

# DIW Weekly Report

A policy bulletin from the German Institute for Economic Research

9  
2026

Economy. Policy. Science.

DIW BERLIN



**67 Report** by Wolf-Peter Schill

## Electric mobility in Germany: Untapped potential

- New registrations of electric cars are recovering, but the longer-term trend tends to stagnate
- New electric vehicles are getting bigger, charging infrastructure is growing faster than the car fleet
- Relaxed EU emission standards threaten to delay the transition, clear technology prioritization is essential

## LEGAL AND EDITORIAL DETAILS

---



DIW Berlin — Deutsches Institut für Wirtschaftsforschung e. V.

Anton-Wilhelm-Amo-Straße 58, 10117 Berlin

[www.diw.de](http://www.diw.de)

Phone: +49 30 897 89-0 Fax: -200

Volume 16 March 4, 2026

### Publishers

Prof. Anna Bindler, Ph.D.; Prof. Dr. Tomaso Duso; Sabine Fiedler; Prof. Marcel Fratzscher, Ph.D.; Prof. Dr. Peter Haan; Prof. Dr. Claudia Kemfert; Prof. Dr. Alexander S. Kritikos; Prof. Dr. Alexander Kriwoluzky; Prof. Karsten Neuhoff, Ph.D.; Prof. Dr. Sabine Zinn

### Editors-in-chief

Prof. Dr. Pio Baake; Claudia Cohnen-Beck; Sebastian Kollmann; Kristina van Deuverden

### Reviewer

Paula Prakash

### Editorial staff

Dr. Hella Engerer; Petra Jasper; Adam Mark Lederer; Frederik Schulz-Greve; Sandra Tubik

### Layout

Roman Wilhelm; Stefanie Reeg; Eva Kretschmer, DIW Berlin

### Cover design

© imageBROKER / Steffen Diemer

### Composition

Satz-Rechen-Zentrum Hartmann + Heenemann GmbH & Co. KG, Berlin

Subscribe to our DIW and/or Weekly Report Newsletter at

[www.diw.de/newsletter\\_en](http://www.diw.de/newsletter_en)

ISSN 2568-7697

AT A GLANCE

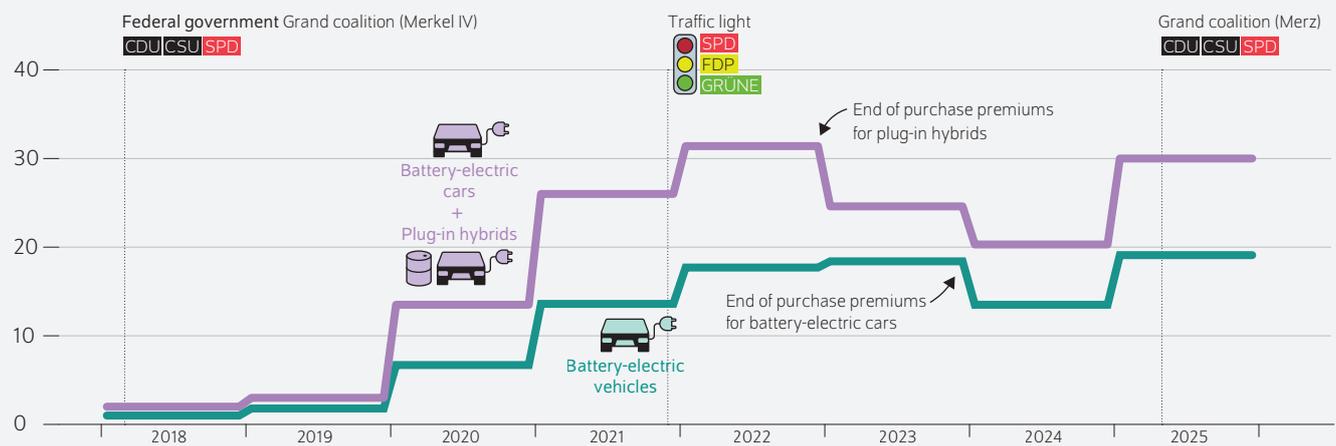
## Electric mobility in Germany: Untapped potential

By Wolf-Peter Schill

- Registrations of electric passenger cars recovered in 2025, but longer-term trends indicate stagnation
- New electric cars predominantly in upper vehicle classes and from European manufacturers
- Total stock of electric passenger cars at four percent of the overall fleet, strong growth dynamics for electric semi-trucks
- Progress in charging infrastructure, rapid chargers growing faster than the electric vehicle fleet
- Relaxed EU emission standards and market uncertainty threaten to slow the transition, technological clarity is needed

### After the slump in 2024, new registrations of electric cars in Germany have recovered, but longer-term trend indicates stagnation

Annual share of new registrations in percent



Source: Data from the Federal Motor Transport Authority, evaluated on the Open Energy Tracker.

