T&E EV progress report – 2025

08/09/2025

Summary

The EU's CO_2 regulation for cars and vans is the backbone of Europe's automotive climate and industrial policy. Data from the first half of 2025 show that the EV transition is on track. Key findings:

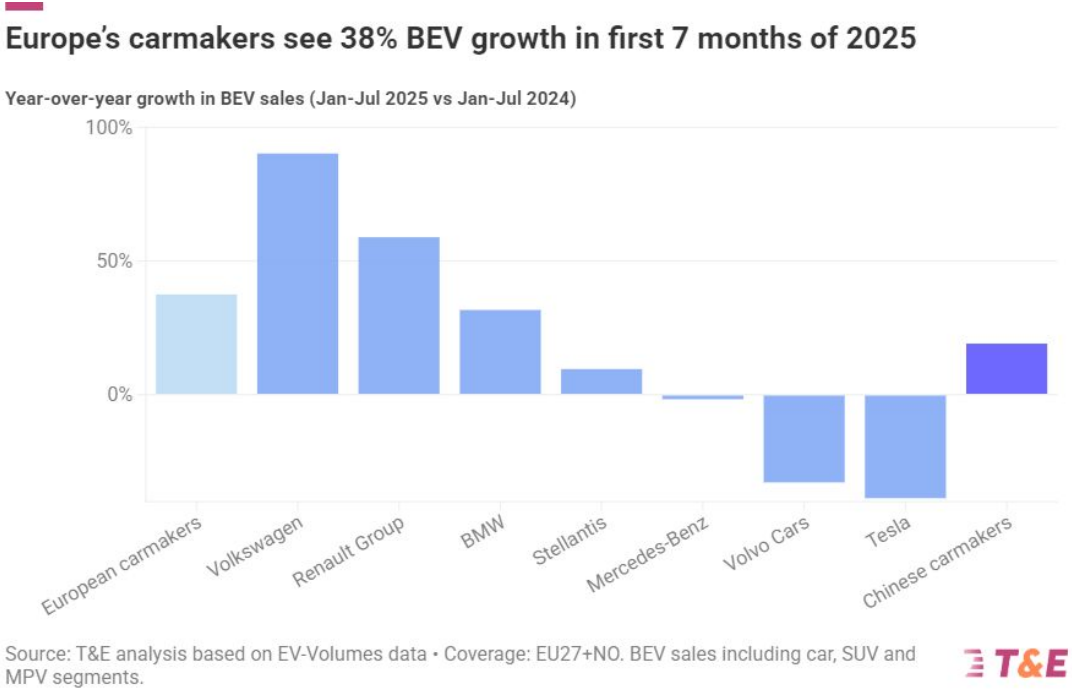
- **All European carmakers are on track to comply over 2025-2027** thanks to a surge in their BEV sales - reaching 25% share over the 3-year period (18% in 2025);
- However, with the EU's delay of the 2025 target, carmakers took their foot off the gas, leading to a **shortfall of 2 million BEVs** (over 2025-2027). Evidence shows that **carmakers inflated BEV price premiums as CO2 targets got relaxed**;
- Despite carmakers' attempt to slow down the EV market, structural battery price decreases will continue to power the EV transition. **By 2027, EV battery prices are expected to drop more than over the past three years**;
- Charging coverage is surging in line with BEV penetration: **All EU countries have already exceeded their 2025 target** for the total number of charging points and almost 80% of the core EU highway network is covered;
- While the EU is discussing the 2035 target, **global markets are going electric fast**: Mexico (5% BEV share in H1 2025), Indonesia (13%), Thailand (24%), China (30%), Vietnam (42%). Europe is losing ground in the global EV race.

Europe now faces a decisive choice: to either lead the global BEV race and confidently enter the electric age or risk falling behind in the fossil fuel era. Weakening the 2030-35 CO2 targets would dismantle all investments and efforts on EVs while China would extend its lead on EVs.

European carmakers' EV sales are growing

Overall BEV sales of European carmakers are up 38% in the first seven months of 2025.

- From January to July 2025, Volkswagen Group BEV sales volumes have increased by 90%. Mercedes-Benz is lagging with a 2% drop following its strategy change to focus on ICEs.
- In the first seven months of 2025, BEVs accounted for 16.6% of sales, up from 13.2% a year earlier.



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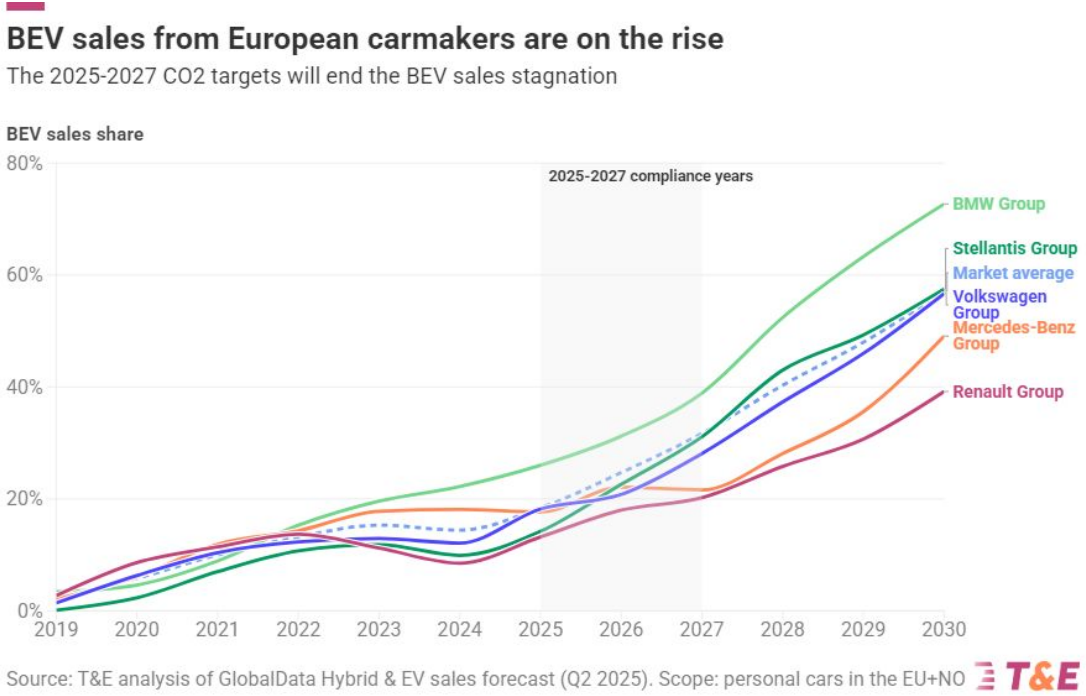
European carmakers' EV sales are growing

The EU is in the midst of an electric car boom. The market should reach 18% in 2025, then 25% over 2025-2027 and exceed 55% by 2030.

Mercedes-Benz is expected to have the slowest growth in its BEV sales.



