

2025 CO2 Regulation

The next step to tackling transport emissions

June 2015

A briefing by **TRANSPORT & ENVIRONMENT**

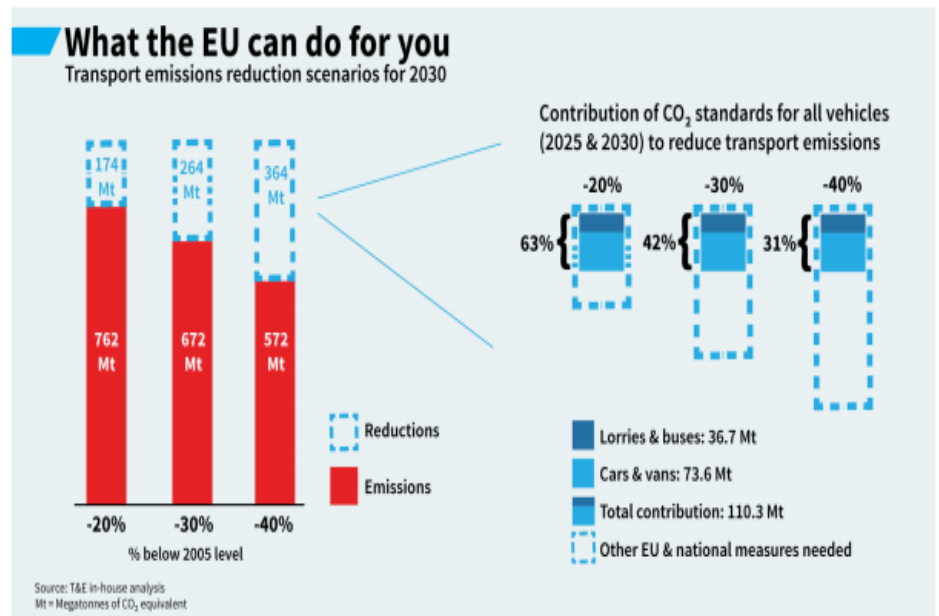
Summary

Vehicle CO₂ standards are one of the EU's most successful climate policies. They stimulate innovation and maintain the competitiveness of the EU automotive industry by creating a market for globally important technologies that improve fuel efficiency. They deliver substantial greenhouse gas savings at a negative societal cost; the money saved by drivers on fuel is spent in Europe stimulating local economies and creating jobs. The policy also improves energy security and balance of payments. Cars are currently regulated to 2021, vans to 2020 but trucks not at all. New standards to 2025 could deliver a significant share of the cuts that will need to be made in transport to deliver the 2030 Climate and Energy goals. Cost-effective technologies to reduce emissions from conventional vehicles from an average 95g/km to 70g/km are available and are anticipated to pay back in lower fuel bills within three years. Smartly designed regulations can also drive plug-in vehicles to become the market-stimulating choice for car-buyers. 2025 vehicle CO₂ standards are a win-win solution and should be proposed by the Commission as part of a package of emissions reductions with the Effort Sharing Decision in mid-2016.

1. Why set a 2025 target for cars and vans?

1.1. To help deliver 2030 climate and energy goals

In the EU, transport CO₂ emissions have risen by 29% since 1990 with 12% of the total EU emissions now arising from the exhaust of cars.¹ As part of its 2030 Climate and Energy Package the EU has set a target to reduce emissions in the non-ETS sectors by 30% from 2005 levels. Technology to improve vehicle efficiency, driven through standards, must do much of the heavy-lifting to reduce emissions and help Member States meet their goals.²



¹ DG Climate Action 2015; http://ec.europa.eu/clima/policies/transport/vehicles/cars/index_en.htm

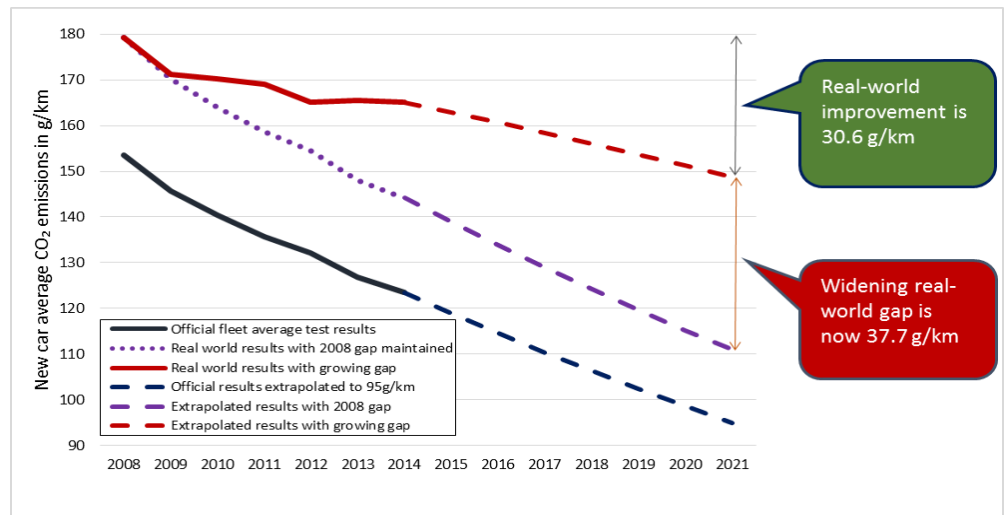
²Transport and Environment 2015, Road to 2020; <http://www.transportenvironment.org/what-we-do/cars-and-co2/Publications>

