

NEWSLETTER

International Regulatory Developments

TABLE OF CONTENTS

AECC Euro 7 Driving Experience Event.....	2
EUROPE	2
Priorities for Spanish EU Presidency.....	2
EP's ENVI Committee Consideration of Draft Report on Euro 7.....	2
ITRE Committee Amendments to Euro 7 Proposal	3
Environment Council Discussion on HD CO ₂ Emissions and Ambient Air Quality	4
ITRE Draft Opinion on Heavy-Duty CO ₂ Emissions Standards	4
TRAN Amendments on Heavy-Duty CO ₂ Standards	5
ENVI Draft Report and Debate on HDV CO ₂ Emission Standards	5
ENVI Committee Vote on EU Air Quality Rules.....	6
Poland Challenge to 'Fit for 55' Package	6
EEA Data on Average CO ₂ Emissions from New Cars and Vans in Europe.....	6
EEA Briefing on Progress under National Emission Reduction Commitments Directive.....	6
European Court of Auditors Report on EU Climate and Energy Targets	7
NORTH AMERICA	7
US President Veto of Resolution against Heavy-Duty Truck NOx Rule.....	7
Final US Renewable Fuels Standards Rule for 2023, 2024 and 2025.....	8
CARB On-Road Motorcycle Rulemaking Workshop.....	8
UNITED NATIONS	9
Adoption of new UN Regulation on RDE	9
GENERAL	9
T&E Analysis of Euro 7 Impact on Air Quality in European Cities	9
TRUE Assessment of Real-World Vehicle Emissions in Scotland.....	9
TRUE Analysis of Particulate Emissions from US Gasoline LDVs and Trucks	11
CARES Report on Real-World Emission Factors and Impact of LEZs	11
Environmental NGOs' Letter on Euro 7	11
RESEARCH SUMMARY	12
FORTHCOMING CONFERENCES	13

AECC Euro 7 Driving Experience Event

On 6 June 2023, AECC and the International Platinum Group Metals Association (IPA) held a Euro 7 driving experience event for MEPs and European Parliament staff, as well as officials from EU Member States' Permanent Representations in Brussels.



As well as being driven in the AECC demonstrator vehicle, guests had the opportunity for detailed exchanges on technologies, performance and ongoing Euro 7 considerations. AECC presented the data from the recent AECC-IPA projects on light- and heavy-duty demonstration vehicles. The attendees had the opportunity to discuss the latest ultra-low emissions test data and findings, obtained over a wide range of driving conditions.

The practical and tangible nature of the driving experience greatly stimulated the interest and curiosity of the attendees. Many of them posed several questions that were answered during – and sometimes beyond – the allocated de-briefing time after the drive.

More information and images from the event are at aecc.eu/event/aecc-ipa-euro-7-driving-experience-event/.

EUROPE

Priorities for Spanish EU Presidency

On 15 June 2023, the President of the Spanish Government, Pedro Sánchez, presented the four priorities of the Spanish Presidency of the Council of the EU, which Spain will assume from 1 July until the year-end.

These are promoting the reindustrialisation of Europe, moving towards ecological transition, consolidating the social pillar and strengthening European unity.

Regarding the green transition, the Spanish EU Presidency says it will work to accelerate the legislative files related to 'Fit for 55', such as the Gas and Hydrogen package, and the energy efficiency regulations.

The press release of the Spanish Presidency is at spanish-presidency.consilium.europa.eu/en/news/priorities-of-the-spanish-presidency-of-the-council-of-the-eu.

EP's ENVI Committee Consideration of Draft Report on Euro 7

On 15 June 2023, the European Parliament's Environment (ENVI) committee was scheduled to debate on the Rapporteur MEP Vondra's draft report on the proposal setting the emission type approval of light and heavy-duty vehicles (Euro 7). However, due to an extended vote on the Nature Restoration Law, the debate on the Euro 7 draft report took place on 27 June.

The Rapporteur, MEP Alexandr Vondra (ECR, CZ), opened the debate, saying that the "high ambition" and broad scope of the proposal would make it difficult for Member States and industry to comply.

He also pointed out that a coalition of eight Member States opposing the proposal would make negotiations difficult within the Council, while the MEP expects the same to be true of the Parliament.

The Rapporteur stressed three overarching issues that his draft Report tries to tackle: the risk of diverting resources for decarbonisation; concerns over technological feasibility; and significant cost implications, quoting a recent for the automotive industry by Frontier Economics.

MEP Vondra proposed in his draft report setting an additional time limit for the Commission to prepare the secondary legislation and different limits for heavier vans. The MEP also criticised the statistical relevance of real-driving condition tests, the introduction of OBM systems and the viability of emission limits for heavy-duty vehicles compared to non-EU countries.

Shadow Rapporteur MEP Jens Gieseke (EPP, DE) welcomed the draft report as an improvement from the Commission's proposal and underlined that clean air and climate measures were important but they had to go hand in hand with the industry navigating it. The MEP criticised the Euro 7 proposal as being a "threat to Europe's automotive future" and stressed the need to take into account the end of the combustion engine already agreed upon. He argued that this should lead to turning down the exhaust limits and called on the Euro 6 test measures to be maintained. Moreover, the Shadow Rapporteur suggested that enough time should be given for relevant technologies to be tested and implemented, which he said justifies a longer deadline for implementation. Mr Gieseke supported the question of CO₂-neutral fuels after 2035.

Shadow Rapporteur Christel Schaldemose (S&D, DK) argued that the Rapporteur's draft Report was worsening the Commission's proposal and said Euro 7 was needed for the health of citizens in Europe. The MEP stressed that the legislation was not a problem for the industry, arguing that

the industry already has the technology. Regarding the cost, the MEP criticised the study quoted by the Rapporteur.

While the MEP agreed on some provisions brought by the Rapporteur, the S&D will table amendments for improvements and expressed her willingness to find compromises and give clarity to citizens and the industry.

Shadow Rapporteur Susana Solis Pérez (Renew, Spain) welcomed the draft Report as a good basis for discussion and called for the need to be pragmatic. The MEP said that Euro 7 was necessary but described the Commission's proposal as not delivering for citizens, the environment and industry. The MEP insisted that there should not be additional costs when the EU is already imposing the electrification of light-duty vehicles and heavy-duty vehicles and argued that the proposal will involve a much greater increase in prices than indicated by the Commission, particularly for small cars. The MEP insisted on the need to give legal certainty and to set a reasonable deadline for secondary legislation while the industry would need at least two years to comply. However, the MEP called for improvement in the monitoring system and for greater ambitions on emissions from tailpipes and tyres as well as for battery durability.

