BRIEFING

Electric trucks go mainstream in Europe

Why an early revision of the EU CO_2 standards for truckmakers is not justified and would endanger Europe's automotive future

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Summary

Enabling conditions in Europe are highly favourable for electric trucks

E-trucks can already **weigh** +2 tonnes **more**; this can increase to +4 tonnes for some configurations.

E-trucks pay less tolls: 47% of EU trucking takes place in countries where zero emission trucks pay lower toll rates

The **EU** is putting almost **€450 million** into truck **charging infrastructure,** funding more than 4,600 public chargers.

European truckmakers can meet EU CO_2 targets

Due to the targeted **amendment to the CO_2 standards**, European OEMs now need to sell **23%** instead of 31% e-trucks to meet their **2030 target**. This weakened target is **very achievable**.

Daimler Truck already achieved a regulated e-truck **sales share of 7.5% in H2 2025.**

Leading markets show that **fast progress is possible**: 13% of new regulated trucks are electric in the Netherlands, 12% in Norway.

Bringing forward the 2027 truck CO_2 review is not in Europe's interest

EU industrial policy

Chinese OEMs are entering the EU market with affordable e-trucks.

↓

Slowing down would risk Europe's competitiveness and tech leadership.

Truck affordability

The **CO_2 standards drive scale**, which leads to lower vehicle prices. Weakening them does the opposite.

EU energy security

Trucks consume 22 times as much oil as cars over their lifetime. **Delaying electrification** prolongs oil import dependence and **weakens Europe's energy security.**

T&E

First introduced in 2019, and then revised in 2024, the EU CO_2 standards for heavy-duty vehicles (HDVs) set specific emissions reduction targets for manufacturers selling HDVs in the EU. Most trucks need to lower emissions by 43% by 2030 compared to 2019 levels. A 64% reduction target applies for 2035, increasing to 90% by 2040.

European truckmakers are calling on the European Commission to bring forward the review of the CO_2 standards for HDVs to 2026 rather than 2027 as set out in the legislation adopted in 2024. They argue that the required enabling conditions in the EU are not in place to generate sufficient demand for zero-emission trucks (ZETs) that Original Equipment Manufacturers (OEMs) need to sell to meet their 2030 CO_2 targets.

We debunk some of the arguments made by the European trucking industry and explain why an early review of the HDV CO_2 standards is not justified, would endanger the EU competitiveness and prolong Europe's dependency on oil imports.

01

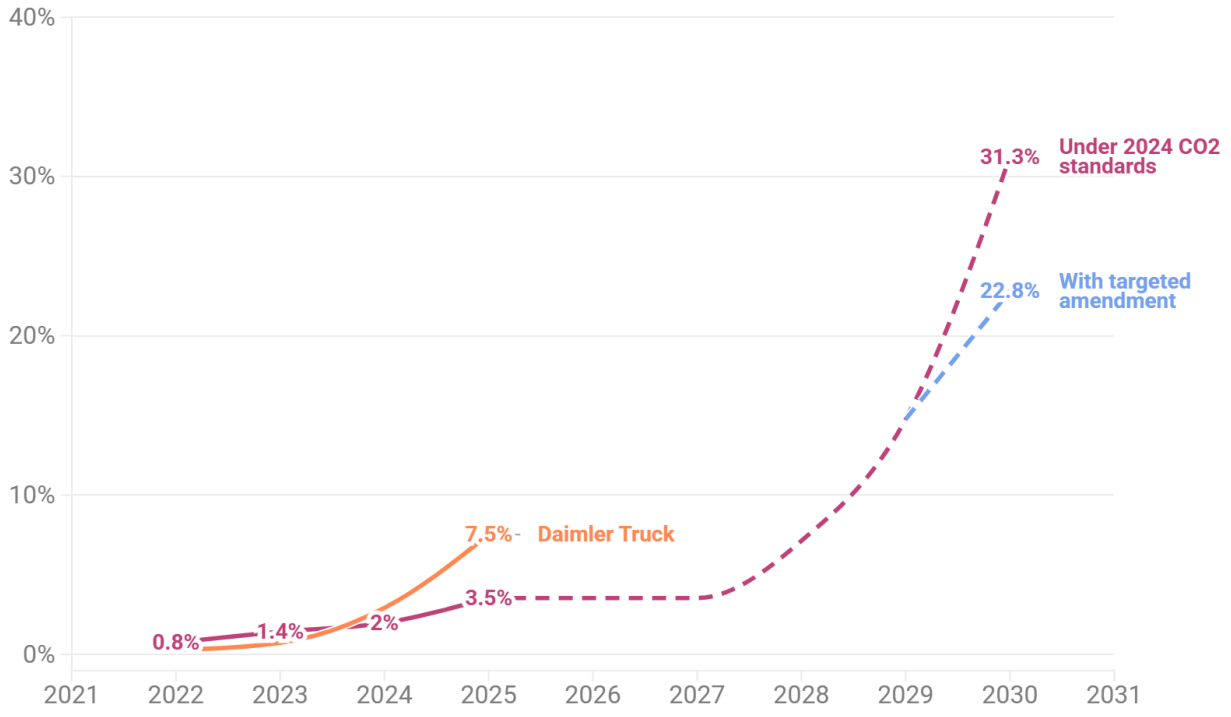
The targeted amendment weakens the 2030 target, making compliance easier

In March 2026, the EU adopted a targeted amendment to the HDV CO_2 standards, overhauling the credit and debt system, as proposed by the Commission in December 2025. This makes it much easier for European truckmakers to accumulate credits which they can use to comply with the 43% emissions reduction target for 2030.

