

NEWSLETTER

International Regulatory Developments

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AECC Position Paper on Euro 7

On 9 February, AECC published its position paper on the European Commission's Euro 7 proposal.

The paper points out that Euro 7 ensures all powertrains contribute to improved air quality and works together with other legislative efforts to reduce CO₂ emissions from the transport sector. AECC also calls for a swift adoption of ambitious Euro 7 emission standards, which is key to realising the implementation dates prescribed in the Euro 7 proposal, further improving European cities' air quality as soon as possible. Additionally, Euro 7 boundary conditions should represent driving conditions encountered in the real world.

Regarding light-duty vehicles gaseous pollutants limits included in the Euro 7 proposal, AECC expects the proposal to be clarified. AECC demonstrator data is significantly below the proposed Euro 7 limits under warm operation. AECC data indicates the proposed Euro 7 PN limit is achievable.

AECC supports the Euro 7 proposal for heavy-duty vehicles as it follows the outcome of the Impact Assessment.



The AECC position paper is available to read at www.aecc.eu/wp-content/uploads/2023/02/230209-AECC-position-on-Euro7_final.pdf.

AECC Statement on CO₂ Emission Targets for New Heavy-duty Vehicles

On 16 February 2023, AECC issued a statement on the adoption of the European Commission proposal for CO₂ emission targets for new heavy-duty vehicles.

AECC welcomed the adoption of this proposal. From an initial view of the adopted proposal, AECC noted the Tank-to-Wheel (TtW) approach, which is defined in the current tailpipe CO₂ emissions regulation, remains in it. This approach limits the Well-to-Wheel (WtW) CO₂ reductions that can otherwise be obtained by using heavy-duty hybrid internal combustion engine technologies with drop-in sustainable renewable fuels.

The statement goes on to say that the revision of the CO₂ emission standards for heavy-duty vehicles is an opportunity to implement a robust and technology neutral approach to

fully consider the role of sustainable renewable fuels for the sector in addition to electrification and hydrogen technologies (FCEV and H₂-ICE).

AECC will study the new heavy-duty CO₂ emissions proposal in detail and will continue to follow the development of future heavy-duty CO₂ emissions standards.

AECC's statement can be found at: www.aecc.eu/wp-content/uploads/2023/02/230217-AECC-statement-on-HD-CO2-emissions-final.pdf.

EUROPE

Publication of Euro 7 Questions and Answers

On 7 February 2023, the European Commission published a list of questions and answers on Euro 7.

The document contains replies to questions on the date of introduction for cars and vans, emission limits, test conditions, measurement procedures and technology, on-board measurement, brake and tyre abrasion, durability, in service conformity, market surveillance, type approval and anti-tampering.

The document can be accessed at: circabc.europa.eu/ui/group/f57c2059-ef63-4baf-b793-015e46f70421/library/f8e8f309-e793-4f89-9ba7-5e54914f33d3/details.

AGVES Meetings on Euro 7

From 22 to 24 February 2023, the Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG-GROW) organised the 12th meeting of the Advisory Group on Vehicle Emission Standards (AGVES) in a hybrid format online and in Brussels.

More than 200 experts from the European Commission, industry, NGOs and academia attended the meeting in person or online. The meeting focused on the development of Euro 7 implementing rules.

The European Commission DG GROW shared their tentative time plan for the development of the Euro 7 implementing legislation, mainly LDV by September 2023, HDV by January 2024. The Commission mentioned both this process and the ordinary legislative process of the Euro 7 proposal should finish by April 2024.

During the three days, the experts discussed light- and heavy-duty vehicles regulatory provisions as well as one day dedicated to on-board monitoring (OBM).

The next AGVES meeting is scheduled from 15 to 17 March.

AGVES meeting material is available at circabc.europa.eu/ui/group/f57c2059-ef63-4baf-b793-015e46f70421/library/fc2533c7-a44a-4e3f-9292-73ca25c901b3?p=1&n=10&sort=modified_DESC.

Heads of German Auto States express Views on Euro 7

On 2 February 2023, the heads of three 'auto states', Baden-Württemberg, Bayern and Niedersachsen, were reported as saying that the federal government must not accept the EU Commission's plans for the Euro 7 emissions standard. The three countries fear significant disadvantages for the German automotive industry if the law is implemented.

A letter from the leader to Chancellor Olaf Scholz is said to state that a new emission standard and the associated test conditions must also be technically and economically feasible. In addition, reasonable implementation periods are required that also take into account the development cycles of the automobile manufacturers.

The prime ministers also criticised the implementation deadlines for the new standard in their letter - July 2025 for passenger cars and light commercial vehicles and July 2027 for heavy commercial vehicles, saying they are "too ambitious technologically".

The three states claim to have between them "well over a million people make their living from automobiles".

The press report can be found at [automobilwoche.de/agenturmeldungen/ministerprasidenten-von-baden-wuerttemberg-bayern-und-niedersachsen-fordern](https://www.automobilwoche.de/agenturmeldungen/ministerprasidenten-von-baden-wuerttemberg-bayern-und-niedersachsen-fordern).

Meeting of Countries potentially opposed to Euro 7

On 22 February 2023, it was reported that the Czech government had organised a meeting of countries which could jointly fight against the proposed Euro 7 emission standards.

Ten countries reportedly attended the meeting, including France, Germany, Slovakia, Poland and Italy. The countries are said to have agreed that the European Commission's proposal goes too far, for example, because of the unrealistic timeline for the rollout of the new emission standards. States joining the meeting also expressed concern that costs related to the new standards would make smaller cars significantly more expensive.

A document from the meeting is reported to state that some countries consider the Euro 7 proposal to be justified in terms of introducing emission limits from brakes and tyres and therefore do not want to drop the proposal as a whole.

Furthermore, the Senate of the Parliament of the Czech Republic sent a letter to the President of the Council of the European Union stating that the Euro 7 proposal may significantly endanger the future of the automotive sector in the Czech Republic and cause serious economic and social impact if it is not substantially revised. The letter requests the extension of the proposed dates of applicability of Euro 7 by at least four years, the clarification and specification of

proposed empowerment of the Commission to adopt implementing acts so that the content of these acts is known in advance and, at the same time, to present these acts as soon as possible in order to allow a proper assessment of all impacts of the submitted proposal.