Shadow Rapporteur Bas Eickhout (Greens/EFA, Netherlands) criticised the Commission's proposal for not being ambitious enough and criticised the draft report for weakening it. Mr Eickhout said the costs of implementation cannot be used as an argument as they would be no more than about 2%. The Shadow Rapporteur reminded MEPs that the aim of the proposal was to improve air quality and asked for consistency, as he pointed out that if the intermediate ambition scenario chosen by the Commission were to be lowered, it would not meet air quality standards. Finally, the MEP criticised the Rapporteur for being inconsistent by giving more time for implementing and lowering ambitions at the same time and called for more ambition for cars that might stay longer on the market.

MEP Sylvia Limmer (ID, Germany) welcomed the draft Report and said that the Commission's emissions limits were inappropriate and not feasible, in particular when taking into account the end of the combustion engine in 2035.

Rapporteur for Opinion for the European Parliament Committee on Industry, Research and Energy (ITRE), MEP Massimiliano Salini (EPP, Italy) criticised the discussion around cost and the source of data and described the Rapporteur's draft Report as appropriate. The MEP also described the tailpipe approach as unscientific compared to the life-cycle approach and described the Euro 6 results as good.

Other MEPs joined the debate, some backing the Rapporteur's draft report and others stressing the need for ambition.

On behalf of the Commission, Mr Mark Nicklas, Head of Unit for Mobility & Energy Intensive Industries at the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) recalled that 70 000 premature deaths occur annually from air pollution. For this reason, the Head of Unit stressed that carbon-neutral fuels have the same exhaust emissions.

The Commission first warned that if there is a significant weakening of the proposal, Member States would have difficulties complying with air quality requirements while the taxpayers would have to cover the costs of court cases.

Mr Nicklas clarified that the Commission re-evaluated the costs, with the same conclusions at about €200 per car. The Head of Unit also mentioned that the study quoted by the Rapporteur goes beyond what is needed to comply with Euro 7 and notably included an automatic gearbox, without anybody really being able to explain why. The Commission indicated that no research was necessary to implement the Euro 7 proposal as it is based on technology already available on the market. The industry can therefore focus on decarbonisation. Moreover, while the Commission understands the concerns about the lead time, the proposed time was correlated to the ambition level. The Head of Unit also warned against linking secondary legislation to the implementation of the proposal, as the sector needs legal certainty and a clear date.

Finally, the Commission stressed that there was much more untapped potential to reduce pollution for HDVs as many real-life conditions are not covered under the Euro VI testing methods.

The MEPs in ENVI had until 29 June to table amendments to the Rapporteur's draft report while the ENVI Committee is provisionally scheduled to vote on the Report on 20 September.

The video of the meeting is at multimedia.europarl.europa.eu/en/webstreaming/committees_20230627-1400-COMMITTEE-ENVI. (from 14.36 to 15.30)

ITRE Committee Amendments to Euro 7 Proposal

On 13 June 2023, the ITRE committee of the European Parliament published amendments to the European Commission's Euro 7 proposal. The Rapporteur is MEP Massimiliano Salini (EPP, IT).

Amendments refer to the need to preserve 'the mobility rights of the EU citizens, their right of free choice regarding the type of car/engine they use...' and that '...emissions reductions resulted from applying the Euro 7 standards should be done in a cost-effective manner for the final consumer...'. Reference is also made to 'industry analysis' of costs, with a call to focus resources on CO₂-neutral and zero-emission vehicles.

Amendments from the Greens mention the need for durability across the full vehicle lifetime, and call for further research into vehicles running on CO₂-neutral fuels.

With regard to emission limits, there are proposed amendments calling for higher and lower limits, from different sides of the political spectrum.

The amendments can be found at europarl.europa.eu/doceo/document/ITRE-AM-749150_EN.pdf and europarl.europa.eu/doceo/document/ITRE-AM-749151_EN.pdf.

Environment Council Discussion on HD CO₂ Emissions and Ambient Air Quality

On 20 June 2023, EU Ministers responsible for the Environment meet on 20 June 2023 in Luxembourg for an Environment Council.

The Ministers held a policy debate on the European Commission proposal for a regulation on CO₂ emission standards for new heavy-duty (HD) vehicles among other items. The Swedish Council Presidency opened the debate by reminding Member States Ministers that while the 2019 proposal was setting targets until 2030 for certain categories of vehicles, the new Commission proposal would extend the scope of the CO₂ emission performance standards to other vehicles, including buses, and increase its ambition by setting targets for 2035 and 2040, in line with the EU climate objectives.

EU Commission Executive Vice President Timmermans referred in his introductory remarks to a memorandum of understanding signed by several countries on 100% emission-free sales targets by 2040, and the fact that the US has proposed a phase 3 greenhouse gas emission standard for HDVs, in line with the Commission's proposal. He also spoke about the linked debate about Euro 7, calling for an early agreement on the HD CO₂ standards. This would enable parties to move forward to unite the opposing views of those that want a more ambitious Euro 7 for air quality benefits and those that want a weaker Euro 7 as it would distract from investments in ZEVs. He said both can be achieved with an ambitious HD CO₂ emissions standard.

Member States shared diverging views on the targets of the HD CO₂ emissions proposal. Germany suggested dealing with the dossier quickly to achieve a General Approach in Council by October and asked for more flexibilities for interim targets in 2030 and 2035. Minister Lemke also welcomed the technology openness including hydrogen combustion engines but said it should additionally promote climate-neutral fuels. The Netherlands asked for higher targets, including a -100% target by 2040. France proposed strengthening the 2030 targets while introducing more ambitious objectives for 2035 and 2040 and taking into account the different levels of technological maturity. Italy called for a careful check on the feasibility of targets and said alternative technologies to electrification will need to be

supported including ICEs which remain important for the sector.

During the discussion on ambient air quality, concerns were raised regarding the implementation of the level of ambitions proposed by the European Commission. Poland, Hungary and the Czech Republic expressed stronger doubts over the possibility of reaching the proposed air pollution ambitions. Croatia stated that it should be considered that certain Member States are not compliant with the current standards, while Cyprus also noted that some provisions would be excessive for small Member States.

Italy also expressed concerns, arguing that the proposed timeline is not appropriate and that the proposed air pollution measures are not realistic.

France argued that a balance between an ambitious but effective legislation needed to be found and that it should be adapted to each Member State's specificities. France also suggested introducing both short and medium term objectives. Finland also argued that national and regional measures should be left to Member States to decide.