Under the original credit and debt system, truckmakers had to sell 31% ZET in 2030 to comply with the -43% target. Under the targeted amendment 23% could now suffice. In other words, this amendment is not a minor flexibility but a severe weakening of the CO_2 emissions standards.

The targeted amendment severely weakens truckmakers' 2030 target

Truckmakers can now comply selling 23% zero-emission trucks instead of 31%



Source: T&E (2025) In-house modelling • Regulated vehicle groups 53, 54, 1s, 1, 2, 3, 4, 5, 9, 10, 11, 12, 16.

The following three market developments explain why this target is very achievable:

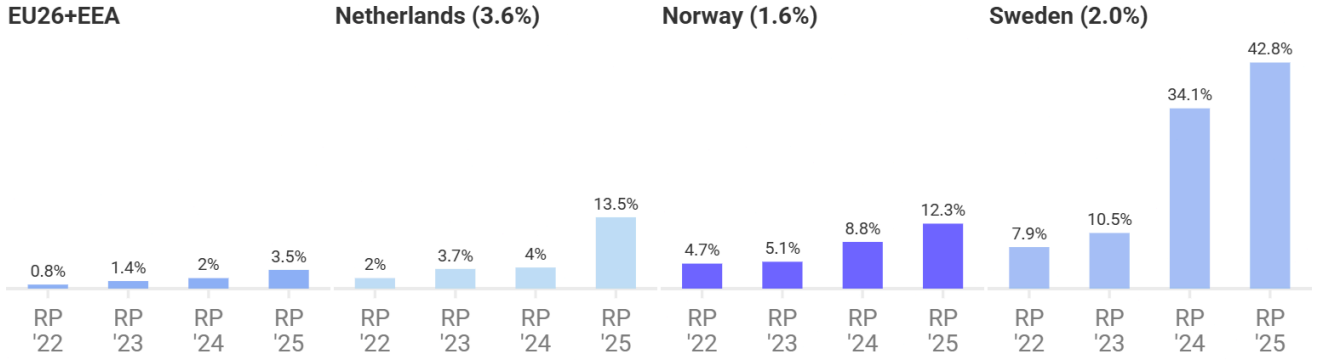
- **ZET sales in Europe are accelerating fast**: Almost 6% of new trucks in H2 2025 were electric. Looking only at truck groups regulated in 2025 and 2030, the electric share more than doubled in two years time, from 1.4% in the 2023 reporting period to 3.5% in H2 2025.

- **European OEM data confirms this trend**: Daimler Truck increased its electric truck sales share from 2.9% of regulated groups in the 2024 reporting period to 7.5% after the 2025 target kicked in. This shows that fast progress towards 2030's 23% share is very feasible.

- **Fast progress in several European markets**: electric sale shares of regulated groups in Norway (12%), Sweden (43%[1]) and the Netherlands (13%) show that rapid progress and adoption by hauliers is possible.

Electric trucks go mainstream in forerunner Member States

Share of electric truck sales across regulated vehicle groups



Source: Dataforce (2026) • RP = Reporting period. Regulated vehicle groups 53, 54, 1s, 1, 2, 3, 4, 5, 9, 10, 11, 12, 16. In Sweden only 32% of new trucks in RP2025 can be assigned a vehicle group due to missing vehicle information. Brackets include the country share of 2025 EU26+EEA truck sales