© CC BY 4.0, creativecommons.org/licenses/by/4.0

### FROM THE AUTHORS

*“The future of road transport is battery electric. In addition to financial incentives, we need, above all, technological clarity. The debate about the end of the combustion engine ban is not helpful in this regard.”*

— Wolf-Peter Schill —

### MEDIA



Audio Interview with Wolf-Peter Schill (in German)  
[www.diw.de/mediathek](http://www.diw.de/mediathek)

# Electric mobility in Germany: More speed is possible

By Wolf-Peter Schill

## ABSTRACT

A rapid transition from combustion engines to electric vehicles is essential for climate protection in road transport. This report highlights current trends in electric mobility in Germany based on data from the Open Energy Tracker platform. Although new registrations of electric passenger cars and commercial vehicles have recently increased, overall, electric mobility is still developing slowly. Newly registered electric cars are predominantly from German and European manufacturers and are larger than average. Among commercial vehicles, the momentum for electric semi-trucks is particularly high. A comparatively large share of the bus fleet is already electric. The expansion of the charging infrastructure is progressing, with the number of fast chargers growing faster than the vehicle fleet in recent years. To accelerate the transition, policymakers should not only focus on financial incentives such as the new electric car subsidy or tax breaks for commercially used passenger cars, but above all create technological clarity by clearly prioritizing battery-electric vehicles and creating the appropriate framework conditions for their ramp-up. The currently discussed softening of CO<sub>2</sub> fleet limits in the European Union is not helpful in this regard.

The share of road traffic in German greenhouse gas emissions has recently increased. In 2024, passenger cars and commercial vehicles together accounted for around one-fifth of total emissions.<sup>1</sup> To achieve the goal of climate neutrality by 2045, rapid and far-reaching emissions reductions in road traffic are essential.

In addition to avoiding and shifting traffic, electric mobility plays a key role in this.<sup>2</sup> However, the replacement of combustion engines with battery-electric drive systems, has progressed slowly across Germany in recent years. Based on the Open Energy Tracker data platform, this Weekly Report provides an overview of current trends in battery-electric vehicles and charging infrastructure in Germany.<sup>3</sup> It also looks at the current discussion about softening the planned phase-out of combustion engines at the European level.

## Trends in electric cars

### New registrations have recently recovered

In 2025, almost one in five newly registered cars in Germany had a purely battery-electric drive (19.1 percent, Figure 1). This represents a significant increase compared to the previous year (13.5 percent). However, new registrations of electric cars slumped in 2024 due to an abrupt end of purchase subsidies. The traffic light coalition government halted this subsidy prematurely at the end of 2023 due to a budget crisis. In 2022 and 2023, the share of purely electric cars in new registrations was already 17.7 percent and 18.4 percent, respectively, which is only slightly lower than in 2025. Despite the recent recovery, the longer-term trend thus shows a tendency

<sup>1</sup> Federal Environment Agency (2025): Greenhouse gas emissions in Germany (in German; available online, accessed on January 13, 2026. This also applies to all other online sources in this report, unless otherwise noted).

<sup>2</sup> See German Advisory Council on the Environment (2017): Change of course required: Climate protection in the transport sector. Special report, November 2017 (in German; available online); and Wolf-Peter Schill et al. (2024): The Future Is Battery Electric: Climate Change Mitigation in Road Freight Transport. DIW Weekly Report No. 47/48, 287–297 (available online).

<sup>3</sup> The data basis for this report is the Open Energy Tracker (available online). Continuously updated, interactive versions of the figures shown in this report are available there. The data is collected and processed as part of the Ariadne (Fkz 03SFK5N0-2) and enERSyn (Fkz 01MV22004B) research projects funded by the BMFTR and BMW.

toward stagnation in growth. In addition, at the end of 2025, new registrations of electric cars did not rise as sharply as in previous years, when changes in fleet emission limits or purchase premiums had a substantial impact at the end of the year. Rather, due to new purchase premiums already announced in the coalition agreement, there is likely to have been a certain degree of reluctance among private buyers.

In 2025, approximately one in ten newly registered cars (10.9 percent) was a plug-in hybrid, i.e., a passenger car with a combination of a combustion engine and a battery-electric drive. This was significantly more than in 2024 (6.8 percent). After new registrations initially slumped sharply with the expiry of purchase premiums for plug-in hybrids at the end of 2022, these cars have now made something of a comeback. However, empirical data shows that the actual electric driving share of plug-in hybrid cars is significantly lower than assumed in the type approval. Thus, their contribution to climate protection remains very limited.<sup>4</sup>

**New electric cars are larger than average**

Recently, an above-average number of electric cars have been registered in the upper vehicle segments (Figure 2). Among the new battery-electric passenger cars in 2025, a good half were SUVs or off-road vehicles (51 percent). Another 13 percent were in the luxury or upper mid-range class. These proportions are well above the average for all newly registered passenger cars. Of these, 44 percent were SUVs or off-road vehicles and six percent were luxury or upper mid-range cars.

