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EUROPE

EU Position for COP26 Climate Summit

On 6 October 2021, the European Council approved conclusions setting the EU's position for the United Nations Climate Change Conference (COP26) to be held in Glasgow begin November. The Council says that these conclusions emphasise the extreme urgency to step up the global response to address the climate emergency and underline the need for a just and fair climate transition across the world.

The conclusions call upon all parties to come forward with ambitious Nationally Determined Contributions (NDCs) and recognise the need to step up adaptation efforts collectively. The conclusions also recall that the EU and its Member States are the world's leading contributors of climate finance and reconfirm their continued commitment to scaling up the mobilisation of international climate finance. They invite other developed countries to increase their contributions as part of the collective developed countries' goal to jointly mobilise US$100 (€86.5) billion per year by 2020 until 2025.

The conclusions also set the EU's position as regards common time frames for emission reduction commitments included in each country's NDC. The Council expresses, with a view to reaching consensus in Glasgow, its preference for a common time frame of five years for all parties' NDCs, that will be implemented by the EU from 2031 onwards only in the case all parties would be required to do so and in a manner consistent with the European climate law.

The press release on the Council position is at consilium.europa.eu/en/press/press-releases/2021/10/06/council-sets-eu-s-position-for-cop26.

Environment Ministers' Discussions on Greenhouse Gas Emissions

On 6 October 2021, the Environment Ministers of the EU Member States met to discuss greenhouse gas emissions and climate change.

During this meeting, EU Ministers discussed the package, with a specific focus on the following proposals: (1) the proposal to revise the EU Emissions Trading System (EU ETS), (2) the proposal to amend Effort Sharing Regulation, (3) the proposal to amend the Land Use, Land-Use Change and Forestry (LULUCF) Regulation, (4) the proposal revising Regulation (EU) 2019/631 setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles and (5) a proposal for a Regulation establishing a Social Climate Fund.

Mr Vizjak, Minister of Environment and Spatial Planning, on behalf of the Slovenian Presidency, opened the meeting. A general background for the "Fit for 55" package was provided by the presidency. The package includes a comprehensive set of proposals on how to improve the economy and achieve the important transition to a green economy and green jobs, as well as to achieve climate neutrality by 2050.

Mr Frans Timmermans, Vice-President of the European Commission, underlined how the package takes a very comprehensive approach not only concerning environmental questions but also legal. The Commissioner discussed mainly two elements: (a) there are new proposals introduced in the package, and (b) whether the package has the right distribution of ambition between the Member States and regions. The Commissioner added that there is a trend in which fossil fuels become relatively more expensive than renewables, and it is thus sensible to invest in the latter.

Several Member States took the floor. Belgium supported the inclusion of the maritime and air transport sectors in the ETS, as well as reinforcing EU standards for light commercial vehicles and cars. Hungary expressed concern over the ambitious targets of the CO_2 emissions standards for cars and vans.

Romania underlined its view that the social climate fund only partially meets its concerns related to the inclusion of road transport and building in ETS. The result would be an increase in vulnerable families to energy poverty, and therefore, it is necessary for a balance in the policy mix, as there are many factors in each Member State. According to Romania, The EU needs to respect technological neutrality and the use of natural gas is essential in the transition.

Finland expressed support for the proposal on CO_2 emissions for cars and vans and noted its openness to considering strengthening the limit values further as well as the linear path between current and future targets.

The Czech Republic expressed concerns about the feasibility of setting the ban on combustion engine car sales from 2035. In its view, it is premature and not in line with the technological maturity principle.

Greece noted that the package offers a framework for transformative changes and necessary transition, and in particular welcomed the reinforcement of the innovation fund and the widening of the modernisation and acceleration of electric vehicles and the ban on combustible fuels after 2035.

Bulgaria expressed concern on the proposal to update CO_2 standards for cars and vans as it found that targeting the proposed measures only to new cars and their manufacturers is ineffective because the main pollution is due to old vehicles.

Commission President Speech at European Sustainable Energy Week

On 25 October 2021, European Commission President Ms von der Leyen made a speech to open the EU's Sustainable Energy Week. Ms von der Leyen talked about the need to decarbonise Europe's energy mix, saying that in 2020, renewable power generation overtook fossil fuels in the EU.

Amongst other things, she said that clean hydrogen is a perfect way to help reach the goal of climate neutrality. It will help to clean

up some of the most polluting industries, including heavy goods transport.

The Commission President pointed out that Europe currently imports 97% of its oil, 44% of its coal and 90% of its gas, making the EU economy extremely vulnerable to price fluctuations in global energy markets. By contrast, the production costs of renewable energies have remained stable or even decreased. She concluded that it is therefore critical to speed up the move from fossil fuels to renewables.

The full speech is available to read at ec.europa.eu/commission/presscorner/detail/en/speech_21_5544?reference=SPEECH%2F21%2F5544&language=en.

Publication of European Commission Work Programme for 2022

On 19 October 2022, the European Commission published its work programme 'Making Europe stronger together' for next year, 2022.

In relation to delivering the European Green Deal, the document states that the Commission will continue on its path towards making Europe the world's first climate neutral continent by 2050. It will follow-up on the zero-pollution action plan including in the areas of integrated water management to tackle surface and groundwater pollutants and ambient air quality to align standards with World Health Organisation recommendations.

The Commission confirms that it will also review the CO_2 emissions standards for heavy-duty vehicles and set up a legislative framework for the harmonised measurement of transport and logistics emissions to support the transition towards zero-emission mobility.

The full EU Commission work programme for 2022 is available to read at ec.europa.eu/info/sites/default/files/com2021_645_en.pdf.

Consultation on Lighter Reporting for CO_2 Emissions from HDVs

On 6 October 2021, the European Commission launched a consultation on the potential to reduce the reporting obligation for manufacturers of CO_2 emissions from HDVs under Commission Implementing Regulation (EU) 2019/1859. The consultation is open for feedback until 3 November 2021.

Implementing Regulation (EU) 2019/1859 obliges manufacturers to monitor and report an additional parameter for new heavy-duty vehicles, for the first time by 30 September 2020. The Commission's assessment of the data obtained in this first round of reporting showed stable results as regards CO_2 emissions. Therefore, the reporting obligation of manufacturers can be adjusted to avoid placing an additional burden on manufacturers to report data by 30 September 2021.

The EC consultation can be found at ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13193-Heavy-duty-vehicles-lighter-reporting.