02

Price of vehicles —not lack of enabling conditions— is the main bottleneck

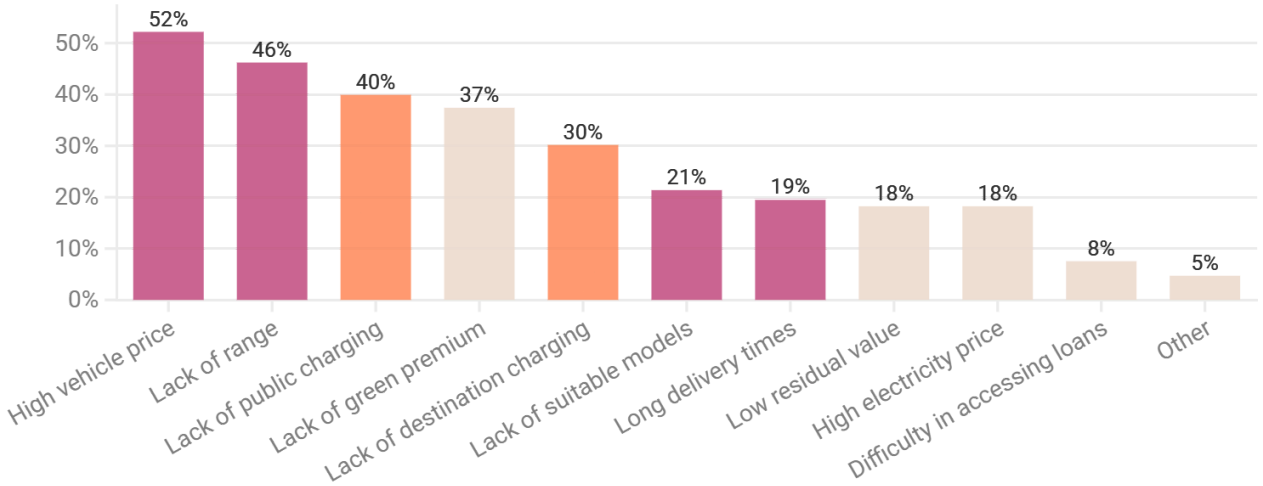
Contrary to the claims of the European truckmakers, not the enabling conditions but the high vehicle prices are the main barrier to electrification. In 2025, T&E commissioned a survey of 319 truck fleets of different sizes based in France, Germany, Italy and Spain, which also looked at the barriers to switching to electric trucks. The results show that investment in electric trucks is not mainly slowed down by charging or economic factors, but primarily by the vehicle price and range. European OEMs have to further ramp up production and investment into ZETs, which will lead to greater economies of scale and lower prices.

[1] In Sweden, 68% of new trucks sold in H2 2025 cannot be assigned to a vehicle group due to missing vehicle information. The electric share of regulated groups is therefore based on only 32% of the market and may not be representative.

Vehicle price and lack of range are the main roadblocks for truck fleets to switch to electric

Roadblock within OEM control Charging roadblock Economic roadblock

What is the largest roadblock you face regarding battery-electric or hydrogen trucks?



Source: Dataforce. (2025). Survey of 319 truck fleets in Germany, Italy, France, and Spain. Commissioned by T&E.

03

Enabling conditions in the EU are much better than truckmakers claim

Compared to other regions in the world, the EU has a strong enabling environment for deploying ZETs. The following section analyses their state of play.

3.1 Reduced toll rates cover almost half of EU road freight

The Eurovignette Directive governs tolling in the EU. Varying truck tolls by CO_2 —by granting ZETs at least a 50% reduction compared to the most polluting trucks and/or applying an external cost charge for CO_2— is an important enabler for improving ZETs' total cost of ownership (TCO).

Following a targeted amendment to the Eurovignette in late 2025, Member States can now fully exempt ZETs from road tolls until June 2031. Germany, which accounts for more than 25% of EU truck activity, is making use of this possibility. According to MAN Truck & Bus, the 100% exemption from road charges results in annual savings of €60,000 per ZET in Germany.

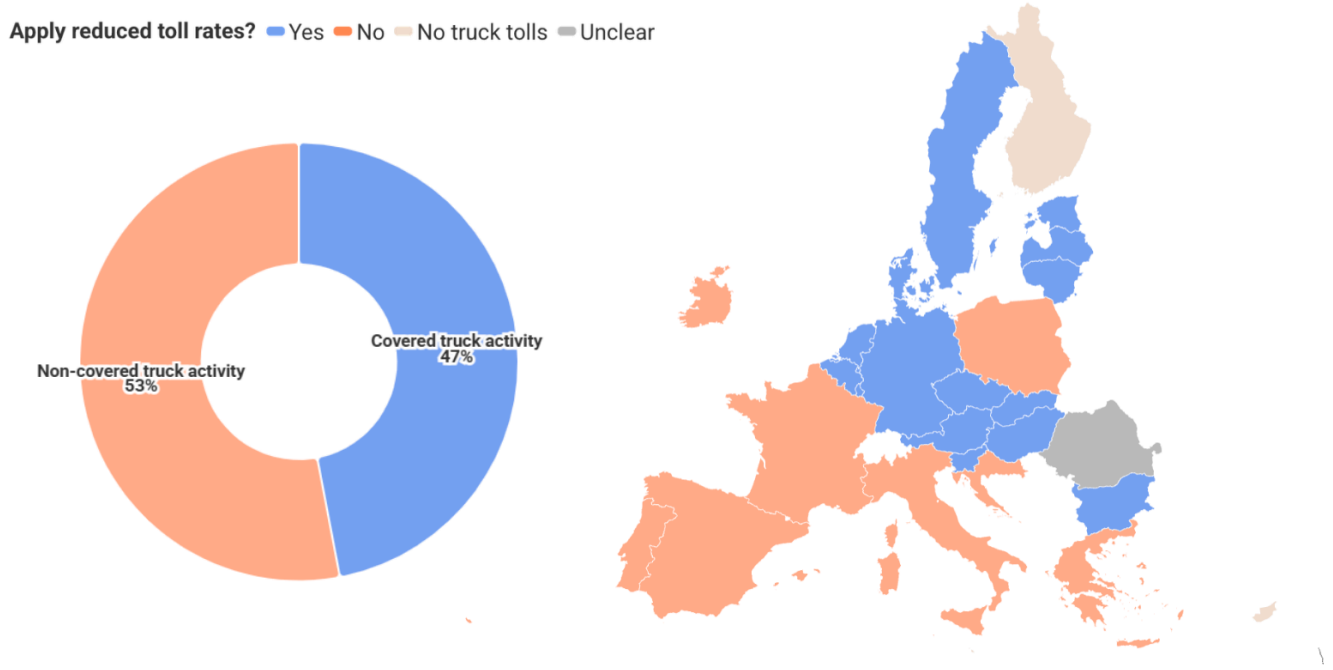
Member States are making good progress in implementing CO_2-based truck tolls, for example:

