acea

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Position Paper

Review of CO2 emission standards regulation for heavy-duty vehicles

REVIEW OF CO2 EMISSION STANDARDS REGULATION FOR HEAVY-DUTY VEHICLES

KEY MESSAGES

- Vehicle manufacturers are committed to swiftly reducing CO2 emissions by **bringing an increasingly wide range of zero-emission vehicles to the market**. However, their uptake largely depends on transport operators being able to invest in them and operate them profitably. To ensure a swift adoption of these vehicles, the right **enabling conditions** must be put in place, including a sufficiently dense network of charging and refuelling infrastructure and an effective carbon pricing system.
- ACEA supports the review of the CO2 emissions reduction target, which should now be set as a **fixed ambition level for 2030**.
- **Target levels for 2035 and 2040 can be set now but should be reviewed again** in due time in view of the status of the enabling conditions, especially the charging and refuelling infrastructure network.
- **ACEA does not support setting intermediate targets before 2030.**
- Despite manufacturers' focus on zero-emission vehicles, the internal combustion engine (ICE) will continue to play an important and long-term role in several heavy-duty applications – if and to the extent they are powered by fossil-free fuels. Therefore, **ACEA does not consider a general -100% target or an ICE phase-out date (across the board or for all vehicle groups) to be a reasonable policy at this point in time.**
- ACEA strongly recommends that the current **credit and debit system is improved further and extended beyond 2030**. Provisions that prevent credits from being transferred to a subsequent compliance period should be removed, so that surplus credits can be better matched with product cycle developments.
- **Strong and effective incentive schemes** must be put in place to encourage and enable transport operators to invest in zero-emission vehicles, and to accelerate fleet renewal investments with a focus on the latest technologies.
- ACEA supports the inclusion of **additional vehicle groups** in the CO2 emission standards regulation if a CO2 certification framework is already in place (and provided that the specificities of the different vehicle segments are fully accounted for). Adding new vehicle groups implies that new, individual baselines for these vehicles will need to be determined.

BACKGROUND

CO2 emission standards for heavy-duty vehicles have been in force since 2019, when regulation (EU) 2019/1242 was first enacted. This regulation set targets to reduce CO2 emissions from the most relevant heavy-duty vehicle segments by -15% in 2025 and -30% in 2030[1]. As stipulated in Article 15, key elements of the emission standards regulation should be reviewed by the end of 2022.

ACEA welcomes this review as an important opportunity to assess the effectiveness of the regulation, adjust different elements, expand its scope and – most importantly – ensure alignment with other important regulations which should create the enabling framework for the transition to climate neutrality (such as the 'Fit for 55' package).

GENERAL REMARKS

European commercial vehicle manufacturers have repeatedly expressed their commitment to climate neutrality targets and to decarbonisation by 2050 at the latest. Climate neutrality in road transport by 2050 implies that by 2040 all new commercial vehicles sold must be fossil-free[2]. The CO2 standards regulation for heavy-duty vehicles is just one element (albeit an important one) of the wider regulatory framework that should enable the road transport sector to become climate neutral.

Even though the CO2 emission standards regulation has been in force for less than three years, manufacturers are already well on the way to implementing strategies for a rapid decarbonisation of road transport. This will require a fundamental shift in powertrain technologies – moving away from diesel as the dominant energy carrier, towards low- and especially zero-emission vehicles. Zero-emission vehicles, namely battery-electric and hydrogen-powered vehicles, will have to become the backbone of road transport if the sector is to reach its decarbonisation targets.

All manufacturers have either started series production of battery-electric trucks or are in the final stages before series production. More than a dozen different battery-electric truck models are available today in various configurations that can be adapted to individual specifications. They offer up to 44t GTW (gross train weight) with regular payloads. Depending on their configuration, they can be operated in different mission profiles such as long-haul, regional distribution and construction. Their availability is expanding rapidly.

Hydrogen-powered (fuel-cell electric) trucks are the second major zero-emission powertrain technology. Fuel-cell trucks are already in customers' hands to gain real-world experiences in regular day-to-day operations. Several manufacturers have announced the start of series

[1] Relative to a baseline of the average certified emissions of new vehicles registered in the reporting period 2019.
[2] ACEA – PIK Joint statement, 'The Transition to zero-emission road freight transport', December 2020: https://www.acea.auto/files/acea-pik-joint-statement-the-transition-to-zero-emission-road-freight-trans.pdf

production of these vehicles from 2024. It is expected that hydrogen-powered trucks will become widely available during the second half of this decade (2025-2027).

