

NEWSLETTER

International Regulatory Developments

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AECC New Year Wishes

The AECC team wishes you a healthy, happy and successful 2024. We look forward to working in partnership with you for cleaner air.



EUROPE

Belgian EU Presidency Priorities

On 8 December 2023, the Belgian Presidency of the European Council set out its priorities for the six months from 1 January 2024, under the slogan 'Protect, Strengthen, Prepare'.

The vision of the Belgian presidency is intended to be holistic, focusing on protecting people and the achievements of the EU, strengthening its economy, structures and capabilities, and proactively preparing future challenges. The presidency slogan and the six key themes it encompasses, are said to symbolise a commitment to a safer, stronger, and more resilient Europe, capable of navigating the complex and rapidly changing landscape of global politics.

Under the theme of 'pursuing a green and just transition', the Presidency says it will place the energy and climate transition at the heart of its priorities. To reduce vulnerabilities to climate change, the Presidency will strive to enhance the Union's circular economy and adaptive and preparedness capacities. It will also promote sustainable water management.

It goes on to say that the EU must fully leverage its energy efficiency potential across the entire economy and rapidly advance the development of renewable and low-carbon energy sources and carriers. Increased investments to deliver a flexible, integrated European energy network are essential to this end.

Further details on the Presidency are at belgian-presidency.consilium.europa.eu.

Outcome of Euro 7 Trilogue Discussions

On 18 December 2023, the European Parliament and Council reached a provisional agreement on new rules to reduce road transport emissions for passenger cars, vans, buses, trucks and trailers (Euro 7).

For passenger cars and vans, negotiators agreed to maintain the current Euro 6 test conditions and exhaust emissions limits. At Parliament's request, the number of exhaust particles will be measured at the level of PN10 (instead of PN23, thereby including smaller particles). This improvement reflects the latest developments in the United Nations Economic Commission for Europe (UNECE).

For buses and trucks, the agreed text includes stricter limits for exhaust emissions measured in laboratories (e.g., NOx limit of 200mg/kWh) and in real driving conditions (NOx limit of 260 mg/kWh), while maintaining the current Euro VI testing conditions, with the exception of a change in the low power threshold.

The co-legislators introduced stricter lifetime requirements for all vehicles in terms of both mileage and lifetimes; that now goes up to 200 000 km or 10 years for cars and vans.

The deal sets brake particles emissions limits (PM10) for cars and vans (3mg/km for pure electric vehicles; 7mg/km for most internal combustion engine (ICE), hybrid electric and fuel cell vehicles and 11mg/km for large ICE vans). It introduces minimum performance requirements for battery durability in electric and hybrid cars (80% from start of life to five years or 100 000 km and 72% up to eight years or 160 000km) and vans (75% from start of life to five years or 100 000 km and 67% up to eight years or 160 000km).

The text also foresees an Environmental Vehicle Passport, to be made available for each vehicle and containing information on its environmental performance at the moment of registration (such as pollutant emission limits, CO₂ 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. Moreover, car manufacturers will have to design their vehicles so as to prevent tampering with emissions control systems through the digitalisation of automobile monitoring.

Parliament and Council need to formally approve the agreement before it can enter into force. The regulation will apply 30 months after its entry into force for new types of cars and vans, and 48 months for new types of buses, trucks and trailers (for vehicles constructed by small volume manufacturers, it will apply from 1 July 2030 for cars and vans, and from 1 July 2031 for buses and trucks).

The European Parliament press release is at europarl.europa.eu/news/en/pressroom/2023/12/07/PR15740/euro-7-deal-on-new-eu-rules-to-reduce-road-transport-emissions.

The Council's press release can be found at consilium.europa.eu/en/press/press-releases/2023/12/18/euro-7-council-and-parliament-strike-provisional-deal-on-emissionslimits.

The agreed text is available to read at data.consilium.europa.eu/doc/document/ST-16960-2023-REV-1/en/pdf.

AECC's response to the outcome of the trilogue negotiations can be found further in this Newsletter.

Publication of Delegated Regulation on Verification of LDV CO₂ Emissions

On 18 December 2023, Delegated Regulations 2023/2866 and 2023/2867 were published in the Official Journal of the European Union. This supplements Regulation 2019/631 by setting out the guiding principles and criteria for determining and defining the procedures for the verification of the CO₂ emissions and fuel consumption values of passenger cars and light commercial vehicles in-service (in-service verification).

