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NEWSLETTER

International Regulatory Developments

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Launch of New AECC Website

On 18 November 2020, AECC launched its refreshed, Euro 7 ready website. AECC sees the next five years as being critical in determining the future of sustainable mobility, the main theme of the enhanced website.

AECC envisions a future where fuel- and technology-neutral regulations take account of the predicted large share of vehicles with internal combustion engines in the short, medium, and long term. The website highlights the importance of legislation, technology and fuels for the future of European sustainable mobility.

The website strengthens AECC's communication and advocacy tools. AECC has informed its contacts about the updated website and it was also shared on media platforms Twitter and LinkedIn.

The AECC web site address remains www.aecc.eu.

EUROPE

Meetings of the Advisory Group on Vehicle Emission Standards

On 16 November 2020, the Advisory Group on Vehicle Emission Standards (AGVES) held a dedicated workshop on simplification proposals for the future Euro 7 legislation to continue the discussion at the 6th AGVES meeting held on 27 October 2020. The meeting was conducted in a virtual setup and was chaired by EU Commission DG Growth.

The European Commission clarified that there is no final EC position on Euro 7 yet. At this stage the Commission is collecting as much information as possible. All stakeholders were invited to do so.

The CLOVE consortium clarified its proposals to simplify the Euro 7 legislation. The following topics were covered by the consortium: merging Light and Heavy-duty into one regulation, testing regime simplification, enforcement, reference to UNECE and an open question for new ideas. The preliminary analysis of the stakeholder feedback to the second targeted questionnaire which closed on 9 November was shown. The CLOVE consortium went through the feedback obtained by the different stakeholders in topics regarding a single legislation framework for light and heavy-duty, as well as the perspective from the different stakeholders on current testing complexity.

CLOVE further explained the principle of the Testing Conformity Indicator (TCI) concept and gave an overview of the simplification this indicator could bring. The definition of the border between Light and Heavy-duty vehicles based on a definition of the Technically Permissible Maximum Laden Mass (TPMLM) was presented. All the mentioned topics are being considered and will continue to be developed by CLOVE.

On 26 and 27 November 2020, AGVES held its 7th meeting in a virtual setup and chaired by EU Commission DG Growth.

In addition to a presentation by AECC, other organisations including the European Association of Automotive Suppliers (CLEPA), European Automobile Manufacturers' Association (ACEA), The International Council on Clean Transportation (ICCT) and FIA, amongst others, presented their views.

AECC presented the status of the ongoing light-duty gasoline and heavy-duty diesel demonstration projects as well as AECC's position on Euro 7/VII.

In addition, AECC commented on CLOVE scenarios presented in the AGVES' October session. In AECC's view, these scenarios are very challenging package due to combination of test conditions and limit values. AECC mentioned that the evaluation of combined test conditions and timing are missing in the CLOVE technology assessment.

AECC strongly stated time is required to further develop technologies and that significant innovation steps are needed. AECC stressed that the initial CLOVE scenarios are not adequate for introduction in one single step in a short timeframe.

The Commission and the CLOVE consortium presented the outcome of the public consultation and targeted stakeholder questionnaires. CLOVE also presented the intended approach for the impact assessment input, following the EC handbook of external cost calculation.

The European Commission clarified that their intention is not to put an end to the Internal Combustion Engine (ICE). It was mentioned that CLOVE consortium was tasked to investigate what technologies can do, with a future perspective in mind. The

Commission's proposal is still to be developed and will be based on the technical assessment provided by CLOVE and a cost-benefit analysis.

AERIS presented the final results of the air quality modelling on behalf of ACEA. ACEA will publish the full report before the end of the year. ACEA expressed its concerns about the AGVES process and the CLOVE proposals. CLEPA presented their views on the wide on-road testing and On-board monitoring (OBM). They listed comments for specific technical elements of the CLOVE proposals and asked to consider an approach with flexible limits.

The ICCT presented insights from recent test projects, including a cost analysis for HD related to the CARB proposals and remote sensing for LD. Finally, FIA presented an overview of results from GreenNCAP tests on Euro 6d-TEMP vehicles for regulated and un-regulated pollutants.

The next session of AGVES will be held on 24 February 2021.

The AECC presentation gives at the AGVES meeting is available at www.aecc.eu/wp-content/uploads/2020/11/201126-AECC-presentation-AGVES-1.pdf.

CO_2 Emissions for Cars and Vans Roadmap Consultation

On 26 November 2020, AECC provided comments to the European Commission on its CO_2 emissions for cars and vans roadmap Public Consultation. AECC stressed that more sustainable and renewable fuels should be used in cars with internal combustion engines.

It was noted that a mechanism to consider the contribution of these fuels towards CO_2 reduction would incentivise the car manufacturers to encourage their use; the fuel industry to increase their production at competitive cost and customers to use them widely. This would help lowering greenhouse gas emissions from road transport, coming from new vehicles as well as from the existing vehicle fleet.

AECC explained how modern light duty vehicles are now equipped with internal combustion engines with integrated emission control technologies, allowing for simultaneous and combined emissions reduction of nitrogen oxides (NOx), particles (PM & PN) and carbon dioxide (CO_2). It was also mentioned that an effective way of moving the road transport emissions towards zero in the short term is to encourage faster fleet renewal. This promotes the market uptake of cleaner cars and vans, including hybrids and clean internal combustion engine vehicles.

The EU public consultation can be found at ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12655-Revision-of-the-CO2-emission-standards-for-cars-and-vans-.

AECC's response to the CO_2 emissions roadmap is at www.aecc.eu/wp-content/uploads/2020/11/201124-AECC-comments-on-CO2-target-for-LD-roadmap-1.pdf.