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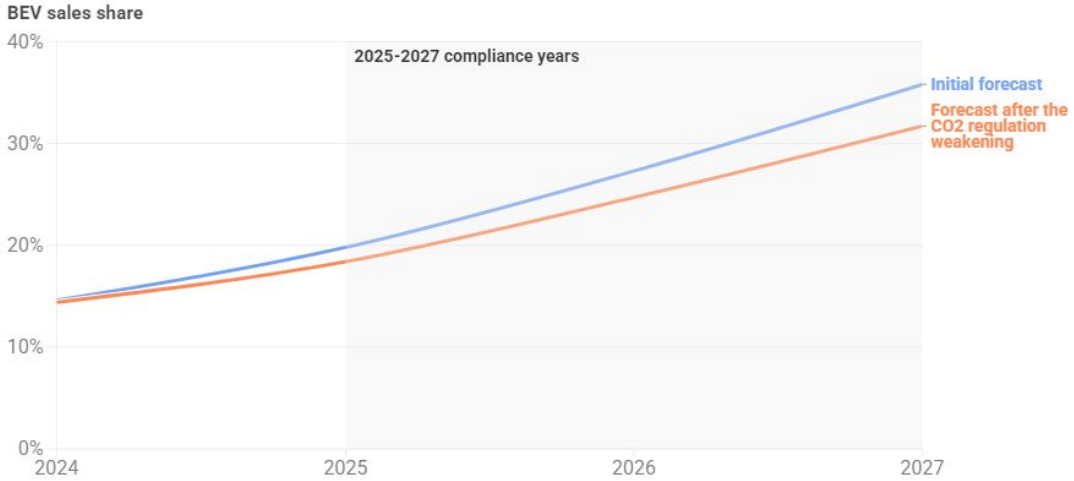
But carmakers took their foot off the gas

Carmakers have slowed down the BEV uptake as the EU delayed the 2025 target, leading to a shortfall of 2 million BEVs

The weakening of the regulation led to a cut in the sales forecast from GlobalData, with the number of BEVs forecasted over 2025-2027 being reduced by 2 million.

Carmakers took their feet off the gas as the regulation was weakened

2 million additional BEVs were initially planned in 2025-2027 before the target was averaged over 3 years

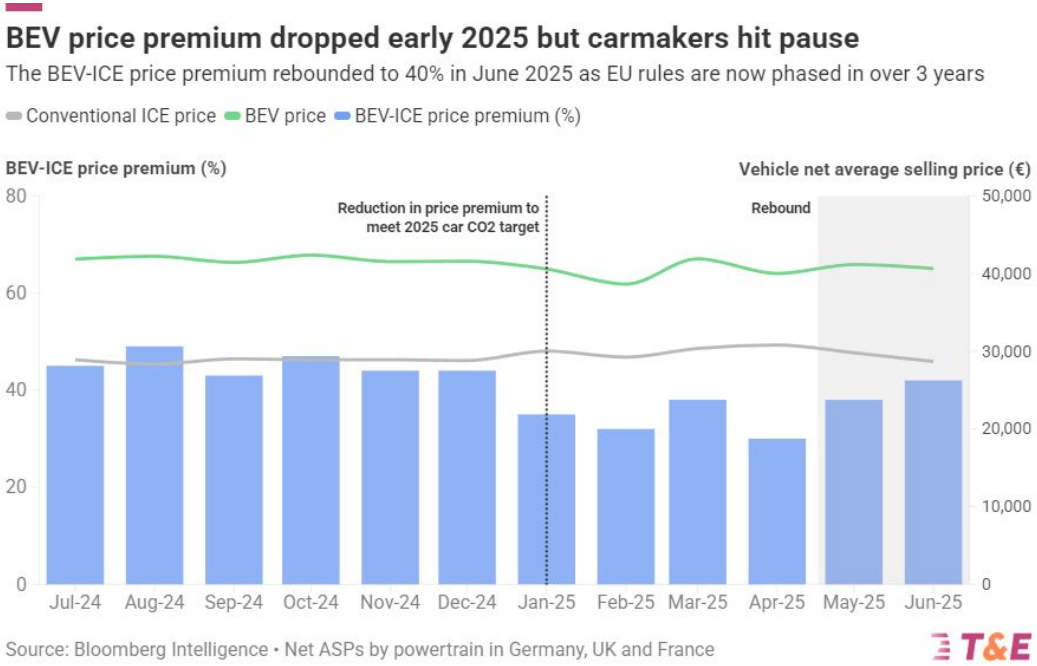


Source: T&E analysis of GlobalData Hybrid & EV sales forecast. The initial forecast is the Q2 2024 update. The forecast after the car CO2 target was phased-in over 3 years is the Q2 2025 update. Scope: personal cars in the EU and Norway

Carmakers inflated BEV-ICE price premiums as CO2 targets got relaxed

Carmakers reversed their lower BEV price strategies as soon as EU delayed the 2025 CO2 target.

- According to Bloomberg, the BEV-ICE price premium fell to 30% in early 2025, down from 40% in 2024, thanks to higher BEV discounts and a wider range of affordable BEVs.
- In June, the price premium rebounded to 40%, as the EU's three-year phasing-in period for the CO2 target came into effect. This results in a BEV market slowdown (previous slide)



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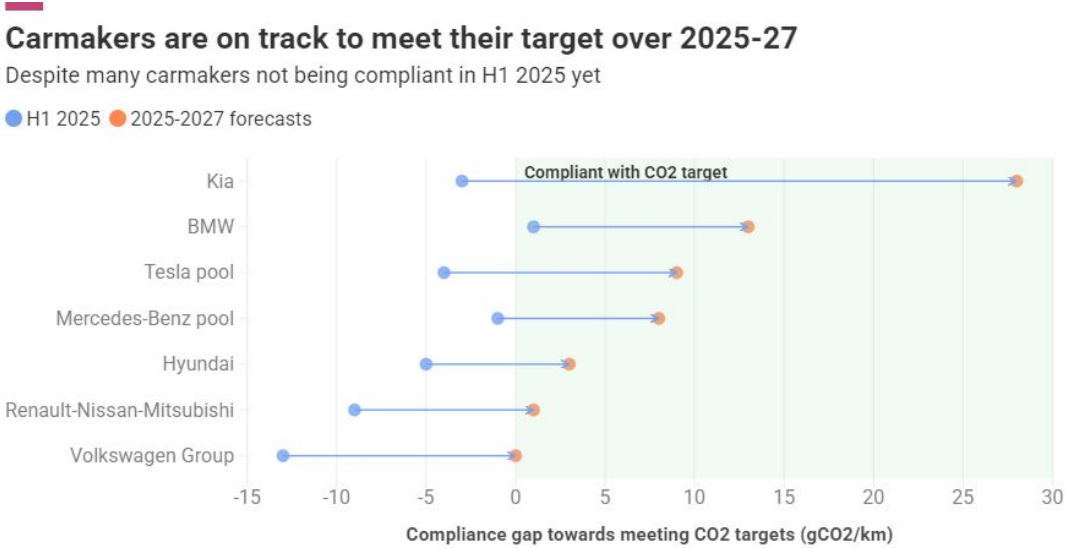
All carmaker pools are still on track to comply

Despite a large H1 2025 compliance gap, all carmaker pools are expected to be compliant with their CO2 targets over three years.

Volkswagen can comply with a 22% BEV share over 2025-27 and a focus on ICE improvements. The launch of new affordable BEV models such as the ID.2 should secure compliance.

