acea

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Review of the CO2 emission standards regulation for heavy-duty vehicles

ACEA Position (draft v6)

REVIEW OF THE CO2 EMISSION STANDARDS REGULATION FOR HEAVY-DUTY VEHICLES (EU) 2019/1242

KEY MESSAGES

- Vehicle manufacturers are committed to swiftly reducing CO2 emissions by **bringing an increasingly wide range of zero-emission vehicles to the market**, their uptake largely depends on transport operators being able to invest in and operate them profitably. The right **enabling conditions** must be put in place, namely a sufficiently dense network of charging and refuelling infrastructure and an effective carbon pricing system, to ensure a swift adoption of zero-emission vehicles.
- 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 measure 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 incentives schemes for zero-emission vehicles** must be put in place to encourage and enable transport operators to invest in the new vehicles and 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 where 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. The regulation set targets to reduce CO2 emissions from the most relevant heavy-duty vehicle segments by -15% in 2025 and by -30% in 2030 relative to a baseline of the average certified emissions of new vehicles registered in the reporting period 2019. As stipulated in Article 15, key elements of the emission standards regulation shall 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 to ensure alignment with other important regulations, such as the 'Fit for 55' package, as part of the enabling framework that facilitates and drives the transition to climate neutrality.

With the following remarks, ACEA provides its perspective on the review of the CO2 standards regulation for heavy-duty vehicles.

GENERAL REMARKS

European commercial vehicle manufacturers have repeatedly expressed their commitment to the climate neutrality targets and to decarbonisation by 2050 at the latest. It is the joint understanding of all manufacturers that climate neutrality in road transport by 2050 at the latest implies that by 2040 all new commercial vehicles sold must be fossil-free[1]. The CO2 standards regulation for heavy-duty vehicles is one, albeit important element of the wider regulatory framework that shall enable, facilitate and drive the transition of the road transport sector to climate neutrality.

Even though the CO2 emission standards regulation has only been in force less than three years, manufacturers are already well on the way of implementing their strategies for a rapid decarbonisation of road transport. It requires a fundamental shift in the powertrain technologies used in road transport, away from diesel as the dominant energy carrier to 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.

Accordingly, all manufacturers have started the series production of battery-electric trucks or are in final stages before series production. More than a dozen different

[1] 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

battery-electric truck models are available today in various configurations that can be adapted to the individual specifications needed. Availability of battery-electric vehicles is expanding rapidly. The models already available today offer up to 44t GTW (gross train weight) with regular payloads. Depending on configuration, they can be operated in different mission profiles such as long-haul, regional distribution, construction.

The first hydrogen-powered (fuel-cell electric) trucks, as the second major zero-emission powertrain technology, are already in customers' hands to gain real-world experiences in regular day-to-day operations. Several manufacturers have announced the start of series production of fuel-cell electric vehicles (FCEV) 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)

Name		GVW (t)	Application	Range (km)*	Availability
Iveco					
EWAY	BEV	20/30 t	City bus		Series production
CREALIS	Trolleybus	30 t	City bus BRT	unlimited	Series production
CROSSWAY LE	BEV	20 t	City bus		2023
CROSSWAY LE	BEV	20 t	Intercity bus		2023
Daimler Truck					
eCitaro Solo	BEV	20t	City Bus	200 - 320	Series production
eCitaro Artic.	BEV	20t	City Bus	180 - 220	Series production
eO500U	BEV		City Bus	up to 250	announced 2022
MAN					
Lion's City 12 E	BEV		City Bus	up to 350 km	Series Production
Lion's City 18 E	BEV		City Bus	up to 350 km	Series Production
Lion's City 12 E	BEV		City Bus	up to 350 km	Series Production
Scania					
Citywide	HEV	20t	City Bus		Series Production
Citywide	BEV		City Bus	250	Series Production
Volvo Trucks					
7900 Electric	BEV	19,5	City bus		
7900 Electric Articulated	BEV	30	City bus		
7900 S-Charge	HEV	19	City bus		
7901 S-Charge Articulated	HEV	29	City bus		
BZL Electric	BEV	19,5			

* Currently, there is no official methodology how the range of alternatively powered vehicles should be determined. Figures are based on the manufacturers' individual assessment.