Implementing Regulation (EU) 2023/2866 establishes procedures for verifying that the CO₂ emission and fuel consumption values recorded in the certificates of conformity correspond to the values in-service as well as procedures for verifying the presence of any strategies on board or relating to the vehicles that artificially improve the vehicle's performance during tests for type approval. Both types of procedures are referred to as 'in-service verification'.

The Regulation also sets out detailed rules on the procedures for reporting deviations found in the CO₂ emissions of vehicles in-service as compared to the specific emissions of CO₂ recorded in the certificates of conformity.

The Delegated Regulation 2023/2867 supplements Regulation (EU) 2019/631 to establish guiding principles and criteria for the definition of procedures for verifying that the CO₂ emission and fuel consumption values recorded in the certificates of conformity correspond to the values in-service.

Moreover, the guiding principles help to define procedures for verifying the presence of any strategies on board or relating to the vehicles that artificially improve the vehicle's performance during tests for type approval.

The Regulations do not apply to vehicles which are exempt from the measurement of CO₂ emissions and to vehicles of a manufacturer that has been responsible for fewer than 1,000 new passenger cars or for fewer than 1 000 new light commercial vehicles.

Both Regulations will enter into force on 7 January 2024.

The Regulations are available to read at eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202302866 and eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202302867.

Council General Approach on Net-Zero Industry Act

On 7 December 2023, the European Council adopted its position ('General Approach') on a draft regulation establishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem, better known as the 'Net-zero Industry Act'.

The main aim of this proposal is accelerating the industrial deployment of critical technologies needed to support the transition to climate neutrality, using the strength of the single market to reinforce Europe's economic resilience and competitiveness.

The Act proposes to facilitate the conditions for investment based on a list of key technologies, by simplifying the permit granting procedures and prioritizing strategic projects. It also proposes to facilitate the market access of strategic technology products, enhance the skills of the European work force in these promising sectors (notably through the launch of net-zero industry academies) and create a platform to coordinate the EU action in this area. To foster innovation, the net-zero industry act proposes the creation of specific regulatory frameworks for the development, testing and validation of innovative technologies (known as regulatory sandboxes).

It sets out the indicative benchmark of reaching 40% of production to cover EU's needs in strategic technology products, like solar photovoltaic panels, wind turbines, batteries and heat pumps. The proposal also sets out a specific target for CO₂ carbon capture and storage, with an annual injection capacity of at least 50 million tonnes of CO₂ to be achieved by 2030.

The Council position supports the main objectives of the Net-Zero Industry Act, but says it introduces several improvements, like enlarging the scope of application, clarifying the rules for permit-granting procedures, access to market and public procurement and promoting skills, research and innovation.

As compared to the Commission proposal, the Council position increases the list of strategic net-zero technologies from 8 to 10, by including nuclear and sustainable alternative fuels. The mandate also enlarges the list of non-strategic net-zero technologies to biotech climate and energy solutions, other nuclear technologies and transformative industrial technologies for energy-intensive industries. Moreover, the Council position includes an Annex with a non-exhaustive list of products and components primarily used for the manufacturing of net-zero technologies.

The Net-Zero Industry Act is one of the three key legislative initiatives of the Green Deal Industrial Plan, together with the Critical Raw Material Act and the reform of the electricity market design, to enhance the competitiveness of Europe's

net-zero industry and support the fast transition to climate neutrality.

The general approach agreed today formalises the Council's negotiating position. It provides the Council presidency with a mandate for negotiations with the European Parliament, which adopted its own position on 21 November 2023.

The European Council's press release is at consilium.europa.eu/en/press/press-releases/2023/12/07/net-zero-industry-act-council-adopts-position.

European Parliament Adoption of Critical Raw Materials Act

On 12 December 2023, the European Parliament approved plans to boost the EU's supply of strategic raw materials, in the form of the Critical Raw Materials Act (CRMA).

The CRMA is designed to make the EU more competitive and sovereign, by cutting red tape, fostering innovation along the entire value chain and supporting SMEs. It also aims to boost research, the development of alternative materials, and more environmentally friendly mining and production methods.

Parliament's press release says that during negotiations with Council on the law, MEPs pushed for a stronger focus on the production and scale-up of materials that can substitute strategic raw materials. They secured the establishment of targets to foster the extraction of more strategic raw materials from waste products. MEPs also insisted on the need to cut red tape for companies, in particular small and medium-sized enterprises (SMEs).