1.2. Standards are good for drivers, jobs and energy security

Low-carbon, fuel-efficient vehicles save drivers and businesses money through using less fuel. A target of 70g/km³ for cars in 2025 would save a new car buyer €350 pa and pay back the costs of technology within three years.⁴ It would also increase spending on other goods and services boosting national economies and employment. 660,000 to 1.1 million jobs are expected to be created by 2030.⁵ The EU would reduce its daily €1 billion spend on oil imports⁶, strengthening balance of payments and reducing the flow of Euros to Russia, thus improving regional security. Fuel-efficient cars are a quadruple-win for drivers, the economy, energy security and the environment. But the failure of the voluntary agreement in 2008 and 20-year stagnation of truck fuel efficiency demonstrates that the automotive industry makes virtually no effort to supply more fuel-efficient vehicles unless it is required to do so through regulation.

1.3. The stringency of the regulation has been halved by the obsolete testing system

Manipulation of the current obsolete NEDC testing system means that there is a widening gap between the emissions measured in official tests; and, real world performance. **Only half the measured improvement in emissions and fuel consumption has been delivered on the road.**⁷



By 2021 performance on the road is likely to average 150g/km – far from the 95g/km target. Abusing test flexibilities has created a huge benefit for carmakers, which can deploy much less fuel-saving technology on vehicles to achieve their targets. From 2008 to 2021 a real-world improvement of just 31g/km is anticipated. Had the 2008 gap not grown the real-world level would have been 114g/km and an additional 38g/km could have been saved on the road.

The new WLTP test will replace the current discredited system, hopefully from 2017, but requires company targets to be revised to account for the new test. Setting an ambitious 2025 target will contribute to the on-road fuel economy anticipated when the regulation was agreed. Delaying setting a target until 2030 means existing companies targets will continue to be weakened through flexibilities in the testing system for another 15 years despite the introduction of WLTP.

³ Figures are based upon the existing NEDC test cycle - equivalent to c80g/km on the new WLTP test.

⁴ Assumes direct manufacturing costs of €700; an uplift for indirect costs 1.24; 20k km pa from a new car; €1.35/l; a real work uplift of 1.31

⁵ ECF 2013, Fuelling Europe's Future; <http://europeanclimate.org/fuelling-europes-future/>

⁶ Ibid 5

⁷ Transport and Environment 2014, 2014 Mind the Gap Report; <http://www.transportenvironment.org/what-we-do/cars-and-co2/Publications>

1.4. Because standards drive innovation and the EU is falling behind

The current car regulation has been effective because it sets a stretching target with a long lead time. A proposal in 2016 for 2025 will provide a sufficient period for automotive industry to develop and deploy the technologies needed to meet their goals. A five-year cycle of progressive targets provides planning and investment security that is necessary to help prioritise research and development activities. The German Environment Minister Hendricks commented in March 2015 that: *standards have proven to be a driver for innovation for the car industry (...) The existing CO₂-regulation in transport has proven efficient and will be continued.*⁸

Car CO₂ regulation has provided important investment security to automotive suppliers, which have delivered a menu of solutions for carmakers to integrate. Despite the economic recession, investment has been maintained and Europe remains a centre for automotive innovation and development, increasing employment in high-value engineering. Automotive suppliers agree, stating: “The EU CO₂ legislation for passenger cars has largely been a success in driving innovations, lowering CO₂ and offering planning certainty.”⁹ In the absence of a 2025 regulation the industry will reduce investment in developing low-carbon technologies. This will have potential implications for jobs in the short-term and long-term global competitiveness.

There are already alarming signs EU carmakers are falling behind Japanese and Korean competitors in obtaining patents for advanced technologies (hybrid, plug-in hybrid, battery and fuel cell vehicles).¹⁰ 2025 standards will drive the development and deployment of advanced low-carbon technologies in demand globally and help to ensure European carmakers remain globally competitive and not overly focused on marginal diesel solutions.

2. How will a 2025 target be delivered?

A range of cost-effective technologies to improve the efficiency of conventional vehicles to well below the 95g/km 2021 target are available. But 2025 standards are needed to continue to drive technology into the market and ensure European companies remain at the cutting edge in developing fuel-efficient technologies. A study underway by the European Commission¹¹ has identified 34 separate technologies that can improve the efficiency of conventional vehicles beyond 2020, illustrated below. Automotive suppliers confirm that they are ... *developing a wide range of technologies for further CO₂ reductions post-2020*; and that there is *additional potential via both increased efficiency of the internal combustion engine and increasing market shares of alternative powertrain vehicles.*¹² Carmakers’ claims that regulation will make cars unaffordable have repeatedly been shown to be scaremongering. In 2007, carmakers said, a *vehicle-related target of 130 grams CO₂/kilometre, as proposed by the Commission, is not feasible.*¹³ Yet almost every ACEA member has met this goal early.