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

Name		GVW (t)	GTW (t)*	Application	Range (km)**	Availability
Iveco						
Nikola Tre	BEV	40t		General Haulage	up to 550	2022
Nikola Tre	FCEV	40t		General Haulage	>800	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	100 km	Series production since 2017
eActros 300	BEV	19t - 27t	40t	Regional delivery	300 km	Series production since 2021
eActros 400	BEV	27t		Regional delivery	400 km	Series production since 2021
eEconic 300	BEV	27t		Municipality / urban delivery	100 - 150 km	2022
eActros LongHaul	BEV		40t	Regional delivery/long haul	500 km	Series announced for 2024
GenH2	FCEV		40t	Long haul		Prototypes
GenH2	FCEV		40t	Long haul	up to 1,000 km	Series announced for 2027
MAN						
eTGM	BEV	26		Distribution	up to 180 km	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		36	Long haul / distribution	15	Series Production
	PHEV		36	Distribution	60	Series Production
25L or 25P	BEV	19		Distribution	100	Series Production
25L or 25P	BEV		29	Distribution	250	Series Production
R- or S-	BEV	29	64	Regional	Up to 420	Sales start 2022
	BEV	29	64	Distribution/ Regional/ Long haul/ Construction	Up to 490	Series production 2024
Volvo Trucks						
FH Electric	BEV		44	Regional	300	Sales start 2021
FM Electric	BEV		44	Regional	380	Sales start 2021

FMX Electric	BEV		44	Construction	320	Sales start 2021
FE Electric	BEV	27		Distribution	200	Sales start 2019
FL Electric	BEV	17		Distribution	300	Sales start 2019
Renault Trucks						
Master Z.E.	BEV	3,5		Distribution	up to 120	Series production
D Z.E.	BEV	16		Distribution	up to 400	Series production
D Wide Z.E.	BEV	20&27		Distribution & city construction	up to 200	Series production
T electric	BEV		44	Regional	300	Production start Q4 2023
C electric	BEV		44	Urban construction	300	Production start Q4 2023

* Gross Train Weight (in t)

** Currently, there is no official methodology how the range of alternatively powered vehicles should be determined. Figures are based on the manufacturers' individual assessment.

Rapid technological developments are currently under way on zero-emission powertrain technologies that enable the transition to climate neutrality. It is clear already today that suitable low- and zero-emissions solutions for almost all vehicle segments and many use cases are either available or will be ready within the decade. ACEA expects that zero-emission technologies will evolve further and mature rapidly, so that the main challenge will be in creating an enabling framework that facilitate a swift market uptake.