According to the release, MEPs also highlighted the importance of strategic partnerships between the EU and third countries on critical raw materials, in order to diversify the EU's supply, with benefits for all sides. They secured measures to pave the way for long-term partnerships with knowledge- and technology-transfer, training and upskilling for new jobs with better working and income conditions, as well as extraction and processing on the best ecological standards in partner countries.

The legislation was adopted with 549 votes to 43, with 24 abstentions. It will now have to be formally endorsed by the Council before publication in the Official Journal.

The European Parliament press release is at europarl.europa.eu/news/en/pressroom/20231208IPR15763/critical-raw-materials-plans-to-secure-the-eu-s-supply.

Commission Call for Improvement of Member State Energy and Climate Plans

On 18 December 2023, the European Commission published its assessment of EU Member States' draft National Energy and Climate Plans (NECPs) and issued recommendations to assist Member States in raising their ambitions in line with EU targets for 2030. The final Plans must be submitted by 30 June 2024.

The Commission assessment finds that at this stage, draft NECPs are not yet sufficient to reduce greenhouse gas emissions by at least 55% by 2030; current measures would lead to a reduction of 51%. Further ambition is needed to close a gap of 6.2 percentage points in the effort sharing sectors compared to the 40% target. There is a gap of around -40 to -50 MtCO₂eq compared to the -310 MtCO₂eq target under the LULUCF Regulation, showing an enhancement of the carbon sink is necessary. For renewable energy, the current drafts would lead to a share of 38.6-39.3% of renewables in the energy mix by 2030, compared to the 42.5% target. For energy efficiency, the current drafts would lead to 5.8% energy efficiency improvements, compared to the target of 11.7%.

The Commission also highlights the importance and urgency of phasing out the use of fossil fuels in energy generation, notably solid fossil fuels. In addition, the persistence of fossil fuel subsidies in all Member States, including in transport, is identified as another obstacle to the EU's pathway towards climate neutrality.

The Commission press release is at ec.europa.eu/commission/presscorner/detail/en/ip_23_6622.

Monitoring Report on Progress Towards 8th EAP Objectives

On 18 December 2023, the European Environment Agency (EEA) published the 2023 edition of its monitoring report on progress towards the 8th Environment Action Programme (EAP) objectives. The EAP is the EU's legally agreed-upon, overarching framework for action on EU environmental policy until 2030.

According to the EEA analysis, the EU may not meet the majority of the targets by 2030. The situation looks particularly challenging when it comes to the 8th EAP priority objective of reducing environmental and climate pressures related to production and consumption. This includes targets on energy consumption, rate of circular material use, and share of area under organic farming, which all look very unlikely to be achieved by 2030.

However, the EEA report shows that the outlook of achieving several other 2030 monitoring targets looks positive. For instance, it is very likely that the share of green economy in the whole economy will continue to increase and that premature deaths attributable to exposure to fine particulate matter will decline in line with the zero-pollution action plan aim.

To meet the target, the EEA says a significant increase in effort is needed across all socio-economic sectors. In the buildings sector, there is significant cost-effective potential to reduce GHG emissions by 2030. The transport and agricultural sectors also require substantial additional efforts. This includes implementation of planned additional measures in the strategic plans of the Common Agriculture Policy, in

order to realise projected emission reductions in line with the 2030 target.

The EEA report can be downloaded from eea.europa.eu/en/newsroom/news/meeting-eu-environment-policy-targets-by-2030-will-be-challenging.

European Court of Auditors Report on Future for Biofuels in EU

On 13 December 2023, the European Court of Auditors (ECA) published a report on the future for biofuels in the European Union.

The EU auditors point to three main issues that biofuels are facing on the ground: sustainability, biomass availability, and cost.

They say the environmental benefits of biofuels are often overstated. For example, biofuels from feedstock that requires land to grow (and so may entail deforestation) may adversely affect biodiversity, soil and water. This raises ethical questions about the relative priorities of fuel and food.

In addition, the availability of biomass limits the deployment of biofuels. The European Commission expected biofuels to increase energy independence. However, in reality, reliance on third countries (e.g., imports of used cooking oil from China, the UK, Malaysia and Indonesia) has soared due to rising demand for biomass over the years. The biofuels sector competes with other sectors for raw materials, especially with the food sector, but also with cosmetics, pharmaceuticals, and bioplastics.

Lastly, as biofuels are more expensive than fossil fuels, they are not yet economically viable. And emission allowances are currently cheaper than reducing CO₂ emissions by using biofuels, which fiscal policies in EU countries do not always favour.