- Denmark, Slovakia and Slovenia introduced CO_2-based truck tolls in 2025.
- Bulgaria and Lithuania did so in early 2026.
- The Netherlands and the Flemish region of Belgium will apply them as of July 2026,

As a result, 47% of EU trucking takes place in countries where lower toll rates for ZETs apply.

Reduced tolls for zero-emission trucks cover half of EU road freight

The map shows which EU Member States apply reduced toll rates for ZETs
The pie chart illustrates the share of road freight activity covered



Source: European Commission (2021). EU Reference Scenario 2020. • EU truck activity (2025)
Romania (unclear) counts as "No".

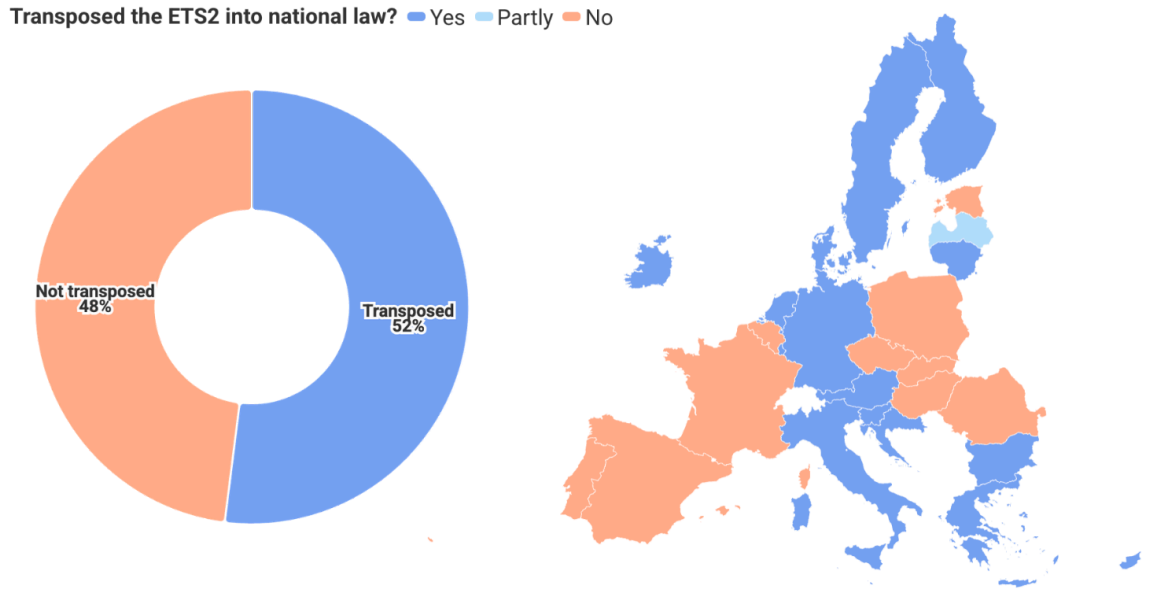
While CO_2 differentiation is not mandatory on wholly or partly concession-controlled networks — as is the case in France, Italy, Croatia, Greece, Portugal, Ireland and Spain— it must be applied when concession contracts are renewed. For instance, in France most of them are due for renewal or will expire in the early 2030s. Poland is not complying with the Directive yet and faces infringement procedures.

3.2 The majority of Member States have transposed the ETS2 into national law

Set to start in 2028, after the co-legislators' decision to delay it by one year in November 2025, a new Emission Trading System (ETS2) will encourage the decarbonisation of building and road transport by applying a new cap-and-trade system to their emissions. By increasing fossil fuel costs, the ETS2 will further improve the TCO of ZETs. As of March 2026, seventeen Member States have already transposed the EU provisions and are ready to implement it.

The majority of EU Member States have transposed the ETS2

The map shows which Member States have transposed the ETS2 into national law
The pie chart illustrates the resulting share of TEN-T core network covered



Source: TENtec Information System | Data based on the official maps of the revised TEN-T regulation Latvia ("partly") counts as "Yes".

The vast majority of ETS2 revenues are set to go to Member States. Thanks to the €3 billion Frontloading Facility approved by the European Investment Bank, Member States preparing for the ETS2 introduction can already start allocating part of the revenues ahead of the 2028 start date. While Member States should use most of ETS2 revenues to protect vulnerable households from high energy costs, a share could be used to support the transition of SMEs and enable investments in ZET-related infrastructure, including public and depot charging.