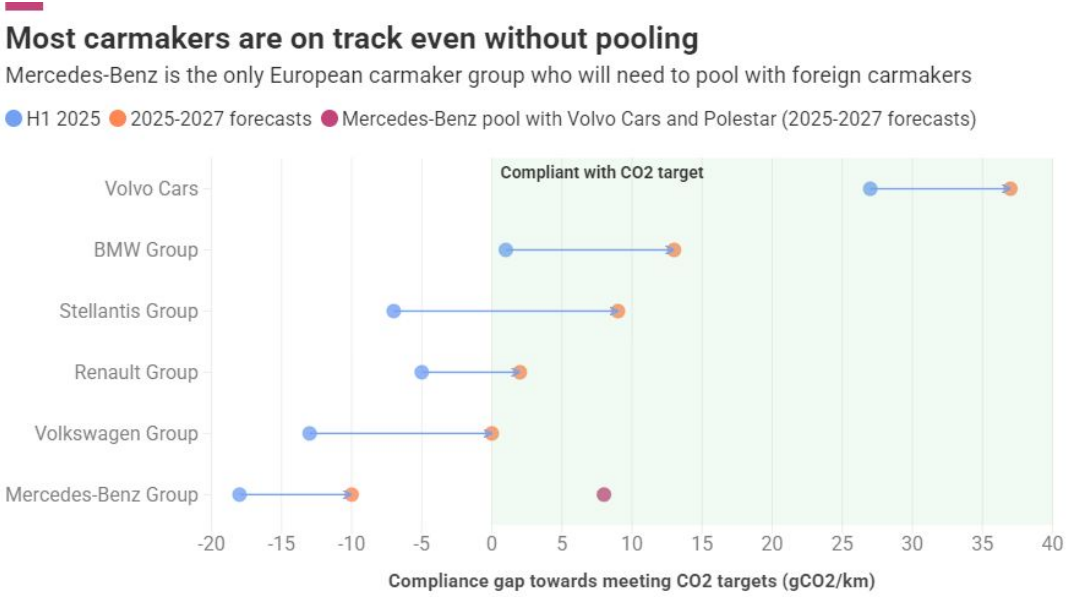


Source: H1 2025 sales in 23 EU countries and Norway from Dataforce. T&E modelling of carmakers compliance over 3 years: T&E central scenario informed by GlobalData powertrain forecast, and T&E modelling of powertrain emissions • Tesla pool include Stellantis, Ford, Toyota and others Japanese carmakers. Mercedes-Benz pool includes Mercedes-Benz, Volvo Cars, Polestar. Renault assumed to pool again with Nissan-Mitsubishi.

Mercedes-Benz is the only EU carmaker that needs to rely on pooling

Mercedes-Benz is the only European carmaker group lagging behind the EU targets, and would need to pool.

- Mercedes-Benz is expected to keep pooling with Volvo Cars and Polestar over 2025-2027.
- Geely's chairman owns 10% of the Mercedes Group while the Geely Group owns Volvo Cars and Polestar.
- The pooling allows Mercedes-Benz to focus on profitable and polluting ICEs.



Source: H1 2025 sales in 23 EU countries and Norway from Dataforce. T&E modelling of carmakers compliance over 3 years: T&E central scenario informed by GlobalData powertrain forecast and T&E modelling of powertrain emissions.

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Mercedes-Benz becomes Europe’s laggard

Mercedes-Benz is falling behind its competitors and trying to deflect the blame onto the EU. However, BMW's success demonstrates that the problem lies with Mercedes' strategy, not the EU.

A Tale of Two Carmakers: as BMW forges ahead, Mercedes-Benz becomes Europe's laggard

The EU is in the midst of an electric car boom, but Mercedes-Benz is the only European carmaker failing to meet EU targets

BMW	VS	Mercedes
25%	BEV sales (%)	17%
14%	PHEV sales (%)	20%
Compliant	2025-2027 Target gap	10 g/km*
149 g/km	Average ICE CO_2	164 g/km
4x worse	PHEV emission gap (real world vs lab)	6x worse
No Pooling	Pooling	With Volvo-Polestar

Source: T&E analysis. Sales and target gap are based on Dataforce market data for the first half of 2025. PHEV emissions based on EU Commission's OBFCM data. *The Mercedes-Benz gap for 2025–2027 is calculated without pooling. The Mercedes pool with Volvo Cars and Polestar is expected to comply.

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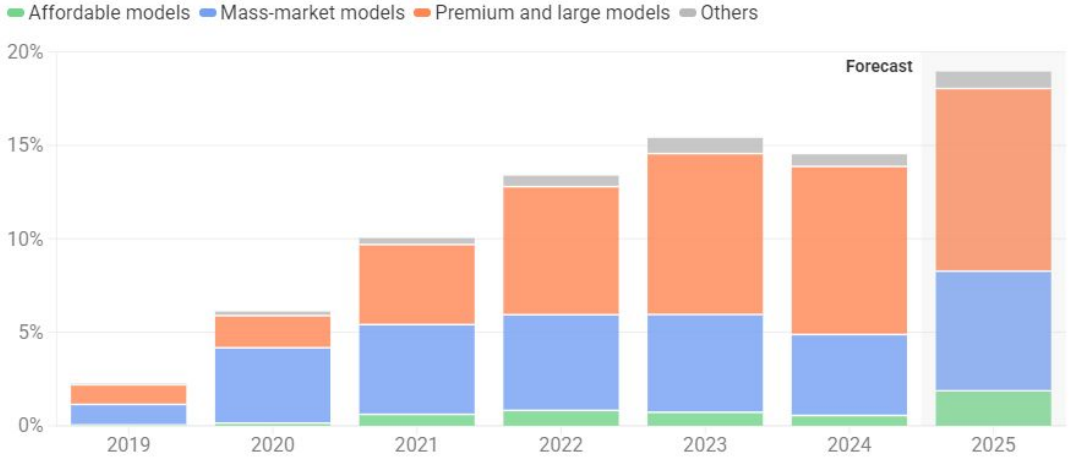
Sales of affordable BEVs are set to double in 2025

Thanks to lower battery prices, carmakers are launching new affordable models with a starting price below €25,000.

- Sales volumes of affordable models should double in 2025 compared to 2024.
- For the first time since the 2019-2022 period, the share of affordable and mass-market models should account for almost half of BEV sales.

Lower battery prices have unlocked the launch of more affordable BEV models in 2025

The number of affordable BEVs will more than double in 2025 compared with the previous year.

