

CO₂ emission standards for new cars and vans

'Fit for 55' package

OVERVIEW

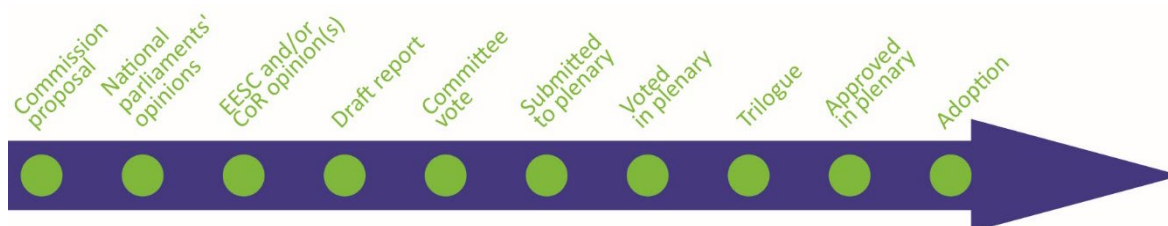
On 14 July 2021, as part of the 'fit for 55' package, the European Commission presented a legislative proposal for a revision of the Regulation setting CO₂ emission performance standards for passenger cars and light commercial vehicles (vans). To increase the contribution of the road transport sector to the EU's climate targets, the proposal sets more ambitious 2030 targets for reducing the CO₂ emissions of new cars and vans, and allows only zero-emission vehicles from 2035.

Stakeholders have expressed mixed views about the proposal as regards its ambition, the impact on the automotive industry, alternative fuels infrastructure and the potential role of sustainable fuels.

The Parliament and the Council adopted their positions in June 2022, and reached a trilogue agreement in October 2022. The regulation was adopted in March 2023 and published in the Official Journal on 25 April 2023. It enters into force on 15 May 2023.

Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 as regards strengthening the CO₂ emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition

<i>Committee responsible:</i>	Environment, Public Health and Food Safety (ENVI)	COM(2021) 556 14.7.2021
<i>Rapporteur:</i>	Jan Huitema (Renew, Netherlands)	2021/0197(COD)
<i>Shadow rapporteurs:</i>	Jens Gieseke (EPP, Germany) Sara Cerdas (S&D, Portugal) Bas Eickhout (Greens/EFA, Netherlands) Sylvia Limmer (ID, Germany) Pietro Fiocchi (ECR, Italy) Kateřina Konečná (The Left, Czechia)	Ordinary legislative procedure (COD) (Parliament and Council on equal footing – formerly 'co-decision')
<i>Procedure completed.</i>	Regulation (EU) 2023/851 OJ L 110, 25.4.2023, pp. 5-20	



Introduction

On 14 July 2021, as part of the 'fit for 55' package, the European Commission presented a legislative proposal for a revision of the Regulation setting CO₂ emission performance standards for passenger cars and light commercial vehicles (vans). The aim of the proposal is to ensure the contribution of the road transport sector to the EU targets set out in the [European Climate Law](#) – achieving climate neutrality by 2050 and reducing net greenhouse gas (GHG) emissions by 55 % by 2030, compared with 1990 levels.

The proposed CO₂ targets for cars and vans are complemented by a wider set of measures proposed as part of the 'fit for 55' package, with the aim of reducing GHG emissions in the road transport sector:

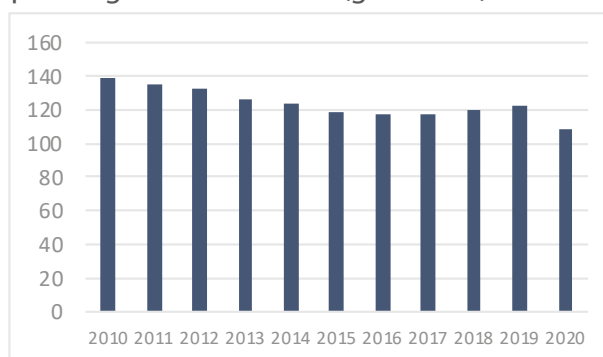
- a new separate [emissions trading system](#) for road transport and buildings fuels;
- an increased share of renewable transport fuels in the review of the [Renewable Energy Directive](#);
- revision of the [Energy Taxation Directive](#) to remove tax advantages for fossil fuels;
- revision of the [alternative fuels infrastructure](#) legislation to expand charging capacity, in line with the number of registered zero- and low-emission vehicles.