Zero and low-emission heavy-duty vehicles (buses and coaches)

		GVW (t)*	Application	Range (km)**	Availability
Iveco					
E-WAY	BEV	20/30t	City bus		Series production
CREALIS	Trolleybus	30t	City bus BRT	Unlimited	Series production
CROSSWAY LE	BEV	20t	City bus		2023
CROSSWAY LE	BEV	20t	Intercity bus		2023
Daimler Truck					
eCitaro Solo	BEV	20t	City bus	200-320km	Series production
eCitaro Artic	BEV	20t	City bus	180-220km	Series production
eO500U	BEV		City bus	Up to 250km	Announced 2022
MAN					
Lion's City 12 E	BEV		City bus	Up to 350km	Series production
Lion's City 18 E	BEV		City bus	Up to 350km	Series production
Lion's City 12 E	BEV		City bus	Up to 350km	Series production
Scania					
Citywide	HEV	20t	City bus		Series production
Citywide	BEV		City bus	250km	Series production
Volvo Trucks					
7900 Electric	BEV	19.5t	City bus		
7900 Electric Articulated	BEV	30t	City bus		
7900 S-Charge	HEV	19t	City bus		
7901 S-Charge Articulated	HEV	29t	City bus		
BZL Electric	BEV	19.5t			

* Gross vehicle weight (in tonnes)

** Currently, there is no official methodology for determining the range of alternatively-powered vehicles. Figures are based on manufacturers' individual assessments.

Zero and low-emission heavy-duty vehicles (trucks)

		GVW (t)*	GTW (t)**	Application	Range (km)***	Availability
Iveco						
Nikola Tre	BEV	40t		General haulage	Up to 550km	2022
Nikola Tre	FCEV	40t		General haulage	>800km	2023
DAF						
LF Electric	BEV	19t		Urban / national distribution	240-270km	Series production
CF Electric	BEV	20t	37t	Urban / national distribution	200-230km	Series production
CF Electric	BEV	29t	37t	Urban / national distribution	200-230km	Series production
CF Hybrid	HEV	20t	40t	National distribution	50km electric	Field trial
XF Hydrogen	ICE H2	20t	44t	National distribution / long haul	600-800km	Prototype
Daimler Truck						
eCanter	BEV	7.49t		Urban delivery	100km	Series production since 2017
eActros 300	BEV	19-27t	40t	Regional delivery	300km	Series production since 2021
eActros 400	BEV	27t		Regional delivery	400km	Series production since 2021
eEconic 300	BEV	27t		Municipality / urban delivery	100-150km	2022
eActros LongHaul	BEV		40t	Regional delivery / long haul	500km	Series announced for 2024
GenH2	FCEV		40t	Long haul	Up to 1,000km	Series announced for 2027
Hyundai						
Xcient FC	FCEV	19.5t	36t	Distribution / urban delivery / national & regional	Approx 400km	Production since 2020
Xcient FC	FCEV	27t	42t	Distribution /urban delivery / national & regional	Approx 400km	Production since 2022
MAN						
eTGM	BEV	26t		Distribution	Up to 180km	Short series
eTruck	BEV	tbd	tbd	Distribution	tbd	Series production announced for 2024
Bayernflotte	FCEV	tbd	tbd	Long haul	tbd	Customer demo fleet 2024
Scania						
	HEV		36t	Long haul / distribution	15km	Series production
	PHEV		36t	Distribution	60km	Series production
25L or 25P	BEV	19t		Distribution	100km	Series production
25L or 25P	BEV		29t	Distribution	250km	Series production
R- or S-	BEV	29t	64t	Regional	Up to 420km	Sales start 2022
	BEV	29t	64t	Distribution / regional / long haul / construction	Up to 490km	Series production 2024