Draft Regulation on Scope of Procedures for HDV CO_2 Determination

On 15 October 2021, the European Commission opened a consultation on extending the scope of procedures for the determination of CO_2 emissions of heavy-duty vehicles. This will amend Regulation (EU) 2017/2400.

Regulation (EU) 2017/24003 introduces a common method to objectively compare the performance of heavy-duty vehicles placed on the Union market as regards their CO_2 emissions and fuel consumption. It lays down provisions for the certification of components with an impact on CO_2 emissions and fuel consumption of heavy-duty vehicles, introduces a simulation tool for the purpose of determining and declaring CO_2 emissions and fuel consumption of those vehicles and lays down requirements for Member States' authorities and manufacturers to verify the conformity of the certification of the components and the conformity of the simulation tool operation.

It determines CO_2 emissions and fuel consumption of heavy lorries. However, in order to cover more relevant vehicles in the calculation of CO_2 emissions, it is also necessary to determine CO_2 emissions and fuel consumption of other heavy-duty vehicles, namely medium lorries and heavy buses.

To appropriately cover the later technologies, it is necessary to specify additional requirements for new technologies such as hybrid and fully electric vehicles, dual-fuel vehicles, waste heat recovery and advanced driver assistance systems.

As the on-road verification testing procedure has proved to be an important tool for the verification of calculations of CO_2 emissions and fuel consumption, it is appropriate for it to apply for medium lorries and new technologies.

Some definitions and requirements in Regulation (EU) 2017/2400 need further clarification and corrections, including further alignment to the CO_2 emission performance standards for new heavy-duty vehicles laid down in Regulation (EU) 2019/1242 of the European Parliament and of the Council.

The draft amending Regulation is available at ec.europa.eu/info/law/13235-Extension-of-scope-of-procedures-for-determination-of-CO2-emissions-of-heavy-duty-vehicles_en.

Parliamentary Question and Answer on Role of Fleet Renewal

On 7 October 2021, European Commission Transport Commissioner Ms Adina Vălean replied to a question from MEP Jan-Christoph Oetjen (Renew, DE) on the role of 'fleet renewal' and the Sustainable and Smart Mobility Strategy.

Mr Oetjen asked how the Commission defines 'fleet renewal', what legislative proposals are planned to address fleet renewal issues in the context of the strategy and different transport modes, and what EU budgetary resources and lines can be used to finance fleet renewal in the different modes.

Ms Vălean said that the Commission considers 'fleet renewal' as the replacement of older, more polluting vehicles, planes, vessels or trains with newer ones that have lower emissions, in all transport modes with an emphasis on zero-emission alternatives.

She added that the eligibility of financial support measures for fleet renewal in the context of NextGenerationEU, is determined by the Commission Recovery and Resilience Facility requirements, notably the do no significant harm principle and state aid rules. As concerns alternative fuels infrastructure, the Connecting Europe Facility (CEF) programme has created an alternative fuels facility to fund alternative fuels infrastructure by a combination of CEF grants with financing from finance institutions.

The question and response are available to read at europarl.europa.eu/doceo/document/E-9-2021-002967_EN.html and europarl.europa.eu/doceo/document/E-9-2021-002967-ASW_EN.pdf.

Zero Pollution Stakeholder Platform

On 11 October 2021, the European Commission and European Committee of the Regions announced the establishment of the Zero Pollution Stakeholder Platform to help achieve the zero-pollution ambition.

The Platform's objective is to define a common vision on how to achieve zero pollution objectives. By bringing together actors from different communities and areas of expertise, including local and regional authorities, it will tackle inter-related challenges and strengthen development of a joint environment and health agenda. It is intended to create co-ownership, promote collaboration, share good practices on cross-cutting topics and foster integrated solutions to maximise synergies with decarbonisation and post-COVID 19 recovery efforts. This way, the Platform is expected to help deliver on the flagship initiatives and actions set out in the Zero Pollution Action Plan.

The press release announcing the platform is at cor.europa.eu/en/news/Pages/achieve-zero-pollution-ambition-platform.aspx.

ENVI Opinion on Sustainable and Smart Mobility Strategy

On 12 October 2021, the European Parliament's Committee on the Environment (ENVI) published an Opinion on the Commission's Sustainable and Smart Mobility Strategy. The Rapporteur for the Opinion is MEP João Pimenta Lopes (GUE/NGL) of Portugal.

The document supports the strategy's intention to end fossil fuel subsidies and calls for the uptake of sustainable transport fuels to be better incentivised in the revision of the Energy Tax Directive. It also calls on the Commission to provide a framework for minimum tax rates that differentiate fuels according to their climate performance, which would help to reduce GHG emissions in the transport sector.

The Opinion urges the Commission and the Member States to deliver on the zero-pollution objective of the European Green Deal and to develop stringent Euro 7/VII emissions standards for air pollutants that pave the way for zero emissions. It underlines that those standards should in due course be extended to all pollutants, including smaller particles and ammonia. It stresses that new test procedures must be carried out under all possible driving conditions to ensure the accuracy of the results and effective application of the limits and to end all existing loopholes.

It states that it is alarmed by the fact that, according to the European Environment Agency (EEA), average emissions from new passenger cars have increased every year since 2017, due in part to the surge in sales of sport utility vehicles (SUVs), which are incentivised by the heavy vehicle adjustment factor. It is also concerned by analysis suggesting that plug-in hybrid cars emit 2-4 times more pollutants than what is claimed by manufacturers.

Furthermore, the Opinion calls on the Commission to develop life cycle assessment (LCA) methodologies to measure the full climate impact of cars, taking into account the use of raw materials, the recyclability of components and the environmental impacts at every step of production. It stresses the necessity of recyclability and calls for a dedicated EU programme for recycling vehicles.

The ENVI Opinion can be read in full at europarl.europa.eu/doceo/document/ENVI-AD-692686_EN.pdf.

EP Think Tank Report on Future of EU Automotive Sector

On 14 October 2021, the European Parliament's Policy Department for Economic, Scientific and Quality of Life Policies (Think Tank) published a report on the future of the EU automotive sector.

The report was prepared at the request of the Committee on Industry, Research and Energy (ITRE) and provides an independent overview of the automotive industrial landscape in the EU. Specifically, the study assesses green and digital trends currently reshaping the automotive sector and provides recommendations considering the adequacy and consistency of ongoing and future EU actions.

Looking at the challenges facing the sector, the study highlights overdependence on world manufacturers outside the EU for EV battery propulsion and says that no European OEMs, at this time, can be considered top innovators, which represents an overdependence risk on technology companies outside the EU. It points out that, with 17 000 EU SMEs active in vehicle manufacture, carmakers specialising in traditional transmission and internal combustion engine (ICE) component production face major risks.