According to the Commission's [climate target plan](#), GHG emissions from road transport have increased by over a quarter since 1990, and account for a fifth of EU total emissions. The climate target plan's impact assessment assumes a 50 % reduction of CO₂ emissions per kilometre of new passenger cars in 2030 as compared with the existing targets to be achieved in 2021.

The Commission's [sustainable and smart mobility strategy](#), presented in December 2020, contains an action plan to transform the EU transport system in line with the objectives of the European Green Deal and the EU's digital strategy. This action plan outlines actions in 10 priority areas (flagships). Flagship 1, 'Boosting the uptake of zero-emission vehicles, renewable & low-carbon fuels and related infrastructure', presents legislative and non-legislative initiatives to reduce GHG emissions and air pollutants, to promote the uptake of zero-emission vehicles and to boost innovation in vehicle technologies, especially with respect to batteries and hydrogen. The strategy aims for at least 30 million zero-emission vehicles to be in operation in Europe by 2030 and close to 100 % zero-emission vehicles to be on the European roads by 2050.

In 2020, the average emissions of [new passenger cars](#) registered in the EU, Iceland, Norway and the United Kingdom were 107.8 grams of CO₂ per km (g CO₂/km), according to [provisional data](#) published by the European Environment Agency. This is 14.5 g (12 %) lower than in 2019 and the first decrease since 2016. The share of electric cars in new registrations rose from about 3.5 % in 2019 to about 11 % in 2020, exceeding 1 million registrations¹ for the first time. [New vans](#) registered in Europe in 2020 had average emissions of 157.7 g CO₂/km, 2.3 g (1.5 %) less than in 2019. The share of electric vans increased from 1.4 % in 2019 to about 2.3 % in 2020.

Figure 1 – Average CO₂ emissions of new passenger cars in the EU (g CO₂/km)



Data source: [ACEA](#).

Existing situation

[Regulation \(EU\) 2019/631](#) sets targets for the EU fleet-wide average CO₂ emissions of new passenger cars and light commercial vehicles. Individual manufacturers are allowed higher or lower average

CO₂ emissions, depending on the average vehicle weight of their vehicle fleet, according to a limit value curve that is adjusted in such a way that the EU targets for fleet average emissions are achieved. In contrast to pollutant emissions regulations, this regulation does not set maximum limits per vehicle: the heavier the average weight of the cars sold by a manufacturer, the higher the permitted CO₂ emissions.²

The current CO₂ emissions standard for passenger cars is 95 g/km, phased in for 95 % of vehicles in 2020, with 100 % compliance from 2021. The CO₂ emission standard for light commercial vehicles is 147 g/km. These values are based on the now obsolete New European Driving Cycle measurement standard. As of 2021, the manufacturers' specific targets are based on the World Harmonised Light Vehicle Test Procedure ([WLTP](#)). Therefore, the fleet-wide targets for 2025 and 2030, which are WLTP-based, are expressed as percentage reductions (-15 % in 2025 for cars and vans, -37.5 % in 2030 for cars, and -31 % in 2030 for vans) relative to the average of the specific emissions targets for 2021 determined for each manufacturer.

The regulation sets out monitoring and reporting requirements that are further specified in delegated and implementing acts. Each Member State has to monitor and report relevant data to the European Commission each year.³ Since 2010, the European Environment Agency has been collecting data on the CO₂ emissions from cars and vans registered in all EU Member States, which are freely available on the agency's website. The collection, publication and monitoring of real-world [fuel and energy consumption](#) data is mandatory as of 2021, based on an obligation for manufacturers to equip new vehicles with on-board measurement devices.

Every manufacturer must ensure that the average CO₂ emissions from its fleet of newly registered vehicles in a calendar year do not exceed its specific annual emissions target. Manufacturers may form a pool for the purpose of meeting a common CO₂ target. Manufacturers that exceed their emissions target in a given year must pay a premium of €95 per gram CO₂/km above the target per vehicle registered.