		GVW (t)*	GTW (t)**	Application	Range (km)***	Availability
Volvo Trucks						
FH Electric	BEV		44t	Regional	300km	Sales start 2021
FM Electric	BEV		44t	Regional	380km	Sales start 2021
FMX Electric	BEV		44t	Construction	320km	Sales start 2021
FE Electric	BEV	27t		Distribution	200km	Sales start 2019
FL Electric	BEV	17t		Distribution	300km	Sales start 2019
Renault Trucks						
Master ZE	BEV	3.5t		Distribution	Up to 120km	Series production
D ZE	BEV	16t		Distribution	Up to 400km	Series production
D Wide ZE	BEV	20t & 27t		Distribution & city construction	Up to 200km	Series production
T electric	BEV		44t	Regional	300km	Production start Q4 2023
C electric	BEV		44t	Urban construction	300km	Production start Q4 2023

* Gross vehicle weight (in tonnes)

** Gross train weight (in tonnes)

*** Currently, there is no official methodology for determining the range of alternatively-powered vehicles. Figures are based on manufacturers' individual assessments.

Low- and zero-emissions solutions that are suitable for almost all vehicle segments and many use cases are either already available or will be ready within the decade. ACEA expects that zero-emission technologies will evolve further and mature rapidly. The main challenge therefore will be to create an enabling framework that facilitates their swift market uptake.

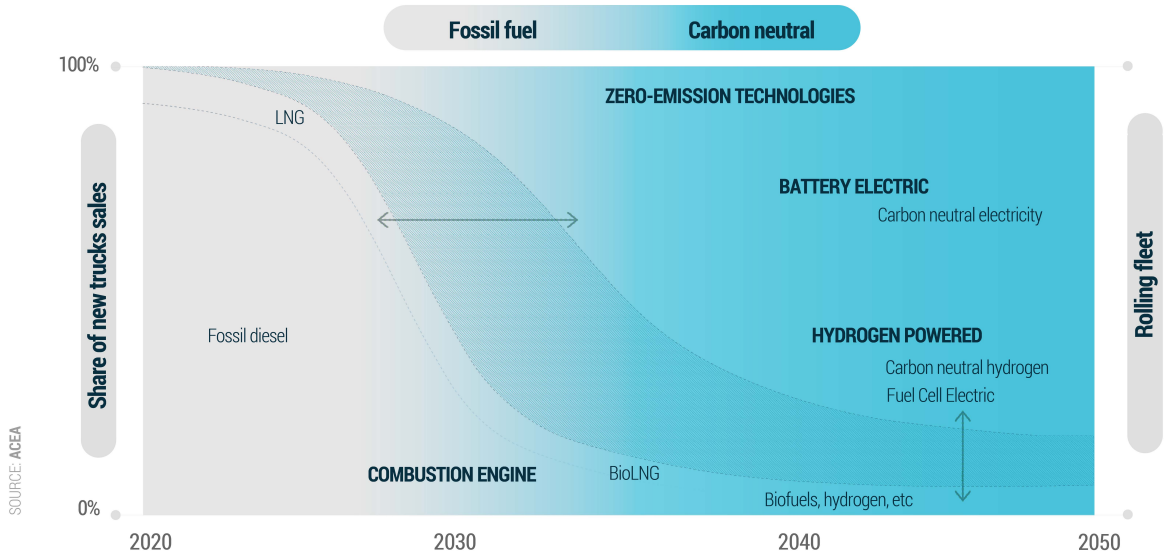
DECARBONISATION PATHWAYS

VEHICLES WILL NOT BE THE BOTTLENECK

The market adoption of low- and especially zero-emission vehicles largely depends on transport operators and their ability to invest in them and operate them profitably. Vehicle manufacturers pursue different strategies to meet their CO2 reduction targets. However, all these strategies rely on a growing share of zero-emission vehicles, namely battery-electric and hydrogen-powered vehicles.

The current 2030 target (-30%) already requires a significant market share of these zero-emission vehicles. Based on the existing regulatory framework, ACEA estimates that by 2025 approximately 40,000 battery electric medium- and heavy-duty vehicles will need to be in operation in Europe. By 2030 this figure will have to increase to at least 270,000. In addition, at least 60,000 hydrogen-powered trucks will have to be in operation by 2030.