Among the Member States clearly supporting the high objectives of the proposal, Germany and Portugal argued that the alignment between EU standards and the WHO guidelines could follow a gradual approach.

The HD CO₂ session can be replayed at video.consilium.europa.eu/event/en/26904.

The ambient air quality session is at multimedia.europarl.europa.eu/en/webstreaming/committee-on-environment_20230626-1500-COMMITTEE-ENVI.

ITRE Draft Opinion on Heavy-Duty CO₂ Emissions Standards

On 16 June 2023, the Industry, Research and Energy (ITRE) committee of the European Parliament published a draft opinion on the proposal for a regulation strengthening the CO₂ emissions performance standards for new heavy-duty vehicles. Rapporteur for opinion is MEP Miapetra Kumpula-Natri (S&D, FI).

The Rapporteur says she supports many elements of the Commission's proposal, such as extending the scope of the regulation to cover smaller trucks, long-distance buses and trailers. She also agrees with the CO₂ reduction target for all vehicle sub-groups for the reporting periods of the years 2040 onwards by 90%. However, the Rapporteur proposes new, stronger CO₂ emission standards for heavy-duty vehicles for the reporting periods of the years 2035 to 2039 by increasing the target from 65% to 75%.

Furthermore, the Rapporteur proposes a more ambitious zero-emission vehicle definition. According to the Commission's proposal, a zero-emission vehicle would be allowed to emit up to 5g CO₂/tkm. This allowance intends to allow for dual-fuel engines running on a mix of hydrogen and diesel to be categorised as zero-emissions. Revising the limit

to 1g CO₂/tkm is the reasonable regulatory approach, according to the Rapporteur.

Amendments also include additional vehicle categories to be covered by the regulation.

The ITRE draft opinion is at europarl.europa.eu/doceo/document/ITRE-PA-749317_EN.pdf.

TRAN Amendments on Heavy-Duty CO₂ Standards

On 16 June 2023, the European Parliament's Transport and Tourism (TRAN) committee published amendments to the proposal for a regulation strengthening the CO₂ emission performance standards for new heavy-duty vehicles. Rapporteur for opinion is MEP Andris Ameriks (S&D, LV).

One amendment says that the strengthened CO₂ emission reduction standards must become technology neutral in reaching the fleet-wide targets that they set, including zero and low-emission vehicles running on advanced biofuels or synthetic fuels.

An amendment from the Greens states that all new heavy-duty vehicles put on the EU market as of 2040 should be zero-emission.

A number of other amendments refer to the need for enabling infrastructure to aid the transition.

The TRAN amendments are at europarl.europa.eu/doceo/document/TRAN-AM-749289_EN.pdf.

ENVI Draft Report and Debate on HDV CO₂ Emission Standards

On 20 June 2023, the Environment (ENVI) Committee of the European Parliament published its draft report on the proposal for a regulation as regards strengthening the CO₂ emission performance standards for new heavy-duty vehicles (HDVs) and integrating reporting obligations, and repealing Regulation (EU) 2018/956. The Rapporteur is MEP Mr Yannick Jadot (Greens, FR).

Amendments include changing the definition of zero-emission internal combustion engine vehicle to one which emits less than 1gCO₂/(t.km) or 1gCO₂/(p.km), rather than 5g proposed by the European Commission. The document also proposes widening the range of vehicles covered by the regulation, as well as increasing the ambition level for 100% CO₂ reduction by 2040.

The draft report was discussed by the ENVI Committee on 26 June. The Rapporteur first emphasised the responsibility to address road traffic emissions and stressed that HDVs account for 27-28% of all transport emissions. MEP Jadot defended the need to send the right signal to truck makers on zero emissions and climate responsibility and mentioned that the challenge was now for car makers to commit to those ambitions. He said the Regulation should pass before

the elections to give a clear unified EU position on the matter. Furthermore, the MEP argued that based on the Commission's proposal, the EU will adapt to business plans with HDV producers based on what they can achieve and stressed that enabling conditions should be taken into account.

Shadow Rapporteur Jens Gieseke (EPP, DE) described the draft Report as unrealistic in its aims and argued that the measures should be implementable to businesses, especially smaller ones and that the answer should not rely solely on electric mobility in this sense. The EPP MEP argued for other climate-neutral technologies to be taken into account, as well as dependence on imports from other countries, particularly China.

Shadow Rapporteur Christel Schaldemose (S&D, DK) welcomed the Rapporteur's draft Report and defended the need to reform the transport sector to contribute to the green transition as well as to send a clear signal to the sector and its investors. However, the MEP described the partial goals to be reached by 2035 as probably too ambitious while she fully supported the proposed definition of "zero emission vehicle" (ZEV). On the proposed exemptions, the MEP also supported the aid for retrofitted vehicles and suggested that lighter-duty vehicles should be included.

Shadow Rapporteur Nikolaj Villumsen (GUE/NGL, DK) recalled that HDVs contribute to 6% of all emissions, which is why the process to become climate neutral should be sped up. On behalf of his political group, the MEP strongly supported the Report and its higher ambitions.

MEP Stanislav Polčák (EPP, CZ) argued that it was essential to give the green light to these changes as soon as possible but stressed that feasibility was key while attention should be paid to the consequences for the EU industry. In addition, progress should be gradual and alternative fuels should be analysed in more detail.

ENVI Committee Chair and Shadow Rapporteur Pascal Canfin (Renew, FR) supported the ambition of the Report but said that it should go too far and too fast, which would imply a loss of support on the part of the industry, something that should be avoided. If objectives are seen as not attainable, the project will not achieve any results. The ENVI Chair argued that the Report risked being counterproductive and called for negotiations to start as soon as possible to stay as close as possible to the Commission's proposal. Similarly to the Rapporteur, the ENVI Chair also objected to adding provisions related to e-fuels. Finally, the MEP Canfin argued for the need to ensure that fleets running on biofuels today have a way out in the medium term.

On behalf of the Commission, Mr Edoardo Turano, Head of Unit of Road Transport at the Directorate-General for Climate Action (DG CLIMA) argued that the Commission's proposal is in line with announcements from major producers to reduce emissions and ensure energy security. In addition, a

signal should be given to the industry also in terms of the skills needed in the job market.

MEP Jadot closed the debate by stressing the need to act quickly, with the aim of voting on the proposal in plenary in November.