The report identifies weaknesses in EV battery supply, raw materials, and associated innovation, which it says represent a significant threat to the development of electromobility in Europe. The report also states that, although an EV leaves a car showroom with zero emissions, the upstream supply chain associated with the same vehicle has already generated a large carbon footprint.

Of the opportunities for the automotive sector, the report highlights that the industry could showcase that the pace of greening and digitalisation is entirely consistent with the political guidelines of the European Commission in general and the EU Industrial Strategy in particular. It says that a technologically neutral stance by the EU is enabling both the growth of lithium-ion (Li-ion) and hydrogen fuel cells (HFCs) related technologies. The study sees an opportunity in consolidating the EU's global lead in sustainability-related technological development while leveraging the ubiquitous presence European carmakers and top tier suppliers have in international markets. It points out that employment gains in connected and autonomous vehicle-related design, testing and manufacturing can help offset job losses within the traditional engine, transmission, cooling, exhaust, and braking systems segments, thereby necessitating up-skilling.

The study can be found at europarl.europa.eu/RegData/etudes/STUD/2021/695457/IPOL_STU(2021)695457_EN.pdf.

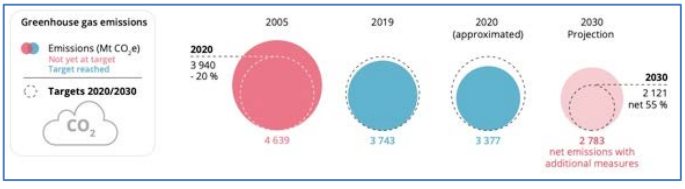
EEA Report on Trends and Projections in Europe

On 26 October 2021, the European Environment Agency (EEA) published its report 'Trends and Projections in Europe 2021', which estimates that the EU achieved its three 2020 climate and energy targets of reducing greenhouse gas emissions by 20% compared to 1990 levels, increasing the share of renewable energy use to 20%, and improving energy efficiency by 20%.

According to EEA estimates, in 2020, EU-27 greenhouse gas emissions were 31% lower than in 1990.

The EEA's preliminary estimates indicate that the EU achieved a 21.3% share of renewables in its energy consumption in 2020. According to the EEA analysis, the overall positive progress is mainly due to the increased use of renewables for electricity, heating, and cooling. The use of renewables in transport is increasing more slowly but preliminary data indicates that the EU narrowly achieved the 10% target of renewable energy use in the sector.

The EEA estimates that the EU's net emissions in 2020 were 34% lower than in 1990. According to the latest national projections available, implementing the climate and energy policies and measures currently planned at the national level could lead to a net emissions reduction of 41% by 2030. These projections, however, do not yet take into account the new measures proposed in the European Commission's 'Fit for 55' climate package to achieve the 55% net reduction target. Additional emission reductions are therefore needed, which can spur the EU towards the 55% target by 2030 and towards climate neutrality by 2050.



The report also notes that the continued introduction of renewable sources for electricity generation needs to be sustained to achieve the EU's renewable energy target. Renewables also need to cover a much larger share of energy used for heating, cooling and transport.

The report can be downloaded from eea.europa.eu/highlights/eu-achieves-20-20-20?utm_source=EEASubscriptions&utm_medium=RSSFeeds.

Transport Trends in National Recovery and Resilience Plans

On 27 October 2021, the European Parliament's Think Tank published a report on transport trends in national recovery and resilience plans. To access funding under the facility, EU countries have had to prepare their recovery and resilience plans in line with a number of requirements, such as earmarking a certain minimum share for investment in the green and digital transitions. The plans have to be endorsed by the European Commission and approved by the Council. This briefing aims to give a flavour of the elements that EU countries want to take up to revive their transport and mobility systems. As all the projects financed have to be implemented by 2026, careful consideration has been needed to determine what is feasible and how it can fit in with long-term national greening efforts.

The report says that Member States have given much attention to replacing polluting private cars as well as replacing commercial and public fleets with cleaner vehicles. In addition to everything else needed to accomplish this task, they plan to invest in install charging and refuelling points and, in several cases, provide support to fuel production.

When it comes to private car replacement, governments intend to use both 'carrots', incentivising the purchase of low polluting cars, and 'sticks', penalising polluting ones. The 'carrots' include various programmes co-financing the purchase of new alternative private cars (introduced by six countries) and scrapping premiums for old polluting cars (planned by five). Alternatively, seven countries will offer support for the purchase of clean company cars and utility vehicles (Austria), trucks (Finland), electric bikes (Cyprus) or company cargo e-bikes (Czechia).

Some countries are deploying tax relief schemes for electric vehicles. Tax relief can be granted when registering a vehicle, as in the case of the German 10-year tax exemption for purely electric vehicles, but also when using electricity for recharging (Denmark) or when using an electric company vehicle (Finland).

Several governments wish to green their public sector through transition to electromobility of their government fleet (Cyprus) or their municipal fleets. These schemes tend to include not only passenger cars but often also minibuses, buses, vans and heavy goods vehicles.

The governments of 17 countries plan to invest in charging infrastructure for electric vehicles and most also plan to invest in some refuelling stations. The briefing says that some are looking

to accelerate the deployment of alternative fuels in general (France). Several EU countries wish to complement this accelerated rollout of charging and refuelling infrastructure with some support for alternative fuels production and for improving the electricity grid. France, for instance, wants to strengthen the resilience of its electricity networks and energy transition in rural areas. Slovakia seeks to 'promote alternative fuels in the transport sector', Denmark plans to invest in green fuels both for transport and industry, while Lithuania wants to produce fuels from renewable energy sources and Croatia advanced biofuels.

Other planned initiatives supporting alternative fuels include research and development activities focusing on hydrogen (France, Italy), as well as the production of fuel-cell components and the serial testing of hydrogen components and vehicles (Germany). Concrete targets for hydrogen refuelling stations are envisaged, for example, by Italy and Croatia. Finland envisages large-scale demonstration projects targeting electric fuels and biofuels.

The briefing paper is available to read in full at europarl.europa.eu/RegData/etudes/BRIE/2021/698765/EPRS_BRI(2021)698765_EN.pdf.

EESC Opinion on Automotive Eco-Systems

On 20 October 2021, the European Economic and Social Committee adopted an Opinion on automotive eco-systems. This states that the EESC believes that the European automotive ecosystem can become a frontrunner in developing and deploying sustainable mobility solutions. Therefore, the automotive ecosystem must actively develop strategies to shape the ongoing disruption and megatrends in Europe's automotive landscape.