Different manufacturers have announced even higher ambitions for the share of new zero-emission vehicles by 2030, provided that all elements of a comprehensive enabling framework are in place. Industry projections which ensure compliance with the current CO2 targets exceed earlier projections made by the European Commission[3], but heavily rely on adjustments to the enabling framework.



MARKET UPTAKE OF ZERO-EMISSION VEHICLES

For the last 100 years, road transport has relied entirely on increasingly fuel-efficient and low-emission combustion engines. Today it is at the beginning of a transition to new powertrain vehicles, which will help pave the way to climate neutrality. This fundamental transformation of the whole sector will have to take place within the next one or two decades. Market uptake of new powertrain vehicles however does not only rely on the availability of the vehicles themselves, but also on a comprehensive framework of enabling conditions, such as a dense infrastructure network of charging and hydrogen refuelling stations and competitive total costs of ownership (TCO). While the deployment of zero-emission vehicles and the necessary charging and refuelling infrastructure will have to progress hand-in-hand, the market uptake for the main vehicle segments (especially long haulage) will remain limited in the beginning. However, once the enabling conditions are well established, uptake will be swift across all vehicle segments.

[3] In its Smart and Sustainable Mobility Strategy (SSMS), December 2020, the Commission announced a milestone of 80,000 zero-emission lorries in operation by 2030: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52020DC0789&from=EN

THE FUTURE OF THE INTERNAL COMBUSTION ENGINE IN HEAVY-DUTY VEHICLES

Despite commercial vehicle manufacturers' focus on zero-emission vehicles, the internal combustion engine (ICE) will continue to play an important and long-term role in several heavy-duty applications. Therefore, ACEA does not consider a general -100% target or an ICE phase-out date (across the board or for all vehicle groups) to be a reasonable policy at this point in time. According to current industry assessments, the ICE will have a future in heavy-duty vehicles until 2040 and beyond, if powered by fossil-free fuels. In fact, ICE vehicles powered by fossil-free fuels will be part of the decarbonisation pathway of the road transport sector. In any case, their relative contribution to road transport emissions will likely be limited, as they will be limited to very demanding, heavy-payload and long-haul applications (especially where a dense network of recharging and refuelling stations is missing).

Contrary to the arguments of some, setting a general ICE phase-out date for all heavy-duty vehicle segments now would not increase the confidence of market actors, nor increase the pace of the transition to zero-emissions. Instead, such a measure would focus on the supply-side only, ie vehicle manufacturers, while neglecting the role of the demand-side, ie transport operators. However, both sides are equally crucial for a successful transition to climate neutrality and must therefore both be addressed in the regulatory framework.

The political need for a Euro VII regulation covering new ICEs is understood. Nonetheless it would have a minimal impact on reducing heavy-duty road transport emissions (ie NOx and particles) compared with fleet renewal by the latest clean Euro VI vehicles in parallel to increasing decarbonisation. The stringency of Euro VII will have a big impact on:

1. Fuel consumption and CO2 emissions
2. Diversion of resources (engineering and financial) from decarbonisation
3. The viability of recovering investment through diminishing ICE sales
4. The attractiveness and TCO of Euro VII vehicles compared to zero-emission options

