

Public comments on the European Commission proposal to introduce a 3-year “averaging” provision for the CO₂ standards regulation for new cars and vans

March 2025

On March 5, the European Commission put forward an Action Plan for the European automotive industry and [announced](#) intent to propose a “focused amendment” to the carbon dioxide (CO₂) standards regulation that would allow vehicle manufacturers to meet the compliance targets by averaging their performance over a 3-year period (2025 to 2027) instead of having to meet them in 2025. It is expected that the Commission will release the proposal for further examination and adoption by the European Parliament and the European Council at the end of March. The following provides a summary description of the proposed provision and its expected impacts.

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How do manufacturers perform under the current CO₂ target mechanism?

The current EU CO₂ standards for new cars and vans set target values following a step-wise function, meaning that more stringent target values take effect only every 5 years, instead of annually tightening targets. The target was last tightened in 2020 and continued to apply throughout the entire period 2020 to 2024. Starting this year, a 15% more stringent target applies for the 2025 to 2029 period. In 2024, on average, manufacturers over-complied with their CO₂ targets by about 12 g/km, or by about 11% relative to the 2020–2024 value. For 2025, already in January, manufacturers were a good way toward meeting their new CO₂ targets and, on average, had 10 more g/km (about 11%) to go for the remaining 11 months of the year. Considering that manufacturers need to reduce their CO₂ emissions by about 47% in 2030 compared with the 2025–2029 target, it can be expected that they will substantially over-comply in all years from 2026 to 2029 with an increasing trend toward the later years (Figure 1).

In reality, manufacturers do not strictly reduce CO₂ emissions following this step-wise targets function. It would be too high of a risk for manufacturers to remain at the same level for several years and then have to drastically reduce emissions in a single year. Instead, manufacturers tend to stay below the regulatory target, especially toward the end of a 5-year period. In 2024, on average, manufacturers over-complied with their CO₂ targets by about 12 g/km, or by about 11% relative to the 2020–2024 value. For 2025, already in January, manufacturers were a good way toward meeting their new CO₂ targets and, on average, had 10 more g/km (about 11%) to go for the remaining 11 months of the year. Considering that manufacturers need to reduce their CO₂ emissions by about 47% in 2030 compared with the 2025–2029 target, it can be expected that they will substantially over-comply in all years from 2026 to 2029 with an increasing trend toward the later years (Figure 1).

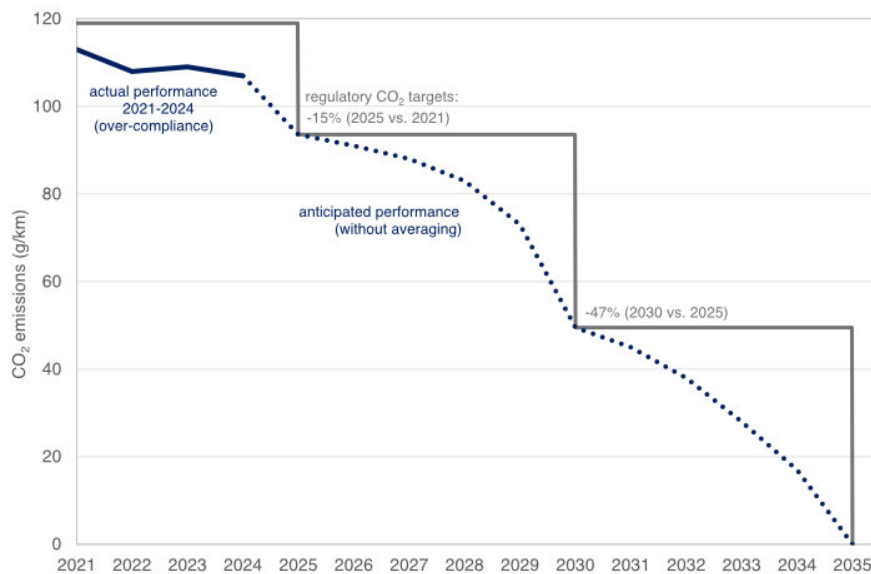


Figure 1. Illustration of the EU step-wise CO₂ targets function as well as historical and anticipated performance of manufacturers. (The target line shown for the period

2021–2024 is the average of the effective manufacturer targets during this period of 118 g/km. The 15% reduction required under the 2025–2029 target, however, relates to a corrected target of 110 g/km, not shown in the figure. This correction was required to maintain the level of target stringency when switching from the former type-approval test procedure to the currently applicable test procedure.)

What does “averaging” mean?

The proposed averaging mechanism will allow manufacturers to exceed their CO₂ target in one or more years, as long as any exceedances are balanced out by over-compliance in other years. In the case of 3-year averaging, it is to be expected that manufacturers will exceed their 2025 CO₂ targets and compensate in 2026 or even only in 2027. Averaging thereby results in a delay of the 2025 CO₂ target (Figure 2). This delay offers manufacturers greater flexibility because they can achieve emission reductions in later years, but it will result in more combustion engine vehicles and fewer electric vehicles registered, and substantial excess emissions.