All this means that the deployment of advanced biofuels is slower than expected. As required, all EU countries imposed obligations on fuel suppliers to ensure that the share of renewable energy was at least 10% by 2020 in the road and rail transport sectors, and 14% in all transport sectors by 2030. However, a majority of EU countries missed their targets in 2020, including Greece, Poland, Romania, France and Spain.

Mr Nikolaos Milionis, the ECA member who led the audit, stated that "Biofuels are meant to contribute to the EU's climate-neutrality objectives and enhance its energy sovereignty. With its current biofuels policy, however, the EU is driving without a map and runs the risk of not reaching its destination".

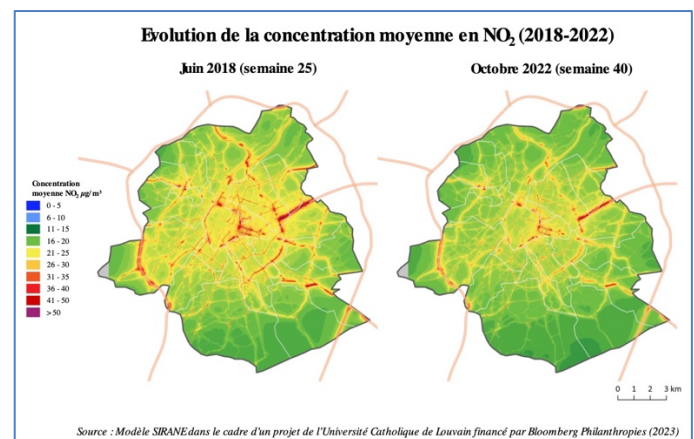
The ECA report is available to download from eca.europa.eu/en/news/NEWS-SR-2023-29.

Air Quality Improvements in Brussels Low Emission Zone

On 11 December 2023, EuroCities published a report demonstrating how the Brussels Capital Region's low emission zone (LEZ) has helped to produce a reduction in air pollution.

The study says that for the first time since the establishment of the LEZ in 2018, nitrogen dioxide (NO₂) levels have decreased by a record 30% along the major roads of the Belgian capital.

Between 2018 and 2022, the introduction of the first low emission zone halved the number of diesel vehicles in the city. New restrictions in 2022 extended the ban to additional vehicle categories, with visible results: the latest measures cut particulate matter (PM_{2.5}) emissions by 30%, black carbon by 62% and brought down the share of older diesel vehicles not equipped with particle filters from 14% to 3%.



Brussels local authorities will tighten the low emission rules again in 2025 and introduce additional restrictions in the following years. By 2035, all internal combustion engine vehicles will be banned, except for heavy goods vehicles and coaches.

The press release is available to read at eurocities.eu/latest/brussels-low-emission-zone-successfully-clears-the-air/.

NORTH AMERICA

Submission of US EPA Draft Heavy-Duty GHG Phase 3 Standards to White House

On 18 December 2023, the US EPA submitted its draft Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles - Phase 3 rule to the White House Office of Management and Budget (OMB) for review. This is the last step towards finalising the rule to decarbonise the nation's trucks and buses.

The rule would be implemented in two steps: first, stronger CO₂ standards for MY 2027 HD vehicles that go beyond the

current Phase 2 standards; and second, an additional set of CO₂ standards that would become increasingly more stringent standards each model year from MY 2028 through to 2032.

The submission can be seen at reginfo.gov/public/do/eoDetails?rid=353366.

CARB Workshop on Hydrogen ICEs

On 28 November 2023, the California Air Resources Board (CARB) held a workshop on hydrogen internal combustion engines (H₂-ICE) and their use in California's trucks. CARB, Engine Manufacturers Association (EMA) and OEMs agreed to this workshop as part of their agreement with CARB under the Clean Truck Partnership for supplying engines in California for the 2024-2025 model years and complying with the sales mandate required by the Advanced Clean Truck regulation (ACT).

The workshop's main agenda comprised of a CARB presentation followed by presentations from academia and industry stakeholders speaking about the science and technology of hydrogen combustion and fuel cells and TCO projections, followed by OEM presentations of heavy-duty deployment of H₂-ICE and fuel cell powertrains. A panel discussion followed.

The CARB presentation looked at the need for emissions reductions, including the 'extreme non-attainment' for ozone in some areas, as well as the regulatory framework for cleaning the heavy-duty fleet in California. It then considered aspects of planning already in place for medium- and heavy-duty fuelling infrastructure, such as regulation, incentives and construction.