A report on the meeting can be found at [euractiv.com/section/politics/news/czechia-forms-country-coalition-against-euro-7-proposal/](https://www.euractiv.com/section/politics/news/czechia-forms-country-coalition-against-euro-7-proposal/) and the letter from the Czech senate can be found at eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CONSIL:ST_6653_2023_INIT.

Italian Industry Minister's Comments on Euro 7 and HDV CO₂ Emissions

On 27 February 2023, Euractiv reported that Italian Industry Minister Mr Adolfo Urso has said Italy wants to join France and Germany to "influence" and slow the pace of European Union laws on cutting car and truck emissions.

Mr Urso is said to have called on the European Commission, to take a "pragmatic, concrete, non-ideological" approach to climate change laws, and said he wanted to build "an alliance" with Paris and Berlin to soften their cost for industry and consumers. In an interview with TGcom, Mr Urso specifically mentioned two draft EU laws: the Euro 7 tougher emission rules for cars, vans, trucks and buses, and February's proposal to further cut truck and bus emissions.

He said Italy would be "determined" to stall the two bills' approval until after the next EU parliamentary elections in 2024, unless Rome's demands for moderation are met.

The Euractiv report can be found at [euractiv.com/section/road-transport/news/italy-seeks-alliance-with-france-and-germany-to-tame-eu-car-emissions-laws/](https://www.euractiv.com/section/road-transport/news/italy-seeks-alliance-with-france-and-germany-to-tame-eu-car-emissions-laws/).

German Position on Phase-Out of Internal Combustion Engines

On 28 February 2023, it was reported that Germany would abstain in the final vote on the EU's plan for 100% CO₂ reductions on new cars as of 2035, unless the European Commission proposes how new combustion engine cars can be registered even after that date if they run exclusively on e-fuels. Transport Minister Mr Volker Wissing said that "we need a binding answer to the question of how to deal with internal combustion engines".

This position, together with others such as Italy's (see above), could jeopardise the adoption of the deal struck between EU institutions in October 2022.

On 3 March 2023, the Permanent Representatives Committee (COREPER) announced the postponement of the final Council's vote to adopt the interinstitutional agreement.

The article is available to read at [euractiv.com/section/road-transport/news/adoption-on-the-brink-germany-to-abstain-on-combustion-engine-ban/](https://www.euractiv.com/section/road-transport/news/adoption-on-the-brink-germany-to-abstain-on-combustion-engine-ban/).

COREPER spokesperson announcement of the vote postponement can be found at

twitter.com/danielholmberg/status/1631583307811938305?s=20.

European Parliament Debate and Vote on Light-Duty CO₂ Emissions

On 14 February 2023, the European Parliament approved the new CO₂ emissions reduction targets for new passenger cars and light commercial vehicles, part of the 'Fit for 55' package.

With 340 votes in favour, 279 against and 21 abstentions, MEPs endorsed the deal reached with the Council on revised CO₂ emission performance standards for new cars and vans in line with the EU's increased climate ambition.

The new legislation sets the path towards zero CO₂ emissions for new passenger cars and light commercial vehicles in 2035 (an EU fleet-wide target to reduce CO₂ emissions produced by new cars and vans by 100% compared to 2021). Intermediate emissions reduction targets for 2030 are set at 55% for cars and 50% for vans.

Other key measures are included in the regulation. The Commission will present by 2025 a methodology to assess and report data on CO₂ emissions throughout the full life cycle of cars and vans sold on the EU market, accompanied by legislative proposals where appropriate. By December 2026, the Commission will monitor the gap between the emission limit values and the real-world fuel and energy consumption data, report on a methodology for adjusting the manufacturers' specific CO₂ emissions and propose appropriate follow-up measures.

Manufacturers responsible for small production volumes in a calendar year (1 000 to 10 000 new cars or 1 000 to 22 000 new vans) may be granted a derogation until the end of 2035 (those registering fewer than 1 000 new vehicles per year continue to be exempt).

The current zero- and low- emission vehicles (ZLEV) incentive mechanism, which rewards manufacturers that sell more such vehicles (with emissions from zero to 50g CO₂/km, such as electric vehicles and well-performing plug-in hybrids) with lower CO₂ emission reduction targets, will be adapted to meet expected sales trends. From 2025 to 2029, the ZLEV benchmark is set at 25% for the sales of new cars, and 17% for new vans, and as of 2030 the incentive will be removed.

Finally, every two years, starting from the end of 2025, the Commission will publish a report to evaluate the progress towards zero-emission road mobility.

Following the final vote in plenary, the text will now have to be formally endorsed by Council before being published in the EU Official Journal shortly after.

The European Parliament press release is at europarl.europa.eu/news/en/press-room/20230210IPR74715/fit-for-55-zero-co2-emissions-for-new-cars-and-vans-in-2035.

European Commission Proposal for Heavy-Duty Vehicle CO₂ Emissions

On 14 February 2023, the European Commission proposed new CO₂ emissions targets for new heavy-duty vehicles (HDVs) from 2030 onwards. These targets will help to reduce CO₂ emissions in the transport sector - trucks, city buses, and long-distance buses are responsible for over 6% of total EU greenhouse gas (GHG) emissions and more than 25% of GHG emissions from road transport. These strengthened emissions standards are intended to ensure that this segment of the road transport sector contributes to the shift to zero-emissions mobility and the EU's climate and zero pollution objectives.

The Commission proposes phasing in stronger CO₂ emissions standards for almost all new HDVs with certified CO₂ emissions, compared to 2019 levels, specifically, 45% emissions reductions from 2030, 65% emission reductions from 2035 and 90% emissions reduction from 2040.

To stimulate faster deployment of zero-emission buses in cities, the Commission also proposes to make all new city buses zero-emission as of 2030.