Regulation with Specific Measures on End-of-Series L-Category Vehicles

On 13 November 2020, Regulation (EU) 2020/1694 was published in the Official Journal of the European Union. This amends Regulation (EU) 168/2013 as regards specific measures on L-category end-of-series vehicles in response to the COVID-19 pandemic.

It provides for vehicles that would have ordinarily become invalid on 1 January 2021 to be made available on the market, registered or entered into service as end-of-series vehicles until 31 December 2021. One condition is that the number of end-of-series vehicles shall not exceed the number of vehicles with an EU type-approval that will become invalid on 1 January 2021, and that were in stock on 15 March 2020.

A manufacturer who wishes to benefit from the derogation is required to submit a request to the national authority of each Member State where the vehicles in question are to be made available on the market, registered or entered into service, indicating the number of end-of-series vehicles for which the derogation referred to in paragraph 1 is requested. The national authority concerned shall then decide, within a month of receiving the request, whether to permit the registration of those end-of-series vehicles within its territory, and in what number.

The regulation can be found in the Official Journal at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2020.381.01.0004.01.

Approval of Use of Engine-On Coasting Function in Passenger Cars

On 25 November 2020, the European Commission passed Implementing Decision (EU) 2020/1806 on the approval of the use of the engine-on coasting function in passenger cars with internal combustion engines and in not off-vehicle charging hybrid electric passenger cars as an innovative technology to reduce CO_2 emissions.

The decision states that as regards the engine-off coasting function, it has not been possible, on the basis of the supporting data provided, to conclusively determine the level of CO_2 savings that may be achieved. In particular, it has not been sufficiently demonstrated that the CO_2 savings achieved by switching off the engine are not offset by the CO_2 emissions resulting from the energy required to restart the engine and to bring the engine speed up to the desired synchronisation speed.

It has however been satisfactorily and conclusively demonstrated that the engine-on coasting function for use in passenger cars powered by an internal combustion engine meets the criteria referred to in Article 11(2) of Regulation (EU) 2019/631 and the eligibility criteria specified in Article 9(1)(a) of Implementing Regulation (EU) No 725/2011.

From 2021, manufacturers' compliance with their specific emissions targets under Regulation (EU) 2019/631 is to be established on the basis of the CO_2 emissions determined in accordance with the Worldwide Harmonised Light Vehicle Test Procedure (WLTP) set out in Commission Regulation (EU) 2017/1151. CO_2 savings from the innovative technology certified by reference to this Decision may therefore be taken into account for the calculation of a manufacturer's average specific emissions of CO_2 only for calendar year 2020.

The text of the implementing decision can be found at eur-lex.europa.eu/legal-content/EN/TXT/OJ.L_.2020.402.01.0091.01.ENG.

Consultation on Taxonomy Criteria defining Environmentally Sustainable Activities

On 20 November 2020, the European Commission launched a public consultation on the first two sets of criteria for determining which economic activities can qualify as environmentally sustainable, under the EU's Taxonomy.

The EU's Taxonomy Regulation, which entered into force on 12 July 2020, will help create the world's first-ever "green list" – a classification system for sustainable economic activities – that will create a common language that investors and businesses can use when investing in projects and economic activities that have a substantial positive impact on the climate and the environment. As part of the Taxonomy Regulation, the Commission was tasked with coming forward with technical screening criteria (through 'delegated acts') to develop the taxonomy further. The first two sets of criteria have been published in a draft delegated act, which is now open for feedback.

The activities and criteria are based on the recommendations of the Technical Expert Group on Sustainable Finance (TEG) published in March 2020.

The public consultation will run for four weeks. Both consultation and delegated acts are at ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12302-Climate-change-mitigation-and-adaptation-taxonomy#ISC_WORKFLOW.

Consultation on EU Action Plan Towards Zero Pollution Ambition

On 11 November 2020, the European Commission launched a consultation on the EU Action Plan Towards a Zero Pollution Ambition for air, water and soil. This follows on from the consultation on the roadmap to achieve this, which closed at the end of October.

The consultation closes on 10 February 2021 and is at ec.europa.eu/info/law/better-regulation/have-your-say/12588-EU-Action-Plan-Towards-a-Zero-Pollution-Ambition.

EP Committee Draft Reports on European Strategy for Hydrogen

On 10 November 2020, the European Parliament's Committee on Industry, Research and Energy (ITRE) published a draft report on a European Strategy for Hydrogen. The Rapporteur for this report is Mr Jens Geier (S&D, DE).

The draft report points out that 95% of the EU's hydrogen production is currently based on fossil fuels and that 'clean hydrogen' is not yet competitive with fossil-based hydrogen and low-carbon hydrogen.

The Rapporteur underlines that hydrogen is not the silver bullet solution to decarbonisation. Instead, the 'energy efficiency first principle' should prevail and direct electrification should be considered the preferable option for decarbonisation, where technologically and economically possible, as it can be more cost- and energy-efficient due to efficiency losses in hydrogen production.

The report goes on to say that the EU needs to base its hydrogen economy on clean hydrogen, as only clean hydrogen is sustainable in the long term. In order to ramp up hydrogen production and establish the clean hydrogen economy fast enough to achieve our climate goals, low-carbon hydrogen can play a transitional role, as clean hydrogen is not yet sufficiently abundant and competitive. The Commission should assess for how long and how much low-carbon hydrogen would be needed during this transitional phase. It is important that fossil-based hydrogen is phased out as soon as possible.

The Committee on Transport and Tourism (TRAN) published its own draft opinion on the same date, under Rapporteur Mr Georg Meyer (ID, AT).

