



OPINION

European Economic and Social Committee

Review of the CO₂ emission standards for heavy-duty vehicles

Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EU) 2019/1242 as regards strengthening the CO₂ emission performance standards for new heavy-duty vehicles and integrating reporting obligations, and repealing Regulation (EU) 2018/956
[COM(2023) 88 final – 2023/0042 (COD)]

CCMI/201

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Referrals	European Parliament, 29/03/2023 Council of the European Union, 03/04/2023
Legal basis	Articles 192(1) and 304 of the Treaty on the Functioning of the European Union
Section responsible	Consultative Commission on Industrial Change
Adopted in section	22/06/2023
Adopted at plenary	12/07/2023
Plenary session No	580
Outcome of vote (for/against/abstentions)	182/4/7

1. Conclusions and recommendations

- 1.1 The EESC welcomes the objective of this regulation to accelerate the pace of decarbonisation in the sector and to boost its structural transformation. The EU should seize the opportunity to become a leader in the clean-transport industry.
- 1.2 The EESC notes that the proposal goes beyond the currently proposed targets in China, but falls short of the recently adopted Regulation in California for a 100% zero-emission sales target for trucks and buses by 2036. The EESC also notes that The U.S. National Blueprint for Transportation Decarbonization¹ assigns a complementary role to "clean electricity, sustainable biofuels/e-fuels, and clean hydrogen" for transport in general, and for heavy duty road transport in particular.
- 1.3 The EESC observes that a number of Member States, alongside other countries (including the United States), have already pledged to transition to 100% zero-emission heavy-duty vehicles (HDVs) sales by 2040². In addition, various regulations at local and regional levels are to be expected (e.g. entry bans).
- 1.4 The EESC acknowledges the importance of a regulatory stimulus to foster the deployment of zero-emission vehicles (ZEVs). However, the EESC believes that a focus must also be given to the demand side and to the key enabling conditions that make operating ZEVs a viable option for logistic operators.
- 1.5 The EESC welcomes efforts by some Member States to support the transition to ZEVs, especially for SMEs, and notably through the European Union's Recovery and Resilience Facility (RRF) and other national funds.
- 1.6 The EESC reaffirms its support for the Alternative Fuels Infrastructure Regulation (AFIR). Public authorities must ensure alternative fuels and charging stations are available where needed³. To meet the 2030 intermediate target, over 50 000 publicly accessible chargers are required, of which 35 000 would need to be high-performance megawatt charging models. Some 700 hydrogen refilling stations would also be required.
- 1.7 Given the limitations of the Commission's impact assessment, the EESC calls for a close and regular monitoring of developments in a progress report, including an in-depth assessment of the supply chain to avoid disruptions and to better reflect the impact of decarbonising transport at regional level.

¹ [DOE/EE-2675](#) | January 2023.

² [COP27: USA, Ukraine, Ireland, Aruba, Belgium, Croatia, Curaçao, Dominican Republic, Liechtenstein, Lithuania sign Global MOU, support path to 100% new truck and bus sales by 2040](#) (17.11.22).
[U.S. Secretary of Energy Advances America's Commitment to Reaching Net Zero Global Emissions and Combatting Climate Change at COP27](#).

³ EESC opinion on the *Regulation on deployment of alternative fuels infrastructure*, [OJ C 152, 6.4.2022, p. 138](#).

- 1.8 In line with its previous opinions⁴, the EESC notes that despite all the benefits of electric and hydrogen powertrains, the proposed regulation based on the "tailpipe" approach needs to be complemented by other policy instruments to incentivise the use of renewable, non-fossil fuels for the part of the fleet running on internal combustion engine (ICE). The Fit for 55 package must ensure a life-cycle approach and avoid road transport decarbonisation leading to a shift of emissions upstream in the value chain.
- 1.9 The EESC stresses the need for a policy framework that drives decarbonisation in a way that is fair for workers. This includes the provision of adequate funding to support regions facing difficulties as a result of the decarbonisation agenda, the need to anticipate change at all levels (sites, companies, regions and sectors) through plans developed with the social partners, and a massive effort by public authorities and companies to retrain and up-skill workers.
- 1.10 The EESC calls for a CO₂ emission reduction trajectory, in line with the industrial sector's capacity to transform and compatible with transport operators in terms of costs and operational efficiency. The proposed targets must be compatible with the time needed to convert existing production facilities and build new ones, to roll out charging infrastructure, to secure supply of key components and raw materials, to create lead markets and to train the workforce.
- 1.11 The EESC stresses the need to decarbonise (the fleet) at a pace that is consistent with the implementation of the EU Green Deal Industrial Plan, and with the important projects of common European interest (IPCEI), that will contribute to developing key supply chains for the sector in Europe, such as clean hydrogen, batteries and microelectronics.
- 1.12 The EESC also stresses the need to provide capacity-building and to support hauliers and operators – especially SMEs – to comply with the reporting obligations implemented by the regulation.