3.3 Zero-emission trucks will get a higher weight allowance

Current EU rules allow ZETs to weigh up to two tonnes more than their diesel counterparts, and trilogues between EU institutions are ongoing to update them. While the European Commission and the Parliament proposed a weight allowance of four tonnes for both five- and six-axle tractor-semitrailers, Member States proposed applying it to the latter.

Concerns over road wear and bridges —and related national budgets— have influenced Member States' position. If adopted, the Council's position would contribute to shifting the EU truck market towards 6x2 (and 6x4) tractor units, i.e. with three instead of two axles. Recently, some truckmakers, including Volvo Trucks and DAF Trucks, have added new electric models with three axles, with a range of more than 500 km, to their portfolio. With this shift, they are poised to reap the benefits from a four-tonne weight allowance.

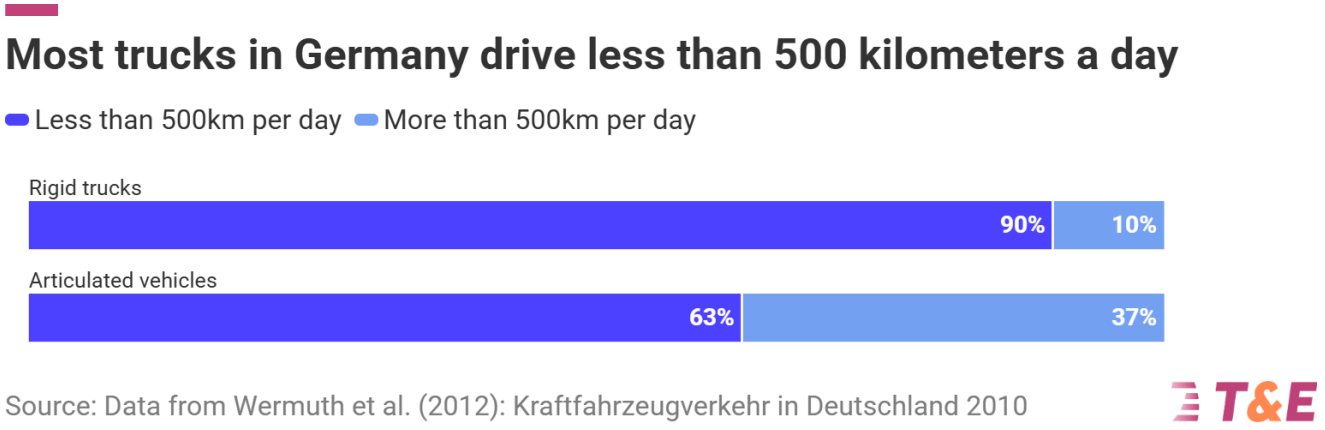
3.4 Deployment of charging infrastructure

European truckmakers emphasise that scaling zero-emission freight requires a substantial rollout of publicly accessible —and often high-power— charging infrastructure. While this is supported by EU policies, including ad hoc funding instruments, evidence based on operational needs suggests that these requirements may be overstated.

3.4.1 Majority of truck charging will be low-power and depot-based

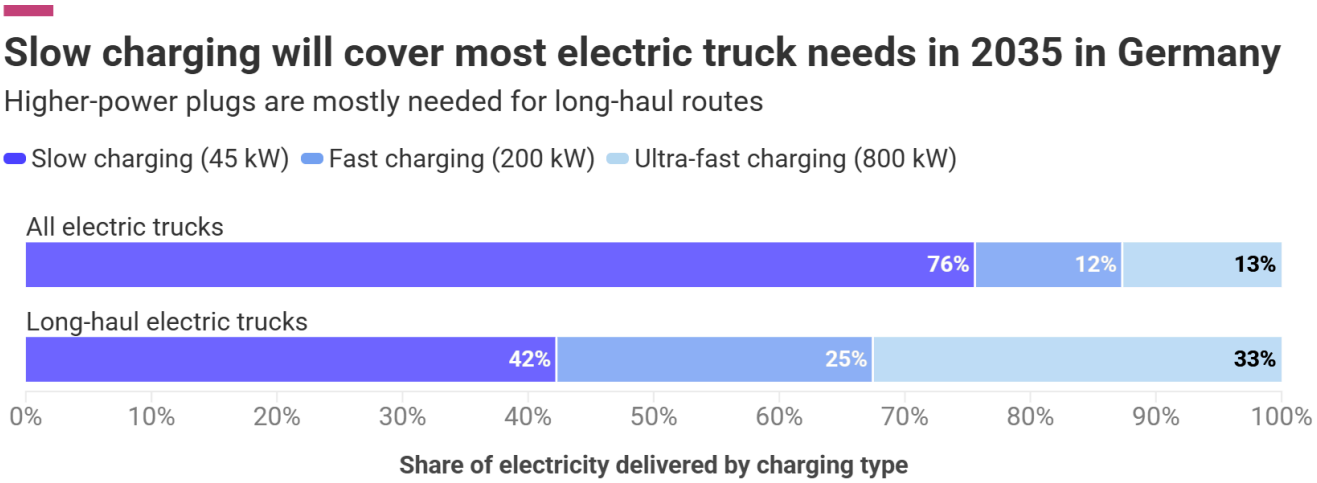
Trucks do not need a range of thousands of kilometres to carry out their daily job. In the Netherlands, articulated tractor trailers which are most common for regional and long-haul operations drive an average of 530 km per day.