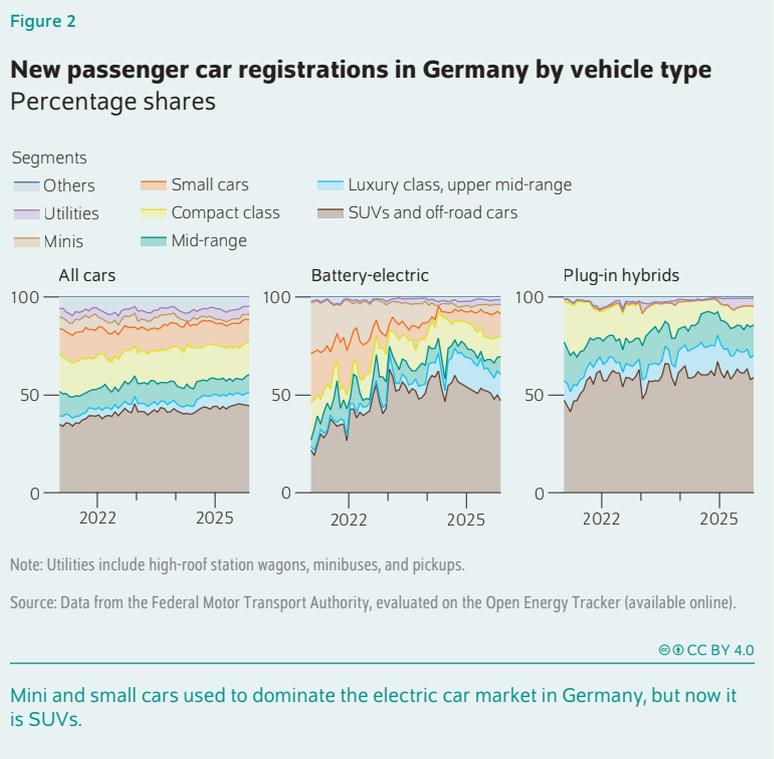
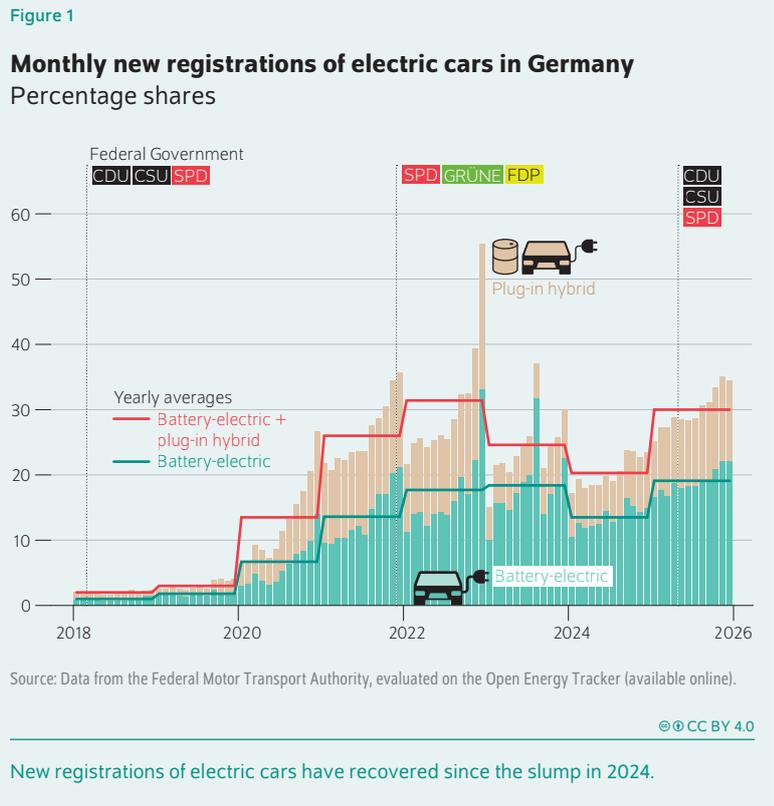
This was not always the case. From 2021 to 2023, the proportion of small cars and minis among new electric car registrations was much higher than it is today, and there were hardly any purely electric luxury vehicles. An important reason for this trend is likely to be the major advances in battery technology, which have made it possible to increasingly electrify large and heavy cars.

Among newly registered plug-in hybrids, SUVs and off-road vehicles were even more common than they were among purely electric cars in 2025, accounting for 60 percent of the total. This continued the trend of previous years: plug-in hybrids are predominately large and heavy vehicles.

**Electric cars mostly from European manufacturers**

More than half of the electric cars newly registered in 2025 (55 percent) were from a German manufacturer.

A total of four out of five of these cars (81 percent) came from European car manufacturers (Figure 3).<sup>5</sup> These figures

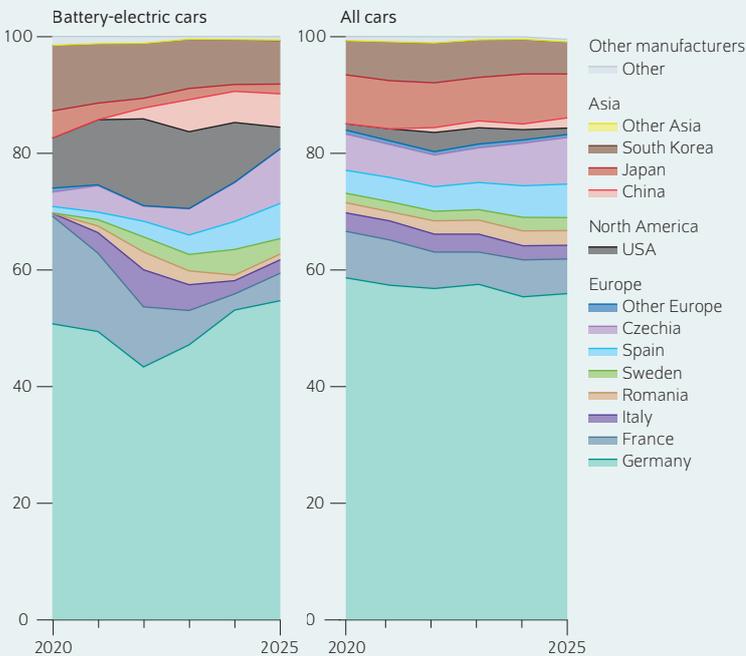


<sup>4</sup> Patrick Plötz and Till Gnann (2025): Real-world Fuel Consumption and Potential Future Regulation of Plug-In Hybrid Electric Vehicles in Europe – An Empirical Analysis of about one Million Vehicles. Kopernikus Project Ariadne, Potsdam (available online).