As well as presentations from OEMs (PACCAR, Daimler Trucks, Volvo, Toyota and Hyundai), there were contributions from Sandia Heavy-Duty Optical Engine Lab, Argonne National Laboratory and Southwest Research Institute.

CARB stated at the end of the workshop that there is no current plan to make a regulatory change or continue a dialogue on this topic until the agency sees some data and results of current test programmes. CARB needs to review the information received during the workshop and also review a complementary fuels policy.

The agenda, presentation and recording of the workshop are available to view and download at arb.ca.gov/clean-truck-partnership.

CARB Proposed Amendments to Heavy-Duty Omnibus Regulation

On 6 December 2023, the California Air Resources Board (CARB) released the proposed amendments to the Heavy-Duty and Vehicle Omnibus Regulation and opened a 15-day comment period which will close on 21 December.

The amendments are part of a deal agreed with engine manufacturers to ease the Omnibus requirements for MY2024-26 transitional legacy engines and to align the key requirements of MY2027 and later engines with EPA standards (see AECC News of 14 July 2023). This is in exchange for industry's support of the state's zero-emission vehicle (ZEV) mandates regardless of whether other parties challenge the state's authority to adopt them.

The proposed amendments are specifically limited to MY2024-26 legacy engine provisions as well as specific certification and in-use testing and OBD requirements.

The CARB document is available to read at arb.ca.gov/sites/default/files/barcu/regact/2023/hdomnibus2023/15day_appa-1.pdf.

ASIA-PACIFIC

Introduction of Euro 5 Fuel in Thailand

On 15 December 2023, the Department of Energy in Thailand announced that from 1 January 2024, sales of fuel would have to meet Euro 5 standards.

The announcement states that the new standard is being enforced to reduce PM2.5 and improve public health as part of the government's 'Solving the Particulate Pollution Problem' agenda. This stipulates measures to prevent and reduce pollution at source, including the setting of new vehicle exhaust standards at Euro 5 and 6 levels.

According to the Pollution Control Department, it has found that Euro 3 and 4 standard cars will see PM2.5 reduced by 20-24% when using Euro 5 fuel.

The announcement (in Thai) can be found at doeb.go.th/news_activity/2531.pdf.

Australia Proposal for Euro 6d

On 21 December 2023, the Australian Government announced that from December 2025, new light-duty vehicle types will have to comply with Euro 6d emission standards.

The Government will also reduce the amount of aromatic hydrocarbons in RON 95 petrol. All petrol vehicles on Australia's roads will be able to use the new grade, while the existing 91 and 98 RON grades of petrol will be unaffected.

To simplify the change for fuel suppliers and customers, the Government says it will align the previously announced reduction in sulfur limits for all petrol with the new, strengthened aromatics limits. Petrol supplied from December 2025 will need to comply with the new standard.

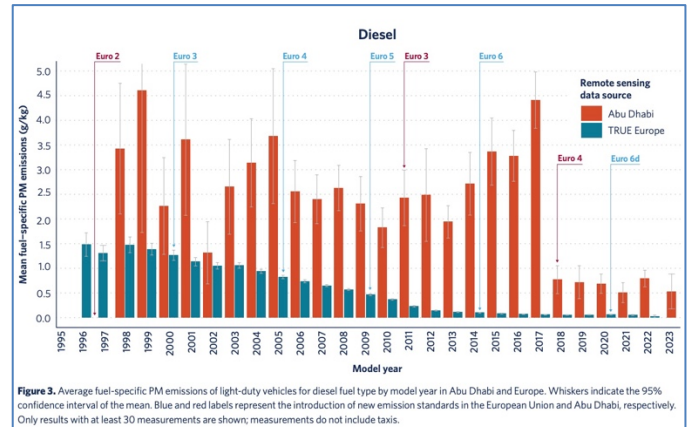
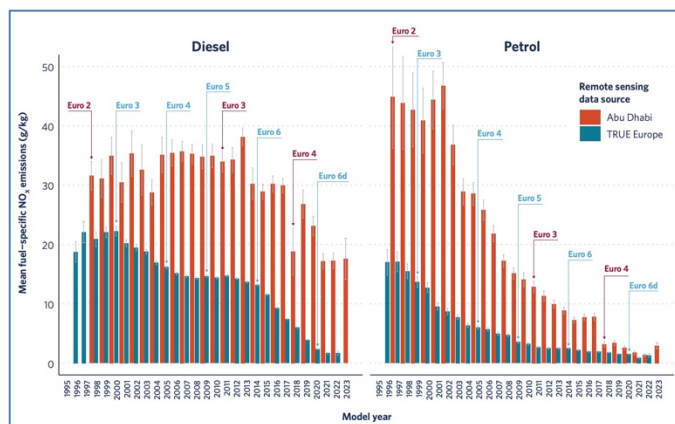
The announcement is available to read at minister.dccceew.gov.au/bowen/joint-media-release-cleaner-fuel-and-cars-leads-multi-billion-dollar-health-and-fuel-savings.