⁸Reuters 2015, Interview March 15, 2015,

<http://de.reuters.com/article/domesticNews/idDEKBN0M61MX20150310>

⁹ CLEPA Position Paper 2014, Emissions Trading Scheme (ETS) and post-2020 CO₂ reductions

¹⁰ Transport & Environment 2015, 2025 CO₂ Regulation (Long Version)

¹¹ DG Climate Action, 2015, Delphi Study 2015

¹² CLEPA 2015, Post 2020 CO₂ Position Paper

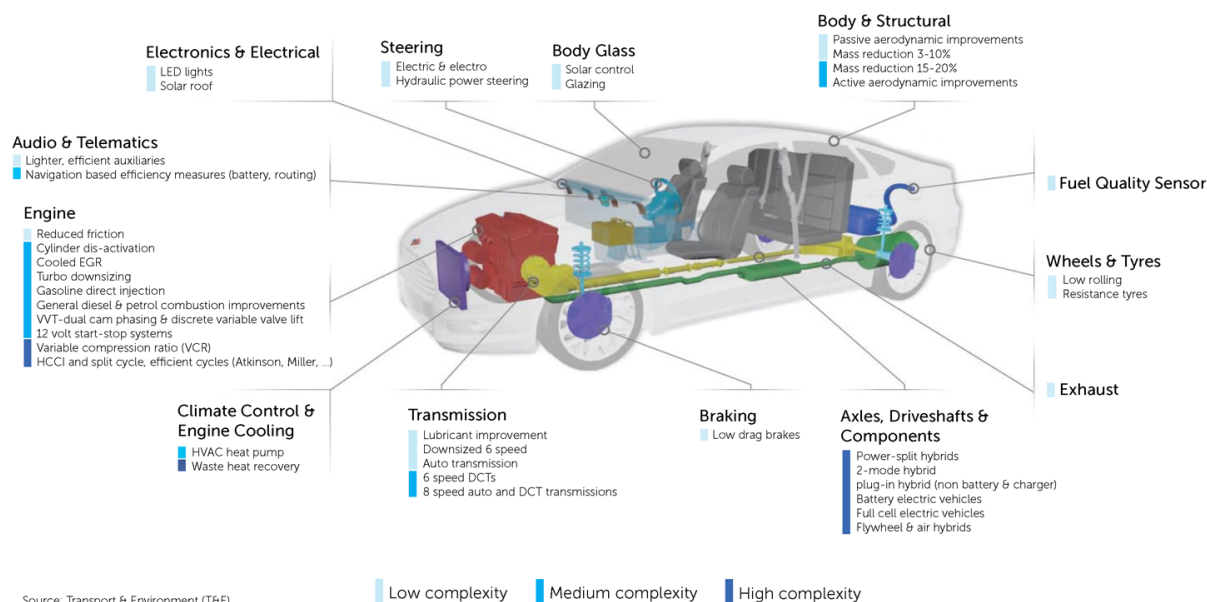
http://www.clepa.eu/index.php?id=628&type=0&juSecure=1&locationData=628%3Atx_dam%3A7271&juHash=84a46c0564b0952c3e89efcca6cf9840beb80e96

¹³ Transport & Environment 2013, Tired of all the hot air;

http://www.transportenvironment.org/sites/te/files/publications/A4_myths_reality.pdf

Electric cars will play an increasingly important role in reducing new car CO₂ emissions. All scenarios are for the market to continue to grow strongly. The target for 2025 should be set at a level that encourages carmakers to supply new models with innovative business models (such as electric car-sharing) but not be overly dependent upon their supply for meeting the 2025 target. A target of 70g/km can be met through hybridisation plus a limited proportion of plug-in vehicles.

Plenty of room for fuel efficiency improvements



3. Conclusions and policy recommendations

CO₂ car, van and truck standards for 2025 are a logical and essential element of the package of proposals to help Member States achieve their 2030 non-ETS goals. A 2025 goal will also save drivers money, create jobs and reduce expenditure on imported oil – a win-win for the EU economy and environment. Half the current 2021, 95g/km goal is not being met on the road due to manipulation of laboratory tests. A 2025 goal will help to deliver the intended emissions reductions with plentiful technology available, notably hybrids and light weighting vehicles. A target¹⁴ of **70g/km** or less for passenger cars and **100g/km** for vans for 2025 can be delivered cost effectively with a payback period of less than three years and without requiring a significant penetration of electric cars (<10% of sales). Company targets should be based upon the average footprint (size) of vehicles sold, not their weight, to encourage light weighting and lower costs of regulation by some 15%.¹⁵

Further information

Greg Archer Vehicles Programme Manager, Transport & Environment
 greg.archer@transportenvironment.org
 Tel: +32 (0)490 400 447 / +44 (0)7970 371224

¹⁴ Targets are NEDC equivalent numbers. In practice the target must be set on the WLTP equivalent value.

¹⁵ Ricardo AEA 2014, Improving the understanding of potential weight reduction of cars and vans;

http://ec.europa.eu/clima/events/docs/0103/downweighting_en.pdf