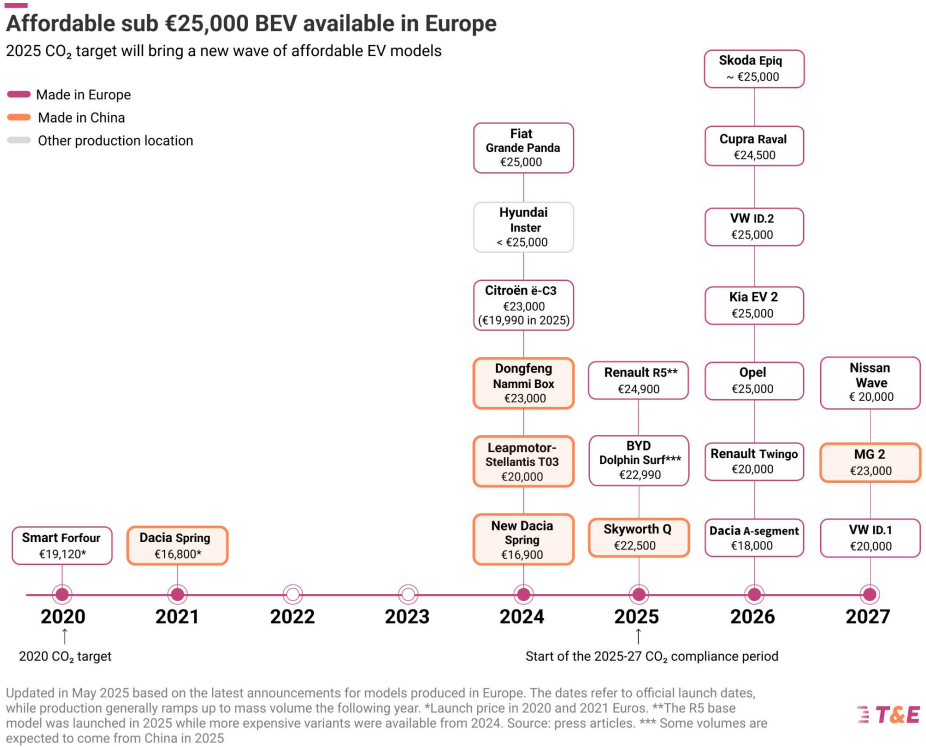


Source: T&E analysis of GlobalData sales data with total BEV share from ACEA • Others: passenger vans and MPVs. Affordable models with a variant starting below €25,000. Mass-market models defined based on mass-market brands in segment A-C.

At least 19 new affordable BEV models are expected to be available in 2027

We expect nine affordable models to be available by the end of 2025. At least 19 affordable models are expected to be available by the end of 2027.

More than two-thirds of affordable models are expected to be made in Europe.



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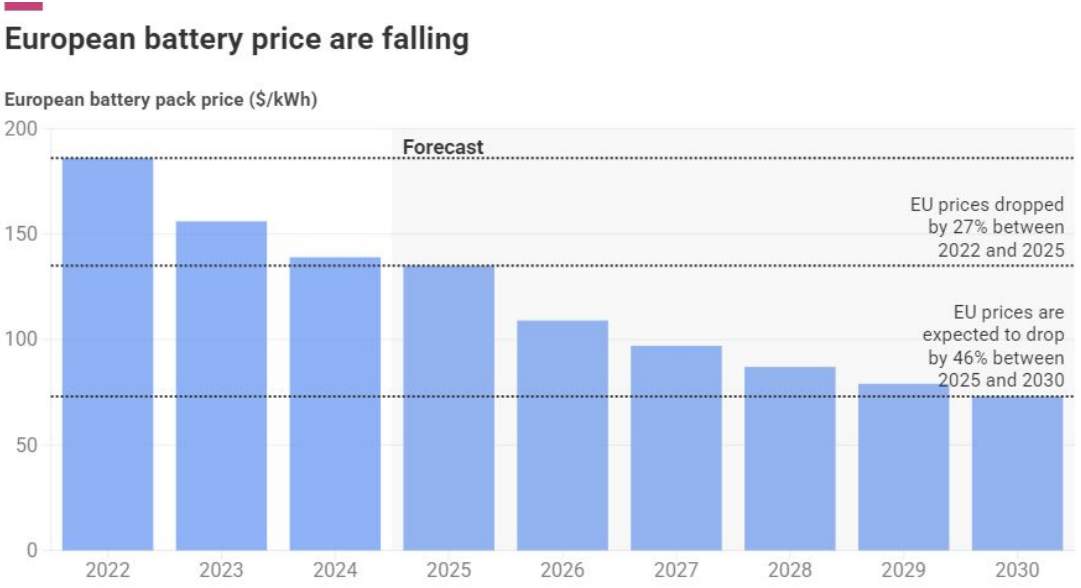
European battery prices are set to continue falling rapidly

The decrease in European battery prices (-28% by 2027 vs. 2025) could exceed the decrease over the past three years, unlocking further BEV price reductions.

- The increasing share of LFP batteries in Europe (50% by 2030) supports the drop of battery prices in Europe. China has already reached a 67% LFP share in 2025. This trend has yet to translate into lower prices for Europeans.
- Prices are expected to drop by 46% between 2025 and 2030.

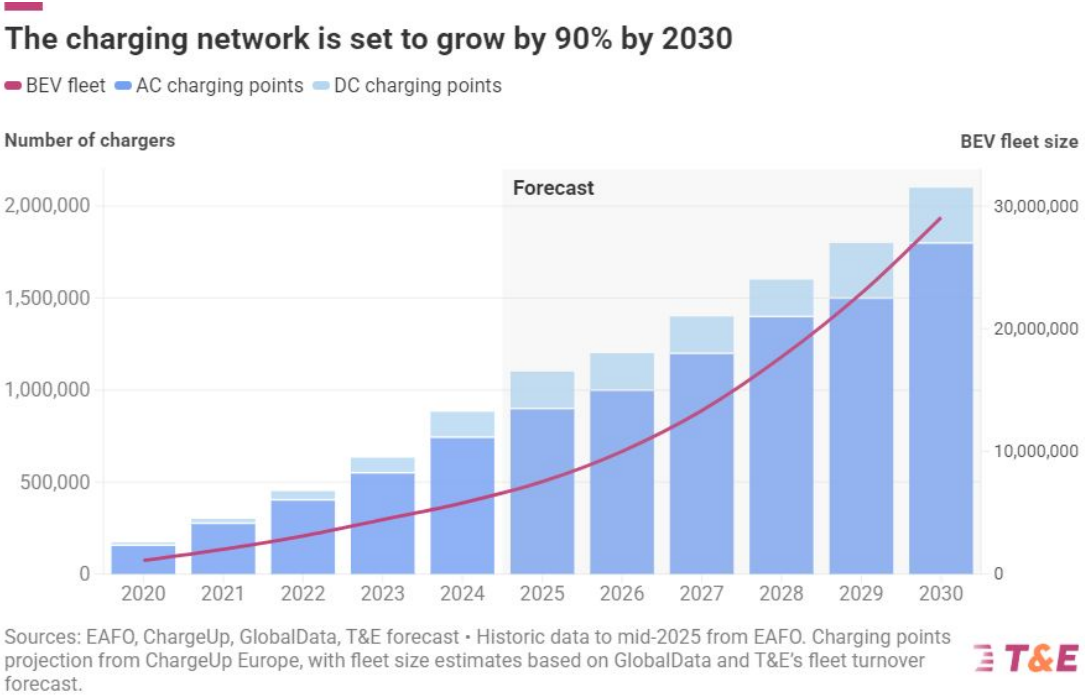


Source: 2022-2024 prices from BloombergNEF's 2024 Lithium-Ion Battery Price Survey • Battery pack price expressed in 2024 $/kWh. European prices take into account the global battery price forecast (BNEF) and a forecast of LFP uptake. The LFP share (BEV production) is expected to reach 50% in 2030 and could converge toward BNEF chemistry forecast (all vehicle sold) in the long term (64% LFP by 2035).