In order to reduce transport emissions by 90% by 2050, the EESC wants the EU to strive to make all transport modes sustainable, while making sustainable alternatives widely available and accessible to EU citizens. EESC says this objective can be achieved with a smart combination of powertrains that strikes a balance between environmental protection, efficient use of renewables, economic viability, and consumer acceptance, while respecting the principle of technology neutrality.

EESC says that delivering on the objectives of the Green Deal will support Europe's leadership in low-carbon technologies and its global competitiveness. This also means massive investments in the development of alternative drivetrains (battery-electric, hybrid, hydrogen) and defossilised fuels for conventional drivetrains that will still be present in the fleet for a long time.

The document proposes strategies for the reduction of tank-to-wheel and well-to-wheel CO_2 emissions, including through the development of e-fuels and biofuels that are in line with the UN Sustainable Development Goals.

The EESC's Opinion can be found at eesc.europa.eu/en/our-work/opinions/eu-mobility-strategy-and-eu-industrial-value-chains-automotive-eco-systems.

Progress on German Coalition Government Talks

On 15 October 2021, the largest party in the new German Parliament, the SPD, announced that preliminary agreement had been reached with the Greens and FDP on the principles for the new administration.

In the field of climate change and the environment, the agreement commits to bring Germany to the 1.5 degree path, in line with the Paris Agreement, and to develop and implement the Climate Protection Act in 2022.

The coalition acknowledges that an accelerated exit from coal power generation is necessary, ideally by 2030. It also wants to strengthen the decentralised expansion of renewable energies.

The statement adds that the coalition supports the proposals of the European Commission in the "Fit for 55" programme, and says it wants the instruments in the individual sectors to be designed in a technology-neutral way. The EU's plan for only CO_2-neutral vehicles from 2035 is expected to be later than in Germany. For Germany this will mean not only battery electric vehicles but also those using e-Fuels.

The coalition's preliminary agreement can be found at spd.de/aktuelles/detail/news/aufbruch-und-fortschritt-fuer-deutschland/15/10/2021/.

UK Net-Zero Strategy

On 19 October 2021, the UK Government set out its strategy to achieve net-zero CO_2 emissions by 2050.

The section on transport reiterates the government's plan to end the sale of new petrol and diesel cars and vans by 2030. From 2035 all new cars and vans must be fully zero emission at the tailpipe. Between 2030 and 2035, new cars and vans will only be able to be sold if they offer significant zero emission capability. The strategy goes on to say that to provide certainty to consumers, energy providers, the charge point industry, vehicle manufacturers and supply chains during this transition, we will introduce a zero emission vehicle (ZEV) mandate setting targets requiring a percentage of manufacturers' new car and van sales to be zero emission each year from 2024.

The government will continue to regulate the tailpipe CO_2 emissions of new non-zero emission cars and vans to limit their emissions until 100% of new sales are zero emission. This framework could subsequently be applied to all forms of new road vehicles sold in the UK.

There will be a further consultation in early 2022 on the design of the ZEV mandate (including uptake trajectories) and CO_2 emissions regulation (as a backstop to ensure standards in the remainder of the fleet are maintained), as well as how and when targets will be set and enforced.

In addition, there will be a consultation this year on a phase out date of 2035, or earlier if a faster transition appears feasible, for the sale of new non-zero emission powered two and three wheelers (and other L category vehicles). The government is

already consulting on a phase out date for the sale of new non-zero emission buses and coaches.

The net-zero strategy document is available to read at assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026655/net-zero-strategy.pdf.

Covenant of Mayors Europe Ceremony 2021

On 9 October 2021, the Covenant of Mayors organised its annual ceremony. Since 2008, over 10 000 local governments have been acting as part of the European Covenant of Mayors movement to reduce their greenhouse gas (GHG) emissions, adapt to climate change, secure access to affordable and sustainable energy, and, overall, to improve the quality of life for their citizens.

In April 2021, the Covenant of Mayors entered a new phase, officially launching its renewed ambition of a fairer and climate-neutral Europe. With this renewed ambition, signatories commit to reaching climate neutrality by 2050.

The President of the European Parliament Mr Sassoli emphasised that we are seeing the most critical result of climate change. Mr Sassoli said that energy poverty is a problem for all Europeans. European cities have a role to play in sustainable mobility and should be involved in the discussion of the objectives at EU level.

European Commissioner for Energy Ms Kadri Simson mentioned that summer 2021 has been a very difficult one, as we have seen the effects of climate change. We need to ensure we work together to implement the EU Green Deal.

European Commission Vice-President Mr Timmermans pointed out that we need the cities, and we need to reduce our GHG emissions substantially. Cities are where the solutions can be found. Three quarters of Europeans live in cities, and they are where the innovation and action related to climate come together. Mr Timmermans announced the launch of a new policy facility, which will allow the cities to access to information and implement strategies. He invited the cities to join the initiative of 100 climate neutral cities in 2030. Most cities have plans to decarbonise public transport and refurbish/refit houses, with huge benefits. He said fewer combustion engine vehicles in the cities means less heat and pollution. In his view, the Covenant of Mayors is the best example worldwide to demonstrate how this transition can be made.

The ceremony web stream can be accessed at eumayors.eu/news-and-events/news/1878-covenant-of-mayors-2021-ceremony-registration-is-open.html.

NORTH AMERICA

US EPA Draft 2022-2026 Strategic Plan

On 1 October 2021, the US EPA released its draft fiscal year 2022-2026 Strategic Plan. This communicates the Agency's priorities and provides the roadmap for achieving its mission to protect human health and the environment. In this Strategic Plan, the Agency states that it renews its commitment to the three principles to "follow the science, follow the law, and be transparent". The Agency also adds a fourth foundational principle: advance justice and equity.

Regarding transport pollution, the EPA says that it will collect and evaluate mobile source emission data to help guide future programme priorities related to reducing criteria pollutant and GHG emissions from light-duty cars and trucks, heavy-duty trucks and buses, non-road engines and equipment, and from the fuels that power these engines. The Agency will develop the next round of multi-pollutant emission standards for light-duty and highway heavy-duty vehicles, which will improve air quality and reduce pollution near roads and other areas of high truck activity, such as warehouses and ports. EPA will also continue to work to ensure that Clean Air Act requirements are met for new transportation projects with heavy-duty diesel traffic, such that they do not worsen air quality near communities with environmental justice concerns. The Agency will address air quality concerns in these communities through implementing regulations, developing improved air quality models and mitigation measures, and collaborating with a broad range of stakeholders — including state air quality agencies and communities with environmental justice concerns — to develop targeted, sector-based, and place-based strategies for diesel fleets (including school buses, ports, and other goods movement facilities).

