Proposal on monitoring and reporting CO₂ emissions from heavy-duty vehicles

Promoting the uptake of the most fuel-efficient heavy-duty vehicles is essential for achieving a low-carbon and competitive road transport sector in the EU.

In 2014, greenhouse gas emissions from heavy-duty vehicles (HDVs, i.e. lorries, buses and coaches) represented around 5% of total EU emissions and roughly a quarter of road transport carbon-dioxide (CO₂) emissions. Emissions from HDVs are set to increase by up to 10% between 2010 and 2030, so action is needed in order to curb them.

The new proposal to monitor and report CO₂ emissions is the first ever EU legislation specifically addressing CO₂ emissions from these vehicles. It is a prerequisite for further legislation on HDV CO₂ emission standards, which the Commission will propose in 2018.

Monitoring and reporting CO₂ emissions and fuel consumption of new HDVs will increase transparency in this market and close the current knowledge gap on the performance of the vehicles. It will enable transport operators to make well-informed purchase decisions and stimulate competitiveness for manufacturers.

1. What is the Commission’s proposal about?

As of 1 January 2019, lorry manufacturers will have to calculate the CO₂ emissions and fuel consumption of new vehicles they produce to place on the EU market, using the new Vehicle Energy consumption Calculation Tool (VECTO). This information will be declared for the registration of vehicles under the EU type-approval legislative framework, in application of the so-called certification regulation, a new draft Commission Regulation approved on 11 May 2017 by the Technical Committee on Motor Vehicles.

With the new proposal on monitoring and reporting, the Commission will collect the declared CO₂ emissions and fuel consumption data via a monitoring and reporting system. The data will be made publicly available by the European Environment Agency on behalf of the Commission, starting in 2020 to cover data monitored in 2019. The new system will complement the existing EU reporting scheme for cars and vans.

According to the draft certification regulation, manufacturers will have to determine the CO₂ emissions and fuel consumption of new lorries above 7.5 tonnes. The scope of the regulation is set to be amended in the future to also cover smaller lorries and buses and coaches. This would allow monitoring of CO₂ data from these vehicle categories too.

2. How does it work?

Designated national authorities will report annually to the Commission via European Environment Agency (EEA) registration data of new registered heavy-duty vehicles (HDVs).
HDV manufacturers will submit to the Commission (via the EEA) the monitoring data for vehicles produced in each calendar year, in particular the CO₂ emissions, fuel consumption and other relevant technical data.

On the basis of the registration data, the two datasets will be combined and checked by the EEA in order to obtain and publish annual monitoring data at vehicle, manufacturer and Member State level.

3. What are the expected benefits?
The CO₂ emission and fuel consumption data of new lorries put on the EU market will be made available to all stakeholders.

- This will be particularly beneficial for the many transport companies in the EU that are SMEs, operating only a few vehicles. They will be able to compare and purchase more efficient lorries, allowing them to save money on fuel bills, which make up more than a quarter of their operating costs.

- It will also foster innovation and competition between manufacturers to produce more energy-efficient vehicles. With other key global markets such as the US, Canada, China and Japan having already introduced fuel efficiency measures for HDVs, it is vital for EU industry to keep pace and maintain their current leading role in vehicle efficiency.

- Public authorities will have access to comprehensive data that will help them design and implement policies to promote more fuel-efficient lorries, for instance through taxation and road user charges. It will also enable analysis of the data, such as assessing the penetration level of CO₂ reduction technologies.

4. What are the expected costs?
The only economic costs for implementation of the proposal are administrative and these are expected to be negligible:

- for manufacturers, around EUR 1 per vehicle monitored and reported;
- for each Member State, around EUR 3.500 on average per year for the monitoring and reporting of the registration data.

5. What is VECTO?
HDVs are quite complex vehicles and physically testing each of them to determine the CO₂ emissions would be very burdensome. The Commission has therefore developed a new tool, the Vehicle Energy consumption Calculation Tool (VECTO), in close cooperation with stakeholders. VECTO is a simulation software that can be used cost-efficiently and reliably to measure the CO₂ emissions and fuel consumption of HDVs for specific mission profiles, loads and fuels, based on input data from relevant vehicle components.

6. What are the next steps?
As underlined in the July 2016 Low Emission Mobility Strategy¹, the EU will need to introduce measures to actively curb CO₂ emissions from the heavy-duty vehicle sector and contribute to achieving the wider EU commitments under the global Paris Agreement.

This proposal on monitoring and reporting, together with the new certification regulation under the type approval framework, is the first necessary step.

¹ COM(2016)244 final
As a second important step, the Commission will come forward with a proposal on HDV CO₂ emission standards in 2018.

For More Information

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