This report notes that the role of local transport (city buses and commercial fleets) will be essential in extending the application of hydrogen to other transport modes. It also stresses that further research can improve the use of hydrogen in cars and can overcome the high hurdles presented by the specific characteristics of hydrogen, and notes that technical improvements are required to limit the high efficiency losses in hydrogen production, transport and use.

On 24 November 2020, the Environment (ENVI) Committee of the European Parliament published its proposed amendments to the European Strategy for Hydrogen.

The document contains 213 amendments. These include proposals around the definition of hydrogen, in particular stressing that "renewable-based hydrogen" is what the Commission should have as its focus in its plans for decarbonisation. Another proposal is for the application of a consistent EU-wide methodology based on life-cycle greenhouse gas emission analyses enabling a transparent comparison of different energy sources, since this constitutes the basis for any future investments. The document calls on the Commission to present in the first half of 2021 a clear definition of renewable hydrogen in line with the (outstanding) delegated act under Article 27 of Directive 2018/2001 and considers that this definition should cover clean hydrogen used in any sector.

Other amendments encourage the Commission to make the necessary effort to facilitate and boost research and investment in hydrogen by the Member States.

The ITRE document is available to read at www.europarl.europa.eu/doceo/document/ITRE-PR-658772_EN.pdf.

TRAN's draft opinion can be found at www.europarl.europa.eu/doceo/document/TRAN-PA-660164_EN.pdf.

The ENVI draft opinion is published at www.europarl.europa.eu/doceo/document/ENVI-AM-660370_EN.pdf.

Post-COVID-19 European Recovery Funds for Climate Neutral Economy

On 16 November 2020, a briefing requested by the European Parliament's Environment (ENVI) Committee set out the opportunities of post-COVID-19 European recovery funds in transitioning towards a circular and climate neutral economy.

The briefing notes that large rapid absolute reductions of resource use and greenhouse gas (GHG) emissions cannot be achieved through observed decoupling rates, hence decoupling needs to be complemented by sufficiency-oriented strategies and strict enforcement of absolute reduction targets. In determining whether the EU is recovering successfully from COVID-19, the evolution of the quality of life and well-being of people, as well as GHG emissions and loss of nature should be monitored. It says that Gross Domestic Product (GDP) is a means to an end, not an end. The EU should present a forward-looking, ambitious vision for an economy geared to the UN Sustainable Development Goals.

According to the briefing, investment in renewables and reliance on renewables for electricity, heat and mobility is not only environmentally desirable, but also economically rational. It concludes that measures that put forward the managed decline of fossil fuels should be central to the green recovery plan. This includes no easing of environmental regulations, a phase-out of fossil fuel subsidies, and no bailouts for fossil fuel-related companies.

The briefing can be read in full at www.europarl.europa.eu/RegData/etudes/BRIE/2020/658186/IPOL_BRI(2020)658186_EN.pdf.

European Commission Autumn Economic Policy Package

On 18 November 2020, the European Commission presented its autumn economic policy package, including a staff working document on *Delivering on the UN's Sustainable Development Goals* (SDGs).

This document explains how the European Commission is taking forward its commitment to sustainable development, the 2030 Agenda and the SDGs through its internal and external action policies, while also monitoring progress at Member State and European Union levels.

It says that this commitment has even greater relevance considering the global COVID-19 pandemic by providing an impetus to 'building back better' towards a more inclusive, sustainable, just and resilient future for all.

It describes the European Green Deal as a major flagship initiative which puts forward the EU's new growth strategy, whose implementation will contribute directly to achieving at least 12 of the 17 SDGs.

The staff working document can be found at ec.europa.eu/info/sites/info/files/delivering_on_uns_sustainable_development_goals_staff_working_document_en.pdf.

Court of Justice Ruling on Air Quality Infringements by Italy

On 10 November 2020, the Court of Justice of the European Union issued a ruling stating that Italy has infringed EU law on ambient air quality. This relates to an infringement procedure launched by the European Commission in 2014 claiming that the Italian Republic had systematically and persistently exceeded, in a certain number of zones in Italy, the limit values for PM_{10} particulate matter laid down by the Air Quality Directive.

The Commission maintained, first, that, since 2008, the Italian Republic had systematically and persistently exceeded, in the zones concerned, the daily and annual limit values applicable to concentrations of PM_{10}. Secondly, the Commission complained that Italy had failed to fulfil its obligation under the directive, to adopt appropriate measures to ensure compliance with the limit values for PM_{10} in all the zones concerned.

Taking the view that the explanations provided in that regard by the Italian Republic during the prelitigation procedure were insufficient, the Commission brought an action for failure to fulfil obligations before the Court on 13 October 2018. In the judgment delivered on 10 November 2020, the Court, sitting as a Grand Chamber at the request of the Italian Republic, upheld that action.

The Court established that the fact of exceeding the limit values for PM_{10} is in itself sufficient to establish failure to comply with the provisions of the Air Quality Directive. Moreover, in this case, the Court found that, from 2008 to 2017 inclusive, the daily and annual limit values for PM_{10} were regularly exceeded in the zones concerned. According to the Court, the fact that the limit values in question were not exceeded in certain years in the period under consideration does not prevent a finding of systematic and persistent failure to comply with the provisions at issue. It states that according to the definition of 'limit value' in the Air Quality Directive, that value must, in order to avoid, prevent or reduce harmful effects on human health and/or the environment as a

whole, be attained within a given period and not be exceeded once attained.

Furthermore, the Court stresses that, when such a finding is made, as in the present case, it is irrelevant whether the failure to fulfil obligations is the result of intention or negligence on the part of the Member State responsible, or of technical or structural difficulties encountered by it, unless it is established that there were exceptional circumstances whose consequences could not have been avoided despite all the steps taken. The Court also states that exceedance of the limit values for PM_{10}, even in a single zone, is sufficient in itself for a possible finding of failure to comply with the abovementioned provisions of the Air Quality Directive.