<sup>5</sup> Country of origin according to the convention of the Federal Motor Transport Authority, according to which the manufacturer's headquarters applies to the entire brand. The data does not reveal where a particular car or its components are actually produced.

Figure 3

**Monthly new registrations of passenger cars in Germany by manufacturer's country of origin**  
Percent shares



Note: Country of origin according to the convention of the Federal Motor Transport Authority, according to which the manufacturer's headquarters applies to the entire brand. Only countries with a share of more than one percent are shown individually; the remainder are grouped under "Others."

Source: Data from the Federal Motor Transport Authority, evaluated on the Open Energy Tracker (available online).

© CC BY 4.0

Most electric cars in Germany come from European manufacturers.

are close to the average for all newly registered passenger cars. The share of French manufacturers declined sharply, from 19 percent in 2020 to five percent last year. In particular, Renault used to have a high market share with its small electric cars, but has since lost significant ground.<sup>6</sup>

Also striking is the decline of North American manufacturers, primarily Tesla. Their market share fell from 15 percent in 2022 to only around four percent in 2025. In addition to growing competition from other car companies and model changes, the controversial political stances of CEO Elon Musk is likely to have played a role here. At the same time, the share of Chinese manufacturers has risen—albeit from a low level: from two percent in 2022 to just under six percent most recently. This means that they are much more strongly represented in electric cars than in all passenger cars.

**Total number of electric cars still low**

There are now around two million purely electric cars on the road in Germany (Figure 4). This corresponds to around four percent of the total fleet. The current electric car fleet is only about half the size it would need to be to achieve the target of 15 million pure electric cars by 2030, as set by the previous traffic light coalition government. Even if only electric cars were registered from now on, this target would be virtually impossible to achieve by now.

The future growth of the electric car fleet depends, among other things, on how many passenger cars are newly registered in total and what proportion of these are electric cars. Since 2018, total new registrations have fluctuated between around 2.4 and 3.6 million per year, with the majority of these being commercial registrations. Assuming that three million new passenger cars will be registered annually in the future and that the share of electric cars in new registrations will increase linearly to 100 percent by 2035, a fleet of 15 million electric passenger cars would not be reached until 2034.<sup>7</sup>

However, the total passenger car fleet in Germany is significantly larger. There are currently around 50 million cars (Figure 5). Vehicles with combustion engines continue to dominate the fleet (60 percent gasoline, 27 percent diesel). Pure battery-electric passenger cars currently account for around four percent. Hydrogen fuel cell cars, which are still often mentioned in political debates, continue to play no role whatsoever. Most recently, their total number was less than 2,000 vehicles (0.03 per thousand of the passenger car fleet).

Although the growth of electric cars has been sluggish in recent years, it still seems possible that all cars with combustion engines can be replaced by purely battery-electric passenger cars by 2045. For this to happen, their share of new

Figure 4

**Total number of electric cars in Germany**  
In millions



Note: Excluding plug-in hybrids. The three scenarios correspond to a total market of 2.5 to 3.5 million new registrations per year, with electric vehicles reaching a share of 100 percent in January 2035.

Source: Data from the Federal Motor Transport Authority, evaluated on the Open Energy Tracker (available online).

© CC BY 4.0

There are currently around two million purely electric cars in Germany.

<sup>6</sup> An additional evaluation of the development of the market shares of individual manufacturers is available on the Open Energy Tracker (available online).

<sup>7</sup> An interactive illustration with different fleet development paths is available on the Open Energy Tracker (available online).

registrations would have to rise sharply in the near future and new registrations of cars with combustion engines would have to end in 2035, as planned. In addition, the total passenger car fleet should not grow any further.

**Trends in electric commercial vehicles**

The Federal Motor Transport Authority distinguishes between trucks, tractors, and buses when it comes to commercial vehicles. Trucks usually have a fixed body. Tractors, on the other hand, are primarily intended for towing trailers. This category also includes semi-trucks, which are also referred to as “semi-trailer tractors” or, more simply an colloquially, also as “trucks”. Additionally, tractors include agricultural and forestry tractors, which will not be discussed below. For a long time, trucks, semi-trailer tractors, and buses in Germany were almost exclusively diesel vehicles.

**Stable growth, especially for medium-duty electric trucks**

Almost one in ten trucks newly registered in 2025 had a purely battery-electric drive (9.0 percent, Figure 6). Most of these were medium-duty commercial vehicles with a gross vehicle weight of up to twelve tons, rather than trucks for heavy-duty transport. As a result, the share of battery-powered vehicles in the total truck fleet reached about three percent at the end of 2025. New registrations of plug-in hybrids have also risen recently for trucks, but they still account for a very small share of the total fleet. Hydrogen fuel cells are also hard to find in trucks, and their already negligible share of the fleet has recently declined even further.