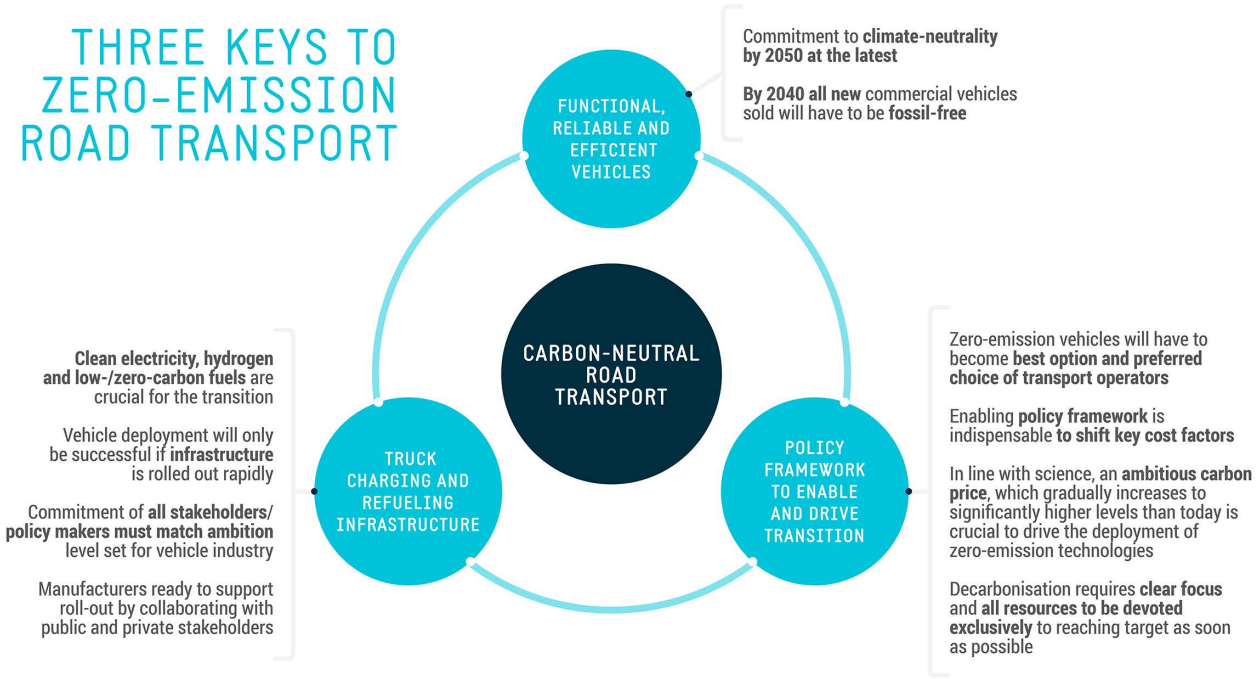
Future CO2 targets and Euro VII cannot be looked at in isolation as they would have to be applied in a similar timeframe.

ESTABLISHING AN ENABLING FRAMEWORK

In addition to **functional and efficient low- and zero-emission vehicles**, two more building blocks are essential for a successful transition to climate neutrality:

- A dense network of charging and refueling infrastructure suitable for heavy-duty vehicles
- A coherent policy framework which enables the transition to climate neutrality and ensures affordability and competitive TCOs

All three building blocks must be put into place simultaneously.



Vehicle manufacturers are clearly committed to bringing zero-emission vehicles to the market. They are providing an increasingly wide zero-emission offering for different use cases, payloads and ranges (see tables). However, the pace of market adoption of these new powertrain vehicles largely depends on the abilities of transport operators to invest in and viably operate them. It is therefore essential to establish a solid enabling framework, which is fully aligned with the necessary emission reductions and the ambition levels set for manufacturers.

With respect to the Alternative Fuels Infrastructure Regulation (AFIR), policymakers need to be aware that setting targets for truck-specific **charging and refuelling infrastructure** now, ie ahead of the revision of the HDV CO2 standards, effectively predetermines the CO2 reductions that can be expected from road transport by the end of this decade. In other words, if the AFIR targets are set too low, vehicle manufacturers (and the road transport sector as a whole) may be severely constrained in their ability to contribute to the required CO2 reductions.

ACEA therefore encourages all policymakers to agree to targets that ensure a minimum network of charging and refuelling stations suitable for heavy-duty vehicles becomes available by 2025 and 2030[4].

Market adoption of zero-emission vehicles also depends on a supportive regulatory framework. In other words, one that incentivises fleet renewal and favours zero-emission

[4] ACEA Position Paper: Proposal for the Alternative Fuels Infrastructure Regulation (AFIR), November 2021: https://www.acea.auto/files/ACEA_Position_Paper-Alternative_Fuels_Infrastructure_Regulation.pdf

vehicles by shifting key cost factors and facilitating TCO-parity. Despite the anticipated technology improvements, the total costs of ownership and especially the upfront investment costs of zero-emission vehicles will likely remain higher than for conventional vehicles. As long as diesel remains cheaper, low- and especially zero-emission vehicles will not become attractive or commercially-viable options for transport operators. The price differential between conventional fossil fuels (diesel) and zero-emission alternatives (eg electricity, hydrogen) has a significant impact on the total costs of ownership.