The Commission says that in line with the European Green Deal and REPowerEU objectives, this proposal will also have a positive impact on the energy transition, by lowering demand for imported fossil fuels and enhancing energy savings and efficiencies in the EU's transport sector. It will provide benefits for European transport operators and users by reducing fuel costs and total cost of ownership, and ensure a wider deployment of more energy-efficient vehicles. It will also improve air quality, notably in cities, and the health of Europeans.

The press release adds that this is a key sector to support the European clean tech industry and boost international competitiveness. The Commission states that the EU is a market leader in the production of trucks and buses and a common legal framework helps to secure that position for the future. In particular, the revised standards provide a clear and long-term signal to guide EU industry investments in innovative zero-emission technologies and boost the rollout of recharging and refuelling infrastructure.

Explaining the revised targets, the Commission says the current HDV emissions standards date from 2019 but are no longer in line with the EU's climate objectives. The proposed new CO₂ standards are said to be in line with the EU's increased climate ambitions, the 'Fit for 55' package and the Paris Agreement.

To support this proposal, investments need to be channelled into zero-emission vehicles and into the recharging and refuelling infrastructure, and the Commission says it has already proposed the Alternative Fuels Infrastructure Regulation to develop the necessary charging infrastructure to support the green transition of the heavy-duty vehicles

sector. In particular, the Commission proposed to install charging and fuelling points at regular intervals on major highways: every 60 kilometres for electric charging and every 150 kilometres for hydrogen refuelling.

In his remarks at a press conference, European Commission Executive Vice-President Timmermans explained that 90% by 2040 means that the vast majority of new trucks and long-distance buses coming on the market will be zero emissions, powered by batteries, fuel cells, or even hydrogen-powered internal combustion engines. He added that the EU will eventually have to move to a 100% target, but at this stage we cannot yet say when all uses of trucks and buses can be made zero-emissions with the technologies currently available – especially where it concerns challenging driving circumstances such as very steep mountains and icy conditions.

Mr Timmermans went on to say that the 2030 target for city buses is “ambitious but it is entirely possible”.

Finally, he considered the broader industrial transition, saying that heavy-duty vehicles are a sector where many European manufacturers are already at the forefront. The EU is a market leader in the production of trucks and buses and in the view of Mr Timmermans, setting this legal framework already now will help it secure that position towards the future. This is a valuable part of the Green Deal Industrial Plan. He said that demand for zero emission trucks and buses will only be increasing, and “the earlier we get there, the better for our planet, industry, citizens and the quality of life in the villages, towns and cities where they all live.”

The Commission’s announcement can be found at ec.europa.eu/commission/presscorner/detail/en/ip_23_762.

The speech of Mr Timmermans is at ec.europa.eu/commission/presscorner/detail/en/speech_23_864.

Green Deal Industrial Plan

On 1 February 2023, the European Commission presented a Green Deal Industrial Plan to enhance the competitiveness of Europe’s net-zero industry and support the fast transition to climate neutrality. The Plan aims to provide a more supportive environment for the scaling up of the EU’s manufacturing capacity for the net-zero technologies and products required to meet Europe’s climate targets.

The Commission says the Plan builds on previous initiatives and relies on the strengths of the EU Single Market, complementing ongoing efforts under the European Green Deal and REPowerEU. It is based on four pillars: a predictable and simplified regulatory environment, speeding up access to finance, enhancing skills, and open trade for resilient supply chains.

The Commission will propose a Net-Zero Industry Act to identify goals for net-zero industrial capacity and provide a regulatory framework suited for its quick deployment, ensuring simplified and fast-track permitting, promoting

European strategic projects, and developing standards to support the scale-up of technologies across the Single Market.



The framework will be complemented by the Critical Raw Materials Act, to ensure sufficient access to those materials, like rare earths, that are vital for manufacturing key technologies, and the reform of the electricity market design, to make consumers benefit from the lower costs of renewables.

The second pillar of the plan will speed up investment and financing for clean tech production in Europe. Public financing, in conjunction with further progress on the European Capital Markets Union, can unlock the huge amounts of private financing required for the green transition. The Commission will also facilitate the use of existing EU funds for financing clean tech innovation, manufacturing and deployment.

To develop the skills for a people centred green transition the Commission will propose to establish Net-Zero Industry Academies to roll out up-skilling and re-skilling programmes in strategic industries.

The fourth pillar will be about global cooperation and making trade work for the green transition, under the principles of fair competition and open trade, building on the engagements with the EU’s partners and the work of the World Trade Organization. To that end, the Commission will continue to develop the EU’s network of Free Trade Agreements and other forms of cooperation with partners to support the green transition. It will also explore the creation of a Critical Raw Materials Club, to bring together raw material ‘consumers’ and resource-rich countries to ensure global security of supply through a competitive and diversified industrial base, and of Clean Tech/Net-Zero Industrial Partnerships.

The full announcement is available to read at ec.europa.eu/commission/presscorner/detail/en/ip_23_510 and a fact sheet can be downloaded from ec.europa.eu/commission/presscorner/detail/en/FS_23_514.

Commissioner Vălean Remarks at Meeting of EU Transport Ministers

On 27 February 2023, Transport Commissioner Ms Adina Vălean made a statement prior to the informal meeting of EU transport and energy ministers.

Ms Vălean said that decarbonising the transport sector depends on having alternatives to fossil fuels, with sufficient supplies of renewable electricity, sustainable biofuels, clean hydrogen, and other renewable and low-carbon fuels.

She added that the Commission has no preference for how fossil fuels are replaced. That is for the market to decide. But what the Commission does insist on is having sufficient alternatives to reach its emissions targets.

The Commissioner went on to say that the Alternative Fuel Infrastructure Regulation, for example, promotes supply and distribution. Its provisions will result in a minimum of 1 million electric charging points on EU roads by 2025, and over 16 million by 2050.

When discussing renewable, low-carbon fuels, Ms Vălean focused on aviation and maritime applications.