**Dynamics in heavy-duty semi-trucks**

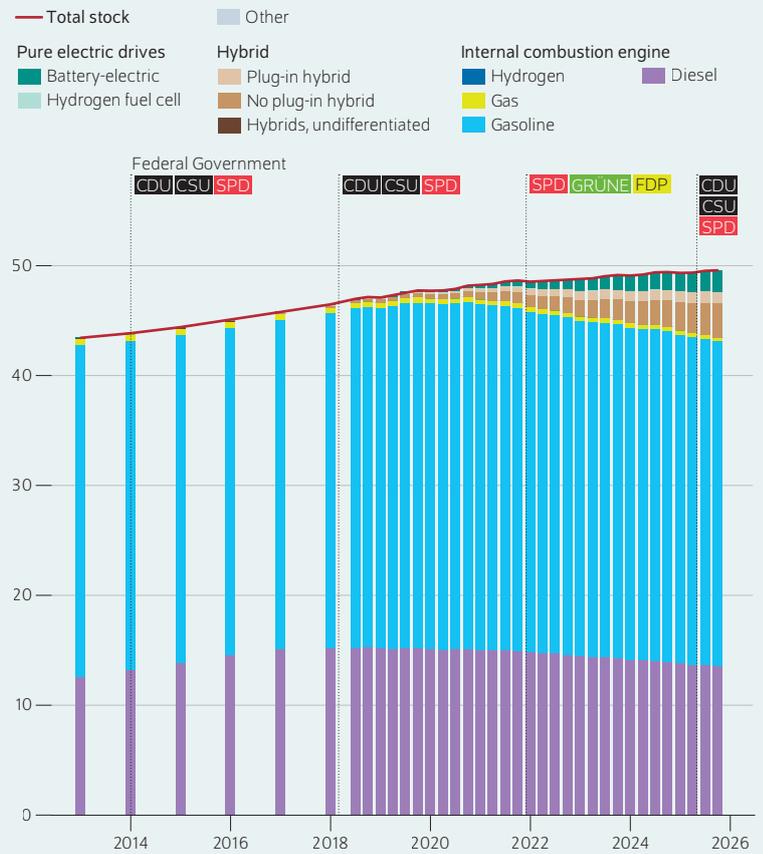
Semi-trucks, which are mainly used in heavy-duty transport, were long considered difficult to electrify due to their high vehicle weights and high mileage. Advances in battery technology and charging infrastructure have changed this.<sup>8</sup> In 2025, the share of purely battery-electric semi-trucks in new registrations has grown from a very low level to around three percent (Figure 6). Even in the overall fleet, almost one in a hundred semi-trucks is now purely battery-electric, which seemed almost inconceivable just a few years ago. Plug-in hybrids play virtually no role in this vehicle segment. The same applies to hydrogen fuel cells. This is remarkable, as hydrogen is often credited with supposed advantages in terms of range and fast refueling; this could be expected to positively affect its adoption in heavy-duty transport.

**Highest share of new electric registrations for buses**

Compared to trucks and semi-trailers, diesel engines are already in sharp decline in buses. In 2025, almost one in four newly registered buses was purely battery-electric

Figure 5

**Total number of passenger cars in Germany**  
In millions



Source: Data from the Federal Motor Transport Authority, evaluated on the Open Energy Tracker (available online).

© CC BY 4.0

New registrations of electric cars have recovered since the slump in 2024.

(23.1 percent, Figure 6). In the total fleet, one in 20 buses was already fully electric (4.9 percent). One driver for this are specific subsidy measures at both the federal and municipal levels. Hydrogen fuel cells, again, play only a very small role in buses, despite subsidies.<sup>9</sup>

**Public charging infrastructure grew faster than the vehicle fleet**

Public charging infrastructure was long considered a bottleneck for the ramp-up of electric mobility in Germany. However, the charging infrastructure has grown significantly in recent years. According to the Federal Network Agency, there were recently around 188,000 publicly accessible charging points.<sup>10</sup> A quarter of these were fast charging points with a capacity of more than 22 kilowatts (kW). The fast charging

<sup>9</sup> In addition, there were a number of buses with hydrogen combustion engines.

<sup>10</sup> The data is current as of December 1, 2025 (in German; available online). In addition, there is a significantly larger number of private charging points that are not included in the statistics.