EPA is taking public comment on the draft plan until 12 November 2021 and anticipates sending the final plan to Congress in February 2022. The EPA Strategic Plan can be downloaded from regulations.gov/document/EPA-HQ-OA-2021-0403-0002.

US EPA Draft Policy Assessment on NAAQS for Particulate Matter

In October 2021, the US EPA published a draft policy assessment of the National Ambient Air Quality Standards (NAAQS) for particulate matter. This follows the EPA's announcement in June 2021 that it would reconsider the decision of the previous administration.

In the assessment, the agency says that when taken together, it reaches the conclusion that the "available scientific evidence, air quality analyses, and the risk assessment… can reasonably be viewed as calling into question the adequacy of the public health protection afforded by the combination of the current annual and 24-hour primary $PM_{2.5}$ standards. In particular, it references new information and analyses in reaching its conclusion.

The draft assessment can be read in full at epa.gov/system/files/documents/2021-10/draft-policy-assessment-for-the-reconsideration-of-the-pm-naaqs.

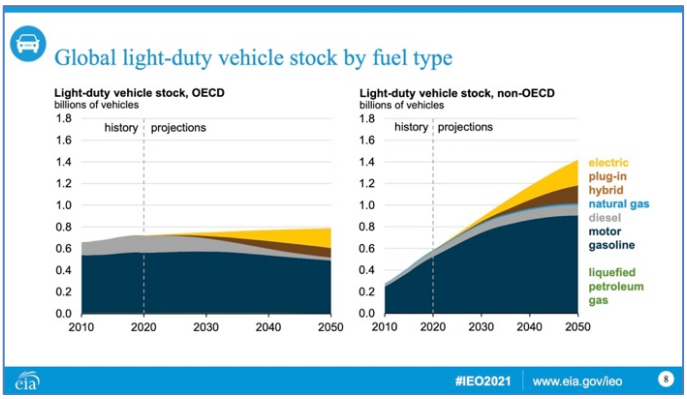
US EIA International Energy Outlook

On 6 October 2021, the US Energy Information Administration (EIA) published its International Energy Outlook 2021.

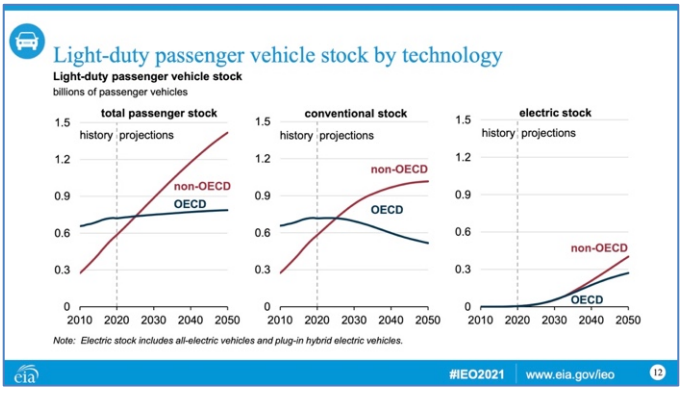
With respect to transportation, EIA estimates the global light-duty vehicle (LDV) fleet contained 1.31 billion vehicles in 2020 and projects this fleet will grow to 2.21 billion vehicles by 2050. It forecasts that plug-in electric vehicles (EVs) will grow from 0.7% of

the global LDV fleet in 2020 to 31% in 2050, reaching 672 million vehicles. Significant growth in EV sales and shares of sales through the projection period results in the global conventional gasoline and diesel LDV fleet peaking in 2038.

IEA expects that an increase in economic activity, population, and private mobility will result in more global LDVs through to 2050. It projects the population of non-OECD (Organization for Economic Cooperation and Development) countries will grow at over three times the population growth rate of OECD countries and that the non-OECD motorisation rate will increase from 92 vehicles per thousand people to 173 vehicles per thousand people between 2020 and 2050. The OECD countries' motorisation rate remains around 530 vehicles per thousand people through the projection period. Because of this growth in population and motorisation rates, IEA projects the number of LDVs in non-OECD countries will surpass those in OECD countries in 2025.



The 2020 global LDV fleet primarily consists of conventional gasoline and diesel internal combustion engine vehicles, but sales of EVs are projected to grow due to recent technology and policy developments. IEA projects EV fleet shares will reach 34% in OECD countries and 28% in non-OECD countries by 2050. Although the conventional LDV fleet peaks in 2023 for OECD countries, faster growth in the non-OECD fleet results in nearly two-thirds of light-duty EVs being in non-OECD countries by 2050.



Full details can be found at eia.gov/todayinenergy/detail.php?id=50096.

SOUTH-CENTRAL AMERICA

Delayed Introduction of ULSD in Mexico

On 22 October 2021, the Mexican government confirmed a further delay to the introduction of ultra-low sulfur diesel (ULSD) until 2025. Current rules allow fuel containing up to 500 ppm sulfur.

It has been reported that the reason is that the fuel is not currently available everywhere in the country. The agreement to delay introduction is said to be subject to an annual review, which could lead to modifications if more fuel becomes available in the future.

A report on the decision is available to read at reuters.com/business/energy/exclusive-mexico-postpones-low-sulfur-diesel-rule-until-2025-sources-2021-10-22/.

ASIA PACIFIC

ICCT Report on Opportunities to Decarbonise Transportation in China

On 7 October 2021, the International Council on Clean Transportation (ICCT) published a report looking at opportunities and pathways to decarbonise China's transportation sector during the fourteenth Five-Year Plan period and beyond.

The ICCT says that China should take a holistic approach in combating climate change and introduce strategies and policies that reduce CO_2 and non-CO_2 emissions. While this study focuses on climate impact, many of the policies ICCT considered are also projected to deliver significant emission reduction of air pollutants and therefore bring substantial benefits to air quality and public health. Policies considered under the High Ambition scenario are expected to reduce NOx emissions by a total of about 7 600, 13 000 and 15 000 thousand tonnes in 2025, 2030, and 2050, respectively, compared with 2020 emissions levels. The PM emission reductions are projected to be 328, 506 and 615 thousand tonnes in the three years, respectively.