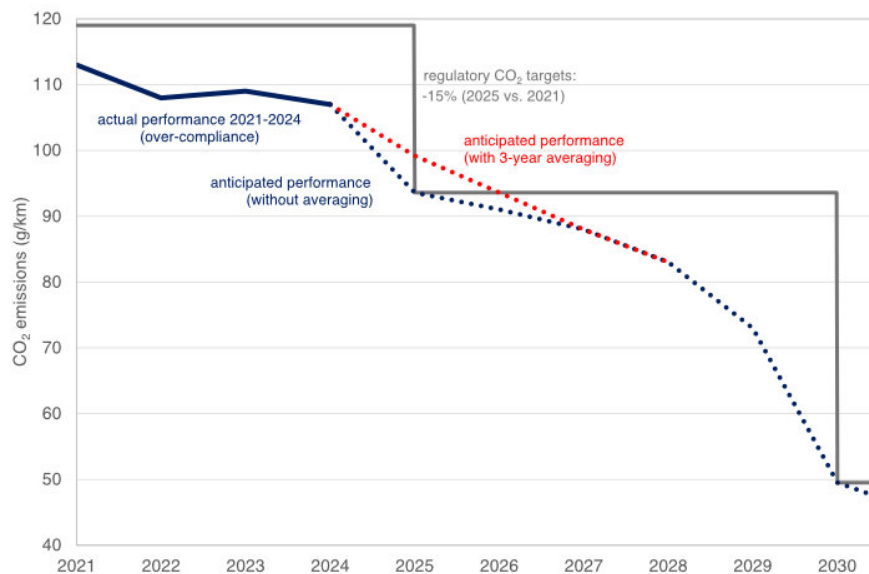


Figure 2. Illustration of the principal effect of 3-year averaging (2025 to 2027) on the anticipated performance of EU manufacturers.

What is the effect of averaging?

Let us consider a hypothetical but exemplary and realistic pathway of anticipated future performance of manufacturers. Here manufacturers make use of the averaging by exceeding the 2025 target by 6% on average, which is equivalent to 5.6 gCO₂/km. Assuming further that manufacturers will meet the target in 2026, the 3-year averaging requires that CO₂ emissions in 2027 are 5.6 g/km lower than the target. Considering the years 2025 to 2027 together, the net effect on annual emission levels would thereby be zero (see the red line and

arrows in Figure 3). However, that is only with respect to the flat regulatory CO₂ target line.

In comparison, the much more realistic anticipated future performance line shows emission levels would still be about 5.6 g/km higher in 2025, and 2.6 g/km higher in 2026, but with no balancing out in 2027. That is because, even in a business-as-usual scenario, without averaging, manufacturers are likely to significantly over-comply with the regulatory target line. Hence, the net effect on annual emission levels is not zero. Instead, averaging results in notable excess CO₂ emissions (see the orange arrows in Figure 3).

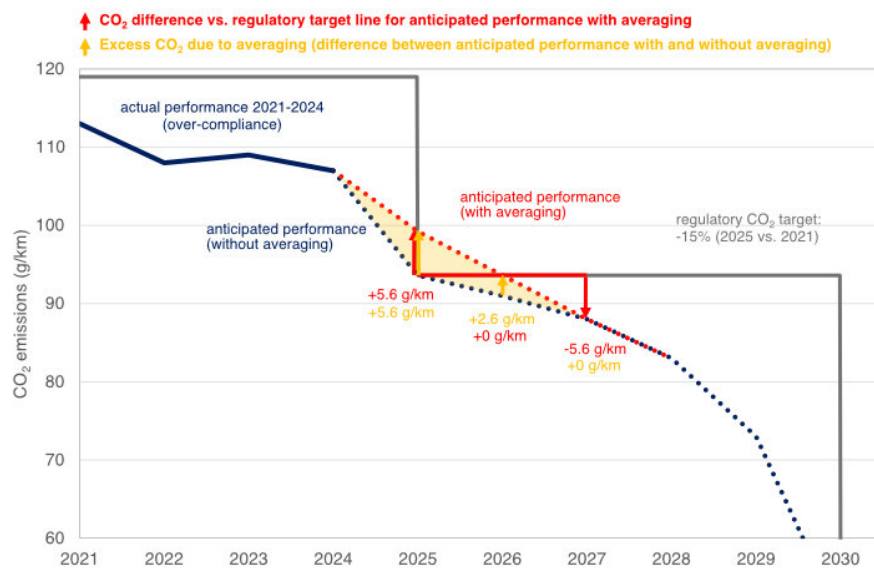


Figure 3. Illustration of the effect of averaging on average CO₂ emission levels of new EU vehicles in 2025, 2026, and 2027.

