

# NEWSLETTER

International Regulatory Developments

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## EUROPE

### European Parliament Vote on Euro 7

On 13 March 2024, the European Parliament voted on the provisional agreement on Euro 7. With 297 votes in favour, 190 against and 37 abstentions, Parliament adopted the deal reached with the Council on the regulation covering type-approval and market surveillance of motor vehicles.



For passenger cars and vans, the current Euro 6 test conditions and exhaust emissions limits will be maintained. For buses and trucks, stricter limits will be applied for exhaust emissions measured in laboratories and in real driving conditions, while maintaining the current Euro VI testing conditions.

For the first time, EU standards will include brake particles emissions limits (PM10) for cars and vans and minimum performance requirements for battery durability in electric and hybrid cars.

An Environmental Vehicle Passport will be made available for each vehicle and contain information on its environmental performance at the moment of registration (such as pollutant emission limits, CO<sub>2</sub> emissions, fuel and electric energy consumption, electric range, battery durability). Vehicle users will also have access to up-to-date information about fuel consumption, battery health, pollutant emissions and other relevant information generated by on-board systems and monitors.

Rapporteur Alexandr Vondra (ECR, CZ) said: “We have successfully struck a balance between environmental goals and the vital interests of manufacturers. We want to ensure the affordability of new smaller cars with internal combustion engines for domestic customers and at the same time enable the automotive industry to prepare for the expected transformation of the sector.”

The European Council now needs to formally approve the agreement before the Euro 7 rule can enter into force.

The European Parliament press release is at [europarl.europa.eu/news/en/pressroom/20240308IPR19017/euro-7-parliament-adopts-measures-to-reduce-road-tpt-emissions](https://europarl.europa.eu/news/en/pressroom/20240308IPR19017/euro-7-parliament-adopts-measures-to-reduce-road-tpt-emissions).

### Vote on Draft CountEmissionsEU Report

On 4 March 2024, the ENVI and TRAN Committees of the European Parliament voted on the draft report on the Accounting of Greenhouse Gas Emissions of Transport Services proposal (CountEmissionsEU).

The initiative aims to overcome the barriers that prevent harmonising the measurement and calculation of greenhouse gas emissions and facilitate its uptake in the transport sector, as making reliable data on emissions available can encourage sustainability, innovation and behavioural change towards sustainable transport options. The proposed regulation establishes rules for the accounting of the greenhouse gas emissions of transport services across transport modes that start or end on the Union territory.

Compromise amendments negotiated by the rapporteurs, MEP Pascal Canfin (ENVI, Renew, Fr) and MEP Barbara Thaler (TRAN, EPP, Austria), aim among others, to expand the scope to include data intermediaries that calculate information on the greenhouse gas emissions of transport services. They advocate for the adoption of a Life Cycle Assessment approach in the methodology, promote the use of primary data, and propose protective measures for SMEs. Additionally, there is a clear push for the ISO standard to be made freely available for the transport sector.

The report was adopted with 58 votes in favour, 19 against and 1 abstention.

The compromise amendments are available at [europarl.europa.eu/meetdocs/2014\\_2019/plmrep/COMMITTEES/CJ46/DV/2024/0304/CAsAccountingofghgmissionsoftptservices\\_EN.pdf](https://europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEES/CJ46/DV/2024/0304/CAsAccountingofghgmissionsoftptservices_EN.pdf) and the vote can be replayed at [europarl.europa.eu/en/tran-envi-committee-meeting\\_20240304-1800-COMMITTEE-ENVI-TRAN\\_vd](https://europarl.europa.eu/en/tran-envi-committee-meeting_20240304-1800-COMMITTEE-ENVI-TRAN_vd).

### ENVI Committee Vote on Provisional Agreement on Air Quality Directive

On 11 March 2024, the Environment Committee of the European Parliament (ENVI) voted on the provisional agreement, reached on 20 February 2024, establishing new measures to ensure that air quality in the EU is not harmful to human health, natural ecosystems and biodiversity.

The committee voted to accept the provisional agreement, with 49 votes in favour, 29 against and three abstentions. The European Parliament plenary is expected to vote on the agreement in April.

On 8 March, ahead of the ENVI vote, the Chair of the Permanent Representatives Committee (Coreper) wrote to the ENVI Committee Chair Mr Pascal Canfin. This was to advise him of the text agreed in Coreper and to confirm that should the European Parliament adopt its position at first reading, the European Council would approve this position.

Full details of the vote are at [europarl.europa.eu/cmsdata/281518/2024-03-11%20votes%20and%20roll-call%20votes%20-%20ENVI.pdf](https://europarl.europa.eu/cmsdata/281518/2024-03-11%20votes%20and%20roll-call%20votes%20-%20ENVI.pdf).

The Council letter and text of the agreement are at [data.consilium.europa.eu/doc/document/ST-7335-2024-INIT/en/pdf](https://data.consilium.europa.eu/doc/document/ST-7335-2024-INIT/en/pdf).

## Parliament Adoption of Position on Weights and Dimensions Rules

On 12 March 2024, the European Parliament adopted their position on the revision of road transport weights and dimensions rules to incentivise the use of zero-emission trucks. The draft rules were adopted by 330 votes to 207 and 74 abstentions, constituting Parliament's position at first reading. The file will be followed up by the new Parliament after the European elections on 6-9 June.