Sector	2025	2035	2050
LDV	947	1,554	1,795
HDV	4,611	6,614	6,643
Rail	453	642	737
Non-road	1,173	2,507	2,574
Marine	372	1,635	3,362
Total	45%	77%	87%

Table 7. Annual PM emissions reduction by sector under the High Ambition scenario compared with 2020 baseline levels (thousand tonnes). The "Total" row shows the total percentage reduction for all sectors.

The NGO also recommends the establishment of near-term and mid-term GHG or climate pollutant emission targets for transportation based on the long-term goals required to bring economy-wide carbon emissions to net zero in 2060. In particular, it recommends that China consider an ambitious climate pollutant reduction target for the transportation sector in 2050, such as 70%-80% compared with 2020 level.

ICCT says that China should formulate comprehensive policies to achieve these transport sector emission reductions, including but

not limited to direct GHG emission standards for on-road, marine, and non-road mobile sources; zero-emission vehicle requirements for various transportation segments and fleets (e.g., public transport, government fleets, taxis and rentals, logistics vehicles, port drayage trucks etc.); establishment of ultra-low and zero-emission zones; bans on, or emission standards for, motor vehicle refrigerants with high global warming potentials; optimised transport system structures; and promotion of low-carbon multi-modal transportation.

The full ICCT report can be downloaded from theicct.org/publications/decarbonize-china-transport-14th-5-year-plan-oct21.

UNITED NATIONS

UN Global Sustainable Transport Conference

On 14-16 October 2021, the second United Nations Global Sustainable Transport Conference was held in Beijing, China. It concluded with a call to accelerate progress towards achieving sustainable transport that would result in major reductions in greenhouse gas emissions and in improving the lives of millions of people.

The Conference participants agreed that without a profound shift to sustainable mobility, achieving the goals of the Paris Climate Agreement and the Sustainable Development Goals would be impossible.

UN Secretary-General António Guterres specifically called for phasing out the production of internal combustion engine vehicles by 2035 for leading manufacturing countries, and by 2040 for developing countries; for zero emission ships to become the default choice, and commercially available for all by 2030, in order to achieve zero emissions in the shipping sector by 2050; and that companies start using sustainable aviation fuels now, in order to cut carbon emissions per passenger by 65% by 2050.

The Conference concluded with the Beijing Statement, which called for adopting integrated, interdisciplinary, and cross-sectoral approaches, supported by greater international cooperation. In his remarks to the Conference, China's President Xi Jinping committed to establishing a Global Innovation and Knowledge Centre for Sustainable Transport as a contribution to global transport development.

More details on the conference are available to read at un.org/en/desa/sustainable-transport-conference-calls-vastly-accelerated-action-achieve-net-zero-emissions-and.

Global Greenhouse Gas Emissions in 2020

On 25 October 2021, the UN's World Meteorological Organization (WMO) published its Greenhouse Gas Bulletin. It says that the abundance of heat-trapping greenhouse gases in the atmosphere once again reached a new record last year, with the annual rate of increase above the 2011-2020 average.

Concentration of carbon dioxide (CO_2), the most important greenhouse gas, reached 413.2 parts per million in 2020 and is 149% of the pre-industrial level. Methane (CH_4) is 262% and nitrous oxide (N_2O) is 123% of the levels in 1750 when human activities started disrupting Earth's natural equilibrium. The report says that the economic slowdown from COVID-19 did not have any discernible impact on the atmospheric levels of greenhouse gases and their growth rates, although there was a temporary decline in new emissions. The Bulletin shows that from 1990 to 2020, radiative forcing – the warming effect on our climate - by long-lived greenhouse gases increased by 47%, with CO_2 accounting for about 80% of this increase.

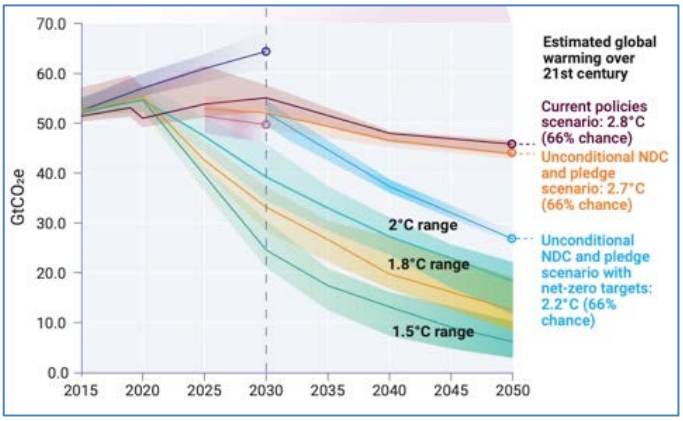
The press release and Bulletin can be found at public.wmo.int/en/media/press-release/greenhouse-gas-bulletin-another-year-another-record.

Emissions Gap Report 2021

On 26 October 2021, the United Nations Environment Programme published its Emissions Gap Report 2021. The report provides an overview of the difference between where greenhouse emissions are predicted to be in 2030 and where they should be to avert the worst impacts of climate change.

The Emissions Gap Report 2021 shows that new national climate pledges combined with other mitigation measures put the world on track for a global temperature rise of 2.7°C by the end of the century. That is well above the goals of the Paris climate agreement, which UNEP says would lead to catastrophic changes in the Earth's climate. To keep global warming below 1.5°C this century, the aspirational goal of the Paris Agreement, the world needs to halve annual greenhouse gas emissions in the next eight years, according to the report.

If implemented effectively, net-zero emissions pledges could limit warming to 2.2°C, closer to the well-below 2°C goal of the Paris Agreement. However, many national climate plans delay action until after 2030. The reduction of methane emissions from the fossil fuel, waste and agriculture sectors could help close the emissions gap and reduce warming in the short term, the report finds.



It also says that carbon markets could also help slash emissions. But that would only happen if rules are clearly defined and target actual reductions in emissions, while being supported by arrangements to track progress and provide transparency. In addition to potentially lowering the cost of additional ambition

everywhere, markets could lead to a shift in capital investment toward selling regions, and in this way affect local air quality, employment, sustainability metrics, and shift costs.

The report can be downloaded from unep.org/resources/emissions-gap-report-2021.

GENERAL

IEA Global Hydrogen Review 2021

On 4 October 2021, the International Energy Agency (IEA) published its 2021 Global Hydrogen Review.

The report says that investment is increasing in hydrogen projects to support the clean energy transition, but that further efforts are needed to reduce costs and encourage wider use across sectors. IEA adds that governments need to move faster and more decisively on a wide range of policy measures to enable low-carbon hydrogen to fulfil its potential to help the world reach net zero emissions while supporting energy security.