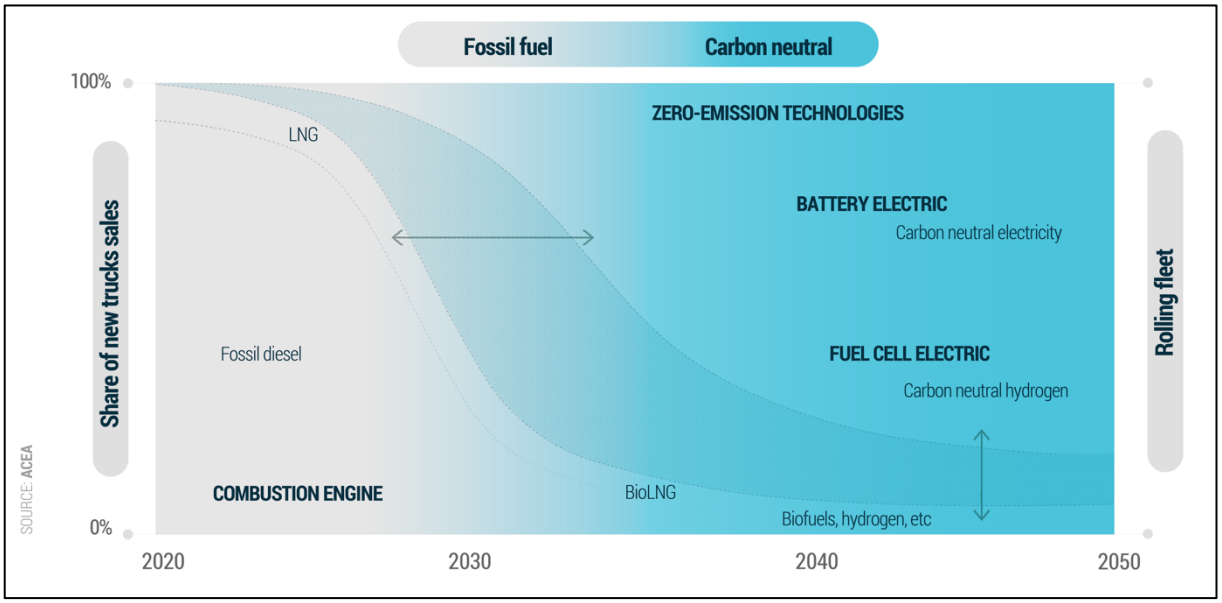
DECARBONISATION PATHWAYS

VEHICLES WILL NOT BE THE BOTTLENECK

While vehicles will not be the bottleneck for the decarbonisation of road transport, the market adoption of low- and especially zero-emission vehicles largely depends on transport operators and their ability to invest in and profitably operate them. Vehicle manufacturers pursue different strategies to meet the CO2 reduction targets. However, all these strategies are based on a growing share of zero-emission vehicles, namely battery-electric and hydrogen-powered vehicles.

Already the current 2030 target (-30%) requires a significant share of these zero-emission vehicles. Based on the current 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 do exceed earlier projections made by the European Commission[2], but they do heavily rely on respective adjustments to the enabling framework.



MARKET UPTAKE OF ZERO-EMISSION VEHICLES (ZEV)

For the last 100 years, road transport has relied entirely on increasingly fuel-efficient and low-emission combustion engines and is now at the beginning of a transition to new powertrain vehicles which help pave the way to climate neutrality. This fundamental transformation of the whole sector will have to take place rapidly within the next one or two decades. At the same time, the transformation and market uptake of new powertrain vehicles 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

[2] In its Smart and Sustainable Mobility Strategy (SSMS), December 2020, the Commission 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

hand-in-hand, the market uptake for the main vehicle segments (long haulage) will remain limited in the beginning. However, once the enabling conditions are well established, the vehicle market uptake will be swift across all vehicle segments.

THE FUTURE OF THE INTERNAL COMBUSTION ENGINE (ICE) IN HEAVY-DUTY VEHICLES

It is the joint understanding of all commercial vehicle manufacturers, that despite their 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 measure at this point in time. According to current industry assessments, the ICE will have a long-term future in heavy-duty vehicles until 2040 and beyond, if powered by fossil-free fuels. In fact, internal combustion engine 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 applications will be focussed on very demanding, heavy-payload and long-haul applications, especially where a sufficiently dense network of recharging and refuelling stations is missing.

