OCTOBER 2024

NEWSLETTER

International Regulatory Developments

TABLE OF CONTENTS

EUROPE

EP Plenary Debate on Automotive Industry

On 8 October 2024, the European Parliament analysed the challenges facing the EU's automotive sector, and how to restore the competitiveness of European manufacturers. Parliament's position will be summarised in a resolution to be voted on at a future plenary session.

In his opening statement, Executive Vice-President Valdis Dombrovskis said that the EU has set a clear framework for the transition to zero-emission vehicles with the 100% zero-emission cars target by 2035. He went on to say that the target has created certainty for manufacturers and investors. It has also provided enough time to plan for a fair transition.

Mr Dombrovskis added that there is a global race to net-zero technology. Global players are speeding up investments. According to the International Energy Agency, one out of five cars sold in 2024 is set to be electric. He stated that Europe cannot afford to fall behind and lose its competitive edge in this race, nor can it leave any strategic vulnerabilities exposed.

The Vice-President stated that the EU knows that several factors are affecting the competitiveness of European automotive manufacturers (30% higher costs than China, Chinese OEM advantages on batteries, software, infotainment and development, effects of subsidies in 3rd countries).

It has put in place measures to support the development of the electric vehicle market, from building up electric vehicle supply chains, including a sustainable supply of batteries, critical raw materials and semiconductors, to the roll-out of recharging infrastructure and accelerating the deployment of an electricity grid fit for the transition to zero-emission vehicles.

During the first round of speeches by MEPs per political group, MEP Gieseke (EPP, DE) said we need a revision of the ban on internal combustion engines. We must ensure that driving remains affordable for everyone, not just those who can afford expensive electric cars. He also said we should be driven by economic realism and remain technologically neutral. If we do not, driving will become too expensive for many Europeans, and we will lose countless jobs in the automotive industry to competitors like China.

MEP Chahim (S&D, NL) commented that China is outpacing the EU in every way. We should look at solutions to make EU BEVs competitive again. Rolling back legislation is only about short-term gains, not long-term solutions for companies and workers.

MEP Borchia (PfE, IT) said the focus in the previous legislative term was only on cutting emissions, not on EU competitiveness, and that those speaking out are being silenced with a 'cordon-sanitaire'.

MEP Objatek (ECR, PL) stated that the EU cannot compete with China and the US, claiming that the EU industry is over-regulated and under-funded. He gave an example of a battery regulation that makes it unprofitable to produce electric car batteries in Poland, one of the biggest battery producers in the world. Mr Obiatek said that Instead of facilitating change, we are creating more barriers. Instead of fighting China, we are fighting against each other, and this has to stop.

MEP Grudler (Renew, FR) called for a long-term plan, with rules not changing 'every five minutes'. MEP Matthieu (Greens, BE) said workers should not be the victim of poor management decisions by EU car manufacturers. We need to double down on electrification, making vehicles more affordable. MEP Kennis (The Left, BE) referred to the closure of an Audi plant in Belgium being 'scandalous', after having received a significant number of subsidies over the past years. MEP Uhrik (ESN, SK) said he was against forcing people buying electric vehicles, and the ICE cannot be banned.

The debate continued with further rounds of opinions from MEPs.

Mr Dombrovskis closed the debate, referring to the upcoming industrial deal and industrial action plan that will ensure the competitiveness of the EU automotive industry.

The full speech of Mr Dombrovskis can be found at ec.europa.eu/commission/presscorner/detail/en/statement_24_5164.

A video of the plenary debate (12:37-16:08) is at multimedia.europarl.europa.eu/en/webstreaming/20241008-0900-PLENARY.

European Commissioners-designate Hearings

On 2 October 2024, the Conference of Presidents, being European Parliament President and leaders of political groups, agreed on the calendar for the hearings of the Commissioners-designate (see AECC News of 20 September 2024).

The hearings will start on 4 November and take place until 12 November. The Conference of Presidents also decided on the division of responsibilities among committees for the confirmation hearings. The detailed schedule of which Commissioner-designate will be heard at what time will be decided by the Conference of Presidents at its next meeting.

The European Parliament invites Commissioners-designate to appear before the appropriate committees for hearings in order to scrutinise if they are suitable for the posts they have been assigned to.

Ahead of the hearings, Parliament's Committee on Legal Affairs scrutinises the declarations of interests of the Commissioners-designate. In order for a Commissioner-designate to take part in a hearing, there must be no conflicts of interest.

The hearings will be followed by meetings in which the committee chair and group representatives (coordinators) of the various committees will assess whether a Commissioner-designate is qualified both to be a member of the College and to carry out the particular duties they have been assigned.

Once all hearings are completed, the Conference of Committee Chairs will assess the outcome of the confirmation hearings and forward its conclusions to the Conference of Presidents. The latter will conduct the final evaluation and decide whether to close the hearings.

The press release can be read in full at europarl.europa.eu/news/en/pressroom/20240930IPR24372/ep-hearings-with-commissioners-designate-to-start-on-4-november.

On 10 October 2024, the Conference of Presidents of the European Parliament decided on the detailed calendar for the hearings of Commissioners-designate.

The hearings will take place from 4 to 12 November. After the consultation of committee chairs, the European Parliament President and political group leaders adopted the detailed schedule of which Commissioner-designate will be heard by which committees and at which time slot.

European Parliament leaders also adopted the written questions prepared by the different committees that Commissioners-designate should reply to by 22 October 2024.

Each hearing will be followed by a meeting in which the Chairs of the Committees and group representatives (coordinators) concerned will evaluate the performance of the Commissioner-designate they just heard.

After the completion of the evaluation process, the Conference of Committee Chairs will assess the outcome of all hearings and forward its recommendation to the Conference of Presidents. The latter will exchange views and decide whether to close the hearings in its meeting on 21 November; it will also decide to place the vote on the College as a whole on the plenary agenda.

The full Commission needs to be elected by a simple majority of the votes cast in plenary, by roll call. The vote is currently scheduled to take place during the (25-28) November session in Strasbourg.

The European Parliament's press release is at europarl.europa.eu/news/en/press-room/20241004IPR24465/ep-leaders-adopt-calendar-for-commissioners-designate-hearings.
The programme for the hearings can be found at europarl.europa.eu/resources/library/media/20241010RES24508/20241010RES24508.pdf.

On 24 October 2024, the European Commission published details of the European Parliament hearings for Commissioners-designate, including questions and answers for each of the candidates.

In their written answers, Teresa Ribera, Executive Vice-President-designate for the Clean, Just and Competitive Transition, and Wopke Hoekstra, Commissioner-designate for Climate, Net-Zero and Clean Growth state that the Clean Industrial Deal will simplify administrative processes to decarbonise industry, will put a framework in place to develop lead markets, and will mobilise private funding for the transition.