Today, 17 governments have released hydrogen strategies, while more than 20 others have publicly announced they are working to develop strategies. The cost of fuel cells that run on hydrogen continue to fall, and sales of fuel cell vehicles are growing.

IEA says that it is important to support the development of low-carbon hydrogen if governments are going to meet their climate and energy ambitions.

The IEA report can be found at iea.org/reports/global-hydrogen-review-2021?utm_content=bufferd16dd&utm_medium=social.

IEA World Energy Outlook 2021

On 13 October 2021, the International Energy Agency (IEA) published the 2021 edition of its World Energy Outlook (WEO).

It says that a new energy economy is emerging around the world as solar, wind, electric vehicles and other low-carbon technologies flourish. The report says however that it clear that this clean energy progress is still far too slow to put global emissions into sustained decline towards net zero, "highlighting the need for an unmistakeable signal of ambition and action from governments" at COP26 in Glasgow.

The WEO sets out what needs to be done to move beyond announced government pledges towards a trajectory that would reach net zero emissions globally by mid-century. In the 'Stated Policies Scenario' scenario, almost all of the net growth in energy demand through 2050 is met by low emissions sources, but that leaves annual emissions still around today's levels. As a result, global average temperatures are still rising when they hit 2.6 °C above pre-industrial levels in 2100.

The 'Announced Pledges Scenario' maps out a path in which the net zero emissions pledges announced by governments so far are implemented in time and in full. In this scenario, demand for fossil fuels peaks by 2025, and global CO_2 emissions fall by 40% by 2050. All sectors see a decline, with the electricity sector delivering by far the largest. The global average temperature rise in 2100 is held to around 2.1 °C.

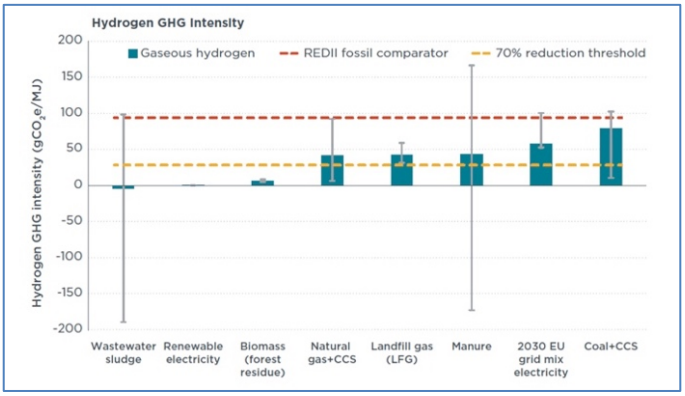
The World Energy Outlook is available at iea.blob.core.windows.net/assets/88dec0c7-3a11-4d3b-99dc-8323ebfb388b/WorldEnergyOutlook2021.pdf.

Lifecycle GHG Emissions of EU Biomethane and Hydrogen Pathways

On 10 October 2021, the International Council on Clean Transportation (ICCT) published a white paper on lifecycle greenhouse gas (GHG) emissions of biomethane and hydrogen pathways in the European Union. ICCT says that the study aims to support European policymakers with a better understanding of the uncertainties regarding gaseous fuels' roles in meeting EU climate goals.

The study conducts sensitivity analysis of the life cycle GHG emissions of a number of low-GHG gas pathways, including biomethane produced from four feedstocks and hydrogen produced from eight sources.

Among the eight hydrogen pathways, hydrogen produced from renewable electricity and forest residue biomass can have low GHG emissions even after accounting for uncertainties in parameters. While hydrogen produced from electrolysis using renewable electricity can reach a close-to-zero GHG intensity, using EU grid electricity results in the high-GHG fuel that may not deliver GHG reductions compared to direct use of fossil fuels. ICCT points out that this is a risk if the European Commission does not introduce robust requirements to ensure the use of only additional renewable electricity for hydrogen producers claiming 100% renewable sources in the Renewable Energy Directive (REDII).



Based on the results of this study, ICCT makes recommendations in two areas: (1) exclusion of certain pathways from use in meeting climate targets and (2) life-cycle methodology for calculating GHG intensity values to determine compliance with legislative mandates. It encourages policymakers not to add fossil-based hydrogen as an eligible pathway in the REDII and not to incentivise this pathway in any other relevant climate and gas policies, such as the upcoming Hydrogen and Decarbonised Gas Market Package. It recommends facility-level measurements on life cycle GHG, including measurement on methane leakage, and recommends

that policymakers provide consistent and detailed guidelines on LCA methodology and data assumptions.

The white paper can be found at theicct.org/publications/lca-biomethane-hydrogen-eu-oct21.

Hydrogen Vehicle Well-to-Wheel Greenhouse Gas and Energy Study

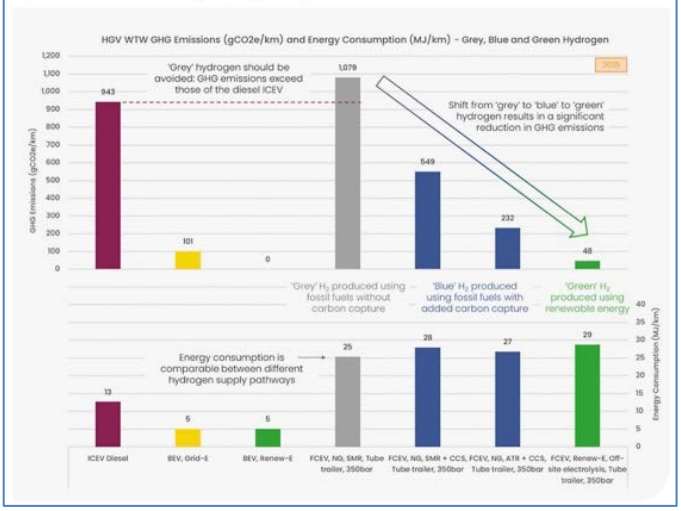
On 12 October 2021, Zemo Partnership (formerly Low Carbon Vehicle Partnership) published a study looking at hydrogen vehicle well-to-wheel (WtW) greenhouse gas (GHG) and energy efficiency.

The study recommends that Government policy should increase its focus on the WtW greenhouse gas emissions and overall energy efficiency performance of new fuels for transport. It says that while hydrogen, electric and renewable fuels (produced from waste-based feedstocks) can all radically cut emissions compared with their diesel-powered counterparts, there are major variations in their effectiveness and efficiency in terms of cutting emissions depending on choices made over the full well-to-wheel life cycle.