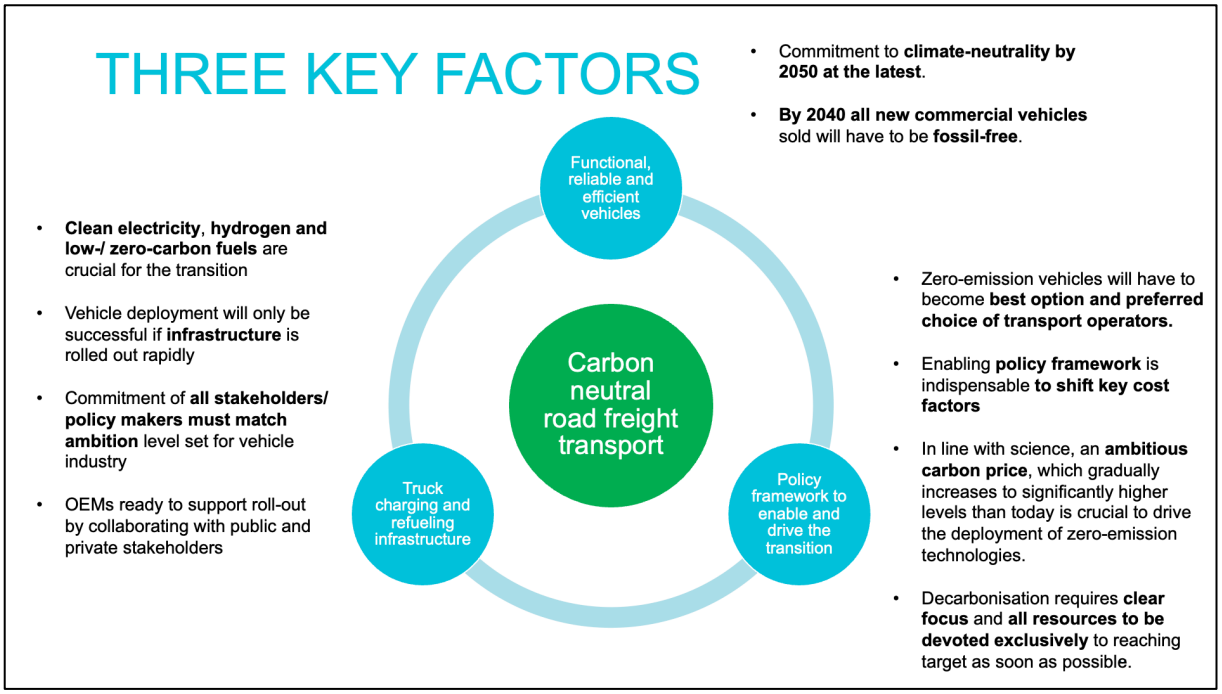
Contrary to the arguments of some, setting a general ICE phase-out date for all heavy-duty vehicle segments now would not provide or increase confidence of market actors in the need or increase the pace of the transition to zero-emission vehicles. Instead, such a measure would overly simplistically focus on the supply-side only, ie vehicle manufacturers, while neglecting the role of the demand-side, i.e. transport operators. However, both sides are equally crucial for a successful transition to climate neutrality and must therefore be addressed in the regulatory framework.

The political need for a Euro VII regulation covering new ICE is understood, despite the fact that a new Euro VII regulation 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. However, the stringency of Euro VII will have a big impact on (a) fuel consumption and CO2 emissions, (b) taking resources (engineering and financial) away from decarbonisation, (c) the viability of recovering investment through diminishing ICE sales and (d) the attractiveness and TCO of Euro VII vehicles compared to ZEV options. All in all, and also considering world events, future CO2 targets and Euro VII cannot be looked at in isolation because the combination of both coming in a similar timeframe could present a major problem for the HDV industry.

ESTABLISHING AN ENABLING FRAMEWORK

In addition to **functional, reliable and efficient low- and especially zero-emission vehicles**, two more building blocks are essential for a successful transition to climate neutrality and must be put into place simultaneously.

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



Vehicle manufacturers are clearly committed to bringing zero-emission vehicles to the market and are well on the way by providing an increasingly wide offering for different use cases, payloads and ranges (see above). However, the pace of market adoption of the 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 **charging and refuelling infrastructure**, ACEA reiterates that policymakers need to be aware that setting AFIR targets for heavy-duty vehicles now, i.e. 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 refers to its published position on AFIR[3] and encourages all policymakers to agree to the proposed targets that ensure a minimum network charging and refuelling stations suitable for heavy-duty vehicles becomes available by 2025 and 2030.

Market adoption of zero-emission vehicles also depends on a supportive regulatory framework that effectively incentivises fleet renewal and favours zero-emission vehicles by shifting key cost factors and facilitating TCO-parity. Despite the anticipated technology improvements, the total costs of ownership and especially the upfront investments costs of zero-emission vehicles will likely remain higher than for conventional vehicles. However, as long as diesel remains cheaper, low- and especially zero-emission vehicles will not become an attractive and commercially viable option for transport operators. The price differential between conventional fossil fuels (diesel) and zero-emission alternatives (e.g. electricity, hydrogen) does have a significant impact on the total costs of ownership.

ACEA therefore reiterates that 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 (ETS-2[4]) and the implementation of road charging systems differentiated by CO2-emissions (Eurovignette[5]) in member states 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[6].

[3] 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

[4] 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

[5] 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.

[6] Incentive schemes which support transport operators have been put in place in - *amongst others* - 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 harmonized across the European Union and be offered with a medium-term perspective to provide planning perspective for operators while especially incentivizing early investments and market adoption.