On the subject of CO_2 emissions standards for cars and vans, they repeated their mission letter comments that the 2035 climate neutrality target for cars creates predictability for investors and manufacturers, and that getting there will require a technology-neutral approach, in which e-fuels have a role to play through a targeted amendment of the regulation as part of the foreseen review in 2026.

The link to all documents can be found at elections.europa.eu/european-commission/en.

EPRS Briefings on Commissioners-designate

On 15 October 2024, the European Parliamentary Research Service (Think Tank) published briefings on some of the Commissioners-designate for the new Commission.

These included profiles of Ms Teresa Ribera Rodrígues, Executive Vice-President-designate for a Clean, Just and Competitive Transition, Mr Stéphane Séjourné, Executive Vice-President-designate for Prosperity and Industrial Strategy, Ms Jessika Roswall, Commissioner-designate for Environment, Water Resilience and a Competitive Circular Economy, Mr Wopke Hoekstra, Commissioner-designate for Climate, Net Zero and Clean Growth, and Mr Apostolos Tzitzikostas, who is in line for the role of Commissioner for Transport and Tourism. The briefings give a short profile of each of the candidates, followed by details of their portfolios, priorities and challenges, and recent developments.

The respective briefings are at
europarl.europa.eu/RegData/etudes/BRIE/2024/762450/EPRS_BRI(2024)762450_EN.pdf
europarl.europa.eu/RegData/etudes/BRIE/2024/762454/EPRS_BRI(2024)762454_EN.pdf
europarl.europa.eu/RegData/etudes/BRIE/2024/762438/EPRS_BRI(2024)762438_EN.pdf.
europarl.europa.eu/RegData/etudes/BRIE/2024/762448/EPRS_BRI(2024)762448_EN.pdf
europarl.europa.eu/RegData/etudes/BRIE/2024/762446/EPRS_BRI(2024)762446_EN.pdf.

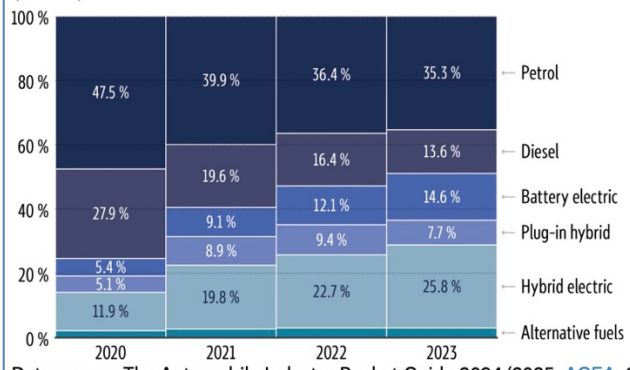
European Parliament Think Tank Brief on EU Automotive Industry

On 2 October 2024, the European Parliament's Think Tank published an 'At a Glance' brief on the 'crisis facing the EU's automotive industry.'

The document sets out by saying that the automotive sector must adapt its business model quickly to mitigate the risks associated with the disruptive trends of the green transition, digitalisation and global competition.

It provides some background on the industry, then looks at the major trends reshaping it, in particular the electrification of vehicles. The brief adds that vehicles are also becoming more connected and more autonomous.

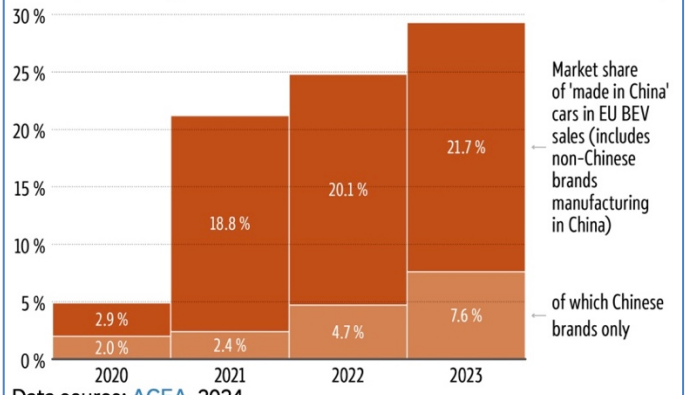
Figure 1 – New car sales in the EU by power source, 2020–2023 (share)



Data source: The Automobile Industry Pocket Guide 2024/2025, ACEA, 2024.

The Think Tank asks if European companies can thrive in the new competitive landscape. It asserts that most European companies are still lagging behind in electric vehicle innovation. European incumbent companies are struggling to make profitable and affordable electric vehicles, particularly due to the high cost of batteries. Only one of the world's top 15 battery electric vehicles is made in the EU.

Figure 2 – Market share of Chinese-made cars in EU BEV sales (including share of non-Chinese brands made in China)



Data source: ACEA, 2024.

The document finally considers what can be done to embark on a 'route to greater competitiveness.' It points out that a range of economic factors have been weighing on the EU sector, such as weak economic growth, high energy costs, disruption in key supply chains, geopolitical risks, and industrial policies of third countries, such as the United States' Inflation Reduction Act and China's extensive government interventions. As a result of slowing car registrations, particularly for battery-electric cars, the brief says EU automotive industry representatives are urging the EU institutions to take urgent relief measures and bring forward to 2025 the CO_2 Regulation reviews for light-duty vehicles.

It concludes by pointing to the recent Draghi report, saying that Draghi recommends measures to lower energy and labour costs, and increase automation in the sector. He recommends developing a specific EU industrial action plan for the automotive industry, covering all stages of the value chain. Furthermore, he advises supporting new important projects of common European interest in very innovative areas (such as affordable electric or autonomous vehicles, and circularity in the value chain), and developing recharging and refuelling infrastructure.

The EP's Think Tank brief is at europarl.europa.eu/RegData/etudes/ATAG/2024/762419/EPRS_ATA(2024)762419_EN.pdf.

Council Adoption of Air Quality Directive

On 14 October 2024, the European Council formally adopted a directive setting updated air quality standards across the EU.

The revised directive sets new air quality standards for pollutants to be reached by 2030 which are more closely aligned with the WHO air quality guidelines. Those pollutants include, among others, particulate matter PM10 and PM2.5, nitrogen dioxide and sulphur dioxide, all known to cause respiratory problems. Member States may request that the 2030 deadline be postponed if specific conditions are met.

The updated directive also brings further improvements to air quality monitoring and modelling, and will ensure early action, with air quality roadmaps that need to be prepared ahead of 2030 if there is a risk that the new standards will not be attained by that date.

The air quality standards will be reviewed regularly in line with latest scientific evidence to assess whether they continue to be appropriate.

The new directive ensures fair and equitable access to justice for those affected or likely to be affected by the implementation of the directive. Member States need to ensure that citizens have the right to claim and obtain compensation when their health has been damaged due to a violation of air quality rules set in the directive.

