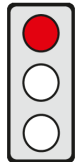


KEY ISSUES

Objective of the Regulation: In order to reduce CO₂ emissions in the road transport sector, CO₂ emission targets for lorries are to be introduced for the first time.

Affected parties: Manufacturers of heavy commercial vehicles, particularly lorries, and their suppliers; transport companies and their customers.



Pro: –

Contra: (1) CO₂ targets for lorries do not guarantee any reduction in CO₂ emissions caused by road haulage.

(2) EU-wide CO₂ targets of 15% as of 2025 and 30% as of 2030 are based on insufficient data and, in view of the long product cycles applicable to lorries, are too strict.

(3) The financial penalties are disproportionately high and therefore in breach of EU law.

The most important passages in the text are indicated by a line in the margin.

CONTENT

Title

Proposal COM(2018) 284 of 17 May 2018 for a **Regulation** of the European Parliament and of the Council **setting CO₂ emission performance standards for new heavy-duty vehicles**

Brief Summary

► Context and objectives

- Lorries, including tractors for trailers and semi-trailers, and buses (“heavy-duty vehicles”, HDVs) cause 6% of all CO₂ emissions EU-wide and 25% of the CO₂ emissions from road transport. Without action, the latter will increase by approx. 9% by 2030 as compared with 2010. [Recital 8]
- By 2050, EU-wide CO₂ emissions in the road-transport sector are to fall by at least 60% as compared with 1990 levels [Transport White Paper COM(2011) 144, p. 3; see [cepPolicyBrief](#)] and should be “firmly on the path towards zero” [Communication COM(2016) 501, p. 2; see [cepPolicyBrief 30/2016](#)].
- Currently, EU targets for the reduction of CO₂ emissions from road vehicles,
 - only apply to cars [Regulation (EC) 443/2009] and “light-duty vehicles” (LDVs) [Regulation (EU) 510/2011] [regarding the recast of both Regulations see Commission proposal COM(2017) 676; see [cepPolicyBrief 02/2018](#)],
 - do not apply to HDVs.
- The proposed Regulation defines “targets” for reducing CO₂ emissions (“CO₂ targets”) from newly registered (“new”) lorries – but not from buses [p. 2]
 - both for the EU fleet
 - and the fleets of the individual manufacturers.
- CO₂ targets will also reduce the fuel consumption of lorries and thus the costs incurred by transport companies and their customers [p. 2].

► Scope

- The Regulation only applies to lorries with one driving axle and distinguishes between four main groups [Art. 2 (1)]:
 - two-axle lorries (“4x2 axle configuration”) exceeding 16 tons (t);
 - three-axle lorries (“6x2 axle configuration”) exceeding 3.5 t;
 - two-axle tractors (“4x2 axle configuration”) for trailers exceeding 16 t;
 - three-axle tractors (“6x2 axle configuration”) for trailers and semi-trailers exceeding 3.5 t.
- The main groups are subdivided – based on cab type, engine power and typical “mission profile” such as urban, regional or long-haul – into a total of nine lorry subgroups [Annex I No. 1].

► VECTO: Estimating CO₂ emissions

- As from 2019, manufacturers will have to estimate the CO₂ emissions and fuel consumption of the “most widely representative” types of new lorry using the simulation tool VECTO [“Vehicle Energy Consumption Calculation Tool”; Regulation (EU) 2017/2400] and register it with the Commission that then publishes this VECTO data [Proposal for a Regulation COM(2017) 279, see [cepPolicyBrief 27/2017](#)].

- By means of VECTO, the CO₂ emissions and fuel consumption of the lorry sub-groups are estimated according to their typical mission profile and payload (t) [see Annex I No. 2.1 Table 2].
- Using the VECTO estimates for 2019, “reference CO₂ emissions” – measured in grammes per tonne kilometre (g/tkm) – are determined which provide the basis for both EU-wide and manufacturer-specific CO₂ targets [Art. 3 (a) in conjunction with Art. 1 and Annex I No. 4].
- The “reference CO₂ emissions” are determined by dividing the CO₂ emissions of all new lorries in one lorry sub-group in 2019 by their typical payload (t) and weighting them according to the typical mission profile [Annex I No. 3].