The regulation includes a technology-neutral incentive mechanism for zero- and low-emission vehicles⁴ in order to accelerate their market uptake. A manufacturer that meets certain benchmarks for the sales of zero- and low-emission vehicles (15 % for cars and vans in 2025, and 35 % for cars and 30 % for vans for 2030) will be rewarded with less strict CO₂ targets.⁵ In determining that share, it is the emissions performance of the vehicles that is taken into account, so that a zero-emission vehicle counts as more than one low-emission vehicle. Manufacturers can also receive emissions credits up to 7 g/km per year for eco-innovations that verifiably reduce CO₂ emissions on the road but not in the lab. From 2025, air-conditioning equipment will become eligible as an eco-innovation.

The regulation contains a facilitative incentive valid until 2030, for the sale of zero- and low-emission cars in markets with a low share of such vehicles (defined as below 60 % of the EU average in 2017, and less than 1 000 newly registered vehicles in the same year), which are weighted more favourably (counting as 1.85 vehicles). However, if the share of zero- and low-emissions cars reaches 5 % of a Member State's fleet of new cars in a year between 2025 and 2030, that Member State will not be eligible for the above incentive in the subsequent years.

The regulation does not apply to manufacturers responsible for fewer than 1 000 annual registrations. Small-volume manufacturers (responsible for 1 000 to 10 000 registrations for cars, and 1 000 to 22 000 registrations for vans) can propose their own emissions reduction target (subject to approval by the European Commission based on agreed criteria). Niche manufacturers of cars (between 10 000 and 300 000 new registered vehicles) can apply for a target of a 45 % reduction from the 2007 level between 2020 and 2024. From 2025 to 2028, the derogation target will be 15 % lower than the derogation target accorded in the 2020-2024 period.

The European Commission must thoroughly review the effectiveness of the regulation by 2023, and submit a report to the European Parliament and Council, and potentially a proposal to amend the regulation. As part of this review, the Commission must assess the feasibility of developing real-

world emissions test procedures using portable emissions measurement systems, and evaluate the possibility of taking the lifecycle emissions from vehicles into account for future CO₂ regulation.

Lifecycle assessments

In the negotiations on the existing regulation, the European Parliament [sought](#) to introduce the requirement for the reporting of lifecycle CO₂ emissions for all cars and vans registered from 2025. In response to the Parliament's request and the above-mentioned requirements of the regulation, the Commission ordered a [study](#) to develop a lifecycle assessment (LCA) methodology for determining the environmental impacts of different vehicle and fuel types. The study, based on international standards on LCA (ISO-14040 and ISO-14044), shows that the average EU lifecycle climate impact of a battery-electric vehicle in 2020 was around 45 % of that of a gasoline car and 53 % of a diesel car. A [global comparison](#) of the lifecycle GHG emissions of passenger cars reaches similar conclusions.

However, the Commission considers that the LCA methodology is not well suited to calculating the lifecycle emissions of individual vehicles, which would require a more detailed and disaggregated approach. According to the Commission, such an approach would bring only limited added value, and it remains unclear whether an LCA approach for a regulatory environment is feasible. This view is shared by the car manufacturers' association ACEA, whose [position paper](#) on LCA states that the European automotive industry uses LCAs, based on the ISO standards, as an internal tool for managing environmental improvements, but cautions against their use as a regulatory instrument, in the light of uncertainties arising from the complexity of vehicles and supply chains.

Parliament's starting position

In its [resolution on the European Green Deal](#) of 15 January 2020, the European Parliament looked forward to a revision of the CO₂ emission performance standards for cars, vans and trucks, ensuring a pathway from 2025 onwards towards zero-emission mobility, and calls on the Commission to develop LCA methodologies for vehicle emissions. It pointed out that the current rules would need to be revised, to allow frontrunner Member States to take more ambitious measures at national level.