The text will be published in the EU's Official Journal and enter into force on the twentieth day following publication. Member States will have two years after the entry into force to transpose the directive into national law.

By 2030, the European Commission will review the air quality standards and every five years thereafter, in line with latest scientific evidence.

The Council press release is at consilium.europa.eu/en/press/press-releases/2024/10/14/air-quality-council-gives-final-green-light-to-strengthen-eu-standards.

On 29 October 2024, the Council of the European Union published draft minutes of the Environment Council meeting of 14 October, where the Council approved the European

Parliament's position on the Directive on Air Quality at first reading.

Malta abstained, making a statement along with Germany, Latvia and Slovenia.

Germany says it welcomes the fact that it has been possible to lay down ambitious yet achievable limit values to progressively reach alignment with the WHO Guidelines as well as the zero-pollution objective and a toxic-free environment in the EU by 2050. It also welcomes the possibility for EU Member States to request postponement of the deadline for attaining the limit values for specific reasons, to the extent that it is, in particular, apparent from projections that the limit values cannot be attained by the deadline. Therefore, Germany asks the Commission to submit, in a timely manner, a draft of the implementing act to set out specific details of the projections, taking into account reasonable and proportionate measures. it is Germany's understanding that, for example, driving bans, decommissioning or limitations on the operations of industrial installations are not to be considered reasonable and proportionate measures, nor can they be demanded as conditions for a deadline postponement, and requests appropriate clarification in the implementing act.

Latvia also supports the final compromise text of the proposal for a Directive on ambient air quality and cleaner air for Europe. Nonetheless, it says outstanding issues of concern remain, including the set deadlines for implementing the new monitoring requirements, as well as introduction of compensation mechanism for damage to human health and rules on penalties. Latvia says Member States will need sufficient time and additional investments to fulfil the new requirements regarding the establishment of monitoring supersites and measurements of new pollutants. The statement adds that Latvia still sees substantial challenges in transposing provisions regarding compensation for damage to human health and rules on penalties applicable to infringements into its national legal system, and regrets that the transitional periods are too short for a successful implementation of the new provisions.

The statement from Malta says that it recognises the importance of the Revision of the Ambient Air Quality Directive and its contribution to the health and well-being of European citizens and the environment. During the negotiation process, Malta adds that it was very vocal on the difficulty of attaining the new stricter limit values. particularly in the case for particulate matter (PM10) and Nitrogen Dioxide (NO_2). This is further confirmed by the Commission's impact assessment itself, which shows that Malta will not be able to attain the limit value for nitrogen dioxide, even with the implementation of the 'maximum technically feasible reduction' scenario.

It goes on to say that the assessment of the costs of a number of measures and the resulting economic benefits from achieving the revised air pollution targets, translate to a benefit-to-cost ratio of 0.07. According to the statement, this outcome clearly demonstrates that attaining the proposed limit values will involve the incurrence of disproportionate socio-economic costs and goes against the spirit of the Ambient Air Quality Directive.

Slovenia's statement relates to a clause on access to justice at EU level, which it says could lead to uneven coverage of the right of access to justice in environmental matters. Slovenia believes that regulating this matter through such a sector-specific approach in the EU goes against the principles of better EU legislation and the principle of proportionality.

The draft minutes, including full statements, are at data.consilium.europa.eu/doc/document/ST-14454-2024-INIT/en/pdf.

Council Position on UN Climate Change Conference

On 14 October 2024, the European Council approved conclusions that will serve as the EU's general negotiating position for COP29, which will take place in Baku, Azerbaijan, from 11 to 22 November 2024.

The Council calls for an ambitious and balanced COP29 outcome that keeps the 1.5°C temperature goal within reach, in light of the best available science, moves us all forward towards long-term resilience, and includes agreement on an effective, achievable and ambitious new collective quantified goal.

Regarding climate finance, the Council stresses the importance of agreeing a new collective quantified goal (NCQG) on climate finance that is achievable and fit for purpose. The new goal should be designed on the basis of a broad, transformative and multi-layered approach, including various flows of finance and a broader group of contributors. The Council says this would reflect the evolution of respective economic capabilities and increasing shares of global greenhouse gas emissions since the early 1990s.

On the subject of nationally determined contributions, the Council says limiting warming to 1.5°C requires collective effort and further action from all countries, especially major economies. It therefore underlines that the next round of nationally determined contributions – the climate plans to be submitted in 2025 – need to reflect progression and the highest possible level of ambition, in line with the outcome of the global stocktake of last year's COP. The Council adds that they should include economy-wide and absolute reduction targets that cover all greenhouse gases.

In its conclusions, the Council underlines the importance of urgently scaling up mitigation ambition and implementation in this critical decade. It also calls on all parties to make greater efforts to integrate and mainstream climate change adaptation and resilience into relevant existing policies. The Council also reiterates the call to transition away from fossil fuels in energy systems in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science.

The press release is available to read at consilium.europa.eu/en/press/press-releases/2024/10/14/un-climate-change-conference-eu.

Duties on Electric Vehicles from China

On 29 October 2024, the European Commission concluded its anti-subsidy investigation by imposing definitive countervailing duties on imports of battery electric vehicles (BEVs) from China for a period of five years. As previously disclosed (see AECC News of 12 July 2024), the investigation found that the BEV value chain in China benefits from unfair subsidisation which the Commission says is causing threat of economic injury to EU producers of BEVs. As a result, the duties will enter into force on the day following publication in the Official Journal.

In parallel, the EU and China continue to work towards finding alternative, WTO-compatible solutions that would be effective in addressing the problems identified by the investigation. The Commission also remains open to negotiating price undertakings with individual exporters, as is permitted under EU and WTO rules.

As from the entry into force of the measures, sampled Chinese exporting producers will be subject to the following countervailing duties: BYD: 17.0%, Geely: 18.8%, SAIC: 35.3%.

Other cooperating companies will be subject to a duty of 20.7%. Following a substantiated request for an individual examination, Tesla will be assigned a duty of 7.8%. All other non-cooperating companies will have a duty of 35.3%. Definitive duties will be collected as of entry into force. The provisional duties imposed on imports of BEVs from China on 4 July 2024 will not be collected.

Going forward, the European Commission will monitor the effectiveness of the measures in force, including to ensure that they are not circumvented.

The Commission press release is at ec.europa.eu/commission/presscorner/detail/en/ip_24_5589.

New Release of VECTO Tool

On 2 October 2024, the European Commission's Joint Research Centre (JRC) issued a new Official Release (v4.2.5) of the VECTO CO_2 emissions and fuel consumption calculation tool, which is used for certification purposes.