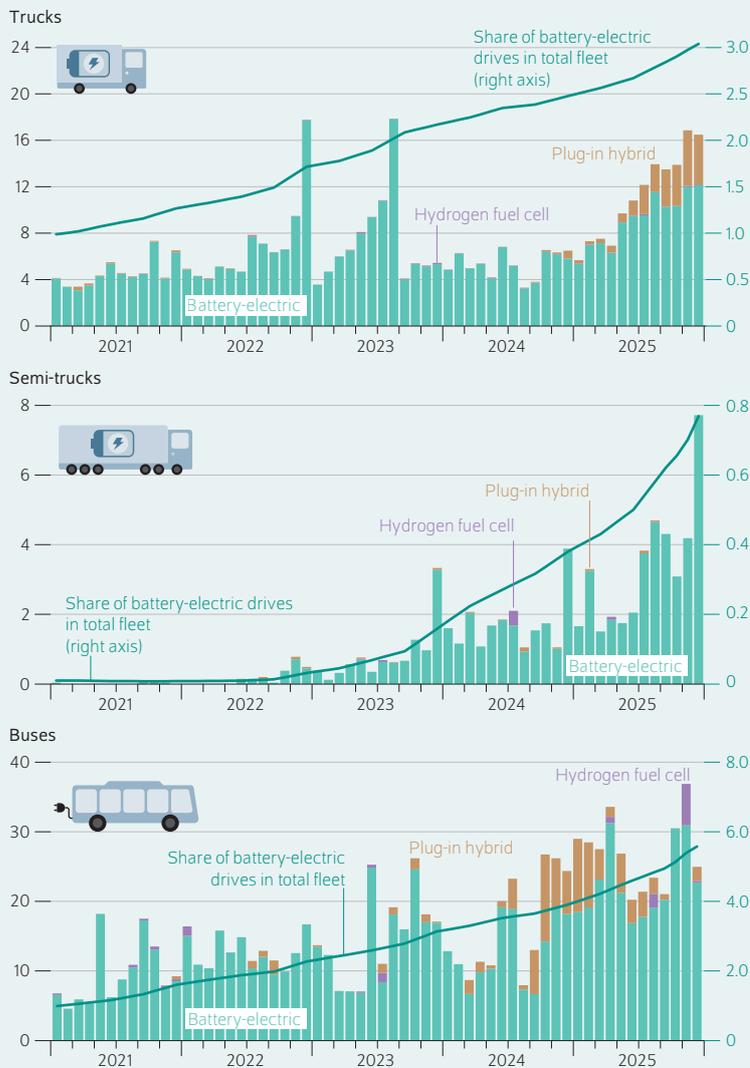
<sup>8</sup> See Wolf-Peter Schill et al. (2024), *ibid.*

Figure 6

**Electric drives in new registrations and in the vehicle stock**

Left axis: New registration shares, in percent

Right axis: Share of total fleet, in percent



Note: Data on new registrations is available monthly, while data on the fleet is available quarterly. Missing data was interpolated linearly.

Sources: Data from the Federal Motor Transport Authority, evaluated on the Open Energy Tracker (available online).

© CC BY 4.0

The fleet of purely electric trucks is growing slowly. Electric semi-trucks are growing particularly fast. The fleet of purely electric buses is already relatively large.

infrastructure grew particularly strongly. This applies above all to charging points with a very high capacity of over 149 kW, sometimes also referred to as ultra-fast chargers.<sup>11</sup> In contrast, the proportion of slow charging points, with a capacity of less than 22 kW, has fallen in recent years.

If we compare the number of purely battery-electric cars with the number of public charging points, we see that fewer and fewer electric cars are sharing a fast charging point (Figure 7). At the end of 2022, there were almost 70 electric cars per fast charger, but now there are only around 44. At the same time, the average charging power per electric car has increased. However, the public charging infrastructure not only supplies electric cars, but also increasingly electric commercial vehicles, albeit still at a low level. Nevertheless, it should be noted that the fast-charging infrastructure in particular has recently developed more dynamically than the electric vehicle fleet itself.

In 2019 and 2020, the ratio of charging points or charging power to electric vehicles was even more favorable than recently. At that time, however, the electric car fleet was still so small that the figures were less meaningful than they are today.

Many electric vehicles are only dependent on public charging infrastructure to a limited extent, as they are mainly charged at private or company charging points. In addition, vehicle batteries have grown in parallel with the expansion of the fast-charging infrastructure. As a result, the often-cited “range anxiety”, i.e., the concern among electric car drivers that the battery charge will not be sufficient for the planned route, is likely to have little basis in practice in Germany by now.

For heavy-duty traffic, a network of particularly powerful fast charging points is to be created on highways. This will also see the introduction of the new Megawatt Charging System (MCS), which theoretically allows charging capacities of up to 3,750 kW and is thus intended to enable purely battery-electric heavy-duty long-distance transport.<sup>12</sup> However, specific challenges are emerging with regard to the necessary power grid connections and space requirements.<sup>13</sup>

## Regulation and support measures determine the pace of the transition

### EU fleet limits key to more electric mobility

The further growth of electric mobility in Germany also depends on the regulatory framework and support measures at various political levels. At the European level, CO<sub>2</sub> fleet limits are the key instrument for setting the course for electric mobility. Previously, the plan was that newly registered passenger cars would not be allowed to emit any CO<sub>2</sub> from 2035 onwards. This regulation is often misleadingly referred to as a “combustion engine ban”, although the ban only applies to new registrations, not to the operation of existing passenger cars.

<sup>11</sup> See Schill et al. (2024), *ibid.*

<sup>13</sup> Julius Jöhrens et al. (2026): enERSyn – Potentials & Synergies of Truck Drive Technologies. ifeu, TU Dresden, DIW Berlin (in German; available online).

Box

**EU Commission's automotive package**

In December 2025, the EU Commission presented an automotive package.<sup>1</sup> It contains various elements, including changes to the fleet emission standards specified for carmakers.<sup>2</sup>

Previously, the plan was that new passenger cars registered in the EU from 2030 onwards would only be allowed to emit an average of 49.5 grams of CO<sub>2</sub> per kilometer. This corresponds to a consumption of just over two liters of gasoline per 100 kilometers. From 2035 onwards, only CO<sub>2</sub>-free cars would be allowed to be newly registered.