She concluded by saying that with the transport and energy sectors working together, a regulatory framework to support supply is on its way. With good financing, she is confident that the EU is on the right path to securing its energy supply and reaching its emissions targets.

The speech, and that of Commissioner Simson, is at ec.europa.eu/commission/presscorner/detail/en/speech_23_1273.

Corrigendum to UN Regulation No 154

On 7 February 2023, a corrigendum to UN Regulation No 154 was published in the Official Journal of the European Union.

This relates to uniform provisions concerning the approval of light duty passenger and commercial vehicles with regards to criteria emissions, emissions of carbon dioxide and fuel consumption and/or the measurement of electric energy consumption and electric range. This amends the document published in the Official Journal of 10 November 2022.

The corrigendum relates to point 3.3.1 in Appendix 2 on page 67 of the original.

It can be found at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2023.035.01.0029.01.

Corrigendum to Regulation on CO₂ Emission Standards for HDVs

On 9 February 2023, a corrigendum to Regulation (EU) 2019/1242 of 20 June 2019 setting CO₂ emission performance standards for new heavy-duty vehicles was published in the Official Journal of the European Union. This amends Regulations (EC) No 595/2009 and (EU) 2018/956 of

the European Parliament and of the Council and Council Directive 96/53/EC.

The amendment relates to the calculation of emission credits and emission debts in each reporting period, found on page 236.

It can be found at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2023.039.01.0067.01.

ENVI Draft Report on Revision of Air Quality Directive

On 24 February 2023, the Environment (ENVI) committee of the European Parliament published a draft report on the proposed revisions to the Ambient Air Quality (AAQ) Directive. The Rapporteur is MEP Javi López (S&D, ES).

The document explains that the current AAQ Directives are based on air quality standards that are 15 to 20 years old. The Rapporteur welcomes the timely proposal of the European Commission (EC) to revise the AAQ Directives, that he says represents a substantial improvement from the current ones, covering some of the findings from their Fitness Check of the AAQ Directives and also including some of the requests made by the European Parliament in the resolution on the implementation of the AAQ Directives.

The Rapporteur considers that the EC proposal has some positive aspects, such as the merging of the two Directives into one to clarify and simplify the rules, the introduction of a regular review mechanism of the air quality standards in line with the latest scientific evidence, the creation of monitoring supersites to control “emerging” pollutants, or the introduction of new provisions on access to justice and compensation. He goes on to say that the current revision of the AAQ Directives constitutes a once in a generation opportunity for the public and the planetary health, therefore the Rapporteur suggests changes in some key areas in order to increase the level of ambition and re-enforce the proposal.

With regard to the level of ambition, the Rapporteur proposes a full alignment of EU limit values with the 2021 WHO Air Quality Guidelines by 2030. The text is also strengthened with the inclusion of explicit references to the UN General Assembly resolution on the human right to a clean, healthy and sustainable environment and the individual right to a clean and healthy air as a direct implementation of the EU Charter of Fundamental Rights. The Rapporteur also thinks it is important to protect sensitive populations and vulnerable groups better from the impact of air pollution. For that reason, information thresholds have been added for SO₂, NO_x and PM.

The Rapporteur suggests improving and clarifying definitions of monitoring sites, in line with scientific knowledge, including new definitions for “traffic location”, “industrial location” and “residential location” and to require the

assessment of the average exposure indicator from all sampling points rather than a limited number.

The current proposal also introduces the requirement for Member States to prepare an Air Quality Plan (AQP) ahead of 2030, setting out measures and policies to comply with the new air quality standards. The Rapporteur believes it is necessary to clarify the distinction between plans that need to be adopted before or after the attainment deadline, which is why a definition of “Preparatory Air Quality Plan” has been proposed. The Rapporteur also suggests introducing an earlier transposition date for the provisions on adoption of Preparatory AQPs. This change would enable MS to make a more rational use of their resources and start implementing policies well in advance to achieve compliance with the new air quality standards by 2030 at the latest.

The Rapporteur also believes it is necessary to introduce changes to Art. 19 and Annex VIII on AQPs, to ensure that competent authorities consider and assess the potential impact of all relevant air pollution abatement measures and not only a few policies that have already been pre-selected without scientific evidence. The suggested amendments would require competent authorities to consider all effective pollution abatement measures, while respecting the principle of subsidiarity.

The draft report is at europarl.europa.eu/doceo/document/ENVI-PR-742410_EN.pdf.

EPRS Document on CO₂ Emission Standards for New Cars and Vans

On 8 February 2023, the European Parliamentary Service (EPRS) published an ‘At a Glance’ guide to the CO₂ emission standards for new cars and vans.

The document outlines the European Commission’s 2021 legislative proposal for a revision of Regulation (EU) 2019/631. The proposal aims to: contribute to the EU’s 2030 and 2050 climate objectives by reducing the CO₂ emissions of cars and vans through wider deployment of zero-emission vehicles; deliver benefits to citizens in the form of better air quality, energy savings and lower cost of vehicle ownership; stimulate innovation in zero-emission technologies; strengthen the technological leadership of EU manufacturers and suppliers; and create employment in the sector.

The proposal sets more ambitious standards for reducing the CO₂ emissions of new cars and vans. Compared to the CO₂ emissions targets applicable in 2021, the emissions of new passenger cars registered in the EU by 2030 would have to be 55 % lower, and those of new vans – 50 % lower. By 2035, CO₂ emissions of new cars and vans would have to fall by 100 %, i.e., all new vehicles would have zero emissions. The incentive mechanism for ZLEVs would cease to apply from 2030. The Commission would have to report on progress towards zero-emission road mobility every two years.

The document goes on to explain the European Parliament’s position on the proposal. The Parliament adopted its position during the 1 June 2022 plenary session with 339 votes in favour, 249 against and 24 abstentions. It supports the emissions reductions targets proposed by the Commission but would abolish the ZLEV incentive mechanism from 2025, and gradually reduce the maximal contribution of eco-innovations towards the manufacturers’ targets. In contrast, the Council’s general approach follows the Commission proposal, the only amendment having been introduced to the content of the Commission’s biennial reports on progress towards zero-emissions road mobility.

