EU HDV CO_2: At a Glance

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On the 17th May 2018 the European Commission published a proposal for setting CO_2 emission performance standards for new heavy-duty vehicles (HDVs), along with an impact assessment. As of 2019, manufacturers will have to start publishing their CO_2 emissions which will allow for direct OEM comparisons. CO_2 emissions will be measured using VECTO, Vehicle Energy Consumption Calculation Tool. The key points from the proposal will be listed out in this briefing with an analysis of the impact assessment, and critical comparison to other global CO_2 to follow.

Top 10 Points

- EU's 2030 framework for climate and energy targets a 40% reduction of domestic EU GHG emissions compared to 1990 and all sectors must be part of this 'ambition'.
- CO_2 emissions account for around 6% of total EU emissions and 25% of road transport emissions, posing three main problems:
  1. As transport activities increases, heavy-duty vehicle CO_2 emissions are set to grow 9% between 2010-2030
  2. Operators are missing out on fuel savings due to the low market penetration of readily available fuel reducing technologies
  3. GHG regulations have been set in the U.S., Canada, Japan, China and India already, hence, EU must follow suit to keep up global competitiveness
- Proposal is part of the 3rd mobility package, whose goal is to reduce GHG emissions in road transport by at least 60% in 2050 compared to 1990 levels.
- The legislation targets vehicles which emit the largest amount of CO_2 in a cost-effective manner hence heavy-duty vehicles with small lorries, buses and vocational vehicles are exempt from the CO_2 standards. The heavy-duty vehicles are split into four groups:
  1. Rigid lorries with a 4x2 axle configuration and weight >16 tons
  2. Rigid lorries with a 6x2 axle configuration
  3. Tractors with a 4x2 axle configuration and weight >16 tons
  4. Tractors with a 6x2 axle configuration

  The four groups are then split by cab type and engine power which gives 9 vehicle sub-groups.
- Targets are set to be compliant at the manufacturer level based on a weighted average. This allows underperformance of a certain vehicle-sub group to be offset by overachievement from another.

- The first performance standard set is to reduce heavy-duty vehicle CO_2 emissions by 15% between 1st January 2025 to 31st December in comparison to monitoring data reported in 2019.
- The second performance standard set is to reduce heavy-duty vehicle CO_2 emissions by 30% from the 1st of January onwards in comparison to 2019's level. However, this target is only aspirational and is subject to review in 2022.
- Super-credits will be awarded to manufacturers who produce zero and low emission vehicles in which small lorries and buses are included. Zero and low emission vehicles will count for two vehicles but can only reduce a manufacturer's average CO_2 by a maximum of 3%. Low emission heavy-duty vehicles are only credited if their emissions are below 350g CO_2/km, which is roughly half of the average fleet emissions.
- Banking and borrowing of CO_2 credits will be allowed across different compliance years. Emission credits can be banked for the periods 2019-2024 and 2025-2029. Credits cannot be carried over from the first period to the next and all emission debts must be cleared by 2029.
- Real world emissions will be reported annually at a manufacturer level to improve transparency with in-service conformity tests introduced to report deviations. Manufactures will face financial penalties for non-compliance of their specific CO_2 target, which will exceed the marginal cost of technologies to meet the specific target.

What is coming next?

KGP is currently preparing a critical analysis of the Commissions' impact assessment with KGP's forthcoming hybrid and electric commercial vehicle study as a comparison. The focus will be on CO_2 reducing technologies discussing cost, price and market penetration of technologies to meet global CO_2 and/or fuel economy standards.

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