The lack of transparency and comparability of contractual charging price models must be addressed. In that vein, the provisions calling on service providers to display through freely available, widely supported electronic means, all the price components to end users should also help consumers to



easily compare the actual costs of charging of different contracts. Publicly accessible charging points must provide the possibility to recharge without entering a contract with the operator, what is known as charging on ad-hoc basis, and consumers should also have the possibility to compare the different pricing schemes for ad-hoc charging. Therefore, we welcome the AFIR provisions laying down the payment methods, the price display, and price composition related to ad-hoc charging. Furthermore, the unrestricted and free access to the ad-hoc price of each operator of publicly accessible charging stations through the National Access Points and the common European access point will ease the comparison of the pricing schemes for consumers. Hence, a roaming solution should be set-up to allow consumers to use all charging operators' networks, as well as compare ad-hoc pricing schemes through a single application. In addition, to prevent operators from charging excessive fees for ad-hoc charging, a tariff cap should be set to ensure that rates are not disproportionately higher than the contract-based pricing options.

EV users also currently face a lack of transparency and unfair pricing models with time-based tariffs, because the rate of charging is often negatively affected by variables such as temperature or the number of users at a charging station. When users pay according to the amount of charging time, they can receive much less electricity than expected. To address this problem, the FIA EB demands that tariffs are based on the amount of electricity received (e.g., euro/kWh), and that the prices per unit are transparent before re-charging and be included in the total billing after charging; this will help users optimize their charging patterns at home and/or in public stations. The FIA EB thus welcomes the provisions laid down in the AFIR, mandating public recharging operators to display, for ad-hoc charging, tariffs based on the amount of electricity received (per kWh, per minute, and per session) before a user is initiating a session, to allow for an easy comparison of prices; nevertheless, we believe that tariffs based on the electricity received should apply for all charging sessions, not only for ad-hoc charging. Once the battery is fully charged, parking fees may be applied to incentivise users to free up the charging facility for others. This aspect is tackled by the AFIR provision allowing operators to charge an occupancy fee per minute, while requiring customers to be informed of it before starting a recharging session.

Motorists also complain about the payment options for ad-hoc charging, as it is often the case that a smartphone app is required. This situation is clearly not convenient for users, and it can be particularly difficult when travelling abroad. It is the opinion of the FIA EB that the AFIR tackles this issue properly, by granting users the right to pay for ad-hoc charging with payment cards, contactless devices, or using QR codes. Motorists would therefore have the freedom to choose the most convenient payment method, making it easier for them to embrace EV.

### Electricity supply and grid

Further development of the electricity distribution networks is an important lever to support EV use. In many places, the number of dedicated EV charging stations that can be installed is limited due to



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the constraints imposed by the local grid capacity. This issue arises, for instance, for motorway service areas' operators, and for companies and organisations looking to electrify their vehicle fleets and charge them in a common operational hub.

The upcoming infrastructure expansion requires huge investments in electricity supply and the electricity grid. A grid with an increased charging capacity, offering the possibility for more vehicles to charge simultaneously, would reduce the necessity to increase the size of EV batteries and decrease the demand for critical raw materials, as well as the environmental impact of these vehicles, notably regarding tyre abrasion.

Secondly, it must be ensured that the additional electricity supply in time originates from renewable sources; otherwise, the lifecycle emission reductions from electric mobility are hampered. Therefore, the FIA EB welcomes the increased targets set-up in the revision of the Renewable Energy Directive (RED) for the use of renewable energy in the transport sector by 2030, since it will foster the use of renewable electricity to charge EV in the cleanest possible way.

Smart grids, distributed generation and storage, and demand-side management should be promoted to increase the flexibility of the system and compensate for the loss of flexibility on the generation side of intermittent renewable sources, such as wind or solar. The RED recognizes the importance of smart grids, demand-side management, and smart metering systems, but clear targets are missing. As for the AFIR, it missed the chance to mandate public charging systems to be equipped with intelligent metering systems to adapt the electricity supply to the demand in realtime, while providing information to consumers to allow them to charge their vehicles at the most efficient time of the day. Furthermore, consumers should be properly informed of the mechanisms (e.g., higher prices or remote controlling of smart meters, reduction of the wall box capacity for single users) applied by grid operators or electricity suppliers to steer the charging of EV.

The AFIR requirement mandating public accessible recharging points built after the entry into force of the Regulation to be capable of smart charging is very pertinent. However, while the potential of bi-directional charging is recognized in the recitals and in the future national policy frameworks, the Regulation is not setting clear targets for this feature. First, the FIA EB calls for the implementation of a regulatory framework for bi-directional charging; secondly, these frameworks must be consumer-friendly to encourage consumers to make use of this feature while avoiding that the benefits only lie within network operators. Therefore, the FIA EB encourages Member States to consider, in their national policy frameworks, measures aiming at the deployment of charging points capable of bidirectional charging. In addition, the FIA EB insists on the need for bidirectional charging in-between vehicles to, for instance, allow roadside assistance services to charge EV without being dependent on specific equipment.





## Circularity of EV batteries

A key aspect of the uptake of EV is the availability of the resources needed to produce their batteries. To reduce the pressure to deplete these resources, while strengthening the EU energy independence, the FIA EB recommends improving the circularity of EV batteries<sup>8</sup> through the following measures:

- the information on the state of health of the batteries (and their embedded materials), currently kept by the original manufacturers, must be available for authorised repairers to make the repair of batteries easier and to develop a circular approach, allowing for various new innovative initiatives to enter the market. Legislation on access to in-vehicle data, resources and functions is paramount to allow authorised third parties to repair batteries easily and increase the lifetime of vehicles.
- A reverse battery value chain is non-existing and must be established, including all the different steps, from collection, testing and dismantling facilities, repurposing workshops that manufacture second-life batteries, to the recycling processes and plants. Therefore, the FIA EB welcomes the ambitious Commission's proposal of a Critical Raw Material Act to boost the extraction, processing, and recycling of critical raw materials in the EU by 2030.
- Automotive battery packs are not yet designed to be easily dismantled by third parties or with a fully circular value-creation in mind. An industry-wide collaboration initiating a common approach to design for circularity and dismantling can set minimum requirements to standardize elements of design for circularity and initiate value-creation throughout consecutive life cycles. Therefore, we call legislators to implement measures to boost the possibility to replace single cells of an electric vehicle battery to allow consumers to repair their EV at affordable costs, while also decreasing the need for critical raw materials by reducing the need for full battery packs.

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<sup>8</sup> [https://www.fiaregion1.com/wp-content/uploads/2022/11/FIA\\_Battery-Recyclability-Study.pdf](https://www.fiaregion1.com/wp-content/uploads/2022/11/FIA_Battery-Recyclability-Study.pdf)



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## The FIA European Bureau

The FIA European Bureau engages in European research and innovation programmes to support and promote the development and the deployment of alternative fuelled vehicles, such as:



The **Green NCAP** scheme and the Green Vehicle Index (GVI) project which promote the development of vehicles that are clean, energy efficient and environmentally friendly.



The **FIA European Bureau** is a consumer body representing 68 Motoring and Touring Clubs and their 40 million members from across Europe. The FIA European Bureau represents the interests of our members as motorists, riders, pedestrians, and passengers. The FIA European Bureau is working to ensure safe, affordable, clean, and efficient mobility for all. Learn more at [www.fiaregion1.com](http://www.fiaregion1.com).

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