The Parliament and the Council reached a provisional political agreement on 27 October 2022. The agreed text largely follows the Commission proposal and takes up elements from the Parliament’s position, with amendments introducing a more ambitious ZLEV incentive mechanism for the 2025-2029 period, setting limits to the maximal contribution of eco-innovations, and focusing on the better use of real-world fuel and energy consumption data, on a methodology for lifecycle assessment of vehicles’ CO₂ emissions and on an assessment of gaps in funding to ensure a just transition in the automotive supply chain.



The EPRS document is at [europarl.europa.eu/RegData/etudes/ATAG/2023/739324/EPRS_ATA\(2023\)739324_EN.pdf](https://europarl.europa.eu/RegData/etudes/ATAG/2023/739324/EPRS_ATA(2023)739324_EN.pdf).

Start of PN-PTI Testing in the Netherlands and Switzerland

On 1 January 2023, the Netherlands and Switzerland started particle number-based tests during periodic technical inspections (PN-PTI) of diesel vehicles equipped with diesel particulate filters (DPF).

The PN-PTI test involves the use of a particle counting instrument to detect particulate filter removal/tampering or other DPF malfunctions. The test is performed at idle, with the vehicle stationary, using a portable PN tester. The PN-PTI test replaces older PTI methods based on smoke measurement that are not sensitive enough for modern diesel engines.

In the Netherlands, where PN testing started this month, the programme applies to both light- and heavy-duty diesel vehicles. The PN-PTI testing requirements cover approximately 1.2 million vehicles, including 700 000 diesel passenger cars (model year 2006 and later), 400 000 diesel vans (2010+), and 100 000 diesel trucks (2013+). About 6 000 PTI garages in the Netherlands have purchased a particle number counter to carry out the new PTI test.

Information on the Swiss testing protocol is at admin.ch/gov/de/start/dokumentation/medienmitteilungen.msg-id-87385.html#downloads.

An announcement on the Dutch programme is at rdw.nl/zakelijk/nieuws/2023/invoering-deeltjestellertest-in-de-apk#.

CJEU Ruling Against Spain for Air Pollution in Madrid and Barcelona

On 22 December 2022, it was reported that the European Court of Justice had ruled against Spain for allowing nitrogen dioxide (NO₂) air pollution levels to “systematically exceed” EU limits in Madrid and Barcelona between 2010 and 2018.

The court found that harmful rates of NO₂ in the air had exceeded the limits in areas with a combined population of 7.3 million people, including the two big cities and an industrial area near Barcelona: Valles-Baix Llobregat.

The ruling stated that “Spain has failed to ensure that the air quality plans provide for appropriate measures to ensure that the period during which the limit values for NO₂ are exceeded is as short as possible, by failing to adopt, since 11 June 2010, appropriate measures to ensure compliance with those limit values.”

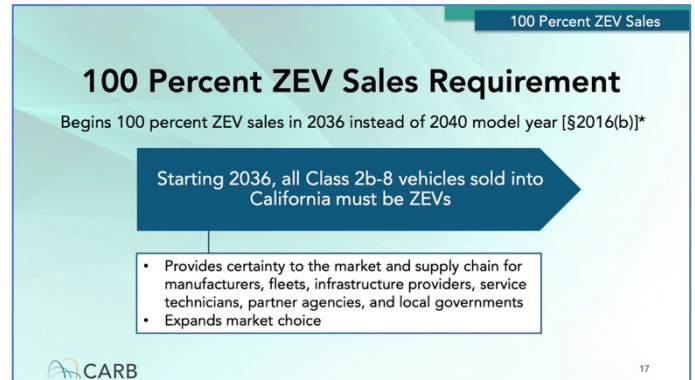
A report on the ruling can be found at reuters.com/business/environment/top-eu-court-rules-against-spain-air-pollution-madrid-barcelona-2022-12-22/.

NORTH AMERICA

CARB Workshop on Advanced Clean Fleets Regulation

On 13 February 2023, the California Air Resources Board (CARB) held a workshop to discuss the proposed Advanced Clean Fleets (ACF) regulation as a follow-up to the first Board hearing held on 27 October 2022. At that hearing, the Board directed staff to discuss and make modifications to the proposed regulation to address stakeholder concerns. The workshop also confirmed concepts for expanded fleet exemptions that were originally presented in a CARB workshop on 13 January.

In a presentation to the workshop, CARB staff indicated that they are proposing to bring forward the 100% electric vehicle (EV) requirement from 2040 to 2036 as well as planning to relax the heavy-duty Omnibus standards for model year 2024-26 vehicles.



100 Percent ZEV Sales Requirement
Begins 100 percent ZEV sales in 2036 instead of 2040 model year [§2016(b)]*

Starting 2036, all Class 2b-8 vehicles sold into California must be ZEVs

- Provides certainty to the market and supply chain for manufacturers, fleets, infrastructure providers, service technicians, partner agencies, and local governments
- Expands market choice

CARB 17

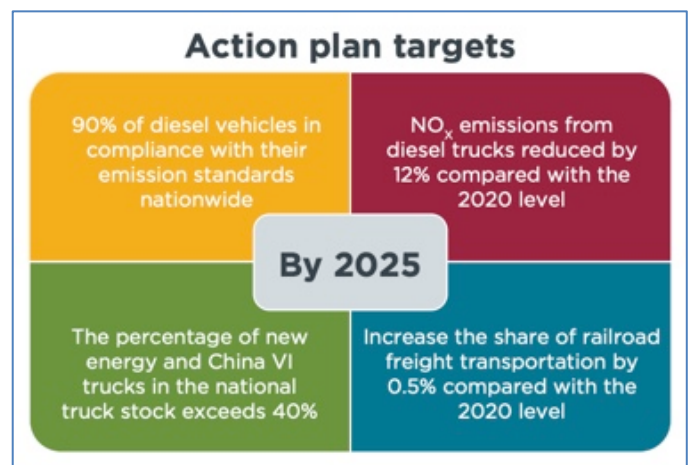
With regards to the Heavy-Duty Engine and Vehicle Omnibus Regulation, CARB said that additional flexibility may be needed to take account of unanticipated changes in manufacturer product lines. According to CARB staff, this may indicate the need for additional legacy engines beyond current production caps and/or the need for provisions to mitigate the incremental cost of legacy engines.