Meaningful and effective incentives must be provided to encourage and enable transport operators to regularly adjust their investments in the latest technology vehicles. The proposed establishment of an emission trading system for road transport (ETS2[5]) and the implementation of road charging systems differentiated by CO2-emissions (Eurovignette[6]) are key in that respect.

Several member states have also provided substantial incentive schemes for transport operators which cover a significant share of the additional costs of new zero-emission vehicles[7].

SPECIFIC ELEMENTS OF THE REVIEW

AMBITION LEVELS

The commercial vehicle market is **driven by demand, with transport operators placing a strong focus of on the total cost of ownership (TCO)**. Making vehicles more efficient has always been a top priority for and driver of competition between manufacturers, as this is a key competitive factor for operators. At the same time, manufacturers need substantial lead times (around 5 years) and a predictable and stable regulatory framework to allow the market to adopt new vehicle technologies.

While vehicle manufacturers are fully committed to doing their part for a rapid transition to climate neutrality, the timing of this transition is not only set by vehicle manufacturers or regulations governing them. The road transport market is a B2B market. The ability of all stakeholders to adjust to changing conditions must therefore be considered. Manufacturers must be enabled to move with and push the market forward. They should not be compelled to comply with targets that cannot be met by demand.

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[5] ACEA Position Paper: EU Emissions Trading System (ETS) for road transport, December 2021: https://www.acea.auto/files/ACEA_Position_Paper-ETS_road_transport.pdf

[6] Directive (EU) 2022/362 amending Directives 1999/62/EC, 1999/37/EC and (EU) 2019/520, as regards the charging of vehicles for the use of certain infrastructures.

[7] Incentive schemes which support transport operators have for instance been put in place in the Netherlands, Germany and France. They provide subsidies for investments in zero-emission vehicles which are limited in time, and which have regularly attracted significant interest from transport operators. To the extent possible, their key parameters should be harmonised across the European Union and should be offered with a medium-term perspective to provide planning perspective for operators, while especially incentivising early investments and market adoption.

Market uptake of zero-emission vehicles in the 2025-2030 timeframe is particularly sensitive, as it can only be as fast as the infrastructure roll-out. Therefore, ACEA does not support setting intermediate targets before 2030. We recommend another review of the 2035 and 2040 targets (and other key elements of the regulation) by 2028.

SCOPE OF THE REGULATION

It is expected that the CO2 standard review will add more vehicle groups to the regulation. Adding new vehicle groups implies that new, individual baselines for these vehicles need to be determined.

As the regular development time for new vehicles is relatively long (in the range of five to seven years), the ambition levels for these new vehicle groups must be set accordingly. Since some of the new vehicle groups already include a relatively high share of zero-emission vehicles at the time the baseline is set, this should also be reflected when setting the CO2 standards. Different market conditions can justify different targets for different subgroups.

ACEA supports the inclusion of additional vehicle groups in the CO2 emission standards regulation where a CO2 certification framework is already in place, and provided that the specificities of the different vehicle segments are fully accounted for. The current provision to balance target compliance between different subgroups should be maintained.

ADDITIONAL VEHICLE SEGMENTS

Small and medium lorries

Small and medium lorries make relatively low contributions to the total CO2 emissions of the road transport sector. Especially compared to heavy-duty vehicles, this segment represents a rather small number of vehicles, many of which include customised and tailor-fit multi-stage vehicles. It should also be noted that the CO2 certification framework is currently only available for vehicles above 5t (TPLM). These specific circumstances should be considered when setting targets for this vehicle segment.

Setting standards for buses and coaches

The structure of the bus manufacturing industry is diverse, covering several business models. Complete buses are produced by manufacturers as well as some bodybuilders. In addition, manufacturers deliver bus chassis at an early stage of completion to external bodybuilders for the final completion of the vehicle. From the chassis it is not clear if the final product will be a city bus, an inter-urban bus or coach, nor if it will be designed as a single- or double-deck vehicle.

As the bus chassis delivered by manufacturers is too incomplete to identify the intended use/ mission it cannot be used as basis for a representative declaration of the final bus or coach. For buses and coaches, ACEA therefore proposes to include actual data of the bodywork in the CO2 standards.