MEPs are seeking to increase the maximum weight of zero-emission trucks by four tonnes, to compensate the space and weight needed to fit battery or hydrogen cells, and to provide additional loading capacity. This update could, they argue, act as an incentive for the transport industry to switch to cleaner vehicles, as the additional loading capacity will make zero emission trucks and buses more competitive than their conventional alternatives. MEPs also add that the installation of zero-emission technologies should not be done at the expense of sufficient cabin space nor reduce driver comfort.

Parliament's press release can be found at [europarl.europa.eu/news/en/pressroom/20240308IPR18992/european-parliament-agrees-greener-trucks-could-be-heavier](https://europarl.europa.eu/news/en/pressroom/20240308IPR18992/european-parliament-agrees-greener-trucks-could-be-heavier).

## Critical Raw Materials Act Approval from European Council

On 18 March 2024, the European Council adopted the regulation to establish a framework to ensure a secure and sustainable supply of critical raw materials, better known as the Critical Raw Materials Act (CRMA). This is the last step in the decision-making procedure.

The CRMA introduces clear deadlines for permit procedures for EU extracting projects, allows the Commission and member states to recognise a project as strategic, requires supply-chain risk assessments, requires Member States to have national exploration plans and ensures the EU's access to critical and strategic raw materials through ambitious benchmarks on extraction, processing, recycling and diversification of import sources.

The final text adopted today identifies two lists of materials (34 critical and 17 strategic) that are crucial for the green and digital transitions, as well as for the defence and space industries. The CRMA establishes three benchmarks for the EU's annual consumption of raw materials: 10% from local extraction; 40% to be processed in the EU and 25% to come from recycled materials.

Following the Council's approval of the European Parliament's position, the legislative act has been adopted.

After being signed by the President of the European Parliament and the President of the Council, the regulation will be published in the Official Journal of the European Union and will enter into force on the twentieth day following its publication.

The Council press release is at [consilium.europa.eu/en/press/pressreleases/2024/03/18/strategic-autonomy-council-gives-its-final-approval-on-the-crma](https://consilium.europa.eu/en/press/pressreleases/2024/03/18/strategic-autonomy-council-gives-its-final-approval-on-the-crma).

## Commission Action Against Italy for Air Quality Non-Compliance

On 13 March 2024, the European Commission called on Italy to comply with air quality standards. The Commission announced it is sending a letter of formal notice under Article 260 TFEU to Italy (INFR(2014)2147) for continued failure to comply with the judgment of the Court of Justice of the European Union of 10 November 2020 (C-644/18).

In this ruling, the Court of Justice found that Italy had breached its obligations under the Ambient Air Quality Directive (Directive 2008/50/EC). If limit values are exceeded, Member States must adopt measures to keep the exceedance period as short as possible. Although the Commission acknowledges that Italy has taken some measures since the judgment, in 2022, 24 air quality zones still reported exceedances of daily limit values and one zone reported exceedances of annual limit values.

Italy now has two months to respond and address the shortcomings raised by the Commission. In the absence of a satisfactory response, the Commission may decide to refer Italy to Court with a request to impose financial sanctions.

The Commission announcement is available to read at [ec.europa.eu/commission/presscorner/detail/en/inf\\_24\\_663](https://ec.europa.eu/commission/presscorner/detail/en/inf_24_663).

## EU Customs Registration of Chinese BEV Imports

On 5 March 2024, the European Commission published Implementing Regulation (EU) 2024/785, making imports of new battery electric vehicles designed for the transport of persons originating in the People's Republic of China subject to registration. This follows the notice about initiation of anti-subsidy investigation from 4 October 2023.

The Commission says it has sufficient evidence tending to show that imports of the product concerned from the PRC are being subsidised. The alleged subsidies consist, inter alia, of direct transfer of funds and potential direct transfers of funds or liabilities, government revenue forgone or not collected, and government provision of goods or services for less than adequate remuneration.

The Commission also says that imports had increased by 14% year-on-year since the investigation was formally launched in October. It said EU producers could suffer harm, which would be difficult to repair, if Chinese imports continued at this accelerated rate before the conclusion of the investigation.

The probe is due to conclude by November, although the EU could impose provisional duties in July.

The Implementing Regulation is published at [eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R0785&qid=1709713206880](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R0785&qid=1709713206880).

## European Parliamentary Research Service Report on Cars

On 4 March 2024, the European Parliamentary Research Service published a report “What if the problem with cars was not their method of propulsion?”. What-if reports are targeted to summarise the scientific state-of-the-art in an accessible and engaging manner.

The report describes the European automotive industry is striving to adapt to market changes driven by the dual green and digital transition. Electrification has become the main strategy for reducing CO<sub>2</sub> emissions, especially in urban traffic. At the same time, the average size and weight of cars have greatly increased. Big electric cars are the trend, but the report questions if they are really the solution and whether better planning and optimisation of resources help.

The report states promoting electric cars may lead to market distortions that run counter to European industrial interests. While complementary measures such as those contemplated in the critical raw materials act take effect, and besides the obvious move towards public transport. One way to allow the EU car industry to adapt while still reducing CO<sub>2</sub> emissions could be to limit the size, weight and engine capacity of urban vehicles. An improved vehicle-to-passenger weight rate could hugely increase energy efficiency in urban transport.