The new VECTO release can be found at code.europa.eu/vecto/vecto/-/releases/Release/v4.2.5.

Launch of INCITE Platform for Submission of Clean Technologies

On 15 October 2024, the new INCITE (see AECC News of 28 June 2024) information platform was launched by the European Commission's Joint Research Centre (JRC), creating a single public space for both submitting and consulting data and information on innovative clean, zero-carbon and circular technologies that will be implemented by large industrial plants and livestock rearing installations during the industrial transition.

The shared transparent knowledge is intended to support the deployment of innovative technologies and help European industry decarbonise, become more circular and reach the EU zero pollution target.

The INCITE (European Innovation Centre for Industrial Transformation and Emissions) platform aims to provide a comprehensive overview of the environmental benefits and performance, technology maturity, possible trade-offs, location and costs benefit elements of these technologies, therefore helping stakeholders to make informed decisions and lower informational barriers for direct investments towards industrial innovation.

The platform is designed to collect data on all industrial sectors covered under the Industrial Emissions Directive (IED), with an initial focus on energy-intensive industries, e.g. iron, steel, cement, or chemicals production. The INCITE team will analyse the information received and publish the (non-confidential) data that meet the platform criteria.

The JRC press release, with relevant links, is at joint-research-centre.ec.europa.eu/jrc-news-and-updates/incite-platform-out-today-submission-clean-technologies-2024-10-15-0.

EEA Report on Sustainability of Europe's Mobility Systems

On 10 October 2024, the European Environment Agency (EEA) published a report titled 'Sustainability of Europe's mobility systems'. This sums up the transport sector's key trends as of 2024, and their environmental and climate impacts. The report shows that transport remains a major source of greenhouse gas emissions, air pollution and noise.

In 2022, greenhouse gas emissions from transport in the EU were about 26% higher than in 1990. One of the main reasons for this increase is the growing transport demand, that more than offsets efficiency gains, for example in engine technology. The uptake of electric vehicles has shown promising signs in recent years, and the deployment of cleaner fuels can contribute to reduce CO_2 emissions of transport modes that are hard to electrify. However, their deployment until now has been too slow to change the overall trend.

Relative to other economic sectors, transport accounted for about 29% of the EU's greenhouse gas emissions in 2022. Its share is expected to increase further as the decarbonisation of the European economy progresses faster in other sectors, most notably in energy production.

In 2022, emissions from light-duty vehicles (i.e. cars and vans reached approximately 544 $MtCO_2e$ and accounted for about 52.1% of all transport GHG emissions. This share has remained essentially constant over the last 32 years, with an average of 53% and standard deviation of 1.1%. Overall, GHG emissions from light-duty vehicles had increased by 21.2% in 2022 compared to 1990. The improved energy

efficiency of new vehicles and the increased use of biofuels, both promoted by EU legislation, have been more than offset by the increase in demand for passenger transport and an increase in the share of passenger car transport.

The report points out that the emissions standards only cover the emissions of CO_2 at the tailpipe, meaning that other GHGs such as methane and nitrous oxide (N_2O) are not currently considered. Internal combustion engines using carbon-neutral fuels or hydrogen could potentially emit substantial quantities of climate forcing gases such as N_2O. This is due to the way NOx aftertreatment systems operate.

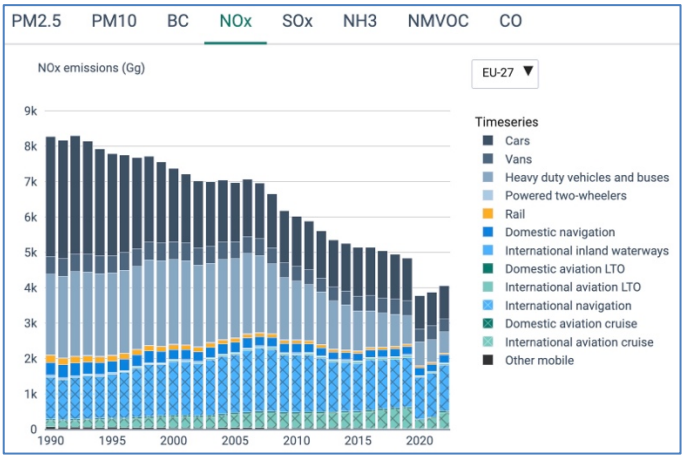
n 2022, heavy-duty vehicles emitted approximately 210 $MtCO_2e$, representing 20% of GHG emissions from transport. Overall, GHG emissions from heavy-duty vehicles have increased by 29.3% since 1990. Furthermore, heavy-duty vehicles emitted approximately the same amount of GHG as the navigation and aviation sectors combined (both national and international), which totalled 271 $MtCO_2e$ in 2022. The increase in GHG emissions from heavy-duty vehicles in the 1990-2022 period was primarily driven by growth in freight transport activity and by an increase in the share of road freight transport.

Overall, road transport emissions in 2022 totalled approximately 764 $MtCO_2e$, representing 73.2% of all transport emissions and 21.1% of all EU-27 GHG emissions (including international bunkers). According to the projections, emissions from the road transport sector will reach 596 $MtCO_2e$ in 2030 and 340 $MtCO_2e$ in 2050, corresponding to reductions of 22.0% and 55.4% respectively compared to 2022.

The report states that the EU transport sector has succeeded in significantly reducing emissions of most air pollutants with policy measures, such as tighter emission standards, and technological development. The greatest share of this progress is due to reduced emissions in road transport and, for sulphur oxides, in maritime transport.

Between 1990 and 2022 (including COVID-19 pandemic period) across the EU-27, emissions of NOx from transport decreased by 51%, SOx by 83%, non-methane volatile organic compounds (NMVOCs) by 90% and carbon monoxide (CO) by 90%.

The increase in ammonia (NH_3) emissions, especially the one that is occurring in recent years and mostly into the heavy-duty sector, is said to be mainly due to the introduction of SCR aftertreatment systems, where NH_3 is used as reducing agent to convert NOx into harmless nitrogen and water. In such systems NOx, NH_3 and N_2O emissions are highly interdependent, and they should be regulated at the same time to avoid unwanted increases in any of the three compounds.



In addition, EEA says it is worth noting that recent literature studies indicate that NH_3 emissions can also be significant for modern light-duty vehicles. This is due not only to the mechanisms described above for heavy-duty vehicles but also to the use of enriched air-fuel mixtures, especially at higher loads in petrol vehicles. This is once more done to facilitate the control of NOx which, at variance with NH_3, is a regulated pollutant for these vehicles.

The report is available to read at eea.europa.eu/en/newsroom/news/transport-in-europe.

Commission Action on Portugal's Rules on Pollution from Industrial Activities

On 3 October 2024, the European Commission decided to refer Portugal (INFR(2022)2085) to the Court of Justice of the European Union for failing to bring its national legislation fully in line with the Industrial Emissions Directive (Directive 2010/75/EU).