► **EU-wide CO₂ target**

- As from 2025, the CO₂ emissions of the EU's fleet of new heavy-duty vehicles must be reduced – as compared with the “reference CO₂ emissions” for their respective lorry sub-group in 2019 – as follows [Art. 1]:
 - 2025–2029 by a total reduction factor of 15%,
 - post 2030 provisionally by a reduction factor of 30%; as there are “more uncertainties” about “more advanced technologies” which are not yet available for CO₂ reduction [Recital 15], the final EU-wide CO₂ target for 2030 will only be determined following an assessment in 2022 [Art. 13].

► **Manufacturer-specific CO₂ targets**

- CO₂ emissions from the fleet of all the new lorries of each manufacturer must be reduced as from 2025 so as to achieve the EU-wide CO₂ target [Recital 18].
- For this purpose, an annual CO₂ target will be specified – in the following year in each case, i.e. initially in 2026 – for the CO₂ emissions of each manufacturer's fleet of new lorries (g/tkm) [Art. 6].
- The manufacturer-specific CO₂ target depends on [Annex I No. 4]
 - the CO₂ reference emissions,
 - the reduction factor of the EU-wide CO₂ target and
 - the typical mileage (km) and payload (t) of all new lorries of a manufacturer in the respective lorry sub-groups.

► **Manufacturer-specific CO₂ emissions**

- As from 2019, the actual average manufacturer-specific CO₂ emissions of each manufacturer's fleet of new lorries (g/tkm) will be determined [Art. 3 (c) and Art. 4, Annex I No. 2.7] – in the following year in each case.
- The manufacturer-specific CO₂ emissions depend on the average CO₂ emissions – estimated using VECTO - and the typical mileage (km) and payload (t) of all the manufacturer's new lorries [Annex I No. 2.7].

► **“ZLEV bonus factor” for zero-emission and low-emission HDVs**

- “Zero-emission” and “low-emission” HDVs (“zero and low emissions vehicles”, ZLEV) will also count towards emissions reduction (“ZLEV bonus factor”) in order to provide an incentive for their introduction [Art. 4, Recital 21].
- The ZLEV bonus factor will be determined – in the following year in each case – for each manufacturer as from 2019 [Art. 5].
- In determining the ZLEV bonus factor [Annex I No. 2.3], zero-emission and low-emission HDVs – including lorries and buses for which there are no CO₂ targets – will be counted multiple times according to their CO₂ emissions in order to reduce emissions:
 - “zero-emission” HDVs with CO₂ emissions below 1 g/kWh or 1 g/km [Art. 3 (j)] as 2 vehicles;
 - “low-emission” HDVs with CO₂ emissions below 350 g/km [Art. 3 (k)] as up to 2 vehicles.
- In order to avoid a “weakening” of the CO₂ targets [Recital 22; Art. 5 (3)],
 - the ZLEV bonus factor can reduce the manufacturer-specific CO₂ emissions by a maximum of 3%;
 - zero-emission HDVs for which there are no CO₂ targets can be counted as reducing the manufacturer-specific CO₂ emissions by a maximum of 1.5%.

► **Emission debts (“borrowing”) and emission credits (“banking”)**

- In order to take account of “fluctuations” in the composition and CO₂ emissions of a manufacturer's fleet of lorries [Recital 25], he can balance lapses in his annual, manufacturer-specific CO₂ targets against over-compliance in other years [Art. 7, Annex I No. 5.1].
 - For lapses, in the period 2025–2029, the manufacturer receives “emission debts” (“borrowing”).
 - For over-compliance, in the period 2019–2029, the manufacturer receives “emission credits” (“banking”).

► **Excess emissions and financial penalties**

- “Excess emissions” by a manufacturer are subject to a penalty where [Art. 8 (2); Annex I No. 6]:
 - in any year between 2025 to 2028, the sum of the emission debts reduced by the sum of the emission credits exceeds 5% of his manufacturer-specific CO₂ target for 2025 [Art. 7 (1)];
 - in 2029, the sum of the emission debts exceeds the sum of emission credits;
 - in the years from 2030, the average manufacturer-specific CO₂ emissions exceed the annual manufacturer-specific CO₂ targets.
- The penalty for exceeding emissions by 1 g/tkm per vehicle is € 6,800 [Art. 8 (1)].