The Commission's new proposal aims to make the target more flexible before 2035 and, from 2035 onwards, to require only a 90 percent reduction in emissions compared to the base year 2021 on average across manufacturers. Car manufacturers can offset the remaining 10 percent by using low-carbon steel, e-fuels, and biofuels produced in Europe. This would allow plug-in hybrids and cars with combustion engines to continue to be sold to a certain extent.

The automotive package also contains other elements. Among other things, the market ramp-up of relatively small electric cars with a length of less than 4.20 meters is to be promoted by giving them disproportionate weighting ("super credits") in fleet limits. In addition, special requirements are to apply to corporate vehicle fleets of large companies, according to which certain proportions of new registrations of zero-emission vehicles must be achieved as early as 2030. The reason for this is that corporate cars account for a high proportion of total new registrations.

<sup>1</sup> European Commission (2025): Automotive Package (available online).  
<sup>2</sup> The automotive package was discussed in detail in episode #39 of the DIW Energy Transition Podcast fossilfrei "The end of the combustion engine ban and why plug-in hybrids are failing in climate protection" (available online).

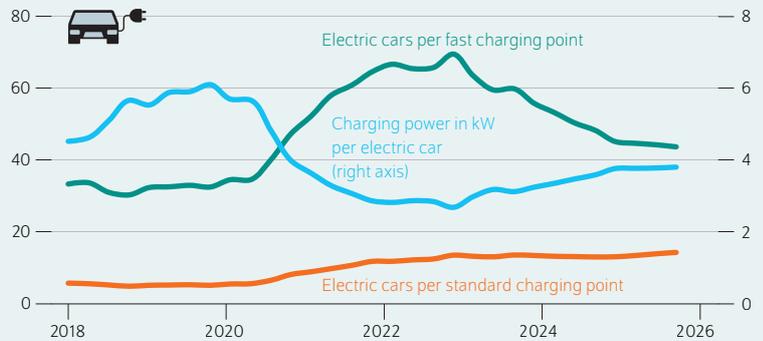
Partly due to pressure from Germany, the EU Commission presented an automotive package in December 2025 that includes a proposal to require only a 90 percent reduction in exhaust emissions from 2035 onwards (Box).<sup>14</sup> This is intended to give the automotive industry more time and flexibility for the transition. Whether this will help the industry in the long term is a matter of controversy.<sup>15</sup> However, the reform proposed by the European Commission is likely to slow the ramp-up of electric mobility.

<sup>14</sup> European Commission (2025): Automotive Package (available online).  
<sup>15</sup> See Wolf-Peter Schill (2026): Softening the phase-out of combustion engines: an own goal for climate and industrial policy: commentary. DIW Weekly Report No. 3, 36 (in German; available online).

Figure 7

**Ratio of electric cars to the number and power rating of public charging points in Germany**

Electric cars per charging point (left axis), charging power in kW per electric car (right axis)



Note: These are mathematical averages for illustration.  
 Sources: Data from the Federal Network Agency, evaluated on the Open Energy Tracker (available online).

© CC BY 4.0

Fewer and fewer electric cars are sharing fast chargers.

**Financial incentives for the use of electric cars**

At the national level, purchase incentives have proven to be an effective, if not necessarily economically efficient, tool for promoting electric cars.<sup>16</sup> Following the premature end of purchase premiums for electric cars at the end of 2023, the current federal government wants to reintroduce such incentives for electric cars.<sup>17</sup> To this end, a new subsidy program for private individuals was presented at the end of January 2026, which is to apply retroactively from the beginning of this year.<sup>18</sup> A basic subsidy of €3,000 will be granted for the purchase or leasing of a new purely electric car, regardless of the vehicle price, which can rise to up to €6,000 for low incomes and households with two children. There is no subsidy for households without children with a taxable income of over €80,000. This income limit increases by €5,000 for the first and second child in the household. Plug-in hybrids are also subsidized. Here, the basic subsidy is €1,500, and, as with the subsidy for pure electric cars, it can increase to up to €4,500 for low-income households with two children.

In addition, various tax breaks have been introduced: new purely electric company cars have been given preferential treatment in terms of taxable monetary benefits. The price limit for this tax advantage has been raised to €100,000. In

<sup>16</sup> Peter Haan, Adrián Santonja di Fonzo, and Aleksandar Zaklan (2022): Purchase premiums for electric cars are changing the composition of the German car market. DIW Weekly Report No. 15/16, 231–238 (in German; available online).  
<sup>17</sup> CDU, CSU, and SPD (2025): Responsibility for Germany. Coalition agreement between the CDU, CSU, and SPD. 21st legislative period (in German; available online).  
<sup>18</sup> Federal Ministry for the Environment, Climate Protection, Nature Conservation, and Nuclear Safety (2026): New electric car subsidy program with social grading: Subsidies for new registrations from January 1, 2026. Press release dated January 19, 2026 (in German; available online).

addition, a special depreciation allowance for electric cars used for business purposes applies temporarily allowing companies to deduct 75 percent of the acquisition costs for tax purposes in the first year. In addition, the existing exemption from motor vehicle tax for new battery-electric cars has been extended: electric cars newly registered until the end of 2030 will remain exempt from motor vehicle tax until the end of 2035.