The report is available to read at [europarl.europa.eu/RegData/etudes/ATAG/2024/757797/EPRS\\_ATAG\(2024\)757797\\_EN.pdf](https://europarl.europa.eu/RegData/etudes/ATAG/2024/757797/EPRS_ATAG(2024)757797_EN.pdf).

## Commission Report on Real-World CO<sub>2</sub> Car and Van Emissions

On 18 March 2024, the European Commission published its first report on the real-world CO<sub>2</sub> emissions of new passenger cars and vans. The report is based on data collected in 2021 from fuel consumption monitors installed on-board of these vehicles.

The first data from a sample of 600 000 cars indicates that the real-world fuel consumption and CO<sub>2</sub> emissions from diesel and petrol vehicles on the road are around 20% higher than indicated by the official values from the standardised

WLTP type-approval test used for regulatory purposes. This discrepancy is in line with what the Commission had anticipated.

For plug-in hybrid electric vehicles, the real-world CO<sub>2</sub> emissions were on average 3.5 times higher than the laboratory values, which confirms that these vehicles are currently not realising their potential, largely because they are not being charged and driven fully electrically as frequently as assumed.

The on-board data has to be collected by the vehicle manufacturers – either through data transmission over-the-air, or when vehicles are brought in for repairs or services – and sent annually to the Commission. In April 2022, the Commission received data for 10.6% of the cars and 1.0% of the vans, which had been first registered in the EU in 2021. In this first year of data collection, the fleet coverage was below expectations for most manufacturers. The report says further steps are needed to significantly improve monitoring in the coming years.

Despite its limitations, the real-world data collected so far for cars provides valuable preliminary insights. The average gap observed between the real-world and the official type-approval average CO<sub>2</sub> emissions and fuel consumption of new cars registered in 2021 was 23.7% for petrol cars and 18.1% for diesel cars (1-1.5 l/100km or 28-35 g CO<sub>2</sub>/km). The gap observed is compatible with the assumptions made for the 2021 gap in the Commission’s Impact Assessments underpinning the revision of the vehicle CO<sub>2</sub> standards. Such a gap was anticipated as there are different factors affecting real-world emissions which cannot all be fully replicated in a laboratory test, such as the traffic conditions, landscape, road conditions, ambient temperature, use of air-conditioning and on-board electronics, and driver behaviour.

An overview of the findings for each manufacturer’s new fleet of vehicles is provided in the Commission Report, with a more detailed analysis added in the accompanying Staff Working Document. The European Environment Agency (EEA) has published the anonymous raw and aggregated datasets.

The Commission press release can be found at [climate.ec.europa.eu/news-your-voice/news/first-commission-report-real-world-co2-emissions-ld-using-obfcm-2024-03-18\\_en](https://climate.ec.europa.eu/news-your-voice/news/first-commission-report-real-world-co2-emissions-ld-using-obfcm-2024-03-18_en).

## EEA Report on Acceleration of Circular Economy in Europe

On 21 March 2024, the European Environment Agency (EEA) published a report titled ‘Accelerating the circular economy in Europe: State and outlook 2024’, giving a comprehensive analysis of the state of play of the transition to a more circular economy in Europe and the strong policy push we have seen in recent times, together with options and prospects to further accelerate it.

EEA says a comprehensive set of new circularity policies has been introduced at EU level and there is evidence of increased circular activities in EU Member States. It adds that Europe continues to operate under a predominantly linear model, where products placed on the market tend to have a relatively short use phase. Business models primarily revolve around mass-producing products, often sacrificing quality, and this results in early breakdown or premature obsolescence.

It says modest decoupling of EU resource consumption from economic growth can be observed, with total consumption of materials dropping slightly while EU gross domestic product (GDP) increased. However, this improvement does not take the demand created by EU consumption for resource extraction elsewhere into account. EU dependence on global imports for supply of some critical raw materials, metal ores and fossil-fuels is currently increasing.

According to EEA, EU policymakers will need to look into further interventions to accelerate the transition. One option — the introduction of targets in areas other than waste collection and recycling — would raise the priority of circular economy actions for national authorities and ensure focus on implementing actions that generate measurable outcomes.

This report also looks into potential actions for the future. One recommendation is that circular policies should become more binding and target-oriented, extending beyond waste to possibly include targets on resource use or material footprint. Measures should also now promote higher quality recycling to foster EU resource independence and reduce its overall material footprint. Bold implementation of the revamped EU Sustainable Product Policy should result in safe and sustainable products, which are designed for circularity from the outset, while additional attention should be paid to the economics of raw material supply, so that secondary raw material markets can thrive. The report adds that in line with the conclusions of the International Resource Panel, additional action is needed on the demand side, potentially leveraging the concept of sufficiency. Finally, just transition principles should be embedded in Europe and globally.

The EEA report can be found at [eea.europa.eu/publications/accelerating-the-circular-economy](https://eea.europa.eu/publications/accelerating-the-circular-economy).

## NORTH AMERICA

### US Multi-Pollutant Emission Standards for Light- and Medium-Duty Vehicles

On 20 March 2024, the US Environmental Protection Agency (EPA) announced a final rule, Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, that sets new, more protective standards to further reduce harmful air pollutant emissions from light-duty and medium-duty vehicles starting with model year 2027.

The final rule builds upon EPA's final standards for federal greenhouse gas emissions standards for passenger cars and light trucks for model years 2023 through 2026 and leverages advances in clean car technology to unlock benefits to Americans ranging from improving public health through reducing smog- and soot-forming pollution from vehicles, to reducing climate pollution, to saving drivers money through reduced fuel and maintenance costs. These standards will phase in over model years 2027 through 2032.