Zemo adds that a focus solely on mitigating tailpipe emissions can risk neglecting the full impacts and the overall energy consumption of the system. The Zemo analysis combines GHG and energy consumption data for a variety of hydrogen vehicles - trucks, buses, vans and cars. It presents well-to-wheel results for the most promising hydrogen vehicle powertrain architectures using battery electric, diesel and renewable fuels for comparison.

The study looks at hydrogen produced for transport use through electrolysis, biomass gasification with carbon capture and storage (CCS) and methane reformation with CCS (all potentially very low carbon and GHG solutions) as well as from fossil fuels without CCS mitigation.

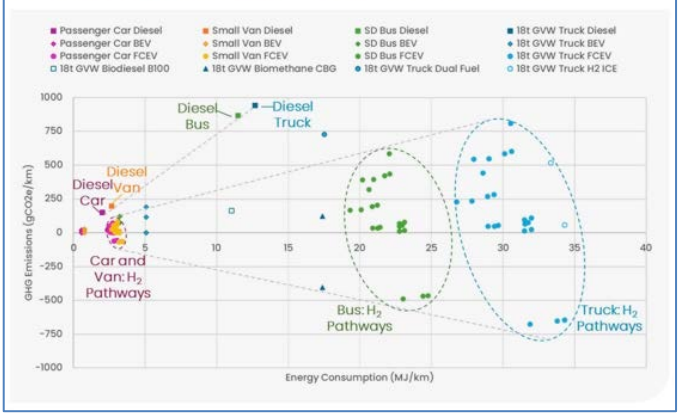
Figure 6. Shift to low carbon hydrogen pathways in 2035



The analysis finds that each of the hydrogen vehicle architectures looked at can deliver lower carbon, and in some cases negative, well-to-wheel GHG emissions solutions within the next decade for many vehicle types, but this is predicated on the use of low carbon hydrogen. The work shows that the well-to-wheel energy efficiency of hydrogen vehicles is lower than diesel internal combustion (IC) or battery electric vehicles and those using renewable fuels in IC engines.

In the case of HGVs powered by hydrogen fuel cells, the well-to-wheel energy efficiency is four to six times worse than that for comparable battery electric vehicles.

Figure 5. Trends in WTW GHG emissions and energy consumption for different vehicles



The study recommends that further feasibility work, including energy analysis, should be done to assess the suitability of different vehicles for different use cases to inform the potential role of hydrogen in the HGV sector. Relevant factors would include vehicle payload and capacity, range, refuelling/charging time and infrastructure.

The study is available to download from zemo.org.uk/news-events/news,welltowheel-study-highlights-need-for-inclusion-of-life-cycle-energy-and-gh.

Clean Air Fund Report on Joined-up Action on Air Quality and Climate Change

On 27 October 2021, the Clean Air Fund, a philanthropic organisation working globally to "empower funders, researchers, policymakers and campaigners to deliver clean air for all", published a report showing that climate policies are up to 50% more effective when they account for air pollution.

The briefing paper, 'Joined-up Action on Air Quality and Climate Change', finds that factoring in wider savings on healthcare, economic productivity and inequality reduction from tackling air pollution when deciding climate policies can support bolder, faster action on air pollution and climate change.

The report says that taking into account air pollution benefits could lead to policy packages which increase emission reduction potential by up to 50%, while also offering a positive net return on overall investment. In the EU, for example, it is estimated that spending €38-40 billion a year to adopt all feasible measures to control both greenhouse gases and air pollution would generate up to €157 billion per annum in health benefits.

The paper calls for governments meeting at COP 26 to take a number of steps to promote this kind of thinking in climate policymaking, including stopping all new public investment into

high carbon emitting and air polluting fossil fuels. The Clean Air Fund wants to make action on air pollution an explicit priority in climate action and to increase the overall share and amount of grant-based assistance for tackling air pollution within climate action and sustainable development programmes, particularly in lower-income countries where air pollution is an overlooked but an escalating emergency.

The fund calls for a new Global Air Quality Convention, where global targets informed by WHO ambient air pollution guidelines can be agreed and reported against, with coordinated national action and improved policy coherence across international climate, and sustainable development frameworks.

The report is available to read at cleanairfund.org/blog-post/joined-up-action-air-pollution-climate-change/.

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Evaluation of emissions in traffic reduction and pedestrianization scenarios in Madrid, José Sánchez, et al.; *Transportation Research Part D: Transport and Environment* (November 2021), Vol. 100, 103064, doi: 10.1016/j.trd.2021.103064.

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FORTHCOMING CONFERENCES

FVV Autumn Conference
8-9 November 2021, Nürburg, Germany
fvv-net.de/en/events/fvv-autumn-conference-2021/

Charging the Way to Zero-Emission Mobility: the role of AFIR
9 November 2021, Online
acea.auto/event/webinar-charging-the-way-to-zero-emission-mobility-the-role-of-afir/

EU Cars CO_2 Law: carmakers' performance so far and way forward
15 November 2021, Online
eventbrite.be/e/eu-cars-co2-law-carmakers-performance-so-far-and-way-forward-tickets

5th International FEV Conference Zero CO_2 Mobility
15-17 November 2021, Aachen, Germany
cevolver.eu/5th-int-fev-conference-zero-co2-mobility

ACEM 2021 Conference - The Ride to 2030 and Beyond
17 November 2021, Online
acem.eu/acem-conference-european-motorcycle-industry-contribution-to-sustainable-mobility

EU Clean Air Forum
18-19 November 2021, Madrid, Spain and Online
ec.europa.eu/environment/events/eu-clean-air-forum_en

POLIS Annual Conference
1-2 December 2021, Gothenburg, Sweden
polisnetwork.eu/2021-annual-polis-conference

Powertrain Systems for Net-Zero Transport
7-8 December 2021, London, UK
events.imeche.org
AECC will make a presentation.

SAE WCX World Congress
5-7 April 2021, Detroit, USA and Online
sae.org/attend/calls-for-papers

Catalysis and Automotive Pollution Control (CAPoC12)
6-8 April 2022, Brussels, Belgium
capoc.ulb.ac.be

CITA International Conference
1-2 June 2022, Amsterdam, Netherlands
citainsp.org/cita-conferences

8th International MinNOx Conference
Spring/Summer 2022, Berlin, Germany (postponed from June 2021)
iav.com/en/events/minnox