SPECIFIC ELEMENTS OF THE REVIEW

AMBITION LEVELS

The commercial vehicle market is **driven by demand and the strong focus of transport operators on the total cost of ownership (TCO)**. Making vehicles more efficient has always been a top priority for the truck industry, as this is a key competitive factor for operators that drives competition between manufacturers. At the same time, manufacturers need substantial lead times (~5 years) and a predictable and stable regulatory framework to manage the transition and 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 the transition is not only set by vehicle manufacturers or their regulations. The road transport market is a B2B market. The ability of the stakeholders to adjust to changing conditions must be considered. Manufacturers must be enabled to move with and push the market forward without pushing them to having to comply with targets that cannot be met by demand.

Especially the ambition levels in 2030 and beyond are highly dependent on the enabling conditions, the market uptake in earlier years etc. where the timeframe 2025 – 2030 is particularly sensitive as the ZEV uptake can only be as fast as the infrastructure roll-out. Therefore, ACEA does not support setting intermediate targets before 2030 and recommends 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. Adding new vehicle groups implies that new, individual baselines for these vehicles need to be determined.

Since the regular development time for new vehicles is relatively long (in the range of 5 – 7 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 (BUSES, MEDIUM LORRIES)

Small and medium lorries

Small and medium lorries make only relatively low contributions to the total CO2 emissions of the road transport sector. Especially compared to heavy-duty vehicles, this segment only represents a relatively 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 industry for bus manufacturing is diverse and several business models exists. Complete buses are manufactured by OEMs but also by some bodybuilders. In addition, bus chassis at an early stage of completion are delivered by OEMs to external bodybuilders for the final completion. From the chassis it is not clear if it will become a city bus, an interurban bus or a coach or if it will be designed as a single- or double-deck vehicle.

As the bus chassis delivered by the OEMs 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 the OEMs would also be addressed with the bus and coach standards regulation. Still, 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 from the case of the lorries. 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 are 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 the challenges for the infrastructure deployment for the shift to zero-emission vehicle is similarly high as 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 exempted from the CO2 emission targets. These vehicles are designed to meet other specific demands than vehicles which are designed for the transport of goods (e.g. 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 and 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 do 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.

As with VECTO, 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 trailers/ semitrailers class should be regulated separate from motor-vehicles in a dedicated regulation.

Credit/ Debit system

ACEA strongly recommends that the current credit and debit system is improved further 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 the 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 of 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 does usually require 5 – 7 years. While the commitment and ambition of vehicle manufacturers to swiftly transition to low- and especially zero-emission vehicles is clear, it is particularly challenging to match the development and required target compliance, especially when enabling conditions are highly volatile.

Pooling

Pooling can be an instrument that provides flexibility for manufacturers in reaching 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, i.e. different manufacturers with differing product portfolios across different vehicle segments, a pooling mechanism must most importantly not have negative impacts on competition, 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 ZLEV incentive mechanism should be designed in a way which actually incentivises the deployment of zero-emission vehicles in a meaningful and effective way.

Any change of 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 to stimulate the ZEV deployment. A higher overall reduction target (e.g. -30% in 2030) obviously requires a higher ZEV-share, 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 incentivizes 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 that corresponds 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 do 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 with respect to ZEV mandates since they potentially create significant market distortions. They only address the supply side (vehicle manufacturers) but do not simultaneously also address and with similar ambition levels the demand side (transport operators). 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 for a swift 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 of conventional vehicles. Those improvements would not be recognized with a ZEV mandate and manufacturers with more fuel-efficient vehicles would effectively be disadvantaged. These improvements are, however, one of the driving forces behind the CO2 regulation.

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. As described, renewable and low-carbon fuels will have to play an important role in cutting CO2 emissions of road transport. The current vehicle fleet and new low-emission vehicles, that will be part of manufacturer portfolios to help meet CO2 fleet targets, will continue to be composed of vehicles with old, current, and future 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 of road transport fuels, electricity, H2 etc., is therefore a crucial cornerstone of 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 and rapidly deliver the decarbonisation of fuels by ensuring that sufficient quantities become quickly and easily available for all road transport users and at convincing prices.

High-Capacity Transport

High-capacity vehicles, such as the European Modular System (EMS), do positively contribute to the decarbonisation of road transport. They should not be penalised, but their more widespread use should instead 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 HCT configurations and 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 15 MAJOR CAR, VAN, TRUCK AND BUS MANUFACTURERS

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