2. **General background**

- 2.1 In October 2014, the EU heads of state / government⁵ set a binding goal to reduce greenhouse gas (GHG) emissions produced across the EU's entire economy by at least 40% compared to 1990 levels by 2030. This target was based on global projections that comply with the medium-term timescale of the Paris Agreement on climate change (COP 21)⁶.
- 2.2 In December 2020 the European Commission published its sustainable and smart mobility strategy. This document sets a series of ambitious targets and milestones to make the EU transport system fit for the climate-neutral and digital world.

⁴ [OJ C 227, 28.6.2018, p. 52](#), and [OJ C 194, 12.5.2022, p 81](#).

⁵ European Council conclusions of 24 October 2014.

⁶ <https://unfccc.int/process-and-meetings/the-paris-agreement>.

- 2.3 In July 2021, the European Commission stepped up the game by adopting the Fit for 55 package⁷ – a set of policy proposals for a 55% net reduction (compared to 1990 levels) in GHG emissions in the EU by 2030. This is consistent with the EU's commitment to achieving climate neutrality by 2050, established by the European Climate Law⁸.
- 2.4 The European strategy for low-emission mobility⁹ published in July 2016 sets the target of at least 60% fewer greenhouse gas emissions from vehicles by 2050 compared to 1990 levels, putting the EU on a firm path towards zero emissions. However, the Fit for 55¹⁰ package establishes that the 2050 climate neutrality goal requires a 90% reduction in overall transport emissions by 2050 compared to 1990 levels. The use of low-emission / emission-free vehicles would have to progressively increase in order to achieve a significant market share by 2030 and set the EU on a consistent long-term path towards zero-emission mobility.
- 2.5 The road transport sector represents one fifth of the EU's GHG emissions. HDVs, such as trucks, city buses and long-distance buses, are responsible for more than 25% of GHG emissions from road transport in the EU, and account for over 6% of total EU GHG emissions. Despite efforts by manufactures to decrease emissions per km, total emissions continue to increase, especially in freight transport due to growing road transport demand, which is expected to continue increasing in the future. Road transport is also an important source of air pollution, and the EU is in the process of revising its air quality legislation, notably on the basis of the proposal on the new Euro 7 standards to reduce pollutants from vehicles.
- 2.6 The current HDV fleet is run almost entirely on internal combustion engines, which are predominantly fuelled by fossil fuels, mostly refined in the EU from imported crude oils, in turn contributing to the EU's energy dependency. According to the European Commission's impact assessment, the proposal of new standards should decrease the demand for fossil fuels by around 2 billion barrels of oil between 2031 and 2050.
- 2.7 Currently, a typical European 40-tonne 4x2 tractor unit in a "long-haul test cycle" consumes around 33.1 L of fuel per 100 km on roads and highways. A typical European 12-tonne 4x2 distribution truck in an "urban delivery test cycle" consumes around 21.4 L of fuel per 100 km¹¹.
- 2.8 Purchasers of HDVs are mostly freight transport operators. They can experience fuel costs greater than a quarter of their operational costs, and rank fuel efficiency as their top purchasing criterion. Unlike the passenger car sector, total cost of ownership will be the dominating factor in choosing the drive type.

7 [COM\(2021\) 550 final](#).

8 [PE/27/2021/REV/1](#).

9 [COM\(2016\) 501 final](#).

10 [COM\(2021\) 550 final](#).

11 Delgado, O., Rodríguez, F., Muncrief, R., Fuel efficiency technology in European heavy-duty vehicles: Baseline and potential for the 2020–2030 timeframe, International Council on Clean Transportation, ICCT White Paper, Berlin, July 2017.

- 2.9 In 2021, according to industry data, lorry exports generated a trade balance surplus of EUR 5 billion. The same year, more than 470 000 trucks were manufactured in the 52 plants located in the EU¹². This sector is part of an automotive industry which generates 12.1 million direct and indirect jobs in Europe, equivalent to 5.6% of total EU employment.
- 2.10 Commercial road transport is the nervous system of the EU economy value chain. Road transport accounts for a large share of the EU's GDP (gross domestic product) and employs over 3.4 million people EU-wide¹³. Challenges to the sector include making transport safer and more secure while preserving the efficiency of the single market, and improving working conditions in the sector and the transport environment as a whole.
- 2.11 Recent developments in the geopolitical landscape have focused attention on the need to ensure the resilience of the EU logistic supply chain, even in the most dramatic situations. Increased energy costs and dependencies on energy and raw materials – coupled with the aggressive protectionist strategies of some key international players – have been threatening the EU economic system and the welfare of its citizens. The EU commercial road transport system needs to remain competitive, affordable, and fully operational, even in the most critical circumstances. The regulatory framework should ensure this.