CO<sub>2</sub> pricing for fossil fuels is also intended to create incentives for the switch to electric mobility. Currently, this is done through national emissions trading, with a fixed price of 55 euros per ton of CO<sub>2</sub> in 2025 and a price corridor of 55 to 65 euros per ton this year. This corresponds to approximately 13 to 15 cents per liter of gasoline before taxes. In 2027, national emissions trading is to be replaced by a European emissions trading system (EU ETS-2), with the prospect of rising prices. However, its introduction at the European level has recently been postponed until 2028. This means that CO<sub>2</sub> pricing is not expected to provide any significant additional impetus for the switch to electric vehicles in the near future.<sup>19</sup>

Another important factor is charging prices. Private or commercial charging often already offers very low charging costs, especially when using self-generated solar power. At public charging stations, on the other hand, prices are usually significantly higher. The Monopolies Commission recently criticized opaque charging tariffs and a lack of competition in public charging infrastructure in some regions, calling for the establishment of a market transparency body for ad hoc charging.<sup>20</sup>

### Truck toll and GHG quota central for commercial vehicles

No new purchase premiums are planned for electric commercial vehicles. Instead, strong incentives for the switch come from an exemption from truck tolls and the greenhouse gas reduction quota (GHG quota) instrument. The GHG quota obliges mineral oil companies to reduce or offset an increasing proportion of the greenhouse gas emissions caused by their fuels over time. Various compliance options are available for this, including electricity used to power electric vehicles. In its current form, however, the GHG quota disadvantages electric trucks compared to those with hydrogen fuel cells, which could be changed through various reform options.<sup>21</sup>

In addition, the ramp-up of fast-charging infrastructure for battery trucks, both in depots and at public charging points, especially on highways, is to be financially supported. This is part of a recently published master plan by the German government.<sup>22</sup> However, the Monopolies Commission also fears a lack of competition here, among other things because extensive concessions were awarded to the company Tank & Rast without a tender process.<sup>23</sup>

### Conclusion: The ramp-up of electric mobility requires, above all, technological clarity

Electric vehicles have arrived in virtually all market segments, from small cars to heavy-duty trucks. But growth is still too slow to quickly achieve the emission reductions in road traffic that are necessary from a climate protection perspective. The ramp-up of electric mobility must be significantly accelerated for both passenger cars and commercial vehicles.

Given the rapid technological progress and global market trends in battery-electric vehicles, the conditions for this are good. The charging infrastructure has also developed positively and should no longer be a relevant bottleneck for the vast majority of electric car users. Nevertheless, the further expansion of the public charging infrastructure for both passenger cars and trucks remains important, including the installation of the necessary grid connections.

The transition will probably only gain momentum with further political support. Various measures have already been initiated to this end. However, one gets the impression that the focus has often been on large and expensive cars. It remains to be seen how the recently introduced purchase premiums for private buyers will work. However, the new subsidies for plug-in hybrids are questionable because of their high real-world emissions.

In addition to financial support, another point seems particularly important: politicians should move away from the ideal of technology neutrality and instead ensure technological clarity, i.e., clear perspectives and priorities for specific technologies. Advancing technological developments, international market and cost trends, and energy system analyses<sup>24</sup> clearly indicate that the future belongs to battery-electric vehicles. Politicians should not ignore this.

In this context, softening the European combustion engine ban does not seem helpful. On the one hand, this could give the automotive industry a little more time for the transformation and, at the same time, promote the decarbonization of

<sup>19</sup> See also episode #31 of fossilfrei "EU emissions trading: Key instrument, sleight of hand and the endgame" (in German; available online).

<sup>20</sup> Monopoly Commission (2025): 10th Sector Report on Energy (2025): Competition and efficiency for a sustainable energy system (available online).

<sup>21</sup> Above all, the mileage of battery trucks is underestimated and their energy efficiency advantages are not sufficiently taken into account. See Wolf-Peter Schill et al. (2025): Drive system transition in heavy-duty transport: Greenhouse gas quota disadvantages battery-electric trucks. DIW Weekly Report No. 46, 723–732 (in German; available online).

<sup>22</sup> Federal Government (2025): Federal Government's Master Plan for Charging Infrastructure 2030 (in German; available online).

<sup>23</sup> Monopoly Commission (2025), *ibid.*

<sup>24</sup> See, for example, Carlos Gaete-Morales et al. (2024): Power sector effects of alternative options for de-fossilizing heavy-duty vehicles—Go electric, and charge smartly. Cell Reports Sustainability 1(6), 100123 (available online) and Rik van Heerden et al. (2025): Demand-side strategies enable rapid and deep cuts in buildings and transport emissions to 2050. Nature Energy 10, 380–394 (available online).

the European steel industry, because car manufacturers can offset part of the remaining CO<sub>2</sub> emissions by using green steel. On the other, there is a risk that a further weakening of the regulation will follow and the necessary technological

clarity will be lost. If vehicle buyers get the impression that the switch to electric vehicles will only become relevant at a later date, this could further delay the transition, thus also delaying climate protection in road traffic.

**Wolf-Peter Schill** is head of the research area "Transformation of the Energy Economy" in the Department of Energy, Transportation, Environment at DIW Berlin | [wschill@diw.de](mailto:wschill@diw.de)

**JEL:** R4, Q40, Q58

**Keywords:** Electric mobility, battery-electric vehicles

©  Open Access: This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>).