Main Changes to the Status Quo

- ▶ Until now, EU rules on the reduction of CO₂ emissions only applied to cars and light-duty vehicles. Now, lorries with one driving axle have to comply with rules aimed at reducing CO₂ emissions.
- ▶ New: manufacturers must pay penalties for excess emissions.

Statement on Subsidiarity by the Commission

According to the Commission, in view of the cross-border impact of climate change and the necessity to protect the internal market for HDVs, EU action is justified. Otherwise the reduction of CO₂ emissions from HDVs would depend solely on measures by the Member States.

Policy Context

By 2030, the EU wants to bring down all CO₂ emissions by at least 40% as compared with 1990 levels [European Council of October 2014, see [cepInput 2/2015](#)]. For this purpose, CO₂ emissions in sectors that – like transport – are not covered by EU emissions trading, will be reduced by 30% as compared with 2005 (see [cepInput 04/2018](#)).

Legislative Procedure

17 May 2018 Adoption by the Commission

Open Adoption by the European Parliament and the Council, publication in the Official Journal of the European Union, entry into force

Options for Influencing the Political Process

Directorates General: DG Climate (leading)
Committees of the European Parliament: Environment, Public Health and Food Safety (leading), Rapporteur: Bas Eickhout (NL, Greens)

Federal Ministries: Environment (leading)
Committees of the German Bundestag: Environment (leading)
Decision-making mode in the Council: Qualified majority (acceptance by 55% of Member States which make up 65% of the EU population)

Formalities

Legal competence: Art. 192 TFEU (Environment)
Form of legislative competence: Shared competence [Art. 4 (2) AEUV]
Legislative Procedure: Art. 294 TFEU (ordinary legislative procedure)

ASSESSMENT

Economic Impact Assessment

In view of the expected increase in transport-related CO₂ emissions; the obvious cross-border nature of road haulage and the need to establish uniform EU-wide rules, the regulation of CO₂ emissions from heavy-duty vehicles (HDVs) at EU level is in principle appropriate. However, from an ordoliberal perspective, the Commission's chosen approach – like the imposition of CO₂ limits for cars and light-duty vehicles (see [cepPolicyBrief 2018-02](#)) – must be rejected because instructions and bans, which give rise to fines in the event of infringement, should not be used where market-based tools are available for achieving a target, which is true in this case:

Instead of the introduction of CO₂ targets for lorries, their inclusion in the Emissions Trading System would be a significantly more effective alternative and less restrictive on the decision-making power of market operators. **In order to achieve CO₂ targets for lorries, reliably and efficiently, EU refineries and fuel importers should be included in an emissions trading scheme (ETS)** – ideally the EU Emissions Trading Scheme (EU-ETS; see [cepInput 03/2018](#)) or at least a transport-specific ETS (see [cepInput 05/2015](#); [cepPolicyBrief 2016-30](#)). These must then hold allowances for the CO₂ bound up in the fuel (“upstream emissions trading”), the costs of which will be borne by fuel consumers. Thus – unlike the CO₂ targets proposed here – **an ETS can** include both new and old vehicles in the efforts to protect the climate as well as **reliably restrict CO₂ emissions** by capping the overall number of allowances in the ETS EU-wide – even when there is economic growth – **and** by way of the trade in allowances **efficiently reduce them** in those locations where the cost of doing so is lowest.

Including the road transport sector in the ETS means that the actual fuel consumption and thus the actual CO₂ emissions of an individual vehicle are imputed directly to it by way of higher fuel prices.

This direct pricing of CO₂ emissions ensures a demand for and supply of vehicles which are more fuel-efficient and have lower CO₂ emissions. As CO₂ pricing is attached to the actual fuel consumption and CO₂ output of all vehicles, there is an incentive for using and driving them in a way which is more fuel efficient and produces less CO₂ as well as for the relocation of some freight transport onto ships or railways (see [cepPolicyBrief 2018-05](#)).