EPA estimates that the air pollution reductions from these standards will provide \$13 billion in annual health benefits. In 2055, EPA estimates harmful pollutants will be significantly reduced (compared to 2055 levels without the final standards) including 8 700 tons of particulate matter, 36000 tons of nitrogen oxides and 150 000 tons of volatile organic compounds.

The standards are technology neutral. EPA expects that manufacturers will choose to produce a diverse range of clean vehicles under the standards, including cleaner gasoline vehicles, hybrids (HEVs), and plug-in hybrid electric vehicles (PHEVs), and full battery electric vehicles (BEVs).

For light-duty vehicles, the standards are projected to result in an industry-wide average target for the light-duty fleet of 85 grams/mile (g/mile) of CO<sub>2</sub> in MY 2032, representing a nearly 50% reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards.

For medium-duty vehicles, EPA is revising the existing standards for MY 2027 and establishing new standards for MYs 2028-2032, given the increased feasibility of GHG emissions-reducing technologies in this sector in this time frame. These standards phase in over a six-year period from MY 2027 through MY 2032. When fully phased in, the MDV standards are projected to result in an average target of 274 g/mile of CO<sub>2</sub> by MY 2032, representing a 44% reduction in projected fleet average emissions target levels relative to the existing MY 2026 standards.

EPA is finalising "Tier 4" criteria pollutant emissions standards for non-methane organic gases (NMOG), NO<sub>x</sub>, PM, and other criteria pollutants and their precursors. For light-duty vehicles, EPA is finalising NMOG plus NO<sub>x</sub> standards that will phase down to a fleet average level of 15 milligrams per mile (mg/mi) by MY 2032, representing a 50% reduction from the existing 30 mg/mi standards for MY 2025 established in the Tier 3 rule in 2014. For MDVs, EPA is finalising NMOG+NO<sub>x</sub> standards that will require a fleet average level of 75 mg/mi by MY 2033, representing a 58% to 70% reduction from the Tier 3 standards of 178 mg/mi for Class 2b vehicles and 247 mg/mi for Class 3 vehicles. The standards will also reduce emissions of mobile source air toxics.

For both light-duty and medium-duty vehicles, EPA is finalising a PM standard of 0.5 mg/mi and a requirement that the standard be met across three test cycles, including a cold

temperature (-7°C) test. The PM standard is a per-vehicle cap (not a fleet average) and will be fully phased in by MY 2030 for light-duty vehicles and by MY 2031 for medium-duty vehicles. EPA projects the PM standard will reduce tailpipe PM emissions from gasoline vehicles by over 95% in addition to reducing mobile source air toxics.

EPA is also finalising cold temperature (-7°C) NMOG+NOx standards for light-duty vehicles and MDVs to ensure robust emissions control over a broad range of operating conditions. EPA is finalising three provisions aligned with the California Air Resources Board (CARB) Advanced Clean Cars II (ACC II) programme for addressing light-duty vehicle NMOG+NOx emissions from frequently encountered vehicle operating conditions not previously captured in EPA test procedures: (1) high power cold starts in plug-in hybrid electric vehicles, (2) early drive-away, and (3) mid-temperature engine starts. EPA is also finalising standards aligned with the CARB ACC II programme that address high load emissions from medium-duty vehicles with high gross combination weight rating (GCWR).

The final standards are projected to accelerate the transition to clean vehicle technologies. EPA projects that from MYs 2030-2032 manufacturers may choose to produce battery electric vehicles (BEVs) for about 30% to 56% of new light-duty vehicle sales and about 20% to 32% of new medium-duty vehicle sales. EPA also projects that consumers will see an increase in the availability of other clean vehicle technologies, including hybrid electric vehicles and plug-in hybrid electric vehicles, as well as cleaner gasoline vehicles.

The final NMOG+NOx standards also have multiple feasible paths to compliance, depending on choices manufacturers make about deployment of emissions control technologies for internal combustion engine (ICE) vehicles as well as electrification technologies. To meet the more protective PM emissions standard, EPA projects that manufacturers will widely utilise gasoline particulate filters on vehicles with internal combustion engines.

The EPA press release is at [epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-mode](https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-mode) with a fact sheet on the final rule at [epa.gov/system/files/documents/2024-03/420f24016.pdf](https://www.epa.gov/system/files/documents/2024-03/420f24016.pdf).

## US EPA Final Rule on Heavy-Duty Vehicle GHG Emissions Standards

On 29 March 2024, the US Environmental Protection Agency (EPA) announced a final rule, “Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3,” that sets stronger standards to reduce greenhouse gas emissions from heavy-duty (HD) vehicles beginning in model year (MY) 2027.

The new standards will be applicable to HD vocational vehicles (such as delivery trucks, refuse haulers, public utility

trucks, transit, shuttle, school buses, etc.) and tractors (such as day cabs and sleeper cabs on tractor-trailer trucks).

The final “Phase 3” standards build on EPA’s Heavy-Duty Phase 2 programme from 2016 and, according to the EPA, maintain that programme’s flexible structure, which is designed to reflect the diverse nature of the heavy-duty vehicle industry. The standards are technology-neutral and performance-based, allowing each manufacturer to choose what set of emissions control technologies is best suited for them and the needs of their customers.