Portugal has not brought the definitions of 'hazardous substances' and of 'existing installation' laid down in its national legislation fully in line with the Directive. Moreover, Portugal has not clearly defined the obligations for the operators of industrial installations or the competent authorities to take appropriate action in case of incidents or accidents. Certain requirements have not been transposed into national law, notably in relation to the reconsideration and update of permit conditions, the content of the permit for waste incineration plants, the assessment of compliance with emission limit values and to information that must be submitted in case of an installation with likely significant transboundary effects.

The Commission sent a letter of formal notice to Portugal in September 2022, followed by a reasoned opinion in September 2023. Even though the Commission accepted some explanations provided by Portugal concerning some of the grievances initially raised, the Portuguese authorities have not addressed all grievances. The Commission considers that efforts by the Portuguese authorities have, to date, been insufficient and is therefore referring Portugal to the Court of Justice of the European Union.

The Commission press release is at ec.europa.eu/commission/presscorner/detail/en/ip_24_4887.

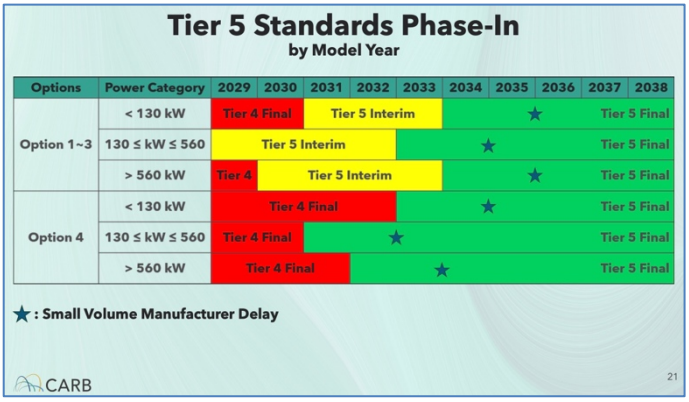
NORTH AMERICA

CARB Tier 5 Off-Road Engine Emission Workshop and 2025 Mobile Source Strategy

On October 8, 2024, the California Air Resources Board (CARB) held another workshop meeting to discuss the proposed Tier 5 emission standards for off-road diesel engines. Before the workshop, on 24 September, the agency released the Draft Proposed Regulation Order.

The workshop focused on changes to the proposed Tier 5 provisions introduced since October 2023. Most of the changes and updates were related to the off-road onboard diagnostic system (OR OBD) and to several other compliance details – there were no changes to the emission limits and implementation dates considered at the previous Tier 5 workshop.

The Tier 5 regulation would be phased-in between 2029 and 2034. Engine manufacturers would choose one of four compliance options that allow phase-in flexibility and the use of emission credits. Three of these compliance options involve a set of Tier 5 interim standards, as shown below.



As well as updates to the OBD proposal, the Tier 5 proposal introduces a new certification pathway for hydrogen-fuelled internal combustion engines (ICE). Off-road H_2-ICEs of MY 2029 and later would be required to certify as compression ignition (CI) engines if they employ boosted air induction or the H_2-ICE engine is designed to operate in equipment historically powered with an off-road CI engine.

This approach is designed to ensure that H_2-ICEs that replace diesel engines would be certified to Tier 5 standards, while allowing applications historically powered by naturally aspirated large spark-ignited (LSI) engines to certify to the LSI standards. H_2-ICEs would generate emission credits for criteria pollutants, but would not generate CO_2 credits, as the H_2 ICE does not meet CARB zero emission (ZE) criteria.

The CARB staff presentation is available to read at arb.ca.gov/sites/default/files/202410/Tier5RulemakingUpdate10-08-24_v.4_clean_FINALwBackupSlides.pdf.

Also in October, CARB released its Discussion Draft 2025 Mobile Source Strategy and held its second public workshop to review this Discussion Draft. In the document, CARB staff provided core information about the current status of the various mobile source categories, as well as an overview of scenario modelling that will be included in later iterations of the 2025 Mobile Source Strategy (MSS).

CARB staff is setting the foundation for the 2025 MSS effort by providing core information about the current status of the various mobile source categories; this includes category descriptions with current and future emissions of oxides of nitrogen (NOx), PM2.5, and tailpipe carbon dioxide (CO_2), summaries of current regulatory and non-regulatory control programs, and lists of available technologies and discussions of their emission reduction potential. The current and future emissions reflect the mobile strategies already adopted by the Board. This Discussion Draft also provides an overview of the scenario modelling that will be included in later iterations of the 2025 MSS, and introduces other key considerations in development of the 2025 MSS including environmental justice and racial equity, and meeting California's zero-emission infrastructure needs.

Moving forward, CARB staff intends to publish two additional iterations of the 2025 MSS: Draft 2025 MSS: Reflecting public input to date, the next iteration will introduce the first potential technology trajectory scenarios and discuss the associated emissions reductions, thereby identifying pathways toward achieving California's environmental targets. Final 2025 MSS: Based on additional public input, staff plans for the final version of the 2025 MSS to illustrate a set of technology trajectory scenarios that can ensure the State's air quality, climate, and community risk reduction mandates are met. The final document will also discuss the existing CARB programmes and those under development that will achieve the technology trajectories shown in the scenarios, as well as potentially identify new regulatory and programmatic concepts for the many off-road vehicle and equipment categories for which further programmes are needed to ensure the deployment of the cleanest technologies, including zero-emission technologies.

The press release and draft Mobile Source Strategy are at arb.ca.gov/resources/documents/2025-mobile-source-strategy.

ASIA-PACIFIC

ICCT Policy Update on China Stage 4 LCV Fuel Consumption Standard

On 14 October 2024, the International Council on Clean Transportation (ICCT) published a policy update on the China Stage 4 fuel consumption standard for light commercial vehicles.

The standard, set to take effect in 2026, tightens per-vehicle fuel consumption limits, introduces a corporate average fuel consumption (CAFC) requirement, and expands coverage to include new energy vehicles like battery electric and fuel-cell

electric models. This regulation lifts per-vehicle limits by roughly 10% over Stage 3 and offers flexibility mechanisms such as off-cycle credits and electric vehicle multipliers. These updates support China's broader goals of peaking carbon emissions by 2030 and achieving carbon neutrality by 2060.

ICCT says the policy represents a potent shift in China's approach to reducing emissions from light commercial vehicles. It includes the adoption of a linear regression-based system, instead of a weight-class system, for fuel limits to support equity in compliance; this prevents manufacturers from slightly increasing vehicle weight to follow more lenient standards. The new standard also expands the scope to include new energy vehicles and vehicles powered by gaseous fuels and alcohol ethers. In addition, CAFC targets are set until 2030 and incentivise manufacturers with off-cycle credits and special multipliers to focus on electric and energy-saving technologies.