3. **The proposal for a regulation**

- 3.1 The proposal is meant to replace the HDV CO₂ Standards Regulation (EU) 2019/1242 of 2019. Despite the fact that an evaluation of the results of the Regulation currently in place is not possible, the Commission believes it necessary to contribute to the objectives of the European Green Deal and the European Climate Law. It sets new binding CO₂ targets applicable from 2025.
- 3.2 The proposal covers trucks (over 5 tonnes), city buses and long-distance buses (over 7.5 tonnes), as well as trailers (an unpowered vehicle towed by a motor vehicle). While this is an important expansion of the scope of the regulation, a regulatory gap regarding the CO₂ regulation of cars and light commercial vehicles (trucks between 3.5 and 5 tonnes) remains.
- 3.3 The Commission is proposing new and more ambitious CO₂ emission targets for new HDVs from 2030 to deliver on the above objectives. Under the proposal, on average and compared to 1990 levels, CO₂ emissions would reduce by:
- 45% from 1 January 2030;
 - 65% from 1 January 2035; and
 - 90% from 1 January 2040.
- 3.4 New city buses in the EU will all have to be zero-emission (100% share of zero-emission vehicles) as of 2030.

¹² [Fact sheet "Trucks"](#).

¹³ Eurostat, 2014 Labour Force Survey data.

- 3.5 An exemption to the CO₂ reduction targets will apply to the following HDVs:
- small volume manufacturers (up to 100 vehicles);
 - vehicles used for mining, forestry and agricultural purposes;
 - vehicles designed and constructed for use by armed forces and track-laying vehicles;
 - vehicles designed and constructed or adapted for use by civil protection services, fire services, and forces responsible for maintaining public order or urgent medical care;
 - vocational vehicles, such as garbage trucks.
- 3.6 Unlike the CO₂ standards for passenger cars and light commercial vehicles, the Commission proposal for HDV views hydrogen internal combustion vehicles (alongside other currently available alternative technologies as battery electric vehicles or hydrogen fuel cells) as a zero-tailpipe-emission option.
- 3.7 Building on the scope of the Fit for 55 package, which covers emissions from all sectors, the Commission proposal for HDV adopts the "tank-to-wheel" methodology, also used in the light-duty vehicles (LDV) Regulation, to set the GHG emission reduction targets. Such a methodology is also referred to as "tailpipe", as it takes into account only the CO₂ emitted from the vehicle while in use, whereas GHG emitted during the vehicle manufacturing or during the production of the fuels or energy are covered by other legislations such as the EU Emissions Trading System. The contribution of renewable and low-carbon fuels for the purpose of target compliance in this specific legislation was discarded, as the Commission deemed it neither cost-efficient nor effective.

4. **General comments**

- 4.1 The EESC welcomes the objective of this regulation to accelerate the pace of decarbonisation in the sector and to boost its structural transformation. The European transport industry needs to renew its road transport fleet, through the gradual adoption of new powertrain technologies (electric/hydrogen fuel cells and hydrogen ICE). The EU should seize the opportunity to become a leader in the clean-transport industry. Developments indicate that the mentioned technologies provide a viable and cost-efficient path for standard use in short-, medium- and (gradually) long-haul trucking.
- 4.2 The EESC notes that the proposal goes beyond the currently proposed targets in China, but falls short of the recently adopted Regulation in California. In June 2022, China announced a proposal ("Stage 4") estimated to tighten fuel consumption standards in the heavy-duty sector by 15% by 2026 as a general target across all vehicle segments, to replace its previous "Stage 3", implemented in 2019. U.S. "Phase 2" standards adopted in 2016 and applicable for 2018-2027 are estimated to reduce CO₂ and fuel consumption that vary by vehicle type and range from 16% to 30% compared to its 2010 baseline. California, whose emission standards are commonly followed by other U.S. states, has recently adopted legislation for a 100% zero-emission sales target for trucks and buses by 2036, allowing only battery electric and hydrogen fuel cell electric vehicles. The U.S. National Blueprint for Transportation Decarbonization¹⁴

¹⁴ [DOE/EE-2675](#) | January 2023.

additionally assigns a complementary role to "clean electricity, sustainable biofuels/e-fuels, and clean hydrogen" for transport in general and for heavy-duty road transport in particular.