Percent Reduction from the Phase 2 CO <sub>2</sub> Emission Standards						
Model Year:	2027	2028	2029	2030	2031	2032
Light-Heavy Vocational	17%	22%	27%	32%	46%	60%
Medium-Heavy Vocational	13%	16%	19%	22%	31%	40%
Heavy-Heavy Vocational	--	--	13%	15%	23%	30%
Day Cab Tractors	--	8%	12%	16%	28%	40%
Sleeper Cab Tractor	--	--	--	6%	12%	25%

The EPA says the final standards for heavy-duty vehicles will avoid approximately 1 billion metric tons of greenhouse gas emissions from 2027 through to 2055, with \$13 (€12.1) billion in annualised net benefits. EPA estimates approximately \$10 (€9.31) billion in annualised climate benefits and up to \$300 (€279) million in annualised benefits from reduced emissions of fine particulate matter (PM).

These heavy-duty greenhouse gas standards complete the EPA’s Clean Trucks Plan for reducing greenhouse gas emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings. These rules include the EPA’s recently finalised light- and medium-duty vehicles final rule (see above) for MY 2027-2032 (which covers Class 2b and 3 trucks), the 2023 heavy-duty NOx final rule, and the greenhouse gas standards set by this rulemaking.

The US EPA press release is at [epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-standards-heavy-duty](https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-greenhouse-gas-emissions-standards-heavy-duty).

## CARB Workshop on Heavy-Duty Engine and Vehicle Omnibus Regulation

On 20 March 2024, the California Air Resources Board (CARB) hosted a public workshop to discuss proposed amendments to the Heavy-Duty Engine and Vehicle Omnibus Regulation. This follows an agreement reached in July 2023, the Clean Truck Partnership (CTP), in which CARB committed to propose amendments to the Omnibus regulation that would generally align the emissions standards, associated test procedures, and accompanying enforcement provisions for 2027 and subsequent model year (MY) engines and vehicles with the corresponding provisions in the federal EPA-NOx rule.

Comparison of Omnibus & U.S. EPA-NOx Rule*	
CARB Omnibus Regulation	U.S. EPA-NOx Rule
<b>Adopted on</b>	
9/21/2021	1/24/2023
<b>Applicability</b>	
2024 and later MY	2027 and later MY
Spark-Ignition (SI) and Compression-Ignition (CI) > 10,000 pounds Heavy-Duty Engines (HDE)	SI and CI > 8,500 pounds HDEs
<b>Elements included</b>	
Certification Standards and Test Procedures	Certification Standards and Test Procedures
Averaging, Banking, and Trading (ABT)	ABT
In-Use Testing - 3-Bin Moving Average Window (MAW) Methodology	In-Use Testing - 2-Bin MAW
Emissions Warranty and Useful Life Periods	Emissions Warranty and Useful Life Periods

\*U.S. EPA-NOx Rule: United States Environmental Protection Agency (U.S. EPA) Clean Trucks Plan NOx Rule

Areas where CARB will maintain separate programmes from EPA will be certification, OBD, emissions warranty information reporting, in-use compliance and clean idle labels.

CARB is proposing to allow any commercially available biodiesel fuel blend to be used for in-use testing. CARB is adopting the same 15 mg/bhp-hr interim NOx compliance allowance for MHDEs and HHDEs that is used by the EPA, but is proposing to allow it only for 2027 to 2034 MYs.

### Certification Emission Standards for 2027 and Subsequent MY Engines

- Staff proposes to align with the certification emission standards for criteria pollutants in the U.S. EPA-NOx Rule for CI and SI Engines

Engine Type	Duty Cycle <sup>1</sup>	NOx mg/hp-hr <sup>2</sup>	HC <sup>3</sup> mg/hp-hr	PM <sup>3</sup> mg/hp-hr	CO <sup>3</sup> g/hp-hr
CI	SET, FTP	35	60	5	6.0
CI	LLC	50	140	5	6.0
SI	SET	35	60	5	14.4
SI	FTP	35	60	5	6.0

<sup>1</sup>Duty Cycles: Supplemental Emissions Test (SET), Federal Test Procedure (FTP), Low Load Cycle (LLC)  
<sup>2</sup>mg/hp-hr: milligrams per horsepower-hour  
<sup>3</sup>HC: hydrocarbons; PM: particulate matter; CO: carbon monoxide

- Staff seeks feedback from stakeholders re: this proposal

The next steps in the development of the proposed amendments include finalising the rulemaking package by August 2025 and posting it for the 45-day notice period in September 2025, before presenting it at the Air Resources Board meeting in November 2025.

Full details of the proposed amendments are at [arb.ca.gov/our-work/programs/heavy-duty-low-nox/heavy-duty-low-nox-meetings-workshops](http://arb.ca.gov/our-work/programs/heavy-duty-low-nox/heavy-duty-low-nox-meetings-workshops).

## ASIA-PACIFIC

### VECC Symposium on China 7 Requirements

On 26 and 27 March 2024, the Vehicle Emission Control Center (VECC) of the Ministry of Environmental Protection in China hosted an 'International Symposium of Low Emissions and Fuel Efficient Technologies to Meet China 7 Requirements' at its labs in Chengdu. AECC was invited together with MECA to give international expertise input to the consideration of future China 7 requirements.