BEV growth is supported by a growing charging network

The EU charging network is growing in line with the BEV fleet penetration. The number of public chargers is expected to reach 1.1 million in 2025, five times more than in 2020.

The charging network is set to grow by 90% by 2030 (2.1 million chargers), compared to 2025, based on ChargeUp Europe forecasts.



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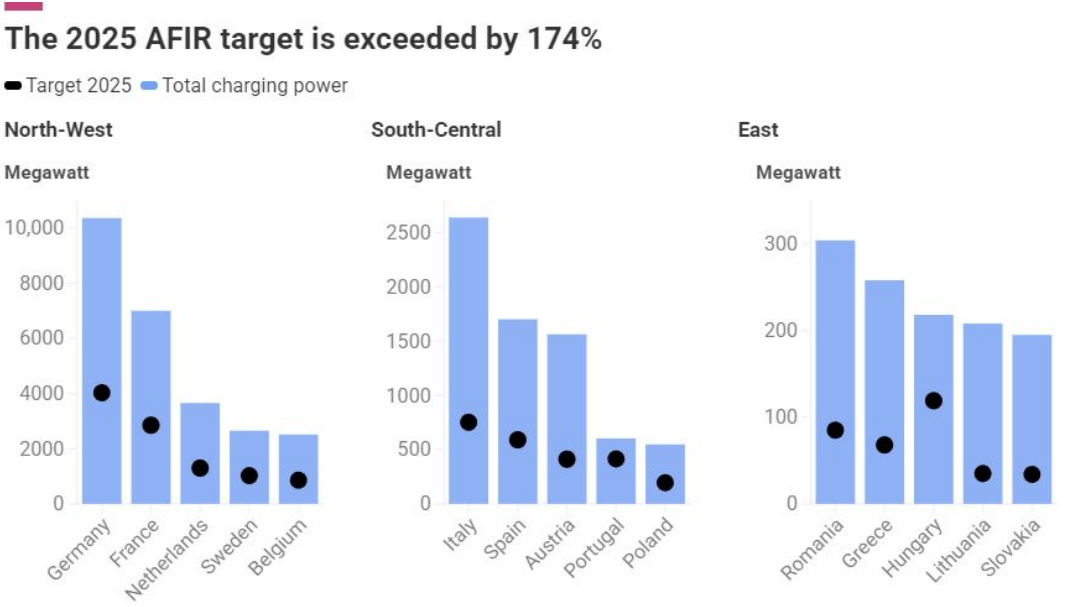
100% of EU countries meet their AFIR target in 2025

The AFIR fleet-based target ensures EU countries have enough chargers for their BEV fleet.

- All EU countries already meet their 2025 AFIR fleet-based target based on the amount of charging points deployed in H1 2025.
- For the EU as a whole, the AFIR target is exceeded by 174%.
- 22 of the 27 EU countries have at least twice as much charging power as required by law.

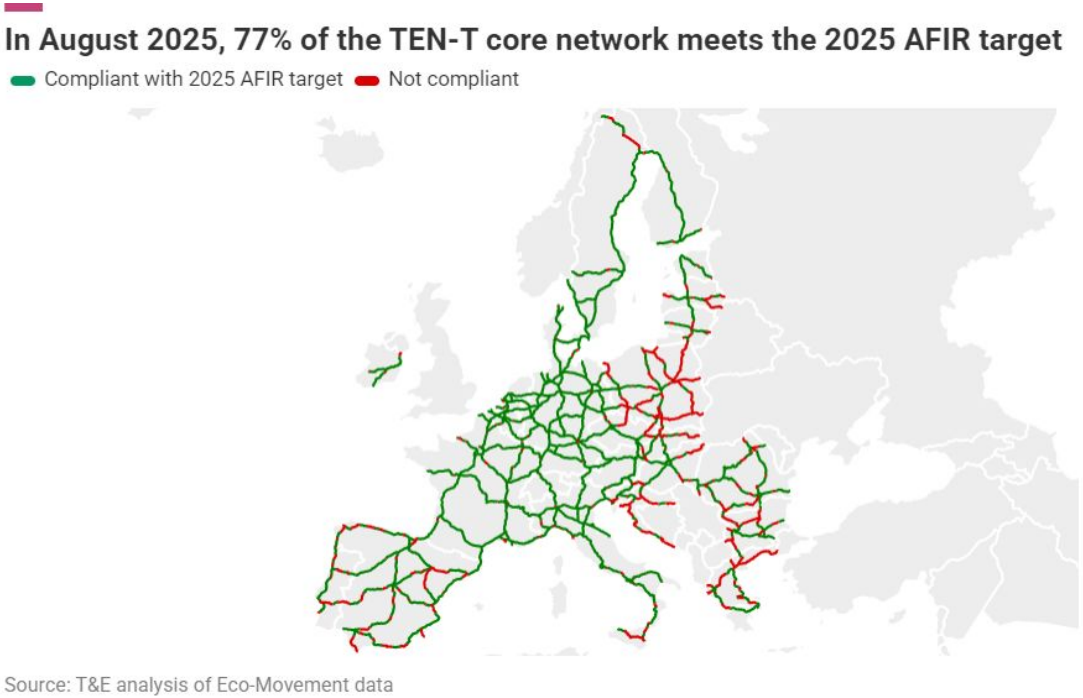


Source: Ecomovement, EAFO, ACEA • Under AFIR, member states must provide 1.3 kW per BEV and 0.8 kW per PHEV. Targets differ by fleet size, with compliance for 2025 due by the end of that year. Only the five largest countries per region are shown for illustration.

The TEN-T network coverage is on track in most markets

77% of the core highway network is already covered with ultra-fast charging and meets the 2025 network coverage AFIR target.

- Most of the Western and Northern EU TEN-T core network is compliant with the 2025 target enabling seamless cross continental travel.
- Eastern countries still have some gaps but have the fastest growing networks (+10%p coverage so far in 2025).