AFRICA AND MIDDLE EAST

Evaluation of Real-World Vehicle Emissions in Abu Dhabi

On 11 December 2023, The Real Urban Emissions (TRUE) Initiative published a report on a vehicle emissions testing campaign in Abu Dhabi. More than 80 000 usable measurements were taken, and the data collected about nitrogen oxides (NOx) and particulate matter (PM) emissions offers insights into the real-world performance of the on-road fleet.

The data highlighted that the introduction of the Euro 4 emission standard in the United Arab Emirates (UAE) in 2018 significantly reduced NOx and PM emissions from light-duty vehicles in Abu Dhabi, especially diesel-powered ones. Even so, these vehicles emit 10 to 15 times higher NOx and PM emissions than average vehicles of the same model year in Europe. The report states that adoption of the Euro 6 "d" stage or higher emission standard in the UAE would support significantly lower real-world NOx emission levels.



Finally, the report states electrification is the fastest way to reduce harmful tailpipe emissions from motor vehicles and TRUE suggests that Abu Dhabi accelerate the electrification of its public transport, government, and taxi fleet by setting zero-emission vehicle targets. At the federal level, policies such as a zero-emission vehicle mandate or CO₂ standard for new vehicles would foster the uptake of electric vehicles and help individual emirates align with federal air quality and climate targets.

The full report can be downloaded from theicct.org/publication/evaluation-of-real-world-vehicle-emissions-abu-dhabi-dec23/.

UNITED NATIONS

COP28 Event on Sustainable Low Carbon Mobility

On 6 December 2023, UNECE, UNESCAP and UN DESA organised an event at COP28 on sustainable low carbon mobility and the road to achieving it.

To get on track with the Net Zero Emissions (NZE) by 2050 Scenario, CO₂ emissions from the transport sector must fall by more than 3% per year to 2030. Today's combustion engine dominated transport sector continues to rely on oil products for nearly 91% of its final energy.

The debate concluded that the reductions in emissions and guaranteed high transport accessibility levels that are needed can only be achieved through a mix of policies and measures, involving: strong regulations (to discourage high emitting operations) and fiscal incentives (to help boost the lower emitting ones); investment in infrastructure to enable low- and zero-emission vehicle operations; a real push towards modal shift from road towards less emitting rail and inland waterways and away from passenger vehicle-based mobility towards active mobility and public transport; enhanced cross-sectoral cooperation.

UNECE's Inland Transport Committee (ITC) agreed on dedicated actions to facilitate wider adoption of electric vehicles (EVs) by working on policy harmonisation, improving

The Euro VI buses that Abu Dhabi introduced in 2019 and 2020 showed NOx emissions 94% lower and PM emissions 86% lower than other buses in the emirate certified to the Euro IV minimum. TRUE therefore suggests that the Abu Dhabi government continue to acquire buses with minimum Euro VI standards, and preferably of the "D" stage or higher, as data from Europe shows those buses offer the best emissions performance.

Taxis more than five years old were responsible for at least 55% of total NOx emissions from taxis despite comprising only around 17% of the taxi fleet in Abu Dhabi. These vehicles were driving under a derogation of their franchise awaiting renewal and were estimated to emit up to 15 times their type-approval limit.

relevant data collection, and fostering global exchanges among experts in the public and private sector.

UN regulations already enable harmonised measurement of vehicles' fuel consumption and tailpipe CO₂ emissions and the widespread introduction of alternative fuel sources, including electric, hybrid and hydrogen. In addition, UNECE is developing a globally harmonised methodology to determine vehicles' carbon footprint throughout their life cycle and is working to regulate the climate impact of some 23 million used vehicles, which were exported in 2015-2020, around 66% of which to developing and transitional countries.

The UNECE press release is at unece.org/media/press/386256.

GENERAL

Industry Reaction to Provisional Euro 7 Trilogue Outcome

On 18 and 19 December 2023, industry associations reacted to the result of the Euro 7 trilogue discussions (see above).