ENVI MEPs have until 4 July 2023 to table amendments to the Rapporteur's draft Report while the Committee is provisionally scheduled to adopt its Report on the measure on 23 October 2023.

The report is available to read at europarl.europa.eu/doceo/document/ENVI-PR-746858_EN.pdf.

The video of the ENVI Committee meeting is at multimedia.europarl.europa.eu/en/webstreaming/committee-on-environment_20230626-1500-COMMITTEE-ENVI. (15.04-15.46)

ENVI Committee Vote on EU Air Quality Rules

On 27 June 2023, the European Parliament's Environment (ENVI) Committee adopted its position to improve air quality in the EU to create a cleaner and healthier environment.

The report, adopted with 46 votes in favour, 41 against and 1 abstention, sets stricter 2030 limit and target values for several pollutants including particulate matter (PM2.5, PM10), NO₂ (nitrogen dioxide), SO₂ (sulphur dioxide) and O₃ (ozone) to ensure that air quality in the EU is not harmful to human health, natural ecosystems and biodiversity. MEPs also say that upcoming reviews of this directive shall ensure full and continuous alignment with the most recent World Health Organization (WHO) Air Quality Guidelines.

The Environment Committee underlines the need to increase the number of air quality sampling points. MEPs also want to harmonise air quality indices covering sulphur dioxide, nitrogen dioxide, particulate matter and ozone across the EU.

MEPs propose that in addition to air quality plans, which are required when EU countries exceed limits, all member states would also have to create air quality roadmaps that set out short- and long-term measures in order to comply with the new limit values.

Parliament is scheduled to adopt its mandate during the 10-13 July 2023 plenary session. Once Council has adopted its position, negotiations on the final shape of the law can start.

The ENVI press release is at europarl.europa.eu/news/en/press-room/20230626IPR00846/air-pollution-environment-committee-meps-push-for-tougher-rules.

Poland Challenge to 'Fit for 55' Package

On 14 June 2023, Euractiv reported that Poland will challenge the regulation on the phase-out of internal combustion engines in the European Court of Justice (CJEU). It will also oppose other parts of the package.

Poland's Climate Minister Ms Anna Moskwa is reported to have said that "The solutions regarding a ban of combustion cars from 2035 is unprofitable for all the European economies."

According to Moskwa, Poland is counting on the CJEU to rule the law void due to wrong legal and formal basis, namely qualified majority voting in the Council, instead of unanimous, which Warsaw believes was against the rules.

The Euractiv report is available to read at euractiv.com/section/politics/news/poland-to-challenge-fit-for-55-over-combustion-engine-law/.

EEA Data on Average CO₂ Emissions from New Cars and Vans in Europe

On 20 June 2023, the European Environment Agency (EEA) published provisional data on CO₂ emissions from new passenger cars and vans registered in Europe in 2022. The data show that average CO₂ emissions of the 9.4 million new passenger cars registered in Europe in 2022 were 108.2 g CO₂/km, around 6 g CO₂/km less than in 2021.

The main driver of this trend was a continued growth in the share of electric car registrations, reaching 23% in 2022. This includes 13.4% full electric cars.

About 1 million new vans were registered in Europe in 2022 with average emissions of 185.3 g CO₂/km, which is around 8 g CO₂/km lower than in 2021. The share of electric vans increased from 3.5% in 2021 to 6.1% in 2022.

The EEA's press release and data are at eea.europa.eu/en/newsroom/news/average-emissions-from-new-cars-and-vans.

EEA Briefing on Progress under National Emission Reduction Commitments Directive

On 28 June 2023, the European Environment Agency (EEA) published a briefing on the progress made by the EU and its Member States towards reducing emissions of the five main air pollutants regulated under the National Emission reduction Commitments Directive (NECD). It presents an assessment of Member State performance against the emission reduction commitments for 2020-2029 as well as their progress towards achieving the more ambitious reduction commitments that will apply from 2030 onward.

The NECD sets obligations to reduce national emissions of five pollutants, namely fine particulate matter (PM2.5), nitrogen oxides (NO_x), non-methane volatile organic compounds (NMVOCs), ammonia (NH₃) and sulphur dioxide (SO₂). The Directive targets 2020-2029, with more drastic obligations from 2030 onwards.

In 2021, 13 Member States met their respective 2020-2029 national emission reduction commitments for each of the five main pollutants, while 13 Member States failed to do so for at least one of the five main air pollutants.

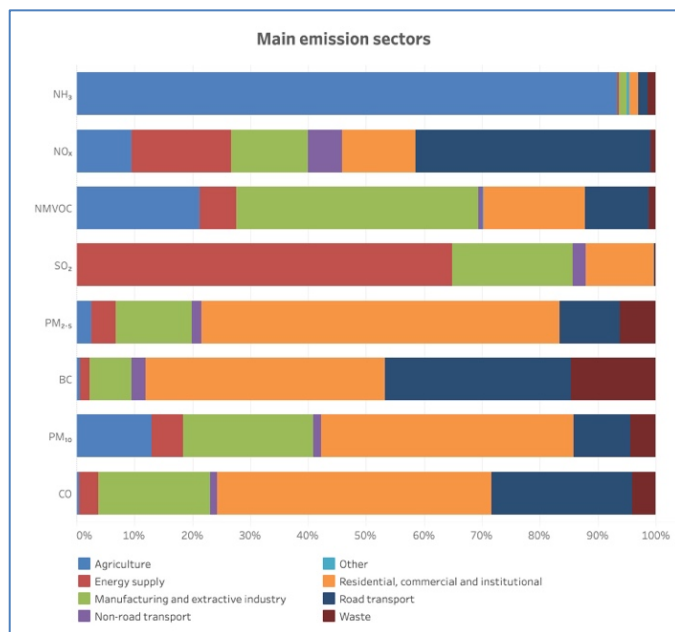
Emissions of the main air pollutants in EU Member States continued to decline, maintaining a trend seen since 2005. This was the case despite an increase in gross domestic product over the same period.

Achieving further reductions for 2030 and beyond is expected to be a significant challenge for nearly all EU countries for nearly all pollutants, and the reduction rate for some pollutant emissions is now levelling off.

Two Member States (Lithuania and Romania) need to reduce their NO_x emissions to meet their 2020-2029 national emission reduction commitments. Four Member States met their emission reduction commitments for 2030.

In 2021, the road transport sector was the main source of reported NO_x emissions, responsible for 41%. The COVID-19 lockdowns led to significant declines in road traffic. This may have helped all but two Member States achieve their NO_x emission reduction commitments for 2021.