Preparation of the proposal

The Commission prepared an inception impact assessment (roadmap) for the update of the CO₂ emission performance standards, on which a [public consultation](#) was held from 13 November 2020 to 5 February 2021. The consultation received 1 057 responses, of which 80 % from citizens and 14 % from businesses and business associations. Most of the responses (824) came from Germany. Most industry and other stakeholders and most public authorities supported the objective of reducing CO₂ emissions of new cars and vans in line with the EU's climate targets, while citizens expressed mixed views. Vehicle price, driving range and availability of infrastructure were regarded as critical factors in the market uptake of zero- and low-emission vehicles, but there were mixed opinions about incentives and about the vehicle types to be supported.

In addition, the Commission gathered feedback through meetings with industry associations, social partners, non-governmental organisations (NGOs) and Member State authorities, and from position papers submitted by stakeholders.

The [impact assessment](#) accompanying the proposal identifies three problems:

- 1 The contribution of light-duty vehicles to the increased EU ambition for reducing GHG emissions is insufficient;
- 2 Consumers risk missing out on the benefits of zero-emission vehicles if these vehicles are not sufficiently deployed on the market;
- 3 The automotive value chain in the EU risks losing its technological leadership.

The impact assessment considered various policy options with regard to: the level and timing of the CO₂ targets; derogations for small-volume manufacturers; incentives for zero- and low-emission

vehicles; the potential contribution of renewable and low-carbon fuel; and the use of revenues from excess emission premiums.

The EPRS [initial appraisal](#) of the impact assessment notes some methodological shortcomings, and concludes that the impact assessment does not fully comply with the Better Regulation Guidelines. The Commission's Regulatory Scrutiny Board adopted a positive [opinion](#) with reservations on the draft impact assessment in April 2021.

The changes the proposal would bring

The [legislative proposal](#) for a revision of [Regulation \(EU\) 2019/631](#) setting CO₂ emission performance standards for cars and light commercial vehicles has three principal objectives:

- 1 contribute to the EU 2030 and 2050 climate objectives by reducing CO₂ emissions of cars and vans, considering that early action is important because of the vehicles' lifetime;
- 2 deliver benefits to citizens through wider deployment of zero-emission vehicles, in the form of better air quality, energy savings and reduced total cost of ownership of such vehicles;
- 3 spur innovation in zero-emission technologies, strengthen the technological leadership of the EU manufacturers and suppliers, and foster employment.

The proposal amends Regulation (EU) 2019/631 by setting more ambitious standards for reducing the CO₂ emissions of new cars and vans. Compared with the CO₂ emission targets applicable in 2021, the emissions of new passenger cars registered in the EU would have to be 55 % lower by 2030, and the emissions of new vans registered in the EU would have to be 50 % lower. By 2035, CO₂ emissions of new passenger cars and vans would have to be reduced by 100 %, i.e. all new vehicles would have zero emissions. The incentive for zero- and low-emission vehicles would stop to apply from 2030.

Table 1 – CO₂ reduction targets in current and proposed legislation

	2025 target for cars and vans	2030 target for cars	2030 target for vans	2035 target
Existing Regulation (EU) 2019/631	15 % below 2021 target	37.5 % below 2021 target	31 % below 2021 target	Same as 2030 (no 2035 target)
Proposed amendments	unchanged	55 % below 2021 target	50 % below 2021 target	100 % reduction

From 2030, only manufacturers responsible for less than 1 000 new vehicle registrations would be able to apply for a derogation from the specific emissions target. The derogation for manufacturers responsible for between 1 000 and 10 000 cars or between 1 000 and 22 000 vans will end in 2029.

The Commission would have to report on the progress towards zero-emission road mobility by 31 December 2025 and every two years thereafter. Based on the reporting, the Commission would have to review the effectiveness and impact of the regulation in 2028.

The annexes to the regulation would be amended with a view to adjusting the formulae for calculating the EU fleet-wide targets for 2030 and setting the formulae for 2035, as well as the annual specific emissions targets for each manufacturer.

Although the proposed new regulation is technology-neutral, the general view is that the 2030 and 2035 targets can only be reached with a high proportion of battery-electric vehicles in new registrations. The proposed review of the alternative fuels infrastructure legislation envisages a corresponding increase in the number of charging points for electric vehicles.