The Court went on to find that "the Italian Republic has manifestly failed to adopt in good time" the measures that were required. It refers to the evidence in the case file demonstrating, in particular, that the exceedance of the daily and annual limit values for PM_{10} has remained systematic and persistent for at least eight years in the zones concerned.

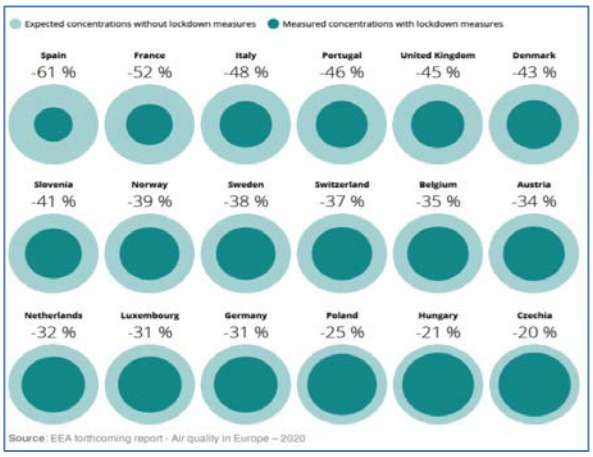
The press release with further detail is available at curia.europa.eu/jcms/upload/docs/application/pdf/2020-11/cp200136en.pdf.

EEA Report on Impacts of Global Pandemic on Europe's environment

On 5 November 2020, the European Environment Agency published their brief on "COVID-19 and Europe's environment: impacts of a global pandemic". The briefing focuses on the short-term effects of COVID-19 on our environment, approximately six months after large parts of the world went into some degree of lockdown. It considers what can be learnt from these effects and how they might help shape decision-making in the future.

The briefing touches on several topics, amongst which, the Greenhouse gas emissions, where it highlights that the transport sector, a key source of GHG, has been particularly affected by the crisis. The demand for passenger transport has declined as a result of international travel restrictions and reduced commuting, tourism and business travel. The International Road Transport Union (IRU) expects a 57% decline in turnover from road passenger transport activity in Europe for 2020 compared to the previous year. Same happens to aviation, and these figures point to a significant decline in GHG emissions from transport in 2020.

The brief also mentions that one of the most evident short-term effects of COVID-19 lockdowns has been the dramatic improvement in air quality, especially in some of the world's most polluted cities. Particularly, the brief shows the reduction on NO_2 concentrations – a pollutant mainly emitted by road transport – fell sharply in many European countries where lockdown measures were implemented in the spring of 2020.



Concentrations of PM_{10} also fell across Europe in this period, but decreases were less pronounced. Whereas NO_2 emissions are largely attributable to road transport, PM concentrations are influenced by emissions from natural sources as well as man-made sources such as residential heating, agriculture and industry, which are less likely to have been affected by lockdown restrictions.

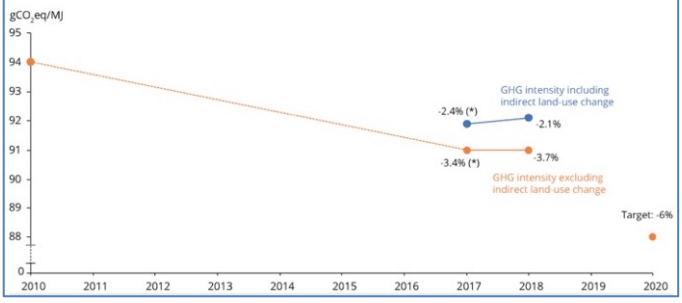
The briefing can be found at www.eea.europa.eu/post-corona-planet/covid-19-and-europes-environment.

EU Progress on Greenhouse Gas Reduction from Transport Fuels

On 19 November 2020, the European Environment Agency (EEA) published its report on greenhouse gas (GHG) emissions from transport fuels, stating that achieving the 2020 reduction target "remains problematic" for most EU Member States.

According to the EEA's fuel quality data indicator, the emission intensity decreased by 3.7% between 2010 and 2018, mostly due to the increased use of biofuels. The emission intensity of fuels sold in the EU actually increased between 2017 and 2018, when considering the effects of indirect land use change due to the increased use of oil crops as feedstocks.

Fig. 1: Average greenhouse gas intensity of road transport fuels in the EU, 2010-2018



Transport is responsible for more than 25 % of the EU's greenhouse gas emissions and is a major contributor to climate change. To support a reduction in greenhouse gas emissions from transport, the EU's Fuel Quality Directive sets the target that fuel suppliers should reduce the emission intensity of fuels sold in the

EU by 6% by 2020, compared with 2010. In 2017, the average emission intensity of fuels in the EU was 3.4% lower than in 2010, thus failing to meet the indicative target of a 4% reduction by 2017.

The report in full is available at www.eea.europa.eu/data-and-maps/indicators/greenhouse-gas-emissions-intensity-of/assessment.

Air Quality in Europe 2020 Report

On 23 November 2020, the European Environment Agency (EEA) published its 2020 *Air Quality in Europe* report. The report provides an annual assessment of the status and impacts of air quality and recent air quality trends. It supports policy development and implementation in the field of air quality at both European and national levels.

The 2020 edition presents updated information for 2018 on air pollutant emissions and concentrations, a review of trends in ambient air concentrations of key pollutants from 2009-2018, and the latest findings and estimates of population and ecosystem exposure to air pollutants with the greatest impacts.