Detailed information on the workshop can be found at arb.ca.gov/our-work/programs/advanced-clean-fleets/advanced-clean-fleets-meetings-events.

ASIA-PACIFIC

ICCT Review of China’s Clean Diesel Action Plan

On 14 February 2023, the International Council on Clean Transportation (ICCT) published a policy update on China’s Clean Diesel Action Plan. The paper provides an overview of the new plan, which includes 14 actions under five programme areas: modal shift; clean diesel trucks; clean non-road machinery and ships; regular inspection and monitoring of truck fleets in key industries; and joint enforcement actions on non-compliant trucks.



Action plan targets

90% of diesel vehicles in compliance with their emission standards nationwide

NO_x emissions from diesel trucks reduced by 12% compared with the 2020 level

By 2025

The percentage of new energy and China VI trucks in the national truck stock exceeds 40%

Increase the share of railroad freight transportation by 0.5% compared with the 2020 level

The goal of the clean diesel truck programme is to enhance the level of compliance with emission standards by new and in-use diesel trucks and to promote the use of new energy

vehicles. For new trucks, the program emphasises the already-planned national implementation of the China VI-b standard starting from 1 July 1 2023, and the continued development of “ultra-low emission and near-zero-emission” technologies for motor vehicles. For in-use trucks, the programme describes a comprehensive in-use vehicle emission inspection and monitoring system to enhance in-use compliance and enforcement, including checking the on-board diagnostics (OBD) system, emission control equipment, and online emissions monitoring system and performing on-road emissions tests on randomly selected vehicles.

With regard to clean non-road machinery, the programme focuses on strengthening the supervision of new and in-use off-road equipment and shipping vessels. It emphasises the implementation of the China IV non-road emission standard on 1 December 1 2022. Additionally, the programme encourages the use of new energy non-road machinery. Additionally, local governments are encouraged to make plans to scrap old non-road machinery. Non-road machinery certified to the China I standard and before should be gradually phased out nationwide and it is encouraged that these be replaced by China IV or newer machineries. All urban construction equipment must be registered in an online management system. The programme requests that local governments establish low-emission zones for non-road equipment to prohibit the use of high emitting equipment and eliminate black-smoke engines. In key regions, 20% of in-use non-road machinery should be randomly selected and tested every year.

The inspection and monitoring programme is a new addition to the action plan and highlights the responsibilities of truck fleet operators in key industries. The goal is to have 70% of the bulk freight in these key industries transported by a cleaner method such as railway, waterway, enclosed belt conveyor, and new-energy or China VI-certified trucks by 2025. In key regions, the goal is 80%.

The joint enforcement programme is also a new addition to the action plan, and it highlights the collaboration between regulatory agencies. These agencies are to carry out joint enforcement actions to manage emissions from mobile sources, with a focus on trucks used for bulk freight in key industries and high emitting compressed natural gas vehicles in key regions.

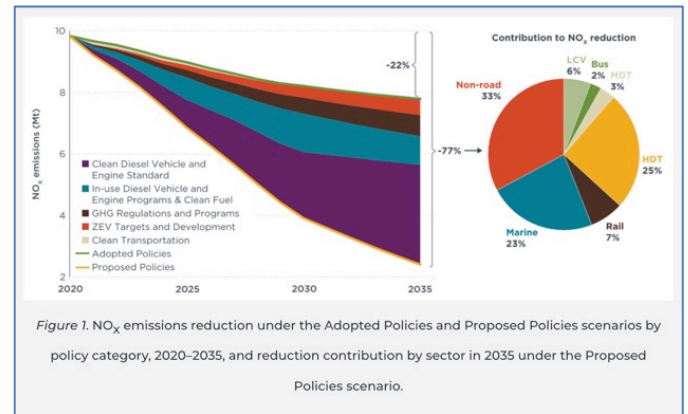
The ICCT document can be found at theicct.org/publication/china-clean-diesel-action-plan-phase-ii-feb23/.

ICCT Proposals for China Emissions Policy

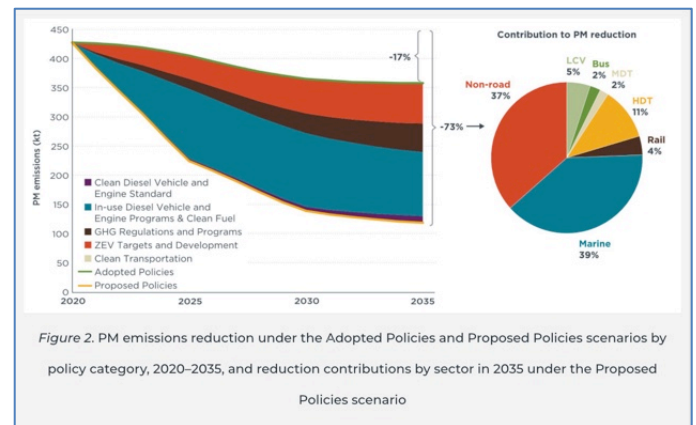
On 16 February 2023, the International Council on Clean Transportation (ICCT) published a blog highlighting opportunities for further diesel emission reductions in China.

ICCT says that by the end of 2035, much higher NO_x and PM emissions abatement can be achieved under its ‘Proposed

Policies’ scenario: 77% and 73% reductions, respectively, compared with 2020. It states that there are only reductions of 22% for NO_x and 17% for PM under the ‘Adopted Policies’ scenario.



Among ICCT’s suggested policies are a tightening of emission standards for new diesel vehicles and engines, including Euro 7 equivalent for on-road in 2025, Euro VI equivalent for non-road in 2027, and Euro V equivalent for marine and locomotive engines. It also wants to fully utilise a variety of technologies, including remote sensing monitoring and remote on-board diagnostics, to improve supervision of vehicles and compliance with emission standards.