Contributions to EU Member States' emissions from the main source sectors in 2021 are below.



Three Member States (Romania, Poland and Hungary) need to reduce their PM_{2.5} emissions to meet their 2020-2029 national emission reduction commitments. Seven Member States met their 2030 emission reduction commitments in 2021.

The EEA briefing can be found at eea.europa.eu/publications/national-emission-reduction-commitments-directive-2023.

European Court of Auditors Report on EU Climate and Energy Targets

On 26 June 2023, the European Court of Auditors (ECA) published a report on the EU's progress towards its climate and energy targets.

The ECA says that the EU's success in reaching its three 2020 climate and energy targets was not due to climate action alone. They note that the EU-27 would most likely not have reached its 2020 energy efficiency target without the lower energy consumption resulting from the 2009 financial crisis and the COVID-19 pandemic.

The auditors also found a lack of transparency regarding the way EU Member States reached their national binding targets through flexible arrangements: some EU countries did not contribute as expected and used other means to achieve their targets, such as buying emissions allocations or renewable energy shares from other member states that had exceeded their targets. The auditors say they found little information on the actual cost to the EU budget, national budgets and the private sector of achieving the targets and on the actions that proved successful. They add this makes it difficult for citizens and stakeholders to determine whether the EU is pursuing its overall targets cost-effectively and to learn lessons for the upcoming 2030 targets.

The auditors confirm that the EU is performing well compared to other industrialised countries in reducing greenhouse gas emissions. However, the EU does not account for all its emissions, which would be around one tenth higher if those caused by trade, international aviation and shipping were included.

Looking ahead, a particular concern of the auditors is that there is no sign of sufficient financing being made available to reach the more ambitious 2030 targets, particularly from the private sector, which is expected to contribute significantly. The Commission has also reported that EU countries collectively lack ambition in pursuit of the 2030 energy efficiency target, the corresponding 2020 target having already proven the hardest one to achieve. Some proposals to further raise the 2030 targets (notably the Fit-for-55 and REPowerEU proposals) will further increase financing needs.

The ECA report is available to read at eca.europa.eu/en/news/NEWS-SR-2023-18.

NORTH AMERICA

US President Veto of Resolution against Heavy-Duty Truck NO_x Rule

On 14 June 2023, US President Biden vetoed a Resolution approved by the House and Senate that would overturn EPA's Heavy-Duty Truck NO_x Rule (see AECC News of 13 January 2023).

This rule amends the Environmental Protection Agency's heavy-duty emissions control programme — including its standards, test procedures, and other requirements — to further reduce the air quality impacts of heavy-duty engines. Explaining the veto, the President explains that the rule cuts pollution, boosts public health, and advances environmental justice in communities across the country. He says it will prevent hundreds, if not thousands, of premature deaths; thousands of childhood asthma cases; and millions of missed school days every year.

He goes on to say that the resolution would deny communities these health benefits by resulting in weaker emissions standards for heavy-duty vehicles and engines, which are significant sources of pollutants that threaten public health.

The full veto message can be found at [whitehouse.gov/briefing-room/statements-releases/2023/06/14/message-on-presidents-veto-of-s-j-res-11/](https://www.whitehouse.gov/briefing-room/statements-releases/2023/06/14/message-on-presidents-veto-of-s-j-res-11/).

Final US Renewable Fuels Standards Rule for 2023, 2024 and 2025

On 21 June 2023, the US Environmental Protection Agency (EPA) announced a final rule to establish biofuel volume requirements and associated percentage standards for cellulosic biofuel, biomass-based diesel (BBD), advanced biofuel, and total renewable fuel for 2023–2025. The rule also responds to a court remand of the 2016 annual rule by establishing a supplemental volume requirement of 250 million gallons of renewable fuel for 2023.

Volume Targets (billion RINs)^a

	2023	2024	2025
Cellulosic biofuel	0.84	1.09	1.38
Biomass-based diesel^b	2.82	3.04	3.35
Advanced biofuel	5.94	6.54	7.33
Renewable fuel	20.94	21.54	22.33
Supplemental standard	0.25	n/a	n/a

^a One RIN is equivalent to one ethanol-equivalent gallon of renewable fuel.

^b BBD is given in billion gallons.

This final rule includes steady growth of biofuels for use in the nation's fuel supply for 2023, 2024, and 2025. The Energy Independence and Security Act (EISA) of 2007 does not specify statutory volumes after 2022, and EPA in this rule is establishing final biofuel volume targets for all categories under the "set" authority. When determining biofuel volumes for years after 2022, EPA must consider a variety of factors specified in the statute, including costs, air quality, climate change, implementation of the programme to date,

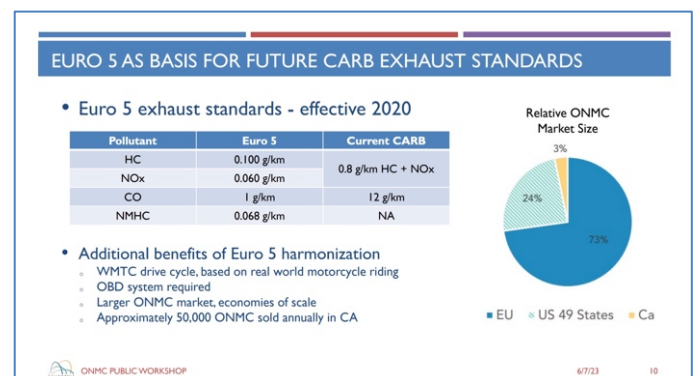
energy security, infrastructure issues, commodity prices, water quality, and supply.

The EPA press release is at [epa.gov/renewable-fuel-standard-program/final-renewable-fuels-standards-rule-2023-2024-and-2025](https://www.epa.gov/renewable-fuel-standard-program/final-renewable-fuels-standards-rule-2023-2024-and-2025).

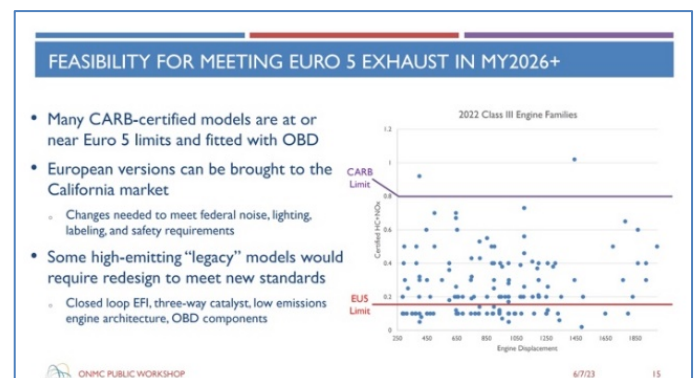
CARB On-Road Motorcycle Rulemaking Workshop

On 7 June 2023, the California Air Resources Board (CARB) held a public workshop on its proposed on-road motorcycle (ONMC) regulatory amendments in relation to emission standards and test procedures. CARB intends to have the amendments officially incorporated into the Code of Regulations by summer 2024.