The ICCT policy update can be found at theicct.org/publication/china-stage-4-fuel-consumption-standard-for-ldv-oct24.

Legal Action against New Zealand Government over Clean Car Standard

On 14 October 2024, Lawyers for Climate Action NZ (LCANZI) announced it has supported the Better New Zealand Trust to take the Government to court over its decision to weaken the Clean Car Standard (see AECC News of 26 July 2024).

LCANZI says the new targets mean that the supply of zero- and low-emission vehicles in the market will decrease compared to the previous targets and that the Emissions Reduction Plan target to have 30% of the fleet as electric vehicles (EVs) by 2035 is going to be that much harder to achieve. As a result, the Better New Zealand Trust, which advocates for EVs, has launched a judicial review of the Minister's decision to adopt the new targets.

LCANZI adds that the previous Clean Car Standard targets would have provided a powerful financial incentive for importers to focus on bringing more zero- and low-emission vehicles to market.

In this claim, the Better New Zealand Trust is asking the court to quash the Minister's Clean Car Standard regulations and replace them with 'targets that comply with the law and have been developed following meaningful consultation.'

More detail is available at lawyersforclimateaction.nz/news-events/minister-for-transport-sued-over-ev-regulations.

UNITED NATIONS

Meeting of the Working Party on Pollution and Energy

From 14 to 17 October 2024, the 91st session of GRPE was organised over three days at the Palais des Nations in Geneva; and was followed by two days of topical workshops dealing with new work items.

This was the last meeting of Mr André Rijnders (Netherlands, RDW) as the chairman of GRPE as he will retire at the end of this year. Mr Rijnders has served seven years at the helm of the GRPE. Memories were shared and words of thanks expressed. Mr Rijnders thanked all for the constructive work done during his 30 years of dealing with vehicle emissions and thanked particularly his vice-chair Mr Duncan Kay and the GRPE-secretary Mr François Cuenot.

GRPE elected its officers for 2025. Mr Per Öhlund of Sweden was elected as the new GRPE chairman. GRPE's current vice-chair Mr Duncan Kay (UK, DfT) is passing on the task to Mr David Miles of the same department; while Mr Tetsuya Niikuni (Japan, NTSEL) was elected as the 2nd vice-chair. As such GRPE has a new leading team consisted of the EU, UK and Japan.

GENERAL

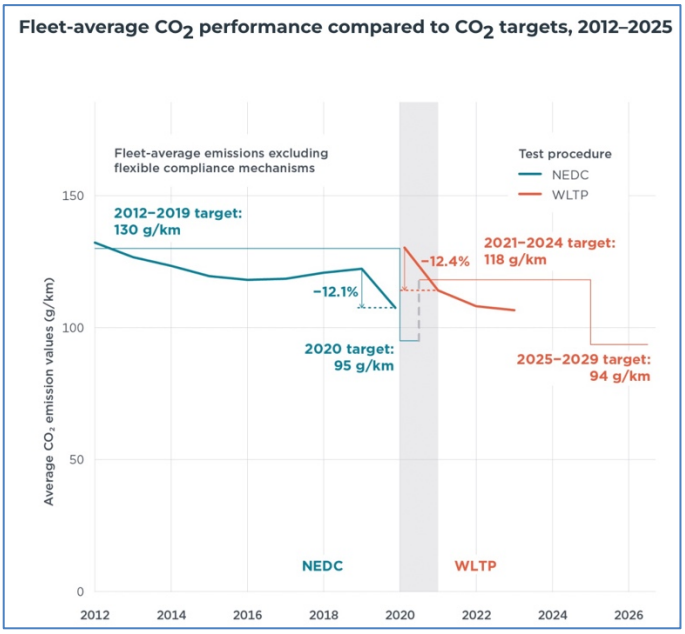
ICCT Report on Progress towards 2025 CO_2 Targets for EU Passenger Cars

On 14 October 2024, the International Council on Clean Transportation (ICCT) published a report on the 2025 CO_2 targets for new passenger cars in the European Union.

The briefing projects the CO_2 targets for each manufacturer in 2025, based on the latest official data, and estimates the maximum share of new battery electric vehicles (BEVs) needed to comply. This maximum share assumes that manufacturers will not further reduce CO_2 emissions from internal combustion engine vehicles.

The study analyses the 10 largest manufacturers and concludes that all these manufacturers bar one must lower their CO_2 emissions to meet the 2025 targets. This requires a maximum increase in battery electric vehicle sales, with manufacturers needing to raise their BEV share at most by an average of 12 percentage points, from 16% in 2023 to about 28% by 2025.

ICCT says that besides increasing their BEV sales share, compliance flexibilities within the legislation, technological progress, and adjusted marketing strategies offer manufacturers additional options to meet the targets. The study concludes that the 2025 targets seem to be within reach.



ICCT's reasoning for this includes the calculation that the CO_2 reductions needed is about half of previous reductions achieved by manufacturers. The average CO_2 reduction of 12% required from 2023–2025 is about half the 23% fleet-average CO_2 reduction observed between 2019 and 2021.

The NGO also states that the increase in BEV market share required for the hypothetical manufacturer pools is about 1–1.5 times as high as the growth observed from 2019 to 2021. This ramp up of BEV sales from 2019 to 2021 occurred despite limited BEV model variety and fewer charging stations at the time.

Finally, ICCT says reductions of CO_2 remissions could accelerate rapidly. The historical trajectory of manufacturers CO_2 emissions performance shows sudden and rapid changes. While emissions rose by 1% annually from 2015 to 2019, they fell by 1% monthly from 2019 to 2021, when a stricter target was introduced.

The ICCT report can be downloaded from theicct.org/publication/2025-co2-manufacturers-targets-oct24.

IEA Renewables 2024 Report

On 11 October 2024, the International Energy Agency (IEA) published its Renewables 2024 report. This provides forecasts for the deployment of renewable energy technologies in electricity, transport and heat to 2030, while also exploring key challenges facing the industry and identifying barriers that are preventing faster growth.