This is similar in Germany where trucks travel less than 500 kilometres per day — a range the latest electric models in series production already achieve without charging stops. Therefore, most ZET charging will take place at depots.



Source: Data from Wermuth et al. (2012): Kraftfahrzeugverkehr in Deutschland 2010

Three quarters of charging needs in Germany —by far Europe's largest freight market— can be covered with slow charging. Higher power chargers, used primarily during the day, cover 25% of truck electricity demand. For long-haul trucks driving more than 500 km a day, slow charging would still cover two-fifths of electricity demand in 2035.



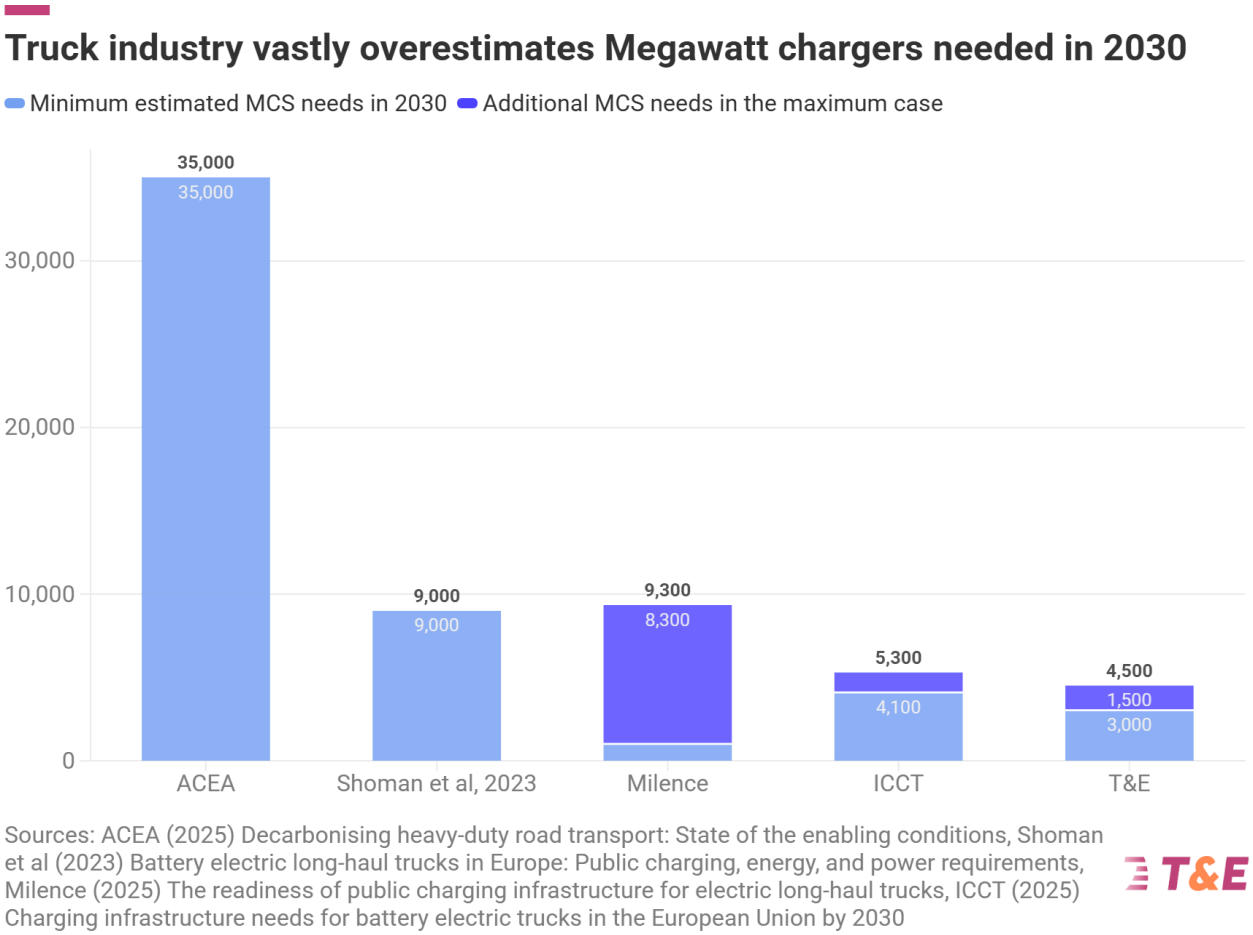
Source: T&E modelling based on Speth & Plötz (2024): Depot slow charging is sufficient for most electric trucks in Germany

3.4.2 European truckmakers overestimate the need for high-power chargers

According to ACEA, approximately 35,000 Megawatt Charging Systems (MCS — chargers under this standard are designed to deliver up to 3.75 MW of DC power) would be required to support the deployment of electric trucks needed to meet the HDV CO_2 targets.