- 4.3 The EESC observes that the proposed regulation will not be the only regulatory framework that the sector will encounter. While a number of Member States, alongside other countries (including the United States), have already pledged to transition to 100% zero-emission HDV sales by 2040¹⁵, various regulations at local and regional levels are to be expected (e.g. entry bans). While the latter will mostly not aim to achieve climate action, they will have an impact on the operation and profitability of non-ZEVs, and on the functioning of the single market.
- 4.4 The EESC acknowledges the importance of a regulatory stimulus as a supply-side policy measure to foster investments in ZEV technologies and the deployment of ZEVs, eventually contributing, together with carbon-neutral fuels, to fully decarbonising the HDV fleet. However, the EESC believes that a focus must also be given to the demand side and to the key enabling conditions that make operating ZEVs a viable option for logistic operators.
- 4.4.1 According to the European Automobile Manufacturers' Association (ACEA), the proposal would require a significantly increased number of zero-emission vehicles on the road at least two years earlier than currently anticipated. Specifically, the newly proposed target would require more than 400 000 zero-emission vehicles to be in operation within less than seven years, and close to 100 000 to be registered annually from 2030, meaning that more than one third of all new registrations would need to be zero-emission vehicles from 2030. This fleet would require over 50 000 publicly accessible chargers, of which 35 000 would need to be high-performance megawatt charging models. Some 700 hydrogen refilling stations would also be required. This indicates the high ambition for both public and private actors.
- 4.4.2 The EESC also calls for adequate enabling conditions to encourage hauliers and operators to invest in new vehicles, including a massively accelerated roll-out of suitable charging and refuelling infrastructure, effective carbon pricing, and other demand-side measures that support transport operators and ensure that they invest in zero-emission vehicles. It must be borne in mind that hauliers and operators will make investment decisions based on profitability considerations.
- 4.4.3 The EESC welcomes efforts by some Member States to support the transition to ZEVs, especially for SMEs. In Austria, the "Emission-free commercial vehicles and infrastructure" funding programme supports companies to switch their fleets to non-fossil-powered commercial vehicles, and to set up the charging and refuelling infrastructure required for these commercial vehicles. Through the European Union's Recovery and Resilience Facility (RRF) and other national funds, Austria has a total of EUR 365 million available to promote zero-emission commercial vehicles and their infrastructure¹⁶.

¹⁵ [COP27: USA, Ukraine, Ireland, Aruba, Belgium, Croatia, Curaçao, Dominican Republic, Liechtenstein, Lithuania sign Global MOU, support path to 100% new truck and bus sales by 2040](#) (17.11.22).
[U.S. Secretary of Energy Advances America's Commitment to Reaching Net Zero Global Emissions and Combatting Climate Change at COP27](#).

¹⁶ https://www.bmk.gv.at/en/topics/mobility/alternative_transport/electromobility.html.

- 4.5 Given the limitations of the Commission's impact assessment, notably the lack of an evaluation of the current Regulation, the EESC calls for a close and regular monitoring of certain key elements, including the development of the new powertrain vehicles, the deployment of the recharging/refuelling infrastructure, and of the cost of vehicles, energy and fuels.
- 4.6 Sustainable, non-fossil fuels can play a role complementary to electrification and hydrogen for decarbonising transport, even though lower efficiency and costs (which are currently high) are limiting that role¹⁷. While they are recognised in regulations for aviation and maritime transport, they are not mentioned in road decarbonisation regulations. However, a methodology distinguishing between linear CO₂ emissions (from fossil fuels) and circular or net-zero emissions (from e-fuels and sustainable biofuels), in a life-cycle context, shows that efficient ICE and hybrid vehicles, fuelled by sustainable biofuels and e-fuels, have a carbon footprint comparable to that of BEVs using fossil-based electricity. This makes it even more important to replace fossil fuels in the existing fleet, as well as in those new HDVs that will continue to use ICE powertrains.
- 4.7 The EESC calls on policy-makers to guarantee that the transition to non-fossil fuels gives clear assurances for investments and a just transition in the fuels sector, and supports the growth of the relevant EU industrial value chain and gain global leadership.
- 4.8 The technology-neutral option presents numerous advantages. It would notably mitigate the risks both in technology development and in security of supply. The resilience of the EU economy would benefit from a diversified technology strategy, with sustainable fuels complementing BEV and hydrogen vehicles, while these two technologies develop and widen their domestic EU basis.
- 4.9 The EESC considers it crucial to ensure that the proposal contributes to:
- strengthening the EU's industrial leadership in the production of HDVs, buses and related equipment through investment and innovation;
 - preserving the effective and cost-efficient operations of the EU logistic chain, allowing the functioning of the EU internal market even in the most critical circumstances;
 - promoting the competitiveness and boosting the employment of all the industries (with special attention for the SMEs) belonging to the value chain of commercial road transport;
 - accelerating the shift to a more sustainable transport system, based on multimodality and where a substantial part of the 75% of inland freight carried today by road will shift to rail and inland waterways;
 - improving the resilience of the EU economy to shocks, large-scale disruptions in supply chains, and constraints in the access to resources. For example, where fossil energy is used as a weapon by certain countries, and the fact that raw materials for BEVs are sourced and processed from just a few non-EU countries.