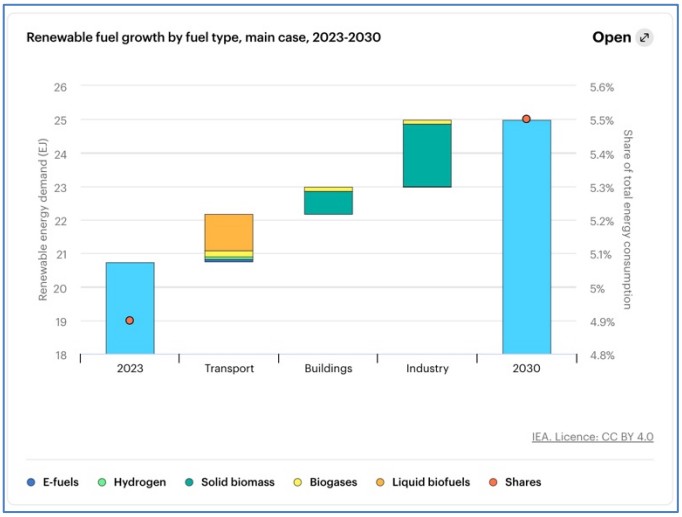
For the first time, the report features a special chapter on renewable fuels, including bioenergy, biogases, hydrogen, and e-fuels. It forecasts their role in global energy demand by 2030 and their potential for decarbonising the industry, building, and transport sectors.

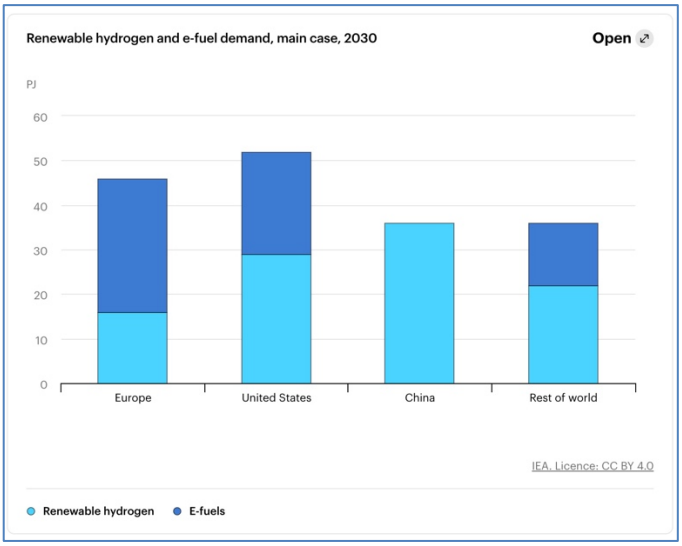
Renewable fuel demand in industry, buildings and transport stands at 22 EJ (5% of global energy demand for these sectors), exceeding total wind and solar PV generation in 2023. Modern solid bioenergy use accounts for the majority of renewable fuel demand (75%), followed by liquid biofuels (20%) in the transport sector and biogases (5%), primarily in the buildings sector. Renewable hydrogen and e-fuels are used in only small quantities today as renewable fuels, primarily in the transport sector.

The report says that compared with hydrogen and e-fuels, modern use of bioenergy is less expensive, its production technologies have been commercialised, and it already benefits from broad policy support. For instance, more than 80 countries have liquid biofuel policies, whereas only the European Union and the United Kingdom have e-fuel requirements.

It goes on to say that annual demand growth for road biofuels slows considerably by 2030, dropping to just 0.3%. While governments continue to enforce biofuel mandates, incentives and GHG intensity standards over the forecast period, overall global road transport fuel demand is expected to peak in 2028, with earlier peaks in the United States and Europe, thereby limiting growth. Even in fast-growing markets such as India, Indonesia and Brazil, total transport fuel demand growth slows considerably by 2030 (to 3% from 10% expected in 2024). Fuel demand declines globally owing to a combination of electric vehicle adoption and vehicle efficiency improvements.

The use of renewable hydrogen and e-fuels for energy (primarily in transport) expands to 0.17 EJ by 2030, from near zero today. A few key policies in Europe, the United States and China spur almost all this increase. Most hydrogen and e-fuel demand originates from the transport market, with e-fuels being claimed for aviation and maritime applications, and hydrogen for heavy-duty transport.





However, high costs and limited policies encouraging uptake make it difficult to construct a profitable business case, restricting growth prospects for both fuels. Existing policies have not yet catalysed the investments needed to realise ambitions, although sufficient production to match the demand forecast in this publication could be achieved if projects currently at the feasibility stage secure final investment decisions and are constructed by 2030.

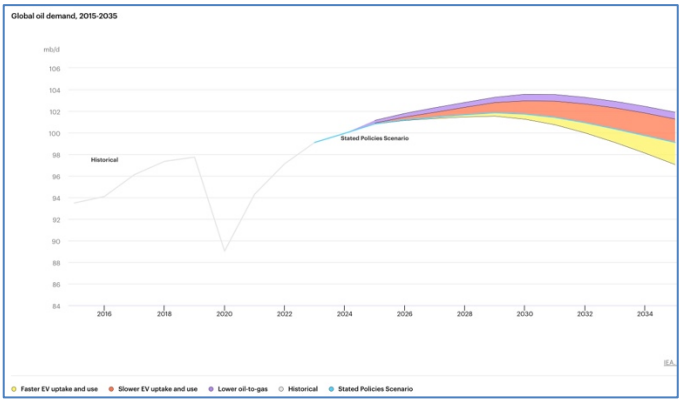
Renewables 2024 is available to download from iea.org/reports/renewables-2024.

IEA World Energy Outlook

On 16 October 2024, the International Energy Agency (IEA) published its World Energy Outlook 2024. The report examines how shifting market trends, evolving geopolitical uncertainties, emerging technologies, advancing clean energy transitions and growing climate change impacts are all changing what it means to have secure energy systems.

Based on today's policy settings, the report finds that low-emissions sources are set to generate more than half of the world's electricity before 2030 – and demand for all three fossil fuels – coal, oil and gas – is still projected to peak by the end of the decade. Clean energy is entering the energy system at an unprecedented rate, but deployment is far from uniform across technologies and markets. IEA says China stands out: it accounted for 60% of the new renewable capacity added worldwide in 2023 – and China's solar PV generation alone is on course to exceed, by the early 2030s, the total electricity demand of the United States today.

Three main scenarios are complemented by sensitivity cases for renewables, electric mobility, liquefied natural gas (LNG) and how heatwaves, efficiency policies and the rise of artificial intelligence (AI) might affect electricity demand.



Commenting on electric mobility, the report says cost-competitive electric vehicles (EVs) – many of them from Chinese manufacturers – are making inroads in a range of markets, although there is uncertainty over how fast their share will grow. EVs currently have a share of around 20% in new car sales worldwide, and this rises towards 50% by 2030 in the Stated Policies Scenario (a level already being achieved in China this year), by which time EVs displace around 6 mb/d of oil demand. If the market share of electric cars were to rise more slowly, remaining below 40% by the end of the decade, this would add 1.2 mb/d to projected oil demand in 2030, but there would still be a visible flattening in the global trajectory.

The World Energy Outlook is available to read at iea.org/reports/world-energy-outlook-2024/executive-summary.