The symposium was moderated by the Director of VECC, Dr. Ding Yan. The first day dealt with heavy-duty vehicles (HDVs) and day 2 was on light-duty vehicles (LDVs). Introduction addresses were given by local authorities.

VECC staff presented the outcomes of the completed pre-studies on LDV and HDV emissions. Follow-up programmes are expected to be kicked off in April, in cooperation with consortia of OEMs and suppliers.

AECC presented an update on the Euro 7 regulation for light- and heavy-duty vehicles and an overview of the AECC LDV and HDV demonstrator data. Emphasis was put on the initial cold-start and low-load, being the remaining emission events which can be significantly reduced.

MECA presented a legislative update on proposals by EPA and CARB, as well as on results from heavy-duty and Non-Road Mobile Machinery (NRM) test programmes at SwRI.

A discussion session was organised at the end of each day.

In summing up, Dr. Ding Yan noted the symposium was a starting point of the China 7 process, with more exchanges to be organised, also with the international experts. China 7 will cover pollutant and GHG emissions, and should promote available technologies. He said all stakeholders should work together to enable it. Historical steps have focused on individual type-approval, but now also the entire fleet will have to be monitored by local authorities. Regarding an on-road test, he noted expectations should be managed between what is possible at certification and realistic in actual operation.

### Australian Vehicle Efficiency Standard

On 27 March 2024, the Australian Government announced the introduction of legislation for the Australian Government's New Vehicle Efficiency Standard. This follows consultation with stakeholders over the past year, including around 9 000 submissions during the latest consultation period.

The new Standard will reduce emissions from new passenger vehicles by more than 60% by 2030, and roughly halve the emissions of new light commercial vehicles over the same period.

Measures in the Standard will include recategorising a limited number of 4WDs from passenger car to light commercial vehicle. This acknowledges that some off-road wagons use similar ladder-frame chassis, and need comparable towing capacity above 3 tonnes, to dual cab utes. The emissions trajectory for light commercial vehicles will also be smoothed. This reflects adjustments announced by the US EPA to its vehicle Standard and smooths the transition for utes, vans and 4x4s. The weight-based relative emissions limits will be adjusted, recognising that heavier vehicles emit more. Also, implementation will be staged to enable preparation and testing of essential data reporting capabilities.

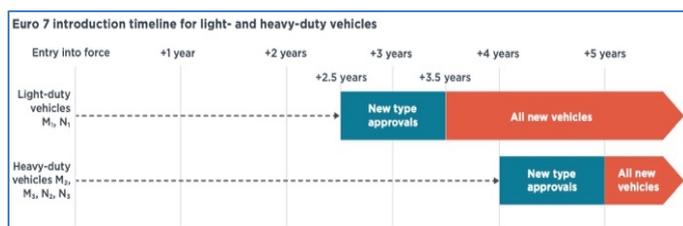
The Government says that to ensure it gets the implementation right in partnership with industry, the scheme will commence on 1 January 2025, but manufacturers will not begin earning credits or accruing penalties until 1 July 2025.

The Australian Government press release is at [infrastructure.gov.au/department/media/news/new-vehicle-efficiency-standard-introduced](https://infrastructure.gov.au/department/media/news/new-vehicle-efficiency-standard-introduced).

## GENERAL

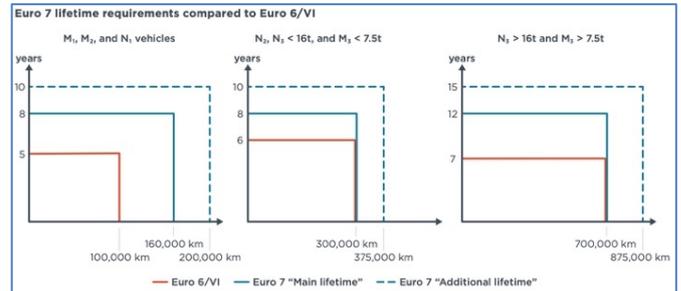
### ICCT Policy Update on Euro 7

On 13 March 2024, the International Council on Clean Transportation (ICCT) published a policy update summarising the Euro 7 emission standard for light- and heavy-duty vehicles in the European Union.



The ICCT document sets out the scope of Euro 7, the timeline for implementation, tailpipe emission limits, non-tailpipe emissions, durability and other elements.

Where the new regulation differs from Euro 6/VI, such as durability and heavy-duty emission limits, ICCT highlights this.



The ICCT Policy Update is available to read at [theicct.org/wp-content/uploads/2024/03/ID-116-%E2%80%93Euro-7-standard\\_final.pdf](https://theicct.org/wp-content/uploads/2024/03/ID-116-%E2%80%93Euro-7-standard_final.pdf).

### ICCT View on EPA Emissions Standards

On 21 March 2024, the International Council on Clean Transportation (ICCT) published a blog giving its views on the US EPA's final multi-pollutant standards for new light-duty vehicles (see above).

ICCT points out that while automakers do not have to sell 56% BEVs in 2032, that is what the EPA data and analysis indicate would be the most cost-effective compliance path.