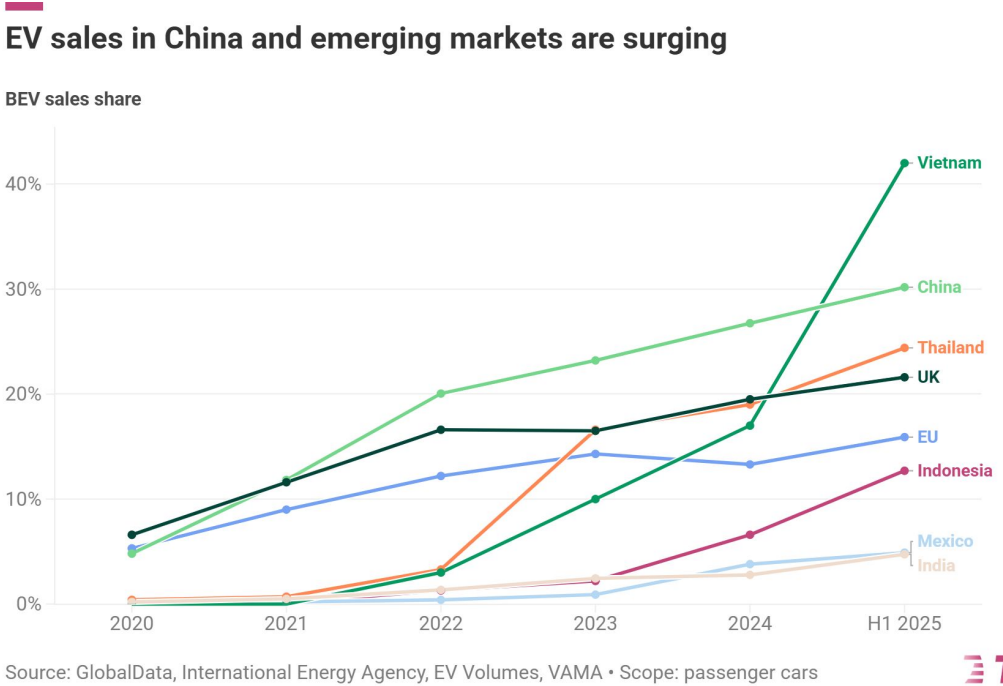


Source: T&E analysis of Eco-Movement data

‘Emerging’ markets are going electric fast and catching up with the EU (1/2)

European is losing ground in the global EV race. Leadership in BEV technology is essential to the European industry's competitiveness globally.

- While the EU is discussing the 2035 target, global markets are going electric: India (5%), Mexico (5%), Indonesia (13%), Thailand (24%), Vietnam (42%).
- In the world's biggest market, China, BEV sales reached 30%.



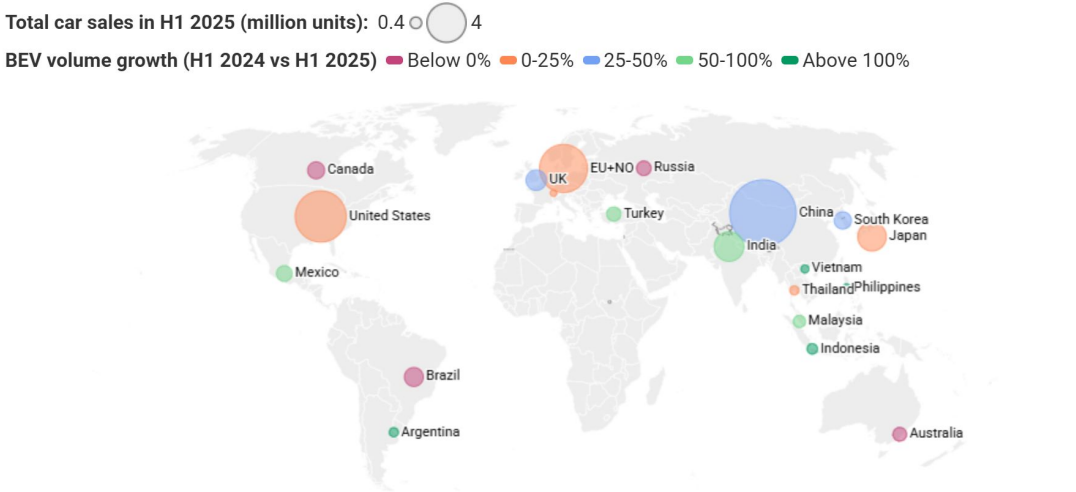
‘Emerging’ markets are going electric fast (2/2)

Global prospects for European carmakers lie in the fast-growing EV market.

With the US market closing to EU imports due to new 15% tariffs (up from 2.5%), the most accessible opportunities are now in Asia, South America, and Africa - regions that also host the fastest-growing BEV markets.

For example: Thailand (+25% growth in volumes between H1 2025 and H1 2024), China (+44%), Mexico (+96%) and Indonesia (+158%). In comparison, the EU27 had a 22% growth in volumes and BEV reached a 16% sales share.

Fast-growing emerging markets offer prospects for European carmakers



Source: GlobalData

What to do in the car CO2 review?

1. Maintain 2030–2035 CO2 targets
Targets are working while delays leads to lost investor confidence, jobs and momentum.

2. Keep biofuels out
Biofuels have no scalable, sustainable role in road transport and pose high fraud import risks (esp. from China).

3. Reject lifecycle analysis (LCA) approach
Too complex and burdensome for vehicle regulation. LCA is the back door for fuels and would destroy the market signal for BEVs.

4. No PHEVs post-2035
PHEVs have been used as SUV-sized defeat-devices for compliance. At best they are a costly distraction from BEVs.

5. Banking & borrowing
Replace five-year target steps with a banking borrowing system with annual linear targets in order to prevent stop-and-go EV sales and compliance games.

Conclusion - A pivotal moment for Europe

The EU's car and van CO2 regulation is Europe's cornerstone climate and industrial policy for the automotive sector. It has set a clear and credible trajectory for the automotive industry and the emobility value chain to make the necessary investments and plan the transition.

While taking stock of progress is important, changing targets 10 years ahead of time on the premise that they are not feasible is simply defeatist and short-sighted.

The Commission should keep the regulation as agreed in 2023 and focus on the building blocks needed to deliver it: a strong industrial strategy that scales battery production, secures raw materials, provides smart incentives across Member States, and accelerates investment in grids and permitting.

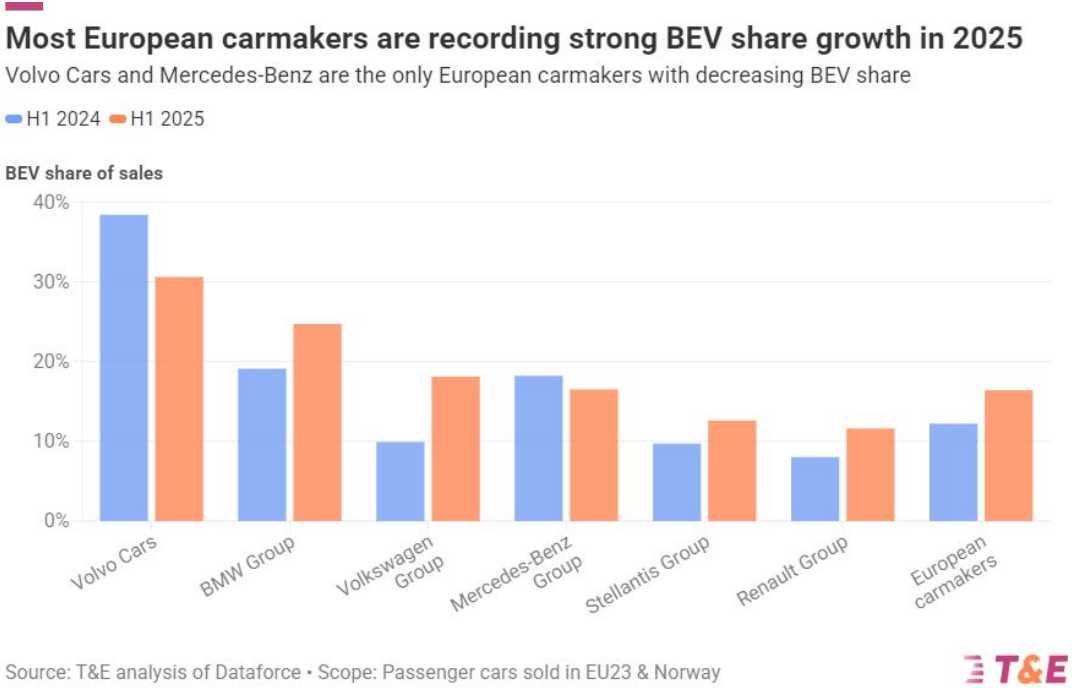
This is a pivotal moment for Europe. The way we act now will determine if Europe secures industrial leadership in the global EV race and enters the electric age, or falls behind in the fossil age.