According to the Commission's [impact assessment](#), the proposed CO₂ standards are projected to reduce the CO₂ emissions of road transport, improve air quality and make the EU less dependent on imported fossil fuels. The net economic savings for society and end-users are expected to exceed the costs for manufacturers, as shown in Table 2. Furthermore, the proposed regulation is expected to reduce the total costs of ownership for first and second users, and decrease the final energy demand of new cars and vans.

Table 2 – Expected impacts of the proposal

	2030	2035	2040
Reduction of CO ₂ emissions from all cars and vans in the EU	32-33 %	56-66 %	83-89 %
Net economic savings for society and end-users over the lifetime of each new car, including the external cost of CO ₂ emissions	€860-€1 600	€1 500-€3 400	€4 600-€5 100
Savings in total cost of ownership for first users of new cars	€330-€600	€ 970-€2 200	€2 800-€3 100
Savings in total cost of ownership for second users of new cars	€450-€800	€1 300-€2 700	€2 800-€3 000
Projected costs for each new car for manufacturers	€300-€550	€940-€1 700	€1 400-€1 700
Projected costs for each new van for manufacturers	€450-€940	€1 500-€2 800	€2 300-€2 700

Advisory committees

The European Committee of the Regions (CoR) adopted an [opinion](#) on zero-emission road transport on 27 January 2022 (rapporteur: Adrian Teban, EPP, Romania), welcoming the initiative to update vehicle emissions standards in line with the climate neutrality objective. The CoR calls on the Commission to launch a strategic stakeholder dialogue on the transformation of the EU's automotive sector, to evaluate the territorial impact on the automotive industry, workforce and regions, and to set up an EU-funded 'European mechanism for a just transition of the automotive sector and regions'.

The European Economic and Social Committee (EESC) adopted an [opinion](#) on the Commission's proposal (rapporteur: Dirk Bergrath, Workers – Group II, Germany) during its plenary session of 19-20 January 2022, supporting the proposed EU fleet-wide CO₂ emission reduction target for new passenger cars. The opinion reaffirms that individual mobility must remain accessible and affordable for all, especially for commuters without access to alternative mobility solutions. It also calls for an evaluation of the state of play regarding the qualification and (re)training of workers, and an analysis of the need for additional action to improve employees' skills and qualifications for the structural transition of the automotive industry.

National parliaments

One [national parliament](#) submitted a reasoned opinion before the subsidiarity deadline on 8 November 2021. The Irish [Houses of the Oireachtas](#) consider that the proposal, along with other transport-related proposals in the 'fit for 55' package, lacks a detailed statement with sufficient quantitative and qualitative indicators to allow national parliaments to fully assess the implications.

Stakeholder views⁶

Eric-Mark Huitema, director general of car manufacturers' association [ACEA](#), draws attention to a widening divide between western Europe and central and eastern Europe when it comes to zero-emission mobility, and warns that a poorly managed transition risks not only causing major social

disruption among auto workers and citizens who lose access to affordable mobility but also undermining support for climate action and the EU. ACEA's [position paper](#) welcomes the fact that the 2025 target remains unchanged, but notes that the proposed 2030 target requires massive uptake of electric cars, while expressing concern that the proposed alternative fuels infrastructure regulation would not deliver sufficient charging and refuelling infrastructure. ACEA views the proposed 2030 target for vans as extremely challenging. Moreover, it considers it premature to fix a 2035 target. Finally, it notes the need for reskilling automotive workers to achieve a just and socially acceptable transformation of the automotive value chain.

CLEPA, the European association of automotive suppliers, is critical of a regulation that would phase out internal combustion engines, [claiming](#) that half a million automotive jobs would be lost under an approach centred on electric vehicles only. CLEPA and European fuel suppliers [advocate](#) shifting the focus away from tailpipe emissions towards a holistic view of the climate contribution of the combination of energy and power train technology, and call on the Commission to create a strategy for renewable sustainable fuels. The [European Biogas Association](#) recommends replacing fossil fuels with advanced biofuels (biomethane) and adopting EU vehicle legislation based on lifecycle assessment and well-to-wheel approach. [Eurelectric](#), representing the electricity industry, supports the proposed targets. However, it advocates a linear trajectory for CO₂ emission reductions between 2025 and 2035, and calls for applying the benchmark for sales of zero- and low-emission vehicles to zero-emission vehicles only, excluding plug-in hybrid electric vehicles.