The proposed **CO₂ targets however** focus only on the potential fuel efficiency of new lorries whilst having no impact on their actual use and thus on their actual CO₂ output. They therefore **provide no guarantee that CO₂ emissions from road haulage will be reduced** to the desired degree because, firstly, unlike CO₂ pricing by way of an ETS, they provide no incentive for fuel-efficient driving. Secondly, higher mileage is likely if – as the Commission envisages – transport costs fall due to more efficient lorries (“rebound effect”). Neither can CO₂ targets limit higher mileage arising from economic growth or an increase in the division of labour. If mileage increases, CO₂ emissions will rise without any overall cap – which is provided for by an ETS.

In order to enforce CO₂ targets, the potential fuel consumption and CO₂ output must be determined as objectively as possible for the various types of lorry. VECTO achieves this because the data thus estimated for fuel consumption and CO₂-output varies from the actual values by less than 3% [see SWD(2017) 188, p. 12]. The publication of the realistic VECTO data alone already increases the competitive pressure on manufacturers to offer more fuel-efficient HDVs producing less CO₂ (see [cepPolicyBrief 2017-27](#)).

The CO₂ targets currently specified for 2025 to 2029 are however based on insufficient data, because VECTO data will only be available from the end of 2019. The Commission should therefore refrain from deciding on the level of CO₂ targets before 2020 when the analysed VECTO data will be available as a basis.

The EU-wide CO₂ targets – with reduction factors of **15% as of 2025 and possibly 30% as of 2030** as compared with the CO₂ reference emissions from 2019 – **are too strict**. This is firstly because the lower savings potential of lorries, as compared with cars and LDVs, has not been taken into account. Secondly, there is not enough time after 2020 – following specification of the CO₂ reference emissions – to achieve the CO₂ targets for 2025 **in view of the long product cycles applicable to lorries**. Thirdly, the CO₂ target for 2030 can only be achieved by way of the increased production of zero-emission – battery electric or fuel-cell powered – lorries. As yet, however, there is no economically viable concept for this as regards long-distance lorries.

The proposed **ZLEV bonus factor** provides an incentive **for low-emission and zero-emission vehicles** but it only takes account of low-emission vehicles that emit less than 350 g CO₂/km. Since this is achievable almost exclusively by purely electrically powered vehicles, the ZLEV bonus factor **is not technology-neutral**.

The possibility for manufacturers to balance out lapses in their annual, manufacturer-specific CO₂ target with over-compliance in other years enables them to avoid premature deployment of CO₂ reduction technologies which are expensive and still in an early stage of development. This increases cost-efficiency.

Legal Assessment

Legislative Competency

Unproblematic. The EU is empowered to issue environmental measures to protect the climate (Art. 192 TFEU). In addition, EU-wide CO₂ targets for lorries serve the functioning of the internal market [Art. 114 TFEU].

Subsidiarity

Unproblematic. Climate change is a cross-border problem which justifies action at least at EU – and preferably on a global – level. In addition, EU-wide standard provisions on CO₂ targets, that are necessary for the functioning of the internal market, can only be adopted at EU level.

Compatibility with EU Law in other respects

In view of the fact that EU-wide CO₂ targets are too strict, **the financial penalty** for excess emissions of € 6,880 per 1 g CO₂/tkm **is disproportionate and therefore in breach of EU law** [Art. 5 (3) TFEU].

Possible future follow-up measures by the EU

In 2022, the Commission must assess [Art. 13] whether to amend the current EU-wide CO₂ target for 2030 of 30% and whether to propose CO₂ targets for additional types of HDV – e.g. less widely represented lorries and buses.

Conclusion

In order to achieve CO₂ targets for lorries, reliably and efficiently, EU refineries and fuel importers should be included in an emissions trading scheme (ETS). An ETS can reliably restrict and efficiently reduce CO₂ emissions. CO₂ targets do not, however, guarantee any reduction in CO₂ emissions caused by road haulage. The CO₂ targets currently specified for 2025 and 2029 are based on insufficient data. EU-wide CO₂ targets of 15% as of 2025 and 30% as of 2030 and, in view of the long product cycles applicable to lorries, are too strict. The ZLEV bonus factor for low-emission and zero-emission vehicles is not technology-neutral. The financial penalties are disproportionately high and therefore in breach of EU law.