Annexes

European carmakers' EV sales are growing

European carmakers BEV share grew from 12% in the first half of 2024 to 16% in the first half of 2025.

Volkswagen has the largest BEV share growth with 18% in H1 2025 compared to 10% in H1 2024.



Data sources used for the compliance analysis

- **T&E has acquired global vehicle sales forecast supplied by GlobalData**; *Copyright © Global Hybrid and EV sales Forecast, Q2 2025. All rights reserved; GlobalData is an independent provider of industry information. The sales forecast is based on GlobalData's model of the macro-environment, including economic and competitive developments. GlobalData uses industry contacts, press and media coverage, direct automotive manufacturer and supplier contacts, investment analysts, and other Globaldata assets. Permission to use GlobalData copyrighted reports, data and information does not imply endorsement by GlobalData of the manner, format, context, content, conclusion, opinion or viewpoint in which GlobalData reports, data and information or their derivatives are used or referenced herein.*
  GlobalData's dataset has been used to inform T&E modelling of carmaker compliance over 2025-2027, for the infographic on the growing BEV share, and for infographics about BEV sales growth in the global market. Adjustments to the GlobalData forecast for 2025–2027 have been made in order to reconcile the differences observed in the H1 2025 powertrain mix with the historical data acquired from Dataforce.

- **Historical sales and emissions data (2024, H1 2025) are supplied by Dataforce**. The data coverage for this briefing includes 23 European countries (Austria, Belgium, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden) and Norway. These 24 countries accounted for 98.3% of the car market in 2023 based on ACEA data. Vehicles identified by T&E as "special purpose vehicles" (e.g. motorhomes, camper vans, ambulances, …) were excluded from the dataset.

Data sources used for other infographics

- **BEV and ICE average net selling (ASP) prices** are from Bloomberg Intelligence and cover France, Germany and the UK.
- **The breakdown of affordable, mass-market and premium vehicle** sales share is based on T&E analysis of GlobalData. Affordable models have been identified by T&E as models with a starting price below €25,000 (announced price by carmakers for the entry-level variant). Mass-market models are from non-premium brands in segments A, B and C. The total annual BEV share is based on ACEA data.
- **Number of affordable models** are from T&E tracking of affordable model launches.
- **Pack prices** for batteries *delivered in Europe* are modelled based on BloombergNEF global price forecast and T&E forecast of battery chemistry. BloombergNEF data includes historical data for global and prices of battery pack delivered in Europe up to 2024, with a short-term forecast for 2025 and a long-term forecast of global pack prices based on a 18% learning rate. LFP share of BEV produced in Europe are from EV-Volumes up to H1 2025. T&E forecasts an increase in LFP share of BEV production in Europe. We assume that the battery chemistry mix used in European car *production* would converge toward Bloomberg's chemistry mix forecast for passenger cars *sold* in Europe by 2035.
- **Number of chargers** are from EAFO while the forecast between 2025 and 2030 is from ChargeUp Europe.
- **2025 AFIR targets per country** are estimated by T&E based on our projections of BEV and PHEV sales for cars and vans.
- **TEN-T charging coverage** is based on T&E analysis of Eco-Movement data.

2025-2027 CO2 compliance: methodology

- The T&E Central Compliance Scenario for 2025–2027 is based on the following methodology:
  - Carmaker (OEM) powertrain sales shares between 2025 and 2030 are derived from GlobalData forecasts. OEMs' emissions are calculated based on each powertrain share and the average emissions of vehicles within each powertrain group.
  - Emissions for each OEM's powertrain group (PHEVs, FHEVs, MHEVs, conventional ICEs) are forecasted based on the change in sales segments (A, B, C, D, ≥E, Others), where each segment share is from GlobalData forecast, and expected improvements in engine efficiency. Historical values (2024 and H1 2024) of each OEM–powertrain–segment combination are based on Dataforce data.
  - Regulatory flexibilities are modelled. The mass adjustment is based on T&E forecast of the mass of each OEM's powertrain group (the change in mass depends on change in sales segments compared to H1 2025). The ZLEV bonus applied on the carmaker target depends on the BEV and PHEV share. Eco-innovation credits are similar to 2023 for each OEM/pool.

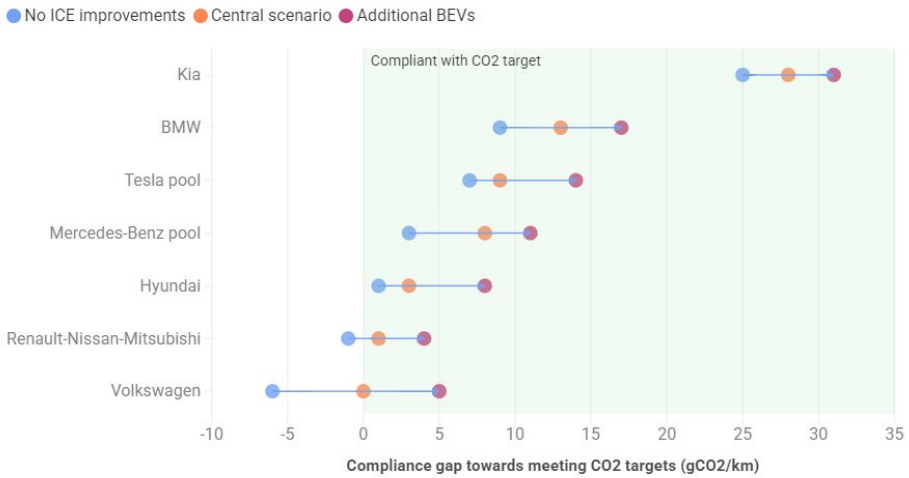
- Given the wide range of possible strategies for each OEM/pool, any forecast is subject to significant uncertainties. The T&E central scenario is based on plausible trends, informed by our assessment of past trends and GlobalData's forecasts. The next page displays possible variations in compliance gaps if ICEs improvements modelled are not achieved, and if the BEV share increases beyond the GlobalData forecast.The following pages contain further details and explanations on T&E assumptions.