This year, for the first time, the report uses unvalidated 'up-to-date' data for selected pollutants to provide a preliminary assessment of ambient air concentrations of key pollutants in 2019 along with an analysis of the effect on air pollutant concentrations of lockdown measures in 2020 to stop the spread of COVID-19.

In relation to coronavirus, the report shows that nitrogen dioxide (NO_2) concentrations were significantly reduced in April 2020, independently of meteorological conditions. The extent of the reductions varied considerably within cities and across cities and countries, however reductions exceeding 60% were observed in some cases.

PM_{10} - particulate matter with a diameter of 10 µm or less - concentrations were also lower overall across Europe in April 2020 as a result of the lockdown measures and independently of meteorological conditions, although the impact was less pronounced than for NO_2. Nevertheless, it reached up to 30% in certain countries.

The EEA says that although early studies have found spatial coincidence between COVID-19 and high levels of air pollution, the causality is not clear and further epidemiological research is needed.

Estimates of the health impact of exposure to air pollution indicate that in 2018 long-term exposure to $PM_{2.5}$ in Europe (including 41 countries) was responsible for approximately 417 000 premature deaths, of which around 379 000 were in the EU-28. This represents a 13% reduction in both Europe and the EU-28, compared with the 477 000 premature deaths in Europe (437 000 in the EU-28) estimated, using the same methodology for 2009.

The estimated impact attributable to the population exposure to NO_2 in these 41 European countries in 2018 was around 55 000 premature deaths (54 000 in the EU-28). For NO_2, a comparison with 2009 impacts (120 000 premature deaths in Europe and 117 000 in the EU-28) shows that premature deaths have more than halved, with a reduction of 54%.

The report is available to download from www.eea.europa.eu/publications/air-quality-in-europe-2020-report.

EEA Trends and Projections in Europe Report

On 1 December 2020, the European Environment Agency (EEA) published its *Trends and projections in Europe 2020* report, tracks progress the EU's 27 Member States (plus the United Kingdom) are making towards Europe's climate and energy targets. The analysis is based on data on greenhouse gas emissions and energy up to 2019, officially reported in 2020, and complemented by the EEA's own preliminary estimates for missing data.

In 2019, greenhouse gas emissions in the EU-27 decreased by almost 4%. This one-year drop was unprecedented over the last decade and occurred before the effects of the COVID-19 pandemic. The 2019 drop took place in a period of economic growth, reflecting the strong and steady growth of renewable energy in Europe and the result of cumulative long-term, sustained efforts toward lower emissions levels.

Since 1990, greenhouse gas emissions in the EU have been steadily declining, with emissions in the EU-27 falling to 24 % below 1990 levels in 2019. This highlights the results of effective climate policies implemented across the EU and according to EEA, shows that it is clearly possible to achieve more ambitious reduction targets by 2030, paving the way for a climate neutral EU by 2050.

Preliminary EEA data suggest that the EU-27 achieved a total share of energy consumed from renewable sources of 19.4% in 2019. The EU is therefore on track to the 2020 target of a minimum 20% share.

EEA says that the COVID-19 pandemic in 2020 is likely to make the 2020 targets easier to achieve, although the impact of COVID-19 related potential reductions might be short-lived and emissions might rebound as economic activities return to pre-COVID levels.

The full report can be found at www.eea.europa.eu/highlights/eu-on-track-to-meet?utm_source=EEA.

UK Plan to phase out Sales of New Petrol and Diesel Cars and Vans

On 18 November 2020, UK Prime Minister Boris Johnson announced a "ten-point plan for a green industrial revolution", covering clean energy, transport, nature and innovative technologies.

One of the areas is that of electric vehicles. The announcement states that after consulting with the motor industry, the UK will end the sale of new petrol and diesel cars and vans by 2030, ten years earlier than originally planned. However, the sale of hybrid cars and vans that can "drive a significant distance with no carbon coming out of the tailpipe" will be allowed until 2035.

Nearly £2.5 billion funding is to be made available to support the transition, approximately half of which will be to accelerate the

rollout of charge points for electric vehicles in homes, streets and on motorways across England, so people can more easily and conveniently charge their cars.

There will also be grants for those buying zero or ultra-low emission vehicles to make them cheaper to buy and incentivise more people to make the transition. In addition, nearly £500 million will be spent in the next four years for the development and mass-scale production of electric vehicle batteries.

The UK government will also launch a consultation on the phase-out of new diesel heavy goods vehicles to "put the UK in the vanguard of zero emission freight".

There are currently no details as to how and when legislation will be introduced to implement these changes.

The ten-point plan is at assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN.pdf.

German Support for Automotive Industry

On 17 November 2020, the German government announced an additional €3 billion of support for its automotive industry. The new funding is intended to bring about "long-term structural change" in the automotive industry. One third of this will be used to extend its subsidy for electric vehicles until 2025.

Under an agreement with the industry, consumer subsidies for electric cars costing less than €40 000 will increase to €6000 from €4000. Purchasers of plug-in hybrids in this price range would be given a subsidy of €4500, up from €3000. For electric cars over €40 000, there will be an increase in the subsidy by 25%. Any car priced over €60 000 will not be supported by the scheme.

Industry and government will evenly split the cost of the subsidies.

A report on the agreement can be found at europe.autonews.com/automakers/german-auto-sector-gets-billions-aid-weather-virus-crisis.

A video of the press briefing (in German) is at www.bmvi.de/DE/Home/home.html.

NORTH AMERICA

US EPA Report on Emission Tampering in Diesel Pickups

On 20 November 2020, the Air Enforcement Division (AED) of the US EPA released a report regarding emission tampering of diesel pickup trucks to "convey to our state partners some information about the impact of tampering and aftermarket defeat devices on air quality".