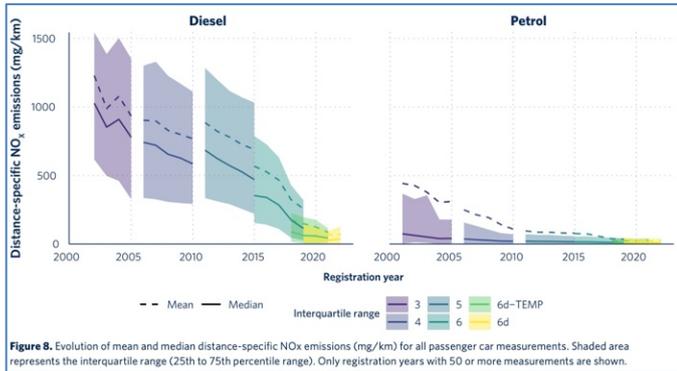
In reference to consumer choice, ICCT says the new standards are expected to expand consumer choice by increasing the number of advanced combustion vehicle models and the number of plug-in hybrids and BEVs available for purchase.

The blog says that the standards do not mandate any particular technology, but they are expected to be great for electric vehicle sales and for those who favour more choices for consumers. ICCT claims it is a 'big deal', especially after the 2020 rollback of standards for model year 2021–2026 vehicles. It concludes by saying that considering the billions of dollars available for consumer incentives, industrial development, and charging infrastructure deployment in the IRA and Bipartisan Infrastructure Law, these new standards are achievable, feasible, and cost-effective.

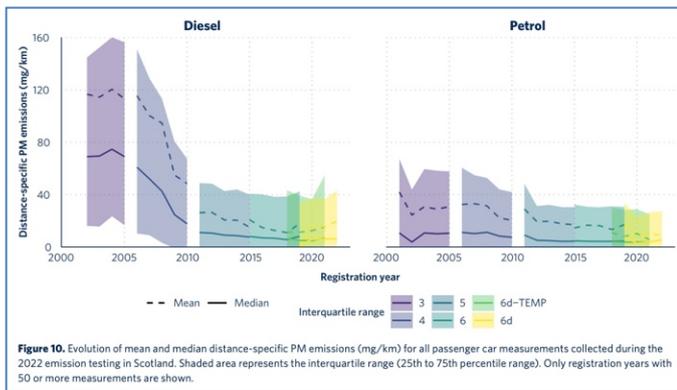
The ICCT blog can be read in full at [theicct.org/no-epas-new-emissions-standards-dont-ban-gas-cars](https://theicct.org/no-epas-new-emissions-standards-dont-ban-gas-cars).

### TRUE Assessment of Real-World Vehicle Emissions from Scottish Cities

On 20 March 2024, the International Council on Clean Transportation (ICCT) published results of a study conducted by The Real Urban Emissions (TRUE Initiative), deploying remote sensing technology in four Scottish cities in 2022 to measure emissions from on-road vehicles. Around 660 000 vehicular emissions data were collected in April and September 2022 across Aberdeen, Dundee, Edinburgh, and Glasgow.



**Figure 8.** Evolution of mean and median distance-specific NO<sub>x</sub> emissions (mg/km) for all passenger car measurements. Shaded area represents the interquartile range (25th to 75th percentile range). Only registration years with 50 or more measurements are shown.



**Figure 10.** Evolution of mean and median distance-specific PM emissions (mg/km) for all passenger car measurements collected during the 2022 emission testing in Scotland. Shaded area represents the interquartile range (25th to 75th percentile range). Only registration years with 50 or more measurements are shown.

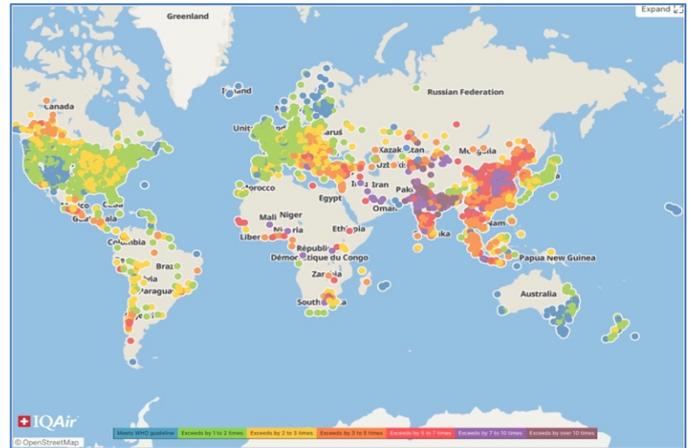
Among other findings, the study assesses that strengthening low-emission zone restrictions and implementing age or mileage limits alongside emission standard-based policies could help promote air quality in urban areas in Scotland. Moreover, encouraging the maintenance or replacement of taxis and private hires – which produce consistently higher emissions than other passenger cars – could yield outsized emission benefits relative to these vehicles’ share of the fleet. Applying an emergent approach to identifying high-emitting trucks, this analysis also shows that remote sensing could help to identify potentially faulty vehicles or vehicles fitted with defeat devices. It also defines an enforcement threshold to identify high-emitting trucks for interdiction and inspection.

The TRUE report can be found at [theicc.org/wp-content/uploads/2024/03/ID-113-%E2%80%93-TRUE-Scotland\\_final.pdf](https://theicc.org/wp-content/uploads/2024/03/ID-113-%E2%80%93-TRUE-Scotland_final.pdf).

## 2023 World Air Quality Report

On 19 March 2024, IQAir published its 6<sup>th</sup> Annual World Air Quality Report, analysing data collected from over 30 000 air quality monitoring stations across 7 812 locations in 134 countries, territories, and regions.