The last-stage vehicle manufacturer is legally the responsible party for part of the final bus and should hence also be responsible for CO2 target compliance for buses and coaches. As a result, other manufacturers besides manufacturers would also be addressed with the bus and coach standards regulation. Nonetheless, the 'big 5' manufacturers would remain responsible for about 80% of the vehicles with respect to target compliance.

This structure of the bus business differs significantly to the lorry business. The delivered lorry chassis is at a much more complete stage, including also a cab, and the correct CO2 subgroup of the lorry can be identified. The bodywork for a lorry has less impact on the CO2 declaration and is sufficiently covered by relying on standard bodies in the regulation. For heavy lorries, ACEA considers the chosen approach appropriate and cost-effective and believes that it should therefore be maintained in the future.

A significant share of zero-emission vehicles is already in operation in the European city bus markets because favourable conditions are already in place in many cases. This contrasts with the coach market, where challenges for the infrastructure deployment are similar to those for long-haul lorries.

A relatively higher ambition level of CO2 reduction compared to other vehicle groups is therefore justified for city buses because of the status of the enabling conditions and the high share of zero-emission city buses already present.

Vocational vehicles

Vocational vehicles should continue to be exempt from the CO2 emission targets. These vehicles are designed to meet specific demands which are different to those of vehicles which are designed for the transport of goods (eg crane trucks, cement trucks etc). They are therefore very difficult to characterise correctly. They also have relatively low annual mileages; hence their relative CO2 reduction potential is limited. Measures for reducing CO2 emissions and energy consumption are not as cost effective as for other heavy-duty vehicles used for the delivery of goods.

Trailers/Semi-trailers

The energy efficiency and emission performance of road transport does not exclusively depend on the performance of motor vehicles. Efficient trailers and semi-trailers contribute significantly to low emissions and high energy efficiency. Therefore, fleet renewal in the trailer and semi-trailer market should be encouraged to accelerate the uptake of new, more efficient trailers/semi-trailers and associated technologies with energy efficiency standards.

Transport operators should be given transparent information and guidance to enable them to invest in new, more energy-efficient trailers/semi-trailers. The currently used VECTO 'standard trailer' should be updated accordingly.
With zero-emission tractors becoming more widely available it will become even more important to also focus on efficient trailer/semi-trailers. However, emission/efficiency standards for the trailer/semi-trailer class should be regulated separately from motor vehicles in a dedicated regulation.

Credit/Debit system

ACEA strongly recommends that the current credit and debit system is further improved and extended beyond 2030. The way the system is currently designed does not work effectively. Excess credits should not be removed after every compliance period.

The exact timing and trajectory of the transition to zero-emission vehicles is difficult to predict, not least because it is highly dependent on the enabling framework, including the roll-out of a dense network of charging and refuelling stations suitable for the different vehicle segments. Significant changes in key factors facilitating the market uptake of zero-emission vehicles can occur between and during each year, especially in the 2025-2035 period. At the same time, the development of (completely) new vehicles usually requires five to seven years. While the commitment and ambition of vehicle manufacturers is clear, it is particularly challenging to match the development and required target compliance, especially when enabling conditions are highly volatile.

Pooling

Pooling can provide flexibility for manufacturers to reach their CO2 reduction targets. It has been successfully implemented in the CO2 regulation for light-duty vehicles, but important differences must be considered with respect to the commercial vehicle market. In view of the structure of the commercial vehicle market, ie different manufacturers with differing product portfolios across different vehicle segments, a pooling mechanism must most importantly not have negative impacts on competition. It should not disadvantage individual manufacturers and therefore must avoid market distortion. A pooling mechanism for heavy-duty vehicles should be designed according to these requirements and with respect to the design of the compliance conditions.

ZLEV incentive mechanism

The zero-and low-emission vehicle (ZLEV) incentive mechanism should be designed in a way which incentivises the deployment of zero-emission vehicles in a meaningful and effective way.

Any change to the current benchmark mechanism, and particularly its level, should be connected to a revision of the current provisions on the cap which should be increased

substantially or ideally fully removed. The current ZEV-benchmark (2% in 2025, cap 5%) was set in order to stimulate the deployment of zero-emission vehicles. A higher overall reduction target (eg -30% in 2030) obviously requires a higher share of zero-emission vehicles, beyond the current benchmark. The nature and level of the current benchmark should therefore be adjusted accordingly.