It says that while the report does not provide an estimate of the prevalence of tampering, it does quantify the scale and air quality impact of the tampering of diesel pickup trucks that the agency has identified in recent civil enforcement efforts. Specifically, AED analysed evidence obtained by EPA civil enforcement personnel during many investigations conducted over approximately five years, involving tampering of Class 2b and 3 diesel pickup trucks that occurred after 2009 and before 2020.

The AED estimates that the emissions controls have been removed from more than 550 000 diesel pickup trucks in the last decade. As a result of this tampering, more than 570 000 tons of excess oxides of nitrogen (NOx) and 5000 tons of particulate matter (PM) will be emitted by these tampered trucks over the lifetime of the vehicles. These tampered trucks constitute approximately 15% of the national population of diesel trucks that were originally certified with emissions controls. But, due to their severe excess NOx emissions, these trucks have an air quality impact equivalent to adding more than 9 million additional (compliant, non- tampered) diesel pickup trucks to our roads.

The report is available to read in full at int.nyt.com/data/documenttools/epa-on-tampered-diesel-pickups-11-20/6d70536b06182ad2/full.pdf.

Climate and Environmental Priorities for President-Elect Biden

US President-elect Joe Biden's transition team has listed on its website that climate change and environmental justice are priorities his administration hopes to quickly address when he takes office next year, alongside the coronavirus pandemic, racial equity and economic recovery. The website sys that "The team being assembled will meet these challenges on Day One and build us back better,". President-elect Biden has also pledged to quickly re-enter the Paris Agreement. He also wants to make investments in infrastructure to "lay a new foundation for sustainable growth, compete in the global economy, withstand the impacts of climate change, and improve public health, including access to clean air and clean water".

On climate specifically, the site includes his central message that addressing climate change can create significant numbers of new jobs. This includes the automotive sector where the goal is to create 1 million new jobs in automotive manufacturing, domestic auto supply chains, and auto infrastructure, from parts to materials to electric vehicle charging stations.

The President-elect's website can be found at buildbackbetter.com/priorities/climate-change.

US EPA unveils Vehicle Air Model Update

In November 2020, the US EPA released an update to its motor vehicle emissions simulator (MOVES) tool that aims to improve estimates of automobile related air pollution used in rulemakings and the agency's 2020 National Emissions Inventory (NEI). The new version of the model, known as MOVES 3, is "a major revision to the previous versions" of the tool with "considerable advances in EPA's understanding of vehicle emissions. MOVES3 incorporates new regulations, features, and significant new data," according to an agency policy guidance document.

The model includes a host of improvements, including upgrades to heavy-duty (HD) diesel running emission rates; updated emission rates for HD gasoline and compressed natural gas (CNG) trucks;

light-duty (LD) vehicle emission rates for hydrocarbons (HC), carbon monoxide (CO) and nitrogen oxides (NOx) based on in-use testing data; updated particulate matter (PM) emission rates for light-duty vehicles; and updates to include the effects of the latest regulations, such as the Trump administration's fuel economy standards.

Also included in the update are revised data for vehicle idling, vehicle miles travelled and vehicle fleets, and the capability to estimate brake wear and tire wear emissions for criteria pollutants and their precursors.

The updated model and guidance document can be found at www.epa.gov/state-and-local-transportation/policy-and-technical-guidance-state-and-local-transportation.

ASIA PACIFIC

Australian Consultation on Early Adoption of Euro 6/VI Standards

The Australian government published a consultation document relating to adopting Euro VI standards before the current proposed implementation date of 2027.

Australia currently mandates the Euro V emissions standards for newly approved heavy vehicle models first manufactured from 1 January 2010, and for all heavy vehicles manufactured from 1 January 2011. This Early Assessment Regulation Impact Statement (draft RIS) evaluates whether the Australian Government should mandate more stringent standards to reduce noxious emissions from heavy road vehicles.

The draft RIS has found that there would be significant benefits for the Australian community if a new Australian Design Rule mandating the latest noxious emissions standards for heavy vehicles, known as Euro VI, was adopted under the Road Vehicle Standards Act 2018 (RVSA).

The Department of Infrastructure, Transport, Regional Development and Communications (DITRDC) has modelled the costs and benefits of mandating Euro VI for all newly approved heavy vehicle models manufactured from 1 July 2027 and for all new heavy vehicles manufactured from 1 July 2028. The document says that industry stakeholders have argued that this strikes a balance between managing Australia's air quality and supporting the ongoing viability of Australia's local heavy vehicle manufacturers and transport operators.

However, the DITRDC is now requesting further stakeholder feedback on how and when Euro VI could be implemented for heavy vehicles in Australia. In particular, the department is seeking views on whether it is possible to introduce Euro VI from an earlier date. This could include, for example, whether Euro VI for some heavy vehicle categories, such as medium-duty trucks and buses, could be introduced from an earlier date or whether elements of Euro VI could be implemented in a 'staged approach' (as was done in Europe and other markets).

Three options are suggested in the draft RIS, including that of business as usual, i.e. rely on Euro v standards and market forces to continue delivering lower emissions and improvements in air quality. The second option is to implement a voluntary standard.

The final option is to increase mandatory standards, introducing Euro VI Stage D on 1 July 2027 but with an option of implementing earlier stages before that.

The consultation is open for comments until 26 February 2021 and can be found at www.infrastructure.gov.au/vehicles/environment/forum/files/heavy-vehicle-emission-standards-for-cleaner-air.pdf.

China's Revised New Energy Vehicle Development Plan

On 2 November 2020, China's State Council formally issued its plan aimed at boosting the high-quality development of new energy vehicles (NEV) from 2021 to 2035. NEVs are defined as battery electric vehicles (BEVs), plug-in hybrid electric vehicles (PHEVs) and fuel cell vehicles (FCVs).