The report found that seven countries met the WHO annual PM<sub>2.5</sub> guideline (annual average of 5 µg/m<sup>3</sup> or less): Australia, Estonia, Finland, Grenada, Iceland, Mauritius, and New Zealand.



The top five most polluted countries in 2023 (Bangladesh, Pakistan, India, Tajikistan and Burkina Faso) all averaged between 9 and 15 times higher than the WHO PM<sub>2.5</sub> annual guideline. A total of 124 (92.5%) out of 134 countries and regions exceeded the WHO annual PM<sub>2.5</sub> guideline value of 5 µg/m<sup>3</sup>.

The full report is available to download from [iqair.com/newsroom/waqr-2023-pr](https://iqair.com/newsroom/waqr-2023-pr).

## RESEARCH SUMMARY

### Effects of Emissions and Pollution

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Sensitivity of air quality to vehicle ammonia emissions in the United States, Claudia Toro, et al.; *Atmospheric Environment* (in press), [doi: 10.1016/j.atmosenv.2024.120484](https://doi.org/10.1016/j.atmosenv.2024.120484).

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Impact of traffic policy on travel population exposure during heavy pollution episodes: A Chengdu case study, Yueqi Liu, et al.; *Urban Climate* (May 2024), Vol. 55, 101886, [doi: 10.1016/j.uclim.2024.101886](https://doi.org/10.1016/j.uclim.2024.101886).

## Emissions Measurements and Modelling

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## Emissions Control, Catalysis, Filtration

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## FORTHCOMING CONFERENCES

### 10<sup>th</sup> AVL High Power Systems Conference

17-18 April 2024, Graz, Austria

[avl.com/en/events/avls-10th-high-power-systems-conference?sfmc\\_id=120623423](https://avl.com/en/events/avls-10th-high-power-systems-conference?sfmc_id=120623423)

### 45<sup>th</sup> International Vienna Motor Symposium

24-26 April 2024, Vienna, Austria

[wiener-motorensymposium.at/en](https://wiener-motorensymposium.at/en)

### SIA High Performance Hydrogen Internal Combustion Engine

16 May 2024, Orléans, France

[sia.fr/evenements/346-high-performance-hydrogen-internal-combustion-engine](https://sia.fr/evenements/346-high-performance-hydrogen-internal-combustion-engine)

### 27<sup>th</sup> ETH Nanoparticles Conference

10-14 June 2024, Zürich, Switzerland

[npc24.scg.ch/?idU=4](https://npc24.scg.ch/?idU=4)

### Fuel Science: From Production to Propulsion

11-13 June 2024, Aachen, Germany

[tme.rwth-aachen.de/cms/TME/Der-Lehrstuhl/Aktuelle-Veranstaltungen/~pmdn/12-FSC-Konferenz-2024/?lidx=1](https://tme.rwth-aachen.de/cms/TME/Der-Lehrstuhl/Aktuelle-Veranstaltungen/~pmdn/12-FSC-Konferenz-2024/?lidx=1)

### Cambridge Particle Meeting

17 June 2024, Cambridge, UK

[cambridgeparticlemeeting.org](https://cambridgeparticlemeeting.org)

## SIA Powertrain International Conference

19-20 June 2024, Lille, France

[event.fourwaves.com/79651605-96c9-454f-9129-fe5986450f40/pages](http://event.fourwaves.com/79651605-96c9-454f-9129-fe5986450f40/pages)

## CLEPA Materials Regulations and Sustainability Event

27-28 June 2024, Frankfurt, Germany

[clepa.eu/events/clepa-materials-regulations-and-sustainability-event-2024](http://clepa.eu/events/clepa-materials-regulations-and-sustainability-event-2024)

## Stuttgart International Symposium on Automotive and Engine Technology

2-3 July 2024, Stuttgart, Germany

[kfs-veranstaltungen.de/index.php?id=100](http://kfs-veranstaltungen.de/index.php?id=100)

## New Materials for future Mobility (NeMMo)

3-4 July 2024, Nantes, France

[sia.fr/evenements/?year=2024](http://sia.fr/evenements/?year=2024)

## International Congress on Catalysis

14-19 July 2024, Lyon, France

<https://www.icc-lyon2024.fr>

## Thermo- and Fluid Dynamics Processes for Clean Propulsion Powerplants

10-13 September 2024, Valencia, Spain

[cmt.upv.es/#/thiesel2024](http://cmt.upv.es/#/thiesel2024)

## Rostock Large Engine Symposium

12-13 September 2024

[rgmt.de](http://rgmt.de)

## Emissions Analytics Non-Road Powertrains and Fuels

18-19 September 2024, Munich, Germany

[conferences.emissionsanalytics.com/nonroad-eu](http://conferences.emissionsanalytics.com/nonroad-eu)

**Deadline for abstracts 5 April 2024**

## SAE Conference on Sustainable Mobility

18-20 September 2024, Catania, Italy

[universitacusano.com/csm2024](http://universitacusano.com/csm2024)

## Aachen Colloquium Sustainable Mobility

7-9 October 2024, Aachen, Germany

[aachener-kolloquium.de/en](http://aachener-kolloquium.de/en)

## POLIS Conference 2024

27-28 November 2024, Karlsruhe, Germany

[polisnetwork.eu/2024-annual-polis-conference](http://polisnetwork.eu/2024-annual-polis-conference)