CARB's most recent amendments were made in 1998, with tailpipe emissions effective in 2008. It proposes using the Euro 5 standards as the basis for future exhaust standards, saying that the size of the Californian market is small compared with Europe. It explained the additional benefits of Euro 5 harmonisation.



CARB wants all ONMC greater than 50cc to meet these standards from Model Year 2026, and says many CARB-certified models are at or near Euro 5 limits already and fitted with on-board diagnostics (OBD).



Details of the workshop are at arb.ca.gov/onmc-meetings-workshops.

UNITED NATIONS

Adoption of new UN Regulation on RDE

On 21 June 2023, the United Nations Economic Commission for Europe (UNECE) announced that it has adopted the United Nations Regulation on Global Real Driving Emissions (Global RDE).

Under this UN Regulation, emissions in real driving conditions shall not exceed laboratory limits by more than 10% for nitrogen oxides (NO_x) and 34% for particulate matter.

The Regulation was adopted by all contracting parties to the 1958 Agreement. In addition to the 57 contracting parties, UN vehicle regulations are often applied by other countries using them as a basis for national legislation.

The UN Regulation on Global RDE can be used together with UN Regulations No. 154 on emissions from light-duty passenger and commercial vehicles, and No. 83 on provisions concerning the approval of vehicles with respect to the emissions of pollutants according to engine fuel requirements. Or it can be used as standalone procedure using the emission limits coming from local laboratory tests as a reference.

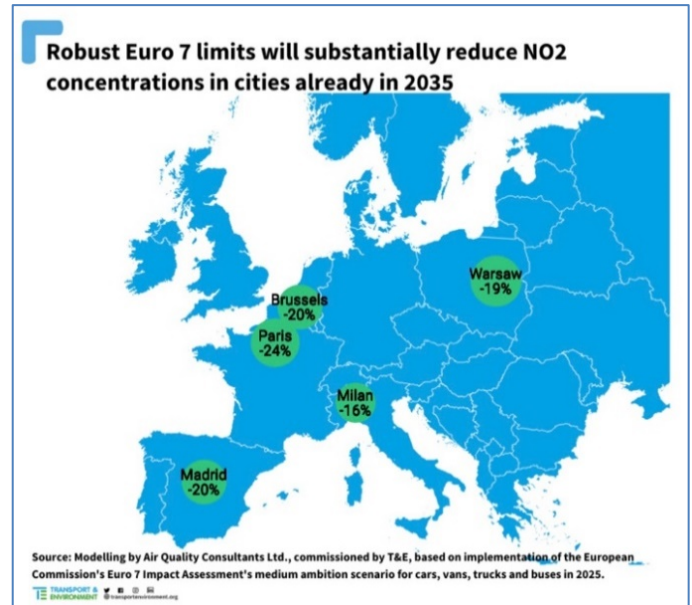
The announcement can be read in full at unece.org/environment/press/unece-adopts-global-regulation-measure-tailpipe-emissions-real-driving-conditions.

GENERAL

T&E Analysis of Euro 7 Impact on Air Quality in European Cities

On 12 June 2023, Transport & Environment (T&E) published research by Air Quality Consultants Ltd showing that if robust Euro 7 air pollution rules are adopted, nitrogen dioxide (NO₂) pollution from road transport will be reduced by around 50% by 2035. T&E says this will result in up to 24% lower concentrations of NO₂ in pollution hotspots in five major European cities – Brussels, Madrid, Milan, Paris and Warsaw – by 2035.

According to the report, without Euro 7 the most heavily trafficked air pollution hotspots in Brussels, Madrid, Paris and Warsaw will not comply with the NO₂ air pollution limit proposed for the revision of the Ambient Air Quality Directive in 2035 unless other measures such as more stringent low and zero emission zones are implemented.



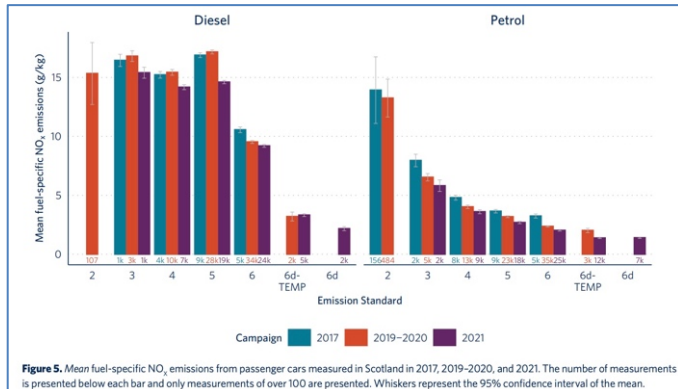
The study is available at transportenvironment.org/discover/robust-euro-7-emissions-standards-will-deliver-better-air-quality-in-european-cities/.

TRUE Assessment of Real-World Vehicle Emissions in Scotland

On 13 June 2023, the International Council on Clean Transportation (ICCT) published The Real Urban Emissions (TRUE) assessment of real-world vehicle emissions in Scotland in 2021. This follows ICCT's policy assessment published in April.

The assessment finds that Euro 6 vehicles in Edinburgh and Glasgow accounted for over 30% of all measurements, followed by Euro 5 and Euro 6d-TEMP. It says the nitrogen oxides (NO_x) emission performance of measured diesel vehicles did not improve significantly until the introduction of Euro 6d-TEMP standards.

Euro 6d-TEMP vehicles were found to emit, on average, 198mg/km, or 40% the level of the preceding Euro 6 standard (498 mg/km). This improvement is attributed to the Real Driving Emissions (RDE) limits introduced with the Euro 6d-TEMP and 6d standards. The petrol vehicles measured were found to have achieved a steady reduction in real-world NO_x emissions. Euro 3 vehicles emitted 374mg/km while Euro 6d vehicles emitted 70 mg/km, on average.