2025-2027 CO2 compliance: sensitivity analysis

The sensitivity analysis displays results for each OEM/pool:

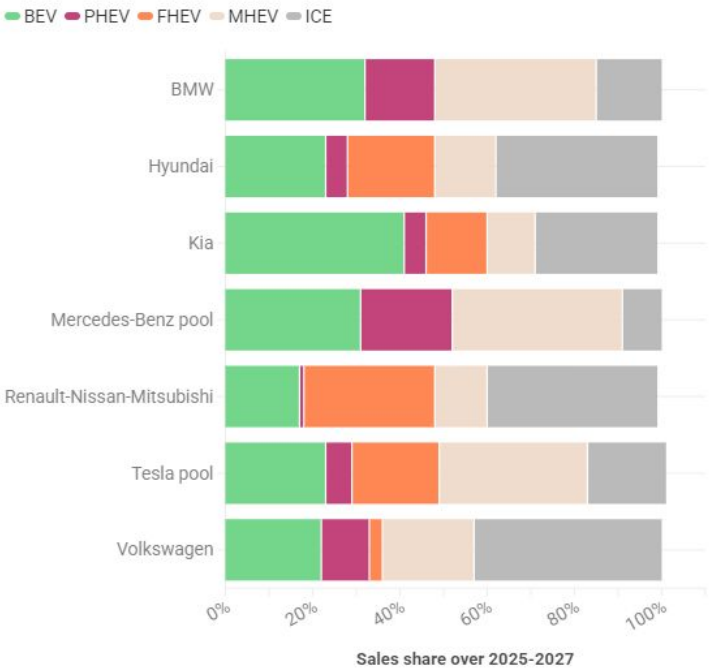
- Without any change in ICE powertrain efficiency compared to H1 2025. The only change compared to H1 2025 is the powertrain share derived from GlobalData forecast.
- With higher BEV sales share: a +2.5 percentage point increase in BEV share is applied to all OEMs. In that scenario, we keep T&E modelling of ICE efficiency improvements.

T&E expects that all OEMs/pools will make the necessary changes to minimise fines over 2025-2027. Any decrease in ICE improvements could be compensated by larger BEV sales and the other way around.

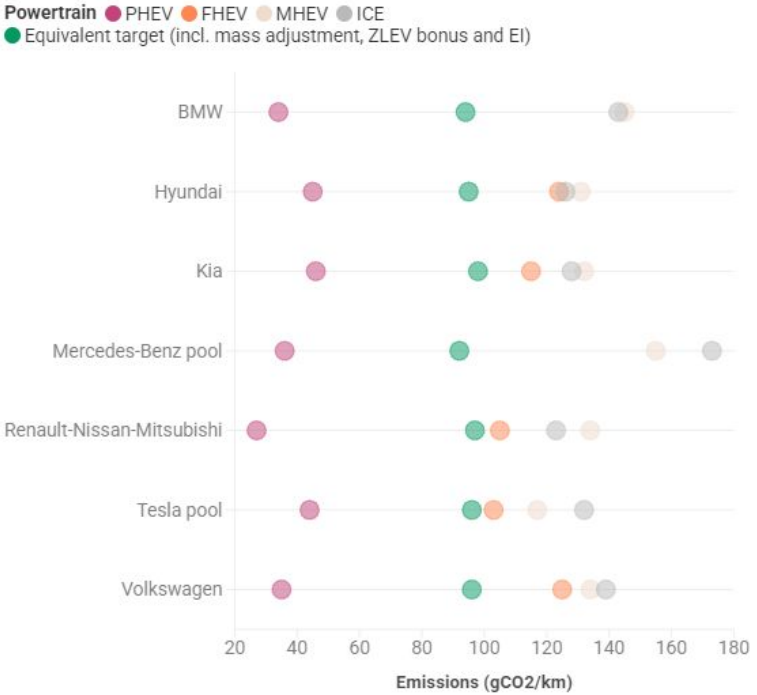


Source: H1 2025 sales in 23 EU countries and Norway from Dataforce. T&E modelling of carmakers compliance over 3 years: T&E central scenario informed by GlobalData powertrain forecast, and T&E modelling of powertrain emissions • Tesla pool include Stellantis, Ford, Toyota and others Japanese OEMs. Mercedes pool includes Mercedes, Volvo, Polestar. Renault assumed to pool again with Nissan-Mitsubishi.

2025-2027 CO2 compliance: powertrain mix and emissions



Source: T&E analysis of GlobalData forecast



Source: T&E forecast of emissions over 2025-2027

2025-2027 CO2 compliance: emissions forecast

- **Emissions forecast:** For each OEM, emissions are forecast based on changes in powertrain share. Within each powertrain group, emissions are calculated according to changes in segment share. An annual efficiency improvement of 1.5% is also applied for each combination of OEM-powertrain-segment up to 2027. For reference, an average annual efficiency improvement of 3% was observed over 2019-2022 for vehicles of same size, when OEMs needed to comply with their previous CO_2 target. Due to the greater reliance on BEV sales, we conservatively apply a lower annual efficiency improvement up to 2027. European OEMs have expertise in combustion engine optimisation, so a 1.5% efficiency improvement can achievable through engine innovation. OEMs could also adopt a commercial strategy of providing discounts on vehicle variants with lower engine power in order to reduce sales of more polluting variants.

- **PHEV emissions forecast**: In addition to the above segment change, the change in the utility factor (UF) curve planned as part of the Euro 6e-Bis and Euro 6e-Bis-FCM regulations is expected to impact PHEV emissions (see Table A8.App5/1). We expect OEMs to minimise the launch of newly type-approved models and facelifts in both 2025 and 2027, in order to minimise the increase in WLTP emissions during the transition period. This is supported by H1 2025 data where the PHEV average emissions is 24 gCO2/km compared to 28 gCO2/km in 2024 while newly type approved would emit more than two times more due to the change in UF in 2025. At the same time, we expect OEMs to increase the electric range of their sales mix. Overall, the combination of longer ranges and launch timing management is expected to limit the increase in WLTP emissions due to UF changes. Nonetheless, we anticipate that the regulatory change would result in a 61% increase in average PHEV WLTP emissions between 2025 and 2027.

2025-2027 CO2 compliance: regulatory flexibilities

- **The mass parameter** is used to calculate OEM-specific targets. We forecast the average mass for each OEM based on changes in powertrain share. Within each powertrain group, masses are calculated according to changes in segment share. We expect OEMs to increase the average range of PHEVs without impacting their mass average. This can be achieved through the use of more energy-dense batteries and lightweight materials in other parts of the vehicle. However, if OEMs fail to limit mass increases, the real-world fuel consumption of PHEVs risks to skyrocket, which would go against the demands of both drivers and regulators. T&E has found that the PHEV real-world fuel consumption is more strongly correlated with mass than with the electric range.

- **The zero and low emissions (ZLEV) bonus** allows carmakers to have less stringent CO_2 targets when they sell more than 25% of vehicles emitting less than 50 gCO_2/km.

- **Eco-innovation (EI) credits** for each OEM/pool are extracted from the 2023 final EEA data and assumed constant. As ICE sales decrease, maintaining the same contribution from EI level implies that OEMs would increase the share of ICEs fitted with EIs. An increase in savings per ICE is expected from 2025 onwards due to the inclusion of air conditioning improvements in the scope of EI technologies.

- **Pooling**: The Tesla and Mercedes pools are defined based on the M1 pooling list from the 15th March 2025. We assume that the Renault Group would join Nissan and Mitsubishi in a pool, as done every year since 2020. Leapmotor is included in the Stellantis Group because they operate as part of a joint venture.

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The findings and views put forward in this publication are the sole responsibility of the authors listed above.