Recommendations also include promotion of control measures by accelerating the phase-out of old vehicles and engines, incentivising multi-modal freight transportation, and implementing stringent inspection and regulations for in-use compliance.

ICCT goes on to propose development of zero-emission sales targets and incentive policies to promote zero-emission vehicles (ZEVs) and engines. For example, in 2030, a target for new sales of on-road commercial vehicles could be 50% zero-emission, and that same percentage could be 90% for freight rail and 35% for non-road machines; new forklifts would be capable of being 100% zero-emission. With respect to ocean-going vessels, a target could be to equip 8% of these with shore power connection by 2030.

Finally, the blog suggests integrating control of greenhouse gas emissions with control of criteria air pollutants in the next stage of emission standards, and regulating limits on CO₂, methane, nitrous oxide, and hydrofluorocarbons.

The NGO states that clean diesel vehicle and engine standards for new vehicles, a category that includes things like introducing China VII emission standards, is the most powerful of the policy categories for reducing NO_x emissions and contributes nearly 60% of the reductions in 2035. The in-use vehicle and clean fuel category comes in second with a 15% contribution to NO_x emissions reduction. Meanwhile, for PM reduction, policies in the in-use vehicle and fuel category, including accelerated retirement of old vehicles and replacement or retrofitting of high-emissions machinery, is the most effective and accounts for 50% of total PM reduction.

The ICCT blog is available to read at theicct.org/china-diesel-policy-punches-feb23/.

Australia Heavy-Duty Euro 6 Regulation

On 14 February 2023, new vehicle standards regarding emission control for heavy-duty vehicles, Australian Design Rule 80/04, was published in the Australian Federal Register of Legislation. This is based on Euro VI Stage C requirements.

The regulation will be phased in for newly approved heavy vehicle models first supplied to Australia from 1 November 2024, and existing heavy vehicle models still being supplied to Australia on or after 1 November 2025.

Details of the standard can be found at legislation.gov.au/Details/F2023L00129, with background information available at infrastructure.gov.au/infrastructure-transport-vehicles/vehicles/vehicle-safety-environment.

GENERAL

ICCT Report on Emissions of Euro VI-D Buses and Recommendations for Euro 7

On 8 February 2023, the International Council on Clean Transportation (ICCT) published a working paper on the emissions performance of Euro VI-D buses, along with recommendations for Euro 7 heavy-duty standards.

ICCT says the study provides insight into the emissions performance of the latest generation of diesel buses in Europe. The ICCT collaborated with VTT Technical Research Centre of Finland Ltd (VTT) to perform a series of on-road measurements on two buses type-approved to the Euro VI-D standard over various duty cycles.

The analysis found that both buses exhibited emissions performance generally in accordance with the Euro VI-D type-approval requirements. However, the NO_x emissions over the highest emitting test windows were three to five times higher than the proposed Euro 7 cold limit. NO_x emissions in

hot operation ranged between one and four times the proposed Euro 7 hot limit.

One of the buses tested exhibited ammonia emissions performance 40% below the proposed Euro 7 limit, while the other bus exhibited emissions 40% above it. Nitrous oxide emissions contributed 7% to 9% of the greenhouse gas emissions of the buses tested. The proposed Euro 7 limits for these emissions are close to the reductions that can be achieved with current emissions control technologies.

The report says the particulate number requirements under Euro 7 would demand higher filtration efficiency than what current technologies offer. The number of particles in the 10 to 23 nm size range, which would also now be regulated under Euro 7, is substantial and would increase the PN count between 60% and 100%.

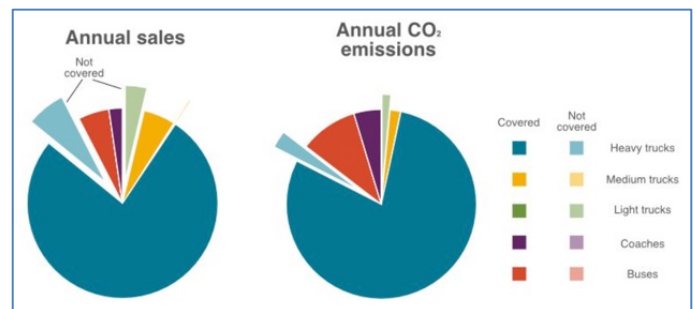
ICCT recommends adopting the proposed Euro 7 limits for trucks and buses, which it says are technically feasible and cost-effective. Compared to Euro VI emission control technologies, the Commission's Euro 7 proposal will drive substantial improvements in the emissions of NO_x and particles. The NGO adds that several technologies are ripe for commercialisation, simultaneously reducing NO_x and CO₂ emissions. The economies of scale created by similarly stringent standards in the United States will ensure that truck and bus manufacturers can cost-effectively deploy such technologies.

The full report can be downloaded from theicct.org/publication/euro-vi-d-buses-feb23/.

ICCT Overview of New European heavy-duty Vehicles CO₂ Standards

On 14 February 2023, the International Council on Clean Transportation (ICCT) published a blog outlining the main elements of the European Commission's proposal for CO₂ standards for heavy-duty vehicles (HDVs).

The article explains that a lot of new truck groups have now been added, including medium trucks, buses, coaches, and trailers. Combined, they amount to 90% of sales and 95% of emissions.



Trucks, buses, and trailers have been grouped into a number of bins, as shown in the figure below, and each of these bins will have their own target. Overall, it equates to a 45% target

for 2030 (currently 30%), a 65% target for 2035, and a 90% target for 2040. For trucks and coaches, the targets are slightly lower at 43% for 2030, 64% for 2035, and still 90% by 2040 (a little lower than the average due to the higher-than-average target for buses).

ICCT says however, that Scania and Daimler Truck have both pledged to go beyond the 90% target, and to only sell zero-emission vehicles by 2040. Combined, the two manufacturers account for about one third of all truck and bus sales. Furthermore, ten Member States have signed a Memorandum of Understanding pledging to enable a full transition to zero-emission trucks and buses by 2040.