¹⁷ See [IPCC AR6 WG III full report](#), p. 1068.

4.10 This requires the following:

- 4.10.1 A CO₂ emission reduction trajectory in line with the capacity of the industrial sector to transform, and compatible with transport operators in terms of costs and operational efficiency. The proposed targets must be compatible with the time needed to convert existing production facilities and build new ones, to roll out charging infrastructure, to secure supply of key components and raw materials, to create lead markets and to train the workforce.
- 4.10.2 A pace of decarbonisation (for the fleet) that is consistent with the implementation of the EU Green Deal Industrial Plan and the important projects of common European interest (IPCEI), and that will contribute in developing key supply chains for the sector in Europe, such as clean hydrogen, batteries and microelectronics. The emission trajectory must also be in line with the European Green Deal objectives, as well as the EU sustainable and smart mobility strategy.
- 4.11 As expressed in previous opinions, the EESC deems an enhanced coordination among environmental legislations targeting road transport crucial for successfully transforming the industry (such as Euro 7, AFIR and Eurovignette)¹⁸, while calling for a coherent legislative approach.
- 4.12 In line with its previous opinions¹⁹, the EESC notes that despite all the benefits of electric and hydrogen powertrains, the proposed regulation based on the "tailpipe" approach needs to be complemented by other policy instruments to incentivise the use of renewable, non-fossil fuels for the part of the fleet running on ICE. The Fit for 55 package must ensure a life-cycle approach and avoid road transport decarbonisation leading to a shift of emissions upstream in the value chain. The EU Emissions Trading System revision, as well as the Renewable Energy Directive, must ensure that the decarbonisation of road transport and of energy production happen at a compatible pace.
- 4.13 In the transformation, the European Union must ensure a fair competition for European Original Equipment Manufacturers (OEMs) and transport operators in domestic and international markets.
- 4.14 The EESC also stresses the need to provide capacity-building and support hauliers and operators – especially SMEs – to comply with the reporting obligations implemented by the regulation, including the proposed central register for data on HDVs.
- 4.15 Regarding urban buses, the EESC underscores the need to exempt buses also used for interurban transport from the specific zero-emission requirement for urban buses.
- 4.16 The EESC acknowledges with concern that the technological changes are not "neutral" for workers. Even though many jobs are set to be created in the mobility ecosystem in the coming years, massive job losses in certain parts of the value chain are to be expected, as many SMEs in various EU regions will be negatively impacted. New technologies also have an impact on the

¹⁸ [OJ C 228, 29.6.2023, p. 103](#), [OJ C 105, 4.3.2022, p. 26](#); and [OJ C 81, 2.3.2018, p. 188](#).

¹⁹ [OJ C 227, 28.6.2018, p. 52](#), and [OJ C 194, 12.5.2022, p. 81](#).

skill profiles required in the sector, and their rapid introduction could create challenges for some categories of workers (low-skilled, older workers, temporary workers). The current shortage of skilled workers in many sectors might also put the pace of the transition at risk.

4.17 The EESC stresses the need for a policy framework that drives decarbonisation in a way that is fair for workers. When it comes to HDVs, a just transition must mean the following:

4.17.1 In-depth supply chain impact assessments to avoid disruptive changes for workers. These impact assessments must also better reflect the impact of decarbonising transport at a regional level.

4.17.2 The provision of adequate funding to support regions facing difficulties as a result of the decarbonisation agenda, bearing in mind the importance of social conditionality in State aid.

4.17.3 The need to anticipate change at all levels (sites, companies, regions and sectors) through plans developed with the social partners.

4.17.4 A massive effort by public authorities and companies to retrain and up-skill workers.

Brussels, 12 July 2023

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