ACEA recommends prolonging the current ZLEV incentive mechanism beyond 2030. A bonus mechanism should be considered which particularly incentivises the deployment of long-haul vehicles, as these represent the vehicle segment with the highest relative emission share. At the same time, due to its specific performance requirements with high payloads and long distances, this vehicle segment presents the biggest challenges for commercially-viable operations of zero-emission vehicles.

A minimum range and transport performance are important parameters for the classification of a vehicle as a long-haul truck, corresponding to related regulations on resting times and taxation.

Each vehicle is designed for and adapted to its specific transport mission. Yet, zero-emission vehicles, with batteries or fuel-cells, usually have a higher total weight. Setting a ZLEV mechanism that essentially incentivises vehicles to be equipped with more energy storage than is usually required for the specific mission would effectively reduce payload capacity, add extra costs and increase energy consumption. A balance between these contradictory requirements needs to be found.

ZEV mandates

Manufacturers have strong reservations about zero-emission vehicle (ZEV) mandates, since they potentially create significant market distortions. They focus on the supply side (vehicle manufacturers) without simultaneously addressing the demand side (transport operators) with similar ambition levels. The demand side would gain one-sided advantages and could potentially strategically delay investments in zero-emission vehicles, which a manufacturer would have to sell to meet the requirements of the ZEV mandate. This carries risks of significant market distortion and could also incentivise transport operators to delay investment decisions, thereby slowing down fleet renewal.

More importantly, a ZEV mandate would – per definition – only focus on zero-emission vehicles, while neglecting the CO2 reduction potentials of further improvements to conventional vehicles. Those improvements – one of the driving forces behind the CO2 regulation – would not be recognised with a ZEV mandate, effectively disadvantaging manufacturers with more fuel-efficient vehicles.

Fuels

As a matter of principle, ACEA supports flexibilities in the regulation which facilitate compliance with the CO2 targets without increasing the overall stringency of the regulation. Renewable and low-carbon fuels will have to play an important role in cutting CO2 emissions

of road transport. The current vehicle fleet, including new low-emission vehicles that will be part of manufacturers' portfolios to help meet CO2 fleet targets, will continue to be composed of vehicles with internal combustion engine (ICE) technologies for many years. That fleet should also contribute to road transport CO2 reduction by having faster and greater access to non-fossil low-carbon sustainable liquid and gas fuels.

The decarbonisation of all energy carriers – including road transport fuels, electricity, hydrogen, etc – is therefore a crucial cornerstone of the successful transition to climate neutrality. Despite a declining market share of ICE-vehicles, low-carbon and renewable fuels will have to play an increasing role in road transport. However, the regulatory framework to ensure the widespread availability of such fuels in necessary quantities is currently insufficient. It must be adjusted now to incentivise the decarbonisation of fuels by ensuring that sufficient quantities become quickly and easily available for all road transport users, at convincing prices.

High-capacity transport

As high-capacity vehicles, such as the European Modular System (EMS), positively contribute to the decarbonisation of road transport, they should not be penalised. Instead their more widespread use should be incentivised across the European Union to help further improve transport efficiency and thus reduce emissions.

Today, there are no clear criteria to determine the usage of these vehicles. However, future reviews should be used to revise provisions that effectively disadvantage vehicles which are capable of being used in high-capacity configurations, and to support their role in improving overall transport efficiency.

ABOUT THE EU AUTOMOBILE INDUSTRY

- 12.7 million Europeans work in the auto industry (directly and indirectly), accounting for 6.6% of all EU jobs
- 11.5% of EU manufacturing jobs – some 3.5 million – are in the automotive sector
- Motor vehicles are responsible for €398.4 billion of tax revenue for governments across key European markets
- The automobile industry generates a trade surplus of €76.3 billion for the European Union
- The turnover generated by the auto industry represents more than 8% of the EU's GDP
- Investing €58.8 billion in R&D per year, automotive is Europe's largest private contributor to innovation, accounting for 32% of the EU total

REPRESENTING EUROPE'S 16 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

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