AT A GLANCE

Requested by the TRAN committee

European Parliament

Pricing of E-Charging for Electric Cars and Onshore Power Supply in Ports

See the full study

This study examines whether prices for public e-charging for drivers of electric vehicles (EV) and on shore power supply (OPS) for ships are reasonable, transparent and comparable across the EU. It explores what users actually face before they charge or connect: the displayed price, the tariff structure, the payment method, and the final bill.

Pricing of public e-charging

EV charging prices must be reasonable, transparent, comparable and non-discriminatory under the Alternative Fuel Infrastructure Regulation (AFIR).

Public charging is substantially more expensive than charging at home or at workplace

Public charging is becoming essential for EV uptake, especially for people who cannot charge at home or work. For these users, the price of public charging directly affects whether driving an EV remains cheaper than driving a petrol or diesel car.

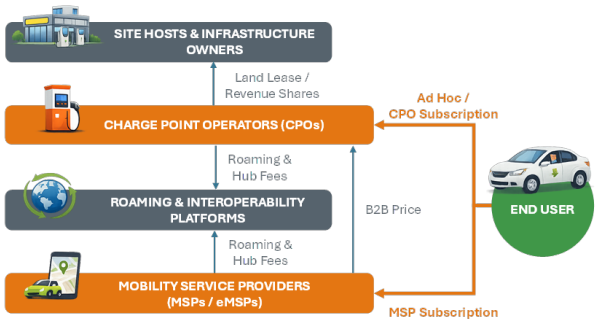
The study finds that public charging is often substantially more expensive than home or workplace charging. These high public charging prices destroy the financial advantage of switching to an EV.

Many components build up the total price, which is not clear to the driver before the session starts

Public charging prices are shaped by a layered market structure in which several actors and fee components together determine the final price the driver pays. The charge point operator (CPO) sets the base conditions for using the charging point, including the energy price and possible time-related, session or occupancy fees. However, the user-facing price is built across several layers: CPO tariffs, pricing by mobility service providers (MSP), roaming arrangements, subscriptions, and site-specific conditions. A key problem is that prices are not always clear before charging starts. This pricing structure makes it difficult for drivers to compare prices and avoid unexpectedly high bills.

Very different prices depending on the access method used

Layered market structure of public EV charging



Source: Authors' own elaboration (FIER, 2026).

Normally it should be possible to start a charging session based on an ad hoc method (bank card) which is the basis for the EU regulation. However, in most cases, the charging session is initiated through an CPO or MSP via an app, card, or subscription service. Because there are many MSPs, each with different commercial arrangements with the CPOs, the same charging session can result in different final prices depending on the app, card or payment method used which results in non-transparency for the end users and a lack of confidence in driving an EV.

Large price spreads and tariff complexity remain major problems for consumers

At the EU level, average AC charging prices range from around €0.27 to €0.65/kWh, with a total spread between €0.10 to €0.90/kWh. For DC charging, the price range is even wider, from averages between €0.32 to €0.85/kWh and a total spread between €0.15 to €1.35/kWh.

Public AC charging is sensitive to local monopoly conditions

Public AC charging is especially sensitive to local monopoly conditions. In practice, EV drivers that are not able to charge at home depend on the nearest available charger and cannot easily choose between competing providers as in many cases the charger is part of a large concession without competition.

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Fast DC surcharge is not always justified

Fast DC charging is different: higher prices can be justified by higher investment costs, grid capacity, and service speed, but observed surcharges are not always clearly linked to these cost differences.

Conclusion: lack of transparency leads to a risk for excessive prices for public e-charging.

Overall, the study shows that public e-charging prices are often excessively complex and difficult to compare and justify from the user perspective.

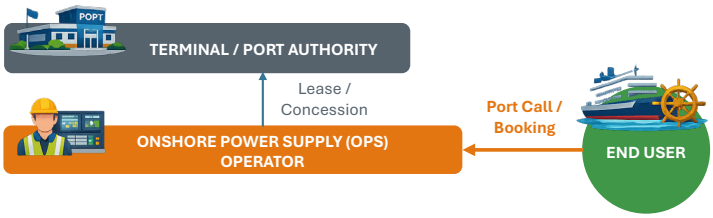
Onshore power supply in ports

EU law requires OPS infrastructure in relevant ports, and from 2030, certain ships will have to use OPS or an equivalent zero-emission solution when at berth.

OPS is provided in monopoly or near-monopoly conditions

However, OPS pricing is not yet covered by the same type of EU pricing rules as public EV charging. While EV charging prices must be reasonable, transparent, comparable and non-discriminatory under the Alternative Fuel Infrastructure Regulation (AFIR), no equivalent EU-level pricing principle exists for OPS. This matters because OPS is usually provided in monopoly or near-monopoly conditions. A ship at a specific berth often has no practical choice between competing shore power providers.

Natural monopoly market structure of OPS



Source : Authors' own elaboration (FIER, 2026).

OPS tariffs widely vary across ports

The study finds that OPS tariffs widely differ across EU ports. They often combine energy charges with fixed, connection-related, call-based, or minimum-charge elements, which makes prices difficult to compare and can lead to higher average costs for smaller vessels or short-stay users.

Without clearer pricing rules, there is a risk that OPS becomes available on paper but remains unattractive or difficult to use in practice.

Recommendations for policymakers

For public EV charging, the priority is to make prices clear, simple and enforceable.

Drivers should be able to see an all-in price before charging starts, including all mandatory price elements. Tariff structures should be easier to compare, and users should receive itemised invoices after charging.

EU and national authorities should also clarify how the AFIR requirements on reasonable, transparent, comparable and non-discriminatory pricing should be applied in practice. Stronger enforcement is needed where prices are unclear, unjustified or strongly divergent for the same charging service. From transparency in principle to transparency in practice.

For OPS, the EU should develop a basic pricing governance framework.

OPS pricing should support cost recovery without unfairly penalising early users, smaller vessels or short-stay calls. A clearer tariff design would help ports, ship operators, and policymakers assess whether OPS prices are reasonable and support the wider goal of cleaner maritime transport.

Overall policy message: electric transport infrastructure must not only be available but also usable, trusted, and fairly priced.

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