The International Council on Clean Transportation ([ICCT](#)) welcomes the proposal as an important signal for Member States and the automotive industry that has already prompted most car manufacturers to announce a transition to electric vehicles. ICCT published a series of [recommendations](#) for the design of European Union CO₂ standards.

Transport and Environment (T&E) takes the [position](#) that stronger targets (-30 % by 2025, -45 % by 2027 and -80 % by 2030) would be better aligned with the car industry's commitments to reduce CO₂ emissions of new cars. T&E recommends: removing the zero- and low-emission vehicle benchmark and corresponding CO₂ bonus from 2025; using a more realistic CO₂ rating of plug-in hybrid electric vehicles based on real-world data from fuel consumption meters; banning the sale of internal combustion engine cars with CO₂ emissions above 120 g/km from 2030; removing the mass adjustment factor; and limiting the CO₂ savings that can be claimed from eco innovations. In reaction to the Commission proposal, T&E published specific positions on CO₂ emission standards for [cars](#) and [vans](#), and [criticised](#) the proposed CO₂ standards as too weak to realise the full potential for electric car sales in Europe.

In response to the public consultation on the proposal, [Agora Verkehrswende](#) called for: stricter CO₂ targets for 2025 and 2030 (up to 75 % reduction compared with the current standards); annual limit pathways after 2025, complemented by supplementary limits for internal combustion vehicles; more realistic emissions levels for plug-in hybrid electric vehicles; and energy efficiency standards for electric vehicles. Heinrich Böll Foundation [advocates](#) raising the 2025 target in order to accelerate the short-term uptake of zero-emission vehicles.

The European consumer organisation [BEUC](#) recommends: introducing an interim CO₂ emission reduction target between 2025 and 2030; excluding plug-in hybrid electric vehicles from the benchmark; removing the mass adjustment parameter; and making use of real-world fuel consumption data. BEUC's May 2021 [position paper](#) on the future of automotive markets argues that battery-electric vehicles deliver the highest financial benefits for consumers, and makes a series of recommendations to promote their early adoption, including in the form of ambitious emissions reduction targets and the elimination of all loopholes and mechanisms that allow car manufacturers to reduce their emissions artificially.

In March 2021, [nine EU Member States](#) called on the Commission to set a phase-out date for the sale of new petrol and diesel cars, strengthen the CO₂ emission performance standards for new cars and vans, and expand recharging and refuelling infrastructure for zero-emission vehicles.

Legislative process

In the European Parliament, the proposal was referred to the Committee on the Environment, Public Health and Food Safety (ENVI). Jan Huitema (Renew, the Netherlands) presented his [draft report](#) on 8 December 2021. The report calls for stricter CO₂ emission reduction targets for cars (-25 % by 2025; -45 % by 2027; -75 % by 2030) and vans (-20 % by 2025; -40 % by 2027; -70 % by 2030), deletion of the zero- and low-emission vehicle benchmark from 2025, and a gradual decrease of the cap on the emissions reductions that can be rewarded for eco-innovations.

On 11 May 2022, the ENVI committee adopted its report with 46 votes in favour, 40 votes against, and 2 abstentions. The Committee supports the proposed 2030 and 2035 targets, but would increase the emissions reduction target for passenger cars for 2025 from 15 % to 20 %, and abolish the post-2025 incentive mechanism for zero- and low emission vehicles. Furthermore, the maximum contribution of eco-innovations towards manufacturers' targets would be gradually reduced (5 g CO₂/km from 2025; 4 g CO₂/km from 2027; 2 g CO₂/km from 2030 until 2034). Type-approval rules would be harmonised for vehicles with internal combustion engines converted to battery or fuel cell electric drive.

The Commission would have to deliver yearly rather than two-yearly progress reports assessing the regulation's socio-economic impacts, starting from 2025. The review of the effectiveness and impact of the proposal regulation would be brought forward from 2028 to 2027.