According to the circular, the NEV industry should make "ground-breaking achievements in batteries, driving motors, vehicle operating systems, and alike by 2025", with new car sales reaching 20% of total sales.

It stated that the core technology of the Chinese NEV industry should leapfrog to the international advanced level in the next 15 years with energy consumption per 100 kilometres dropping to 12 kWh.

In addition, batteries will be better recycled, reused, and monitored throughout the lifecycle. Charging facilities also will be enhanced with scientific coordination with urban and rural construction planning, power grid planning, property arrangement, parking, and more. The document says that "orderly promotion" is needed for hydrogen fuel supplies.

Furthermore, China intends its NEV industry to actively take part in formulation of international rules and standards to facilitate the formation of an open, transparent, and inclusive international NEV market environment.

The State Council's press release can be found at english.www.gov.cn/policies/latestreleases/202011/02/content_WS5f9ff225c6d0f7257693ece2.html.

Achieving Air Quality Targets in China will Result in Additional CO_2 Reductions

On 24 November 2020, a joint article of Chinese and American researchers on "The quest for improved air quality may push China to continue its CO_2 reduction beyond the Paris Commitment" was published in the Proceedings of the National Academy of Sciences of the United States of America.

This article focused on the challenges that China is facing while simultaneously improving air quality and mitigating climate change. The "Beautiful China" strategy, launched by the Chinese

government in 2020, requires that all cities in China attain 35 µg/m3 or below for annual mean concentration of $PM_{2.5}$ (particulate matter with aerodynamic diameter less than 2.5 µm) by 2035. Meanwhile, China adopts a portfolio of low-carbon policies to meet its Nationally Determined Contribution (NDC) pledged in the Paris Agreement. Previous studies demonstrated the co-benefits to air pollution reduction from implementing low-carbon energy policies. Pathways for China to achieve dual targets of both air quality and CO_2 mitigation, however, have not been comprehensively explored.

The study investigates coupling an integrated assessment model and an air quality model to evaluate air quality in China through 2035 under the NDC scenario and an alternative scenario (Co-Benefit Energy – CBE) with enhanced low-carbon policies. Results indicate that some Chinese cities cannot meet the $PM_{2.5}$ target under the NDC scenario by 2035, even with the strictest end-of-pipe controls. Achieving the air quality target would require further reduction in emissions of multiple air pollutants by 6 to 32%, driving an additional 22% reduction in CO_2 emissions relative to the NDC scenario.

Results show that the incremental health benefit from improved air quality of CBE scenario exceeds 8 times the additional costs of CO_2 mitigation, attributed particularly to the cost-effective reduction in household $PM_{2.5}$ exposure. The additional low-carbon energy polices required for China's air quality targets would lay an important foundation for its deep decarbonization aligned with the 2°C global temperature target.

The study can be found at www.pnas.org/content/117/47/29535.

UNITED NATIONS

Climate and Clean Air Coalition 2030 Strategy

On 18 and 19 November 2020, the Climate and Clean Air Coalition's (CCAC) working group met to discuss a new strategy that will guide the Coalition's work to 2030. The CCAC's 2030 Strategy represents a new phase for the Coalition that builds on the achievements of the past eight years.

In order to achieve the goals of the Paris Agreement and hold warming to 1.5˚C, the lessons learned, and solutions developed by the Coalition must now deliver significant reductions in short-lived climate pollutants over the next decade. According to CCAC, the science indicates that this is possible. Methane emissions can be reduced by 40% and black carbon by 70% by 2030 (from 2010 levels).

The Coalition's 2030 Vision is to put the world on a pathway in the next decade that rapidly reduces warming in the near-term and maximizes development, health, environmental and food security benefits.

The strategy sets out three directions to guide the Coalition. These include driving an ambitious agenda by increasing high-level ambition and promoting integrated climate and air pollution solutions that produce multiple social, economic and environmental benefits; supporting national and transformative actions by mobilising finance, supporting transformative actions, and strengthening capacity building, peer-to-peer engagement and leadership to achieve substantial emission reductions; and advancing policy-relevant research and analysis to provide decision-makers the confidence and tools to make ambitious commitments and take fast action.

The Climate and Clean Air Coalition is a voluntary partnership of governments, intergovernmental organisations, businesses, scientific institutions and civil society organisations committed to protecting the climate and improving air quality through actions to reduce short-lived climate pollutants.

More information on the 2030 Strategy is available at www.ccacoalition.org/en/news/ccac-working-group-2020.

GENERAL

IEA View on Use of Biofuels to meet Green Goals for Transport

On 17 November 2020, Euractiv published an interview with Mr Paolo Frankl, head of the renewable energy division at the International Energy Agency (IEA).

Mr Frankl said that the IEA is in favour of electric vehicles but does not think that they are the only solution. He stressed that electric vehicles are still expensive and still need the proper infrastructure in terms of charging stations, as well as a robust power system to support it. In order to meet transport's goals, he said first-generation biofuels, such as bioethanol and biodiesel, will be needed to decrease the use of fossil fuels.

Referring to advanced biofuels, he said they are at a much earlier stage of maturity and need special support even with earmarked quotas. He explained that "There has to be a period in which these new technologies can develop. If they are successful, they need to demonstrate that costs can go down, that you have economies of scale. If they fail, they failed. We cannot pretend that all technologies work". He added that "The challenge is so strong and in the time is so tight, that we really need all of these technologies".

The interview is available to read at www.euractiv.com/section/agriculture-food/news/policymakers-urged-to-support-biofuels-to-meet-transports-green-goals/.