While ultra-fast MCS is required for some long-haul routes, for the majority of operations Combined Charging Systems (typically delivering between 50–400 kW of DC power) provide a more cost-effective and grid-friendly path to decarbonisation. A 2025 ICCT study concludes that only between 4,100 and 5,300 MCS chargers will be needed by 2030.

Even less ultrafast charging is needed now that the targeted amendment to the HDV CO_2 standards lowered the required ZET sales share in 2030 from 31% to 23%.



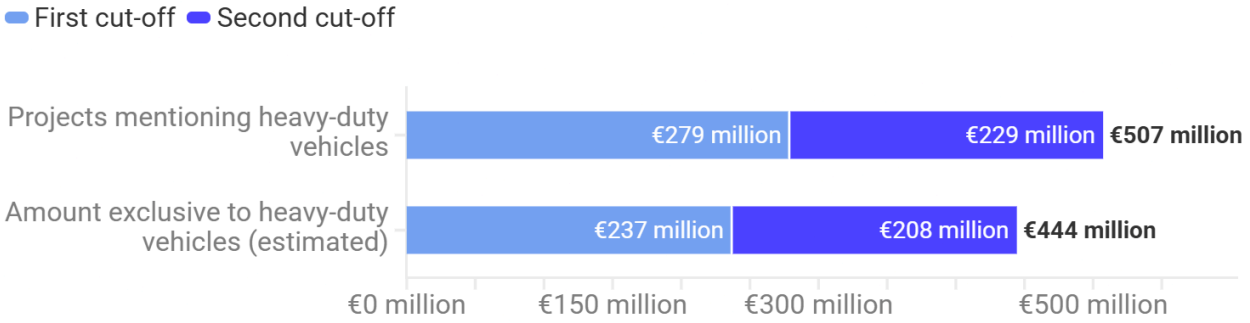
Sources: ACEA (2025) Decarbonising heavy-duty road transport: State of the enabling conditions, Shoman et al (2023) Battery electric long-haul trucks in Europe: Public charging, energy, and power requirements, Milence (2025) The readiness of public charging infrastructure for electric long-haul trucks, ICCT (2025) Charging infrastructure needs for battery electric trucks in the European Union by 2030

3.4.3 The EU is already funding over 4,600 public charging points for trucks

While depot charging will cover most HDV charging needs, public infrastructure will still be necessary. To address this, the EU's Alternative Fuel Infrastructure Regulation (AFIR) sets mandatory national targets for the deployment of public charging (and refuelling) infrastructure.

The Alternative Fuel Infrastructure Facility (AFIF) provides financial support to their investments. Taking into account the latest call, AFIF has allocated almost €450 million to public infrastructure for HDVs across Europe, funding more than 4,600 chargers.

AFIF commits almost €450 million to truck and bus charging infrastructure



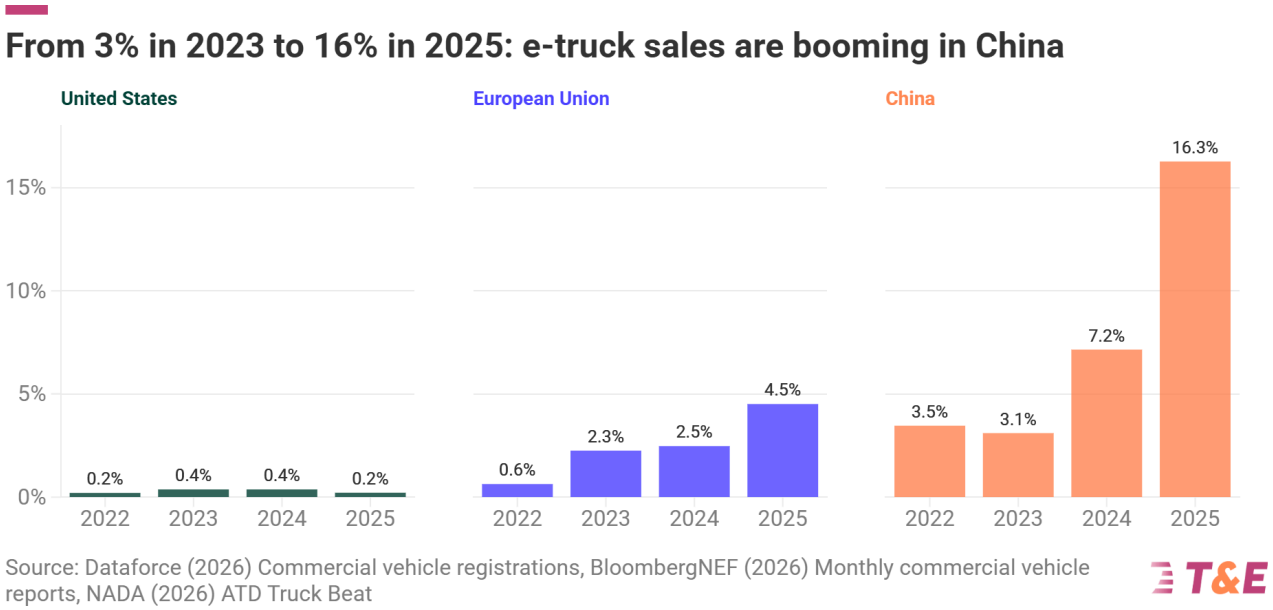
Source: CINEA (2025) AFIF2 call for proposals. First and second cut-off dates

04

Conclusions: early review risks Europe's truck industry leadership

Europe's electric truck market is gaining momentum as enabling conditions improve. Revising the CO_2 standards for HDVs now would create uncertainty and slow down clean tech investment —including in charging infrastructure— without solving the high investment challenges that truck operators are facing when buying e-trucks.