By the end of 2023, the Commission would have to assess the need for targeted funding to ensure a just transition in the automotive sector and – if appropriate – present a legislative proposal to establish an EU funding instrument to address that need; any revenues from excess emission premiums would be allocated to that purpose. Member States would be invited to prepare territorial just transition plans for their automotive industries.

By 2023, the Commission would have to present a common EU methodology for lifecycle assessment of CO₂ emissions of cars and vans placed on the EU market, as well as for the fuels and energy consumed by these vehicles. Manufacturers would be able to report vehicles' lifecycle CO₂ emissions on a voluntary basis from January 2024, and such reporting would become mandatory from January 2028.

By December 2023, the Commission would have to establish a methodology for measuring and comparing the efficiency of zero- and low emission vehicles based on the amount of electricity needed to drive 100 kilometres. By December 2024, the Commission would have to present a legislative proposal to set minimum energy efficiency thresholds for new cars and vans. The ENVI report calls for a revision of the legislation on consumer information about fuel economy and CO₂ emissions of new cars ([Directive 1999/94/EC](#)) to provide information on real-world fuel consumption, CO₂ emissions, air pollutant emissions and energy efficiency. By 31 December 2023, the Commission would have to present appropriate proposals on minimum eco-design requirements for new cars and vans.

The Parliament [adopted](#) its position on the basis of the ENVI report during the June I 2022 plenary session with 339 votes in favour, 249 votes against, and 24 abstentions. However, Parliament decided to keep the emissions reduction target for passenger cars for 2025 at 15 %, as opposed to the 20 % reduction in the report,⁷ and to request that the Commission propose, by 28 February 2023, legislation to increase the share of zero-emission vehicles in public and corporate light-duty vehicle fleets by means of binding mandates on fleet owners and operators, taking into account regional disparities. The file was referred back to the ENVI committee with a mandate for trilogue negotiations.

In the Council, environment ministers held a first exchange on the 'fit for 55' package at an informal meeting on 20 July 2021, and discussed the proposal in the Environment Council meetings of 20 December 2021 and 17 March 2022, on the basis of the [progress report](#) of 6 December 2021. On

29 June 2022, the Council adopted its [general approach](#), following the Commission proposal with only an amendment concerning the contents of the Commissions' biennial reports on progress towards zero-emission road mobility.

The Parliament and Council reached a provisional political agreement on 27 October 2022. The [agreed text](#) follows largely the Commission proposal, with the following changes. From 2025 to 2029, a zero- and low-emission vehicle benchmark⁸ of 25 % will apply to the sales of new cars, and a 17 % zero- and low-emission vehicle benchmark to the sales of new vans. Until 2028, manufacturers responsible for between 10 000 and 300 000 registrations of new cars per year will be able to apply for a derogation from the specific emissions target. The maximum contribution of eco-innovations towards manufacturers' targets will be gradually reduced (6 g CO₂/km from 2025 until 2029 and 4 g CO₂/km from 2030 until 2034).

By June 2023, the Commission must assess how real-world fuel and energy consumption data may be used to ensure that each manufacturer's vehicle CO₂ emissions and fuel or energy consumption values remain representative of real-world data. By December 2026, the Commission must monitor the gap to the real-world data, report on a methodology for adjusting the manufacturers' specific CO₂ emissions, and propose appropriate follow-up measures.

By 2025, the Commission must present a methodology for lifecycle assessment of CO₂ emissions of cars and vans placed on the EU market, and is empowered to adopt delegated acts setting out a common EU methodology for lifecycle assessment and data reporting. Manufacturers will be able to report vehicles' lifecycle CO₂ emissions on a voluntary basis from June 2026.

By December 2025, the Commission must present a report on funding gaps in ensuring a just transition in the automotive supply chain, accompanied by proposals for adequate financial measures, where appropriate. The agreed text sets detailed requirements for the Commission's biennial progress reports on zero-emission road mobility, first due in December 2025.