New Green NCAP Results Released

On 26 November 2020, Green NCAP released the results of a further 24 cars that have undergone its tests. The rating scheme now adds the assessment of greenhouse gases to those of clean air and energy efficiency, providing even more broad and comprehensive information for consumers. It says that electric cars stand out as the cleanest and most efficient vehicles but there are big differences between the best and worst performing conventionally powered cars.

Three popular superminis are all rated as three-star vehicles. At the other end of the scale, the large people-carriers get no better than one and a half stars, mainly because of their weight and poorer aerodynamics. While very effective after-treatment means they control pollutant emissions well, they require a lot of energy – fuel - to move their weight around. Green NCAP says that SUVs emerge little better than the vans with, on average, just over two stars.

In the large family car class, the "Mercedes in particular impressed with its control of pollutant emissions which, while nowhere near the zero tailpipe emissions of electric cars, nevertheless demonstrated what can be done with good engine design and exhaust aftertreatment".

All of the tests in this publication were sponsored by the European Commission as part of the Green Vehicle Index (GVI) project. Going forward, Green NCAP plans to further extend its analysis from 'tank to wheel' to 'well to wheel' and take account of the 'upstream' emissions involved in the manufacture of fuels or in the generation of electricity.

Full analysis of the vehicles tested is at www.greenncap.com/press-releases/green-ncap-returns-with-revamped-rating-scheme-and-fresh-results/.

RESEARCH SUMMARY

Effects of Emissions and Pollution

Disparate air quality impacts from roadway emissions on schools in Santa Clara County (CA), Iris Stewart, et al.; *Applied Geography* (December 2020), Vol. 125, 102354, doi: 10.1016/j.apgeog.2020.102354.

The Respiratory Risks of Ambient/Outdoor Air Pollution, Gary Adamkiewicz, et al.; *Clinics in Chest Medicine* (December 2020), Vol. 41, pp. 809-824, doi: 10.1016/j.ccm.2020.08.013.

Association between air pollution and Multiple Sclerosis: A systematic review, Zahra Noorimotlagh, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2020.110386.

A time series analysis of the ecologic relationship between acute and intermediate $PM_{2.5}$ exposure duration on neonatal intensive care unit admissions in Florida, Eric Coker, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2020.110374.

Population-weighted exposure to air pollution and COVID-19 incidence in Germany, Guowen Huang and Patrick Brown; *Spatial Statistics* (in press), doi: 10.1016/j.spasta.2020.100480.

Traffic-related organic and inorganic air pollution and risk of development of childhood asthma: A meta-analysis, Kun Han, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2020.110493.

Translocation of (ultra)fine particles and nanoparticles across the placenta; a systematic review on the evidence of in vitro, ex vivo, and in vivo studies, E. Bongaerts, et al.; *Particle and Fibre Toxicology* (2020), Vol. 17, 56, doi: 10.1186/s12989-020-00386-8.

Air Quality, Sources and Exposure

The effect of cold-start emissions on the diurnal variation of carbon monoxide concentration in a city centre, Rohan Jayaratne, et al.; *Atmospheric Environment* (January 2021), Vol. 245, 118035, doi: 10.1016/j.atmosenv.2020.118035.

Analysis of two heat wave driven ozone episodes in Barcelona and surrounding region: Meteorological and photochemical modelling, Clara Jaén, et al.; *Atmospheric Environment* (in press), doi: 10.1016/j.atmosenv.2020.118037.

Monitoring of extreme air pollution on ring roads with $PM_{2.5}$ soot particles considering their chemical composition (case study of Saint Petersburg), Vladimir Lozhkin, et al.; *Transportation Research Procedia* (2020), Vol. 50, pp. 381-388, doi: 10.1016/j.trpro.2020.10.045.

Impact of Covid-19 lockdown on air quality in the Poland, Eastern Europe, Mikalai Filonchyk, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2020.110454.

Air pollutants and risk of death due to COVID-19 in Italy, Marco Dettori, et al.; *Environmental Research* (in press), doi: 10.1016/j.envres.2020.110459.

Air quality in urban areas: Comparing objective and subjective indicators in European countries, Bruno Chiarini, et al.; *Ecological Indicators* (in press), doi: 10.1016/j.ecolind.2020.107144.

Emissions Measurements and Modelling

Dependence of pollutant emission factors and fuel consumption on driving conditions and gasoline vehicle types, Liang Qu, et al.; *Atmospheric Pollution Research* (in press), doi: 10.1016/j.apr.2020.10.016.

Hydrocarbon emissions in flex fuel vehicles using ethanol: Preliminary results using a method implemented in Brazil, Bruno Siciliano, et al.; *Fuel* (in press), doi: 10.1016/j.fuel.2020.119506.

Real-world Activity, Fuel Use, and Emissions of Heavy-Duty Compressed Natural Gas Refuse Trucks, Gurdas Sandhu, et al.; *Science of The Total Environment* (in press), doi: 10.1016/j.scitotenv.2020.143323.

Field tests and real-world exhaust gas emissions of a pure rapeseed oil-fuelled harvester in forestry: Testing a solution for combined water, soil, and climate protection, Peter Emberger, et al.; *Journal of Cleaner Production* (January 2020), Vol. 280, 124360, doi: 10.1016/j.jclepro.2020.124360.

Impact of regulated pollutant emissions of Euro 6d-Temp light-duty diesel vehicles under real driving conditions, Reyes García-Contreras, et al.; *Journal of Cleaner* Production (in press), doi: 10.1016/j.jclepro.2020.124927.

Emission factor development for light-duty vehicles based on real-world emissions using emission map-based simulation, Jigu Seo, et al.; *Environmental Pollution* (