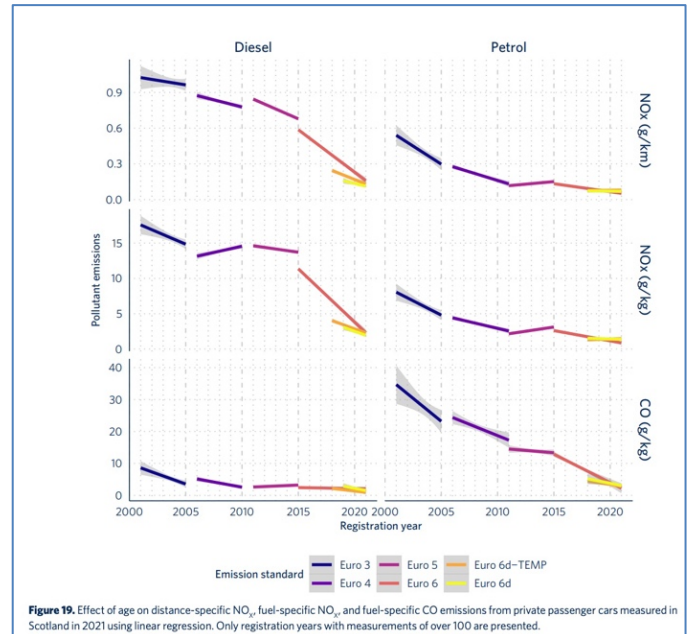
Petrol vehicles were found to have mean CO emissions up to ten times and mean HC emissions around three times those of their diesel counterparts. However, newer petrol vehicles certified to Euro 6d-TEMP and 6d were found to have significantly lower CO emissions, emitting on average below 4g per kg fuel burnt.

The report states that post-RDE Euro 6 vehicle families showed varied emissions performance. Only five of 15 Euro 6d-TEMP vehicle families, defined by the combination of manufacturer and engine size, and three of seven Euro 6d vehicle families had mean real-world NO_x emissions below their respective on-road limits of 168 mg/km and 114 mg/km.

When emissions were investigated as a function of the registration year of measured vehicles, there were positive correlations between the NO_x emissions from diesel passenger cars certified to Euro 4–6 and how long they have been registered, or in use. Similar trend was found for CO emissions from petrol passenger cars certified to Euro 4–6. The report says the results allude to the possible degradation of emission control systems of diesel vehicles that were previously not widely studied.

The measurements showed that NO_x emissions from Euro V and Euro VI trucks driven in urban conditions characterized by low speed and cold engines were almost double those from Euro V and Euro VI trucks driven in motorway conditions.

Buses in Scottish cities showed highly elevated levels of real-world NO_x emissions compared to other buses measured on motorways, mainly due to cold engines and low speeds. Buses certified to the newest standard, Euro VI-D, however, achieved an 80% reduction in NO_x emissions compared to the preceding standard.



The report goes on to make recommendations based on its findings. It says the two cities can reap greater emissions benefits than are currently expected from their upcoming low emission zones (LEZs) by expanding the restrictions to diesel vehicles not subject to on-road emissions testing, namely those certified to Euro 6 (not including Euro 6d-TEMP and Euro 6d). These vehicles account for 23% and 29% of the total NO_x emissions from all passenger cars in Edinburgh and Glasgow, while making up 15% and 23% of the total passenger car activities in respective cities.

TRUE proposes additional measures to limit the use of old taxis and private hires in the cities, such as an age or mileage limit, to address disproportionate emissions from this group of high-usage vehicles.

The report adds that despite the significant volume of NO_x emissions from all types of vehicles illustrated by the Scottish remote sensing measurements, there is currently no capability within the Scottish Ministry of Transport (MOT) to screen for NO_x emissions. However, opportunities may lie at the annual MOT certification, either via adding enhanced emissions monitoring as a routine part of testing or following the identification of high emitters using remote sensing.

The TRUE assessment can be downloaded from theicc.org/publication/true-scotland-remote-sensing-jun23/.

TRUE Analysis of Particulate Emissions from US Gasoline LDVs and Trucks

On 22 June 2023, the International Council on Clean Transportation (ICCT) published analysis from The Real Urban Emissions (TRUE) Initiative on particulate matter emissions from US gasoline light-duty vehicles and trucks.

This analysis, utilising existing real-world emissions data from the TRUE US database, reports a direct correlation between gasoline direct injection (GDI) vehicles and rising tailpipe particulate matter (PM) emissions across light-duty vehicles and trucks.

Findings suggest that, at the fleet level, the trend of decreasing average PM emissions from gasoline vehicles has not been sustained over time and that progress has been nearly erased with newer model year vehicles. UV smoke levels, used as a proxy for PM emissions in this study, begin to increase starting at model year 2015 and continue to rise through model year 2020. Comparatively, the average CO, HC, and NO emissions in each model year show clear and consistent downward trends.

ICCT says that the adoption of gasoline particulate filters (GPF), which could reduce PM emissions by 97%–100% compared to non-GPF equipped vehicles, would help to counteract the observed increase in PM emissions from gasoline vehicles across the US fleet.

The full report can be downloaded from theicct.org/publication/true-pm-emissions-jun23/.

CARES Report on Real-World Emission Factors and Impact of LEZs

On 14 June 2023, the City Air Remote Emission Sensing (CARES) project published its report on real-world emission factors and the impact of low emission zones (LEZs).

Based on remote emission sensing in Krakow, Milan and Prague, CARES found that average NO_x emissions from diesel cars have decreased significantly with real-world driving emissions (RDE) requirements, i.e., for Euro 6d-TEMP and Euro 6d emission stages. Most vehicle families perform well within the RDE limit, but a few show higher emissions.

The report says that plume chasing measurements have collected reliable evidence on the fleet share and contribution from high NO_x emitting trucks: almost 60% and more than 33% of Euro V and Euro VI trucks respectively are found with 'suspicious to high' emissions. On average these malfunctioning vehicles double the NO_x emissions compared to a clean fleet. Demonstrations with roadside inspection have shown that their identification is robustly possible.

Finally, the impact of low-emission zones and the extra contribution from high-emitting vehicles are estimated. Careful on-road measurement helps determine those segments of the fleet that have smaller shares of the activity but high shares in the total pollutant emissions. Well-designed measures e.g., for Krakow are estimated to reduce NO_x and PM emissions from the car fleet by about 20 to 25%, while affecting only 7% of the fleet.

The full report can be found at cares-project.eu/wp-content/uploads/2023/06/CARES-814966-D4.5-Real-world-emission-factors-and-impact-of-LEZ.pdf.