In 2026, the Commission must review the regulation's effectiveness and impact, and assess the need to review the emissions targets and the impacts of establishing minimum energy efficiency thresholds for new zero-emission cars and vans. By December 2024, the Commission must review Directive 1999/94/EC, considering the need to provide information on vehicles' real-world fuel and energy consumption, as well as CO₂ and air pollutant emissions, and evaluate the options for introducing a fuel economy and CO₂ emission label for new vans.

Recital 11 of the text agreed in trilogue states that the Commission would 'make a proposal, following stakeholder consultation, for registering after 2035 vehicles running exclusively on CO₂ neutral fuels in conformity with EU law, outside the scope of the fleet standards, and in conformity with the Union's climate neutrality objective'.⁹

The agreed text was endorsed by the Council's Committee of Permanent Representatives (Coreper) on 16 November 2022 and by Parliament's ENVI committee on 30 November 2022. Parliament approved the agreed text during its February II 2023 plenary session with 340 votes in favour, 279 votes against, and 21 abstentions. Council adopted the act on 28 March 2023. It was signed on 19 April 2023 and published in the Official Journal on 25 April 2023. The regulation enters into force on 15 May 2023.

EUROPEAN PARLIAMENT SUPPORTING ANALYSIS

Claros Gimeno E. and Pape M., [Transport CO₂ emissions in focus](#), EPRS, European Parliament, 2020.

Erbach G., [CO₂ standards for new cars and vans](#), EPRS, European Parliament, 2019.

Vikolainen V., ['Fit for 55' legislative package: Strengthening the CO₂ emission performance standards for new passenger cars and new light commercial vehicles](#), EPRS, European Parliament, November 2021.

[The Future of the EU Automotive Sector](#), Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament, October 2021.

OTHER SOURCES

[Procedure file on CO₂ emission standards for cars and vans. 'Fit for 55 package'](#), Legislative Observatory (OEL), European Parliament.

[Determining the environmental impacts of conventional and alternatively fuelled vehicles through LCA](#), Ricardo Energy & Environment, 2020.

ENDNOTES

- ¹ In the EU, 526 739 battery electric vehicles and 513 889 plug-in hybrid electric vehicles were [registered](#) in 2020.
- ² The CO₂ reduction effort is distributed among manufacturers on the basis of the average mass of the vehicle fleet over a certain period. The reference mass for each manufacturer is adjusted every three years before 2025, and every two years with effect from 2025, so that changes in the average test mass and their effect on the positioning of manufacturers on the limit value curve can be taken into account earlier. The same methodology applies to vans with a below-average mass. For vans with above-average mass, the limit value curve is kept constant over time.
- ³ The regulation contains provisions to ensure the robustness and representativeness of reported emissions data and to correct them, if necessary.
- ⁴ Zero-emission vehicles include battery electric or fuel cell vehicles. Low-emission vehicles with tailpipe CO₂ emissions of less than 50 g/km are mainly plug-in hybrid vehicles equipped with both a conventional and an electric engine.
- ⁵ Until the end of 2022, vehicles with CO₂ emissions below 50 g/km count as more than one car when calculating the average specific CO₂ emissions. These 'super-credits' were introduced to encourage investment in new technologies.
- ⁶ This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under 'European Parliament supporting analysis'.
- ⁷ The report adopted by the ENVI committee included other amendments that were not adopted in plenary: a prohibition to register passenger cars with CO₂ emissions above 123 g/km as of 2030, and the inclusion of new vehicles equipped with hydrogen combustion engines in the definition of zero- and low-emission vehicles.
- ⁸ A manufacturer that meets the benchmarks for the sales of zero- and low-emission vehicles will be rewarded with less strict CO₂ emission targets.
- ⁹ Prior to the text's adoption by the Council, the Commission issued a [statement](#) on how it intends to implement recital 11 of the regulation. Immediately after its adoption, the Commission intends to submit an implementing regulation for type approvals of vehicles that are fuelled exclusively with renewable fuels of non-biological origin (e-fuels). In the autumn of 2023, following stakeholder consultation, the Commission plans to propose a delegated act specifying how such vehicles would contribute to the CO₂ emission reduction targets, in relation to the Regulation on CO₂ emission standards for cars and vans. In the event that the co-legislators reject the proposal, the Commission intends to follow another legislative path, such as a revision of the regulation.

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