Any adverse effect on fleet-average annual CO₂ emission levels (g/km) leads to high excess CO₂ emissions (million tons) due to the number of vehicles newly placed on the market each year and the long time period those vehicles stay on the road. With the averaging effectively delaying the 2025 CO₂ targets, fewer electric vehicles will get newly registered than otherwise would be the case; instead, more combustion engine vehicles with comparably high emissions will get registered. About 10.8 million new passenger cars get registered in the European Union every year. Those new vehicles drive on average for about 250,000 km before they get taken off the road at the end of their lifetime. Considering that CO₂ emissions during real-world driving are on average 19% higher than the official values¹, each additional

¹ Based on data reported by the European Environment Agency for combustion engine vehicles registered in 2022. This represents a best-case assumption, as the fleet-average gap is expected to be higher due to the extremely large gap of over 300% observed for plug-in hybrid

gram in type-approval CO₂ emissions results, on average, in additional real-world fleet CO₂ emissions of about 3.2 Mt. As the level of CO₂ emissions of a vehicle and the amount of fuel consumed are directly linked, any delay in the CO₂ standards will also lead to increased fuel consumption and thereby increased fuel expenditures and reliance on oil imports.

The amount of excess CO₂ emissions caused by multi-year averaging depends on the number of years over which averaging is allowed. Averaging over 5-year averaging, as parts of the automotive industry sought, is 4-5 times worse than averaging over 3 years and an order of magnitude worse than 2-year averaging. The effect also depends on the anticipated performance pathway of manufacturers, which can be approximated using a range of scenarios. Table 1 provides an overview of the expected quantitative impacts of averaging.

Table 1. Projected impacts of averaging on BEV uptake and vehicle lifetime CO₂ emissions and fuel consumption.

Scenario	(Change in) fleet-average CO ₂ of new vehicles registered in 2025 (g/km)	(Change in) share of battery electric vehicles in 2025 ^{a)}	Additional lifetime CO ₂ emissions ^{b)} of vehicles registered in 2025–2029 (megatons)	Additional lifetime fuel consumption ^{c)} of vehicles registered in 2025–2029 (billion liters)
BAU (current policy)	94 g/km	25 %	N/A	N/A
2-year averaging	+2 to +4 g/km	-2 to -3 percentage points	+8–16	+3.7–7.1
3-year averaging	+5 to +7 g/km	-4 to -7 percentage points	+26–51	+11.6–22.5
5-year averaging	+6 to +11 g/km	-6 to -8 percentage points	+127–201	+55.6–88.2

^{a)} Based on 2024 fleet-average numbers, assumes for 2025 a plug-in hybrid vehicle sales share of 7%, fleet-average plug-in hybrid CO₂ emissions of 30 g/km, and fleet-average CO₂ emissions of combustion engine vehicles, including hybrid vehicles, of 135 g/km (<https://theicct.org/wp-content/uploads/2025/02/ID-309-%E2%80%93-EU-Monitor-cars-2024-Market-Monitor-70167-v3.pdf>).

^{b)} Takes into account an average gap of 19% between real-world driving and official type-approval CO₂ emissions.

^{c)} Expressed in petrol equivalent using an emission factor of 2,278 g CO₂/liter petrol (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52024SC0059>).

For comparison, the 26 to 51 megatons of additional CO₂ emissions for a 3-year averaging scenario are equivalent roughly to the entire annual CO₂ emissions of a country the size of [Denmark or Greece](#). The 11.6 to 22.5 billion liters of additional fuel consumption correspond to fuel costs, excluding any taxes and only considering the value of the underlying crude oil, its refinery, transport and distribution, of about €10 to €20 billion.²

Is averaging the same as “banking-and-borrowing”?

While the averaging approach, as proposed, maintains the flat regulatory CO₂ target line, a typical banking-and-borrowing approach would require establishing a target pathway with annually increasing stringency. That pathway could be, in its most simple form, a linear interpolation between the 2025 and 2030 target points. Manufacturers would need to borrow credits for any years their CO₂ emissions are higher than the target and could bank credits in years they over-comply. At the end of the banking-and-borrowing period or a certain number of years after borrowing, all borrowed credits would have to have been balanced out by banked credits.

The number of borrowed credits could be required to be balanced out at an “interest rate,” as is the case for the UK's Zero Emission Vehicle Mandate. Such a banking and borrowing scheme would typically allow trading of credits among manufacturers instead of forming manufacturer pools, as is allowed by the EU CO₂ standards.² It would avoid the type of excess emissions illustrated in Figure 3 above and would ensure that those manufacturers that already comply in 2025 are rewarded for taking the risks associated with innovativeness and not penalized for being more proactive than the non-compliant ones.

As it is more complex than the averaging approach proposed by the European Commission, a typical banking-and-borrowing approach would require thorough preparation and hence would be more challenging to introduce on short notice.

Outlook

The European Commission's proposed amendment to the CO₂ standards regulation is expected to pass through the legislative process as part of an “accelerated procedure.” If the European Parliament and Council both agree to adopt the proposed amendment

² Assuming a value of about [€0.74 per liter](#) of fuel.

without any changes, the 3-year averaging could be implemented already for the year 2025, and the applicable averaging period would be 2025–2027. If, instead, Parliament and Council decide to introduce significant changes to the proposed amendment, the European Commission has the right to withdraw its proposal; in that case, the 2025 CO₂ targets would apply as originally foreseen.