Buses have a zero-emission sales target of 100% for 2030, going beyond the 2035 phase-out target for cars. Coaches have the same CO₂ reduction target as trucks, meaning they can achieve it through either electrification or efficiency improvements.

The targets for heavy passenger vehicles (i.e., buses and coaches) are considered separate from freight vehicles (i.e., trucks and trailers). This means that if a manufacturer produces high-emitting trucks that are over their emissions target, they cannot compensate by focusing more on buses.

The flexibilities for complying with the standards have been changed slightly from the original regulation. The Zero- and Low-Emission Vehicle (ZLEV) factor, which can reduce a manufacturer's target by up to 3% if they produce enough ZLEVs, will be phased out after 2029. Until then, zero-emission buses and trailers with a zero-emission propulsion system will count towards the ZLEV factor, while it previously only could be used for trucks. However, buses and other currently non-regulated vehicles can only contribute to the ZLEV factor – and thus can only reduce their target – by a maximum of 1.5%.

The credit and debt system has been extended from the current expiration date of 2030 to 2040. It allows manufacturers to earn credits by reducing their fleet emissions below an emissions trajectory line (i.e., a straight line drawn between the targets for two years). Starting in 2025, if their emissions are above the target applicable for that period, they rack up debts. Credits can then be used to offset debts, and if any debts remain, they will face a penalty. Credits earned over 2019–2024 can only be used to offset any debts earned in 2025, but credits earned from 2025 onward can be used to offset debts until 2040.

A new element will allow “economically connected” manufacturers, such as those that share a parent company, to trade vehicles in order to comply with the targets. This can only be done this with a limited number of vehicles, up to a maximum of 5% of the receiver's sales. While this flexibility is only available to connected manufacturers in the case of CO₂ emitting-vehicles, manufacturers who produce zero-emission vehicles will be able to trade them with anyone.

ICCT goes on to explain that in the proposal, the definition of a long-haul truck has changed, slightly. Long-haul trucks contribute more towards the CO₂ emission targets of a manufacturer thanks to a factor applied to the CO₂ emissions called the mileage, payload, and weighting (MPW) factor. Originally, a truck was deemed long-haul if it had a sleeper cab. Under the new proposal, a truck will also need to meet a minimum range requirement to constitute as a long-haul truck. This prevents manufacturers creating low-range zero-emission vehicles and registering them as long-haul to benefit from the high MPW factor.

In ICCT's view, the proposal remains a significant improvement over the current standards, even though it falls short of committing to end the internal combustion engine. It concludes that “what the European Commission has proposed with these standards creates an excellent framework for a regulation which will do a lot to aid in Europe's move to decarbonization by 2050.”

ICCT's blog can be read in full at theicct.org/eu-co2-hdv-standards-explained-feb23/.

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Effects of Emissions and Pollution

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FORTHCOMING CONFERENCES

SAE On-Board Diagnostics Symposium

14-16 March 2023, Prague, Czech Republic
sae.org/attend/obd-europe

13th VERT Forum

21 March 2023, Switzerland
vert-dpf.eu/j3/index.php?view=article&id=66:vert-r-13th-vert-forum-march-21th-2022-conference&catid=8

SIA H₂ ICE and Vehicles Conference

30 March 2023, Orléans, France
sia.fr/evenements/310-hydrogen-injection-day

WCX SAE World Congress Experience

18-20 April 2023, Detroit, USA
sae.org/highlights/wcx

44th International Vienna Motor Symposium

26-28 April 2023, Vienna, Austria
wiener-motorensymposium.at/fileadmin/Media

SAE Heavy-Duty Diesel Sustainable Transport Symposium

3-4 May 2023, Gothenburg, Sweden
sae.org/attend/heavy-duty-diesel-sustainable-transport-symposium

AECC will have a presentation.

Fuel Science – From Production to Propulsion

23-25 May 2023, Aachen, Germany
fuelcenter.rwth-aachen.de/cms/Fuelcenter/Austausch/~smxp/Int-Konferenz

AVL Vehicle & Environment Conference

25-26 May 2023, Graz, Austria
avl.com/-/vehicle-environment?j=3464186&sfmc_sub

SIA Powertrain 2023

14-15 June 2023, Paris, France

sia.fr/evenements/302-sia-powertrain-2023

ETH Conference on Combustion-Generated Nanoparticles

20-22 June 2023, Zurich, Switzerland

nanoparticles.ch/

Stuttgart International Symposium

4-5 July 2023, Stuttgart, Germany

fkfs-veranstaltungen.de/en/events/stuttgart-symposium

Cenex-LCV

6-7 September 2023, Millbrook, United Kingdom

cenex-lcv.co.uk

International Conference on Engines and Vehicles for Sustainable Transport

10-14 September 2023, Capri, Italy

ice2023.info

Deadline for abstracts 25 March 2023

FISITA World Congress 2023

12-15 September 2023, Barcelona, Spain

fisita.com/diary/fisita-world-congress-2023

International Transport and Air Pollution Conference

25-26 September 2023, Gothenburg, Sweden

ivl.se/tapase

Aachen Colloquium Sustainable Mobility

9-11 October 2023, Aachen, Germany

aachener-kolloquium.de/en/attend/speaker/call-for-papers.html

FEV Zero CO₂ Mobility

7-8 November 2023, Berlin, Germany

fev-live.com/zero-co2-mobility/

Deadline for abstracts 16 June 2023

Heavy-Duty, On- and Off-Highway Engines

7-8 November 2023, Nuremberg, Germany

atzlive.de/en/events/heavy-duty-on-and-off-highway-engines/

POLIS Annual Conference

29-30 November 2023, Leuven, Belgium

polisnetwork.eu/2023-annual-polis-conference/

Powertrain Systems for a Sustainable Future

29-30 November 2023, London, United Kingdom

events.imeche.org/ViewEvent?code=CON7568#msdynttrid=P31DYp9_uO9BcgMpB1eDYE_yyLahi1N1sHvWz0Zd1JU