AECC expressed disappointment and says Euro 7 falls short as a supporting tool for better air quality in European cities. AECC's press release points out that for cars and vans, the provisional Euro 7 agreement settles with Euro 6 limits and test conditions for exhaust emissions. It does acknowledge on the other hand that PN10 procedures are included.

Regarding trucks and buses, AECC highlights that test procedures are almost identical to those in Euro VI, with the low-power threshold adjusted. It goes on to say that limits are reduced, but this will not fully address significant shortcomings for cold-start operation in urban environments.

Commenting on the "weak ambition" of Euro 7, AECC calls on the European Commission to consider reviewing its effectiveness and appropriateness linked to the reviews of future EU air quality rules, as well as the light- and heavy-duty vehicles' CO₂ emissions standards.

The European Automobile Manufacturers' Association (ACEA) said it "marks a major milestone in Europe's world-leading record of setting emissions standards for cars, vans, trucks and buses and provides planning certainty going forward."

The association says it is counting on the European Commission's support to deliver robust secondary legislation as swiftly as possible. It adds that it will "continue working to ensure a realistic Euro 7, within the limitations imposed by the primary legislation."

The European Association of Automotive Suppliers (CLEPA) responded by saying that the compromise was slightly more ambitious than the Council's position, particularly on limit values. It goes on to say that the agreement removes most of the Commission's proposal. CLEPA does say it is positive to see progress on brake particle limits which allow for

further evaluation of hybrid and fuel cell vehicle performance and some improvement on NO_x and particle size. However, "more ambition would have been technically and economically feasible."

AECC's press release is available to read at aecc.eu/wp-content/uploads/2023/12/231219-AECC-statement-on-Euro-7-trilogue-final.pdf.

ACEA's statement is at

acea.auto/press-release/euro-7-agreement-industry-welcomes-planning-certainty-but-flags-technical-and-investment-challenges.

CLEPA's press release can be found at

clepa.eu/mediaroom/trilogue-on-euro-7-concluded-new-pollutant-standards-make-marginal-steps-forward.

Green NGO Response to Provisional Euro 7 Trilogue Agreement

On 18 December 2023, Transport & Environment (T&E) responded to the provisional trilogue agreement on Euro 7.

T&E is calling on the European Parliament to reject the deal which would allow carmakers to 'greenwash' new vehicles as 'Euro 7' despite being 'virtually no cleaner than under the 'Euro 6' standard agreed in 2014.'

It points out that lawmakers agreed to count smaller particles than under the existing law, but that limits on the emissions of NO_x, carbon monoxide and hydrocarbons and the mass of particulate matter remain unchanged.

T&E warns that citizens' health will suffer for decades as a result of the 'watering down' of the rules for emissions from cars, vans, buses and trucks.

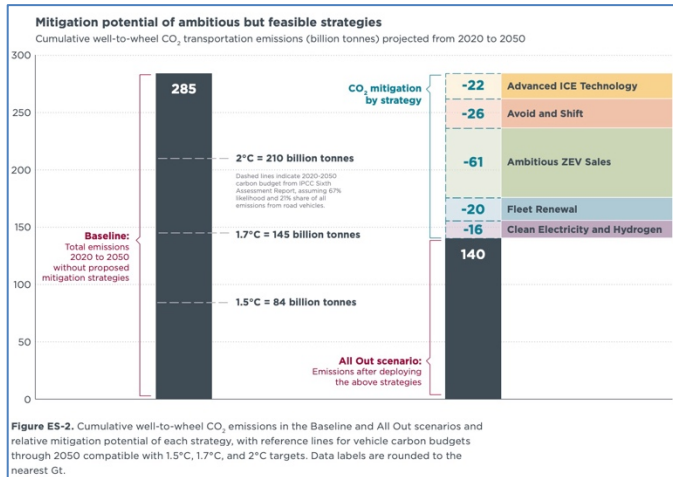
The T&E statement can be found at

transportenvironment.org/discover/euro-7-deal-to-freeze-air-pollution-limits-shows-that-the-car-lobby-is-back/.

Report on Strategies for Alignment of Global Road Transport with <2°C Goal

On 27 November 2023, the International Council on Clean Transportation (ICCT) published a report looking at strategies to decarbonise global road transport.