Environmental NGOs' Letter on Euro 7

On 23 June 2023, a group of seven health, consumer and environmental organisations (EPHA, Transport & Environment, Eurocities, POLIS, BEUC and ECOS), raised their concerns on the weakening of key provisions of the Euro 7 proposal within the draft committee report.

The letter to the European Parliament's Environment (ENVI) Committee Rapporteur and Shadow Rapporteurs says that it is imperative to avoid reducing the level of ambition of the European Commission's Euro 7 proposal if we want to 'meet the needs of our cities and the rights of our citizens.'

The letter goes on to say that a swiftly adopted, meaningful Euro 7 emission standard that fully delivers significant reductions in ICE vehicles' exhaust and non-exhaust emissions is needed. The NGOs also want a 'fit-for-city regulation' with simplified Euro 7 standards that support local governments at the time of setting up low-emission zones.

The signatories also underline their view that e-fuels have no place in the future of road transport. They say allowing their use in cars and trucks via the Euro 7 standards would undermine actions to reduce air pollution since 'the use of e-fuels does not significantly reduce pollution compared to fossil fuels.' They claim that allowing their use via the creation of another 'unnecessary' Euro 7 subcategory, a carbon correction factor or any other mechanism which circumvents the EU car CO₂ standards would also risk the EU's electromobility leadership and result in unnecessary costs for consumers.

The letter is available to read at polisnetwork.eu/wp-content/uploads/2023/06/23062023-Joint-NGO-for-a-robust-Euro-7.pdf.

RESEARCH SUMMARY

Effects of Emissions and Pollution

Intrauterine and early postnatal exposure to air pollution associated with childhood allergic rhinitis, Chan Lu, et al.; *Chemosphere* (September 2023), Vol. 336, 139296, [doi: 10.1016/j.chemosphere.2023.139296](https://doi.org/10.1016/j.chemosphere.2023.139296).

Air Quality, Sources and Exposure

Particulate matter 10 μm (PM10), 2.5 μm (PM2.5) datasets gathered by direct measurement, low-cost sensor and by public air quality stations in Fontibón, Bogotá D.C., Colombia, Karen Albarracín, et al.; *Data in Brief* (in press), [doi: 10.1016/j.dib.2023.109323](https://doi.org/10.1016/j.dib.2023.109323).

Revealing the impact of China's clean air policies on synergetic control of CO₂ and air pollutant emissions: Evidence from Chinese cities, Zining Huang, et al.; *Journal of Environmental Management* (October 2023), Vol. 344, 118373, [doi: 10.1016/j.jenvman.2023.118373](https://doi.org/10.1016/j.jenvman.2023.118373).

Assessment of children's personal and land use regression model-estimated exposure to NO₂ in Springfield, Massachusetts, Dong Gao, et al.; *Science of The Total Environment* (September 2023), Vol. 892, 164681, [doi: 10.1016/j.scitotenv.2023.164681](https://doi.org/10.1016/j.scitotenv.2023.164681).

Emissions Measurements and Modelling

Heavy vehicles' non-exhaust exhibits competitive contribution to PM2.5 compared with exhaust in port and nearby areas, Tiange Fang, et al.; *Environmental Pollution* (in press), [doi: 10.1016/j.envpol.2023.122124](https://doi.org/10.1016/j.envpol.2023.122124).

Differences in compositions and effects of VOCs from vehicle emission detected using various methods, Zhenzhen Niu, et al.; *Environmental Pollution* (September 2023), Vol. 333, 122077, [doi: 10.1016/j.envpol.2023.122077](https://doi.org/10.1016/j.envpol.2023.122077).

NOx emission deterioration in modern heavy-duty diesel vehicles based on long-term real driving measurements, Liqun Lyu; *Environmental Research* (September 2023), Vol. 232, 116396, [doi: 10.1016/j.envres.2023.116396](https://doi.org/10.1016/j.envres.2023.116396).

Exhaust aftertreatment device-derived ammonia emissions from conventional and hybrid light-duty gasoline vehicles over different driving cycles, Han Jiang, et al.; *Journal of Hazardous Materials* (September 2023), Vol. 458, 131914, [doi: 10.1016/j.jhazmat.2023.131914](https://doi.org/10.1016/j.jhazmat.2023.131914).

Real-world emission characteristics and inventory of volatile organic compounds originating from construction and agricultural machinery, Hongqian Che, et al.; *Science of The Total Environment* (October 2023), Vol. 894, 164993, [doi: 10.1016/j.scitotenv.2023.164993](https://doi.org/10.1016/j.scitotenv.2023.164993).

Results of recurrent in-service exhaust gas measurements with an EU stage IV forest harvester fuelled with rapeseed oil within the emission durability period, Peter Emberger, et al.; *SN Appl. Sci.* (2023), Vol. 5, 191, [doi: 10.1007/s42452-023-05414-8](https://doi.org/10.1007/s42452-023-05414-8).

Emissions Control, Catalysis, Filtration

Emission control status, and future perspectives of diesel trucks in China, Shihai Zhang, et al.; *Journal of Environmental Sciences* (in press), [doi: 10.1016/j.jes.2023.06.010](https://doi.org/10.1016/j.jes.2023.06.010).

Transport, Climate Change & Emissions

Fiscal policies and car choices in Italy and Norway: A scenario analysis based on a stated-preference survey, Mariangela Scorrano, et al.; *Case Studies on Transport Policy* (September 2023), Vol. 13, 101037, [doi: 10.1016/j.cstp.2023.101037](https://doi.org/10.1016/j.cstp.2023.101037).

FORTHCOMING CONFERENCES

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

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 Conference

7-8 November 2023, Berlin, Germany

fev-live.com/zero-co2-mobility

Heavy-Duty, On- and Off-Highway Engines

7-8 November 2023, Nuremberg, Germany

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

European E-fuels Conference

8-9 November, Dusseldorf, Germany

wplgroup.com/aci/efue4-mkt-agenda/

POLIS Annual Conference

29-30 November 2023, Leuven, Belgium

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

IMechE Powertrain Systems for a Sustainable Future conference 2023

29-30 November 2023, London, United Kingdom

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

International Engine Congress

27-28 February 2024, Baden-Baden, Germany

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

45th International Vienna Motor Symposium

24-26 April 2024, Vienna, Austria

wiener-motorensymposium.at/en/

Deadline for abstracts 30 September 2023

New Materials for future Mobility (NeMMo)

3-4 July 2024, Nantes, France

sia.fr/evenements/?year=2024

Deadline for abstracts 2 November 2023