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COMMISSION STAFF WORKING DOCUMENT
EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

Accompanying the document

Proposal for a Regulation of the European Parliament and of the Council setting CO₂ emission performance standards for new heavy duty vehicles

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Executive Summary Sheet

Impact assessment on a Proposal for a Regulation of the European Parliament and of the Council setting CO₂ emission performance standards for new heavy-duty vehicles

A. Need for action

Why? What is the problem being addressed?

Between 1990 and 2015, CO₂ emissions of heavy-duty vehicles (HDV) rose by some 19%. HDV CO₂ emissions are currently not regulated within the EU, contrary to car and van emissions.

A large number of readily available cost-effective technologies to improve fuel efficiency are not widely deployed in the market even though their costs are low and they could bring high net savings. This is mainly due to imperfect and asymmetric information in the new vehicle market as it is complex for transport operators, which are mainly SMEs, to access and make full use of the technical information on such technologies.

As a result, the problems identified are:

- 1) The CO₂ emissions from HDVs are set to increase, without further action, by up to 6% between 2015 and 2030.
- 2) Transport operators and their customers miss out on fuel savings.
- 3) European HDV manufacturers and component suppliers are at risk of losing their technological innovative leadership as significant markets such as the US, Canada, Japan and China have in recent years implemented emission standards to stimulate innovation and rapidly improve vehicle efficiency.

Parties affected include the general population, freight transport operators and HDV manufacturers.

What is this initiative expected to achieve?

The initiative should: 1) contribute to the achievement of the EU's commitments under the Paris Agreement by reducing CO₂ emissions from HDVs, 2) reduce operating costs for transport operators and transportation costs for consumers 3) maintain the technological and innovative leadership position of EU HDV manufacturers and component suppliers

What is the value added of action at the EU level?

EU action is cost-effective and will ensure coordinated measures across Member States in addressing climate change. It is unlikely that Member States acting individually would be sufficient.

B. Solutions

What legislative and non-legislative policy options have been considered? Is there a preferred choice or not? Why?

Following an analysis of transport-related EU policy measures, the need to introduce CO₂ emission standards was identified. This would set out a complementary supply side measure at EU level with the view of ensuring an effective decarbonisation of the HDVs transport sector.

For the design of the CO₂ standards, various policy options were considered with respect to:

- 1) CO₂ emission targets
- 2) Distribution of EU fleet-wide CO₂ emission targets across vehicle groups and manufacturers
- 3) Incentives for low- and zero-emission vehicles (LEV/ZEV)
- 4) Elements for cost-effective implementation
- 5) Strengthening of the governance

Who supports which option?

The majority of stakeholders support the introduction of HDV CO₂ targets at EU level. HDV manufacturers advocate for less ambitious targets compared to NGOs and support a single CO₂ target per manufacturer. Regarding LEV/ZEV, manufacturers support super credits, while NGOs are in favour of a mandate. Cost-effective implementation is supported by all stakeholders with manufacturers in favour of banking and borrowing and civil society organisations of trading. Most stakeholders support monitoring the certified CO₂ values against real world emissions.

C. Impacts of the preferred option

What are the benefits of the preferred option (if any, otherwise main ones)?

The options considered cover a range of CO₂ reduction target trajectories up to 2030.

Across the different options considered for the target levels, the CO₂ emission reductions for HDVs in 2030, with respect to the baseline, range from 3% to 8%. By 2030, NO_x emissions decrease by 1.3% to 4.7% and PM_{2.5} emissions by up to 0.6 %.

Significant net benefits are expected for society as a whole as well as for transport operators and consumers. They increase as CO₂ target levels get stricter. Net economic benefits from a societal perspective, including avoided CO₂ costs, range from 9,377 - 52,369 EUR per lorry registered in 2025 and from 41,567 –87,278 EUR per lorry registered in 2030.

From the first and second use perspective, cumulative net savings, i.e. the difference between fuel savings and manufacturing costs, range from EUR 5,413 - EUR 37,589 per lorry in 2025 and from EUR 22,032 to EUR 82,429 per lorry in 2030. This is equivalent to saving 1-4 % of its operating costs in 2025 and 3-12 % in 2030.

An analysis of the cost-effective technologies already at hand or becoming readily available in the short term shows that their full deployment would allow achieving emission reductions between 15% to 20% in 2025 compared to the baseline.

Higher uncertainties over the performance and costs of more advanced technologies and, in particular, alternative powertrains relying on the existence of an alternative fuels infrastructure could affect the feasibility of higher target level options in 2030.

Total costs of HDV freight transport per activity are slightly reduced, by less than 1% in 2025 and in the order of 1 to 3% in 2030.

What are the costs of the preferred option (if any, otherwise main ones)?

Manufacturing costs will increase and thus operators purchasing a new lorry will face higher upfront costs. For an average new lorry registered in 2025, they range from EUR 858 to EUR 27,797 and in 2030, they range from EUR 4,657 to EUR 58,760 across the options considered. In relative terms, this represents between 0.8% and 25.3%, of the purchase price of the vehicle

How will businesses, SMEs and micro-enterprises be affected?

Transport operators, mainly SMEs, are expected to benefit from reduced fuel consumption. Resulting savings are estimated to significantly outweigh the additional costs of a new lorry equipped with CO₂ reduction technologies. SMEs supplying such technologies to HDV manufacturers will benefit from the additional demand.

Will there be significant impacts on national budgets and administrations?

Tax revenues in the EU28 are expected to decrease slightly due to decreased diesel sales.

Will there be other significant impacts?

A regulatory framework for CO₂ emissions from HDVs will help the EU automotive industry to retain its global technological and innovative leadership and access to markets. Due to reduced fossil fuel needs, the EU's energy security situation will improve.

D. Follow up

When will the policy be reviewed? Maximum 4 lines

An early review is foreseen in 2022 on the effectiveness of the legislation. The review would (1) establish or confirm the target for 2030, (2) extend the scope to other groups of HDVs, i.e. buses and smaller lorries, (3) review the effectiveness of the modalities for implementation, for instance the incentive scheme for zero and low emission vehicles.