Strategies considered are: further accelerating the transition of new vehicle sales to zero-emission vehicles (ZEVs); accelerating the transition of used vehicle imports to ZEVs; further deployment of internal combustion engine (ICE) efficiency technology for new light-duty vehicles; further deployment of ICE efficiency technology for new heavy-duty vehicles; passenger vehicle avoid-and-shift measures in urban areas; freight vehicle avoid-and-shift measures and operational efficiency improvements; and fleet renewal strategies to shift vehicle activity from older ICE vehicles to new vehicles.



The study shows that a combination of additional strategies in the “All Out” scenario could further reduce emissions in line with a well-below 2°C pathway with the same parameters as a previous study. It also finds that projected CO₂ emissions from vehicles that are already on the road today would exceed the limited carbon budget remaining to avoid overshoot of 1.5°C. It states that the cumulative emissions from selling no new vehicles going forward are only 10 billion tonnes lower than the All Out scenario when no other measures are implemented.

ICCT comments that ending all car sales tomorrow is not a feasible option, but the strategies identified in this paper are, and are nearly as effective. In particular, Ambitious ZEV Sales

for new vehicles combined with restricting the age of used vehicle sales to no more than five years for light-duty vehicles and no more than eight years for heavy-duty vehicles (both with a three-year dispensation for Africa) could avoid an additional 61 billion tonnes of cumulative CO₂ emissions globally; this contributes 42% of the emission reductions in the All Out scenario, more than any other two strategies combined.

The ICCT report is available to read at theicct.org/publication/vision-2050-strategies-to-reduce-gap-for-global-road-transport-nov23/.

RESEARCH SUMMARY

Effects of Emissions and Pollution

Human exposure to diesel exhaust induces CYP1A1 expression and AhR activation without a coordinated antioxidant response, M. Friberg, et al.; *Particle and Fibre Toxicology* (2023), Vol. 20, 47, doi: [10.1186/s12989-023-00559-1](https://doi.org/10.1186/s12989-023-00559-1).

Acute and continuous exposure of airborne fine particulate matter (PM_{2.5}): diverse outer blood-retinal barrier damages and disease susceptibilities, Yuzhou Gu, et al.; *Particle and Fibre Toxicology* (2023), Vol. 20, 50, doi: [10.1186/s12989-023-00558-2](https://doi.org/10.1186/s12989-023-00558-2).

Transport, Climate Change and Emissions

A review on low carbon fuels for road vehicles: The good, the bad and the energy potential for the transport sector, Jesús Benajes, et al.; *Fuel* (April 2024), Vol. 361, 1 April 2024, 130647, doi: [10.1016/j.fuel.2023.130647](https://doi.org/10.1016/j.fuel.2023.130647).

FORTHCOMING CONFERENCES

International Engine Congress

27-28 February 2024, Baden-Baden, Germany

atlive.de/en/events/international-engine-congress/information/information-for-speakers/call-for-papers

On-Board Diagnostics Symposium - Europe

12-14 March 2024, Amsterdam, Netherlands

sae.org/attend/obd-europe/registration

VERT Forum

22 March 2024, Dübendorf, Switzerland

vert-dpf.eu/j3/index.php/start-page/events

10th AVL High Power Systems Conference

17-18 April 2024, Graz, Austria

avl.com/en/events/avls-10th-high-power-systems-conference?sfmtc_id=120623423

45th International Vienna Motor Symposium

24-26 April 2024, Vienna, Austria

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

27th ETH Nanoparticles Conference

10-14 June 2024, Zürich, Switzerland

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

Deadline for abstracts 29 February 2024

SIA Powertrain International Conference

19-20 June 2024, Lille, France

event.fourwaves.com/79651605-96c9-454f-9129-fe5986450f40/pages

Fuel Science: From Production to Propulsion

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tme.rwth-aachen.de/cms/TME/Der-Lehrstuhl/Aktuelle-Veranstaltungen/~pmdn/12-FSC-Konferenz-2024/?lidx=1

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CLEPA Materials Regulations and Sustainability Event

27-28 June 2024, Frankfurt, Germany

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

New Materials for future Mobility (NeMMo)

3-4 July 2024, Nantes, France

sia.fr/evenements/?year=2024

International Congress on Catalysis

14-19 July 2024, Lyon, France

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

Rostock Large Engine Symposium

12-13 September 2024

rgmt.de

Emissions Analytics Non-Road Powertrains and Fuels

18-19 September 2024, Munich, Germany

conferences.emissionsanalytics.com/nonroad-eu

Deadline for abstracts 5 April 2024

Aachen Colloquium Sustainable Mobility

7-9 October 2024, Aachen, Germany

aachener-kolloquium.de/en

Deadline for abstracts 15 February 2024