RESEARCH SUMMARY

Effects of Emissions and Pollution

Impact of air pollution on mortality: geo-epidemiological study in French-speaking Africa, Laurie Capitanio, et al.; *Heliyon* (in press), doi: 10.1016/j.heliyon.2024.e39473.

Health impact assessment of exposure to road traffic noise and air pollution according to pre- and post-densification scenarios in Helsingborg, Sweden, Erin Flanagan, et al.; *City and Environment Interactions* (in press), doi: 10.1016/j.cacint.2024.100176.

Impact of air pollution and noise exposure on cardiovascular disease incidence and mortality: A systematic review, Stephan Peronard Mayntz, et al.; *Heliyon* (November 2024), Vol. 10, Issue 21, e39844, doi: 10.1016/j.heliyon.2024.e39844.

Air Quality, Sources and Exposure

Synergistic effects and optimal control strategies of air pollutant and carbon emission reduction from mobile sources, Chuanda Wang, et al.; *Journal of Cleaner Production* (in press), doi: 10.1016/j.jclepro.2024.143824.

Munich's selective diesel vehicle ban and its impact on nitrogen dioxide concentrations: A quasi-experimental study, Anna Leibinger, et al.; *Environment International* (November 2024), Vol. 193, 109067, doi: 10.1016/j.envint.2024.109067.

Assessment of the dispersion of pollutants from automobile exhaust, taking into account relative humidity, pavement temperature, wind direction and speed, which varies depending on the time of day, Alibek Issakhov, et al.; *International Communications in Heat and Mass*

Transfer (December 2024), Vol. 159, Part B, paper 108140, doi: 10.1016/j.icheatmasstransfer.2024.108140.

Controlled human exposures: a review and comparison of the health effects of diesel exhaust and wood smoke, Erin Long, et al.; *Part Fibre Toxicol* (2024), Vol. 21, 44, doi: 10.1186/s12989-024-00603-8.

Emissions Measurements and Modelling

Fuel consumption and exhaust emissions from Euro 6d vehicles fueled by innovative LPG/DME blend, T. Rossi, et al.; *Journal of the Energy Institute* (December 2024), Vol. 117, 101851, doi: 10.1016/j.joei.2024.101851.

Diesel vehicle emissions: Dissecting the multi-factorial effect on variations of VOC-component concentrations, Chang Wang, et al.; *Urban Climate* (November 2024), Vol. 58, 102157, doi: 10.1016/j.uclim.2024.102157.

Exploring ultrafine particle emission characteristics from in-use light-duty diesel trucks in China using a portable measurement system, Dong Li, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2024.120234.

Impacts of MTBE in gasoline on the tailpipe ammonia emissions from China-6 certified passenger vehicles, Miao Wen, et al.; *Journal of Hazardous Materials* (in press), doi: 10.1016/j.jhazmat.2024.136275.

Tailpipe emissions and fuel consumption of a heavy-duty diesel vehicle using palm oil biodiesel blended fuels, Liqiang He, et al.; *Science of The Total Environment* (in press), doi: 10.1016/j.scitotenv.2024.177048.

Emissions Control, Catalysis, Filtration

Effects of variable valve timing and duration on catalyst heating using optically accessible MPI engine, Jisoo Kim, et al.; *Energy Conversion and Management* (December 2024), Vol. 322, 119157, doi: 10.1016/j.enconman.2024.119157.

Optimization control strategy for diesel Urea-selective catalytic reduction (SCR) urea injection based on the interior point method (IP) + higher order SCR model, Wenlong Liu, et al.; *Journal of Environmental Chemical Engineering* (in press), doi: 10.1016/j.jece.2024.114423.

An experimental study about the characteristics of reciprocating flow regeneration of diesel particulate filter with diesel vapor injection, Yangbo Deng, et al.; *Results in Engineering* (December 2024), Vol. 24, 103073, doi: 10.1016/j.rineng.2024.103073.

Economic viability and overall performance analysis of optimized Cu-Fe-ZSM-5 catalyst for NOx and particulate matter removal using NH_3-SCR, Shivani Shirke, et al.; *Fuel* (February 2025), Vol. 381, Part B, 133435, doi: 10.1016/j.fuel.2024.133435.

Optimal Control of Hydrocarbon Reducer (HC) Injection Based on Trust-Region-Reflective Algorithm (TRRA) and Physical Models for Diesel Oxidation Catalyst (DOC), Wenlong liu, et al.; *Journal of Hazardous Materials* (in press), doi: 10.1016/j.jhazmat.2024.136267.

Transport, Climate Change and Emissions

Defueling the impasse: EU political discourse on e-fuels, T. Birel, et al.; *Energy Policy* (April 2024), Vol. 187, 114022, doi: 10.1016/j.enpol.2024.114022.

But can it drive to Lapland? A comparison of electric vehicle owners with the general population for identification of attitudes, concerns and barriers related to electric vehicle adoption in Finland, Nils Sandman, et al.; *PLOS Climate* (October 2024), doi: 10.1371/journal.pclm.0000346.

High-selective platinum and palladium capture using polyamide 6: A potent material for platinum group metals' recovery from spent car catalytic converter, Che-Jung Hsu, et al.; *Journal of Environmental Management* (November 2024), Vol. 370, 123047, doi: 10.1016/j.jenvman.2024.123047.

FORTHCOMING CONFERENCES

FISITA World Mobility Summit
13-14 November 2024, Warren, USA
events.fisita.com/event/Summit2024

POLIS Conference 2024
27-28 November 2024, Karlsruhe, Germany
polisnetwork.eu/2024-annual-polis-conference

8th European Conference on Results from Road Transport Research Projects (RTR)
11-13 February, Brussels, Belgium
rtrconference.eu

International Automotive Recycling Congress
19-21 March 2025, Antwerp, Belgium
events.icm.ch/event/IARC2025

SAE WCX World Congress
8-10 April 2025, Detroit, USA
wcx.sae.org

Heavy-Duty Sustainable Transport Symposium
7-8 May 2025, Gothenburg, Sweden
sae.org/attend/heavy-duty-sustainable-transport-symposium

Vienna Motor Symposium
14-16 May 2025, Vienna, Austria
oevk.eventsair.com/motorensymposium2025abstracts/en/Site/Register

Shanghai-Stuttgart Symposium 'Automotive and Powertrain Technology
22-23 May 2025, Shanghai, China
fkfs-veranstaltungen.de/veranstaltungen/shanghai-stuttgart-symposium

SIA Powertrain 2025
11-12 June 2025, Port Marly, France
sia.fr/evenements/376-powertrain-SIAPowertrain2025

Stuttgart Internaitonal Symposium
2-3 July 2025, Stuttgart, Germany
fkfs-veranstaltungen.de/en/events/stuttgart-symposium