Now that the targeted amendment to the CO_2 standards has been green-lighted, further weakening the rules would be poor industrial policy for Europe. At a time when Chinese OEMs are beginning to enter the truck market with cheaper models, allowing European truckmakers to slow down would risk Europe's competitiveness and technological leadership.



Source: Dataforce (2026) Commercial vehicle registrations, BloombergNEF (2026) Monthly commercial vehicle reports, NADA (2026) ATD Truck Beat

For fleet operators considering investments in ZETs, vehicle affordability remains the primary concern. Further weakening the CO_2 standards would ease the pressure on European OEMs to scale up mass production and invest in clean technologies, undermining their competitiveness against international rivals, particularly Chinese OEMs.

Chinese OEMs are entering the EU truck market

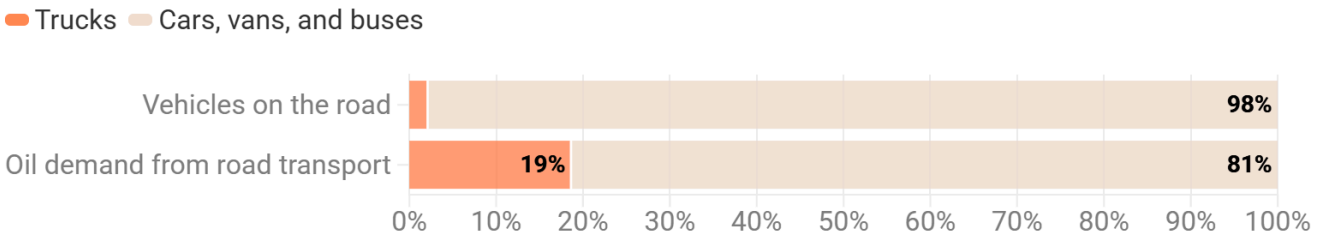
Even when solely focusing on electric tractor units, Chinese OEMs are already delivering electric trucks —or at least planning deliveries as early as 2026— with models offering ranges of at least 500km. Examples include:

- **The SANY e263**: its European launch was officially announced in September 2025.
- **The Windrose Global E700**: for the European market, Windrose will assemble it in Belgium.
- **The SuperPanther eTopas 600**: already in 2024, DHL Freight and SuperPanther signed a memorandum of understanding on strategic cooperation.
- **Sinotruk** in March 2026 announced electric and diesel trucks production in Austria.

According to Reuters, more than half a dozen Chinese OEMs are planning to launch European heavy truck sales in 2026.

In addition, postponing the shift to electric trucks would also prolong Europe's dependence on oil imports, at a time when the need to move away from fossil fuels is even more urgent.

Trucks: the 2% of vehicles that burn 19% of oil



Sources: ACEA (2026) Vehicles on European Roads, Eurostat (2025) nrg_d_traq, T&E (2025) EUTRM

Enabling conditions are better than often portrayed —although further improvements remain necessary. Rather than reopening the CO_2 standards prematurely, the EU and its Member States should place greater emphasis on OEM responsibility while continuing to double down on enabling conditions. Despite falling battery prices, ZETs remain two to three times more expensive than diesel alternatives. Scaling up production is essential to close this cost gap and secure Europe's industrial leadership on the technology of the future.

Recommendations

01 The European Commission should keep the review of the CO_2 standards for heavy-duty vehicles in 2027, as planned, to ensure that European truckmakers continue to scale up electric truck production and bring down their prices.

02 Member States should roll out CO_2-based truck tolls (and/or a full exemption) where they are still missing, and channel part of the revenues towards e-mobility.

03 Member States should implement the ETS2 in 2028, using a portion of the revenues to support the trucking sector, notably SMEs.

04 The EU should finalise the trilogues on the Weights and Dimensions Directive in the first half of 2026, increasing the current weight limits for zero-emission trucks.

05 The European Commission should prolong the Alternative Fuel Infrastructure Facility before the new Multiannual Financial Framework begins in 2028 and put in place an EU-backed de-risking mechanism for truck charging infrastructure as soon as possible

06 The EU should consider coming forward with a de-risking fund that offers interest free loans for SMEs to purchase/lease zero-emission trucks and invest in depot charging and battery storage.

07 As part of the review of the CO_2 standards for heavy-duty vehicles, the European Commission should introduce binding zero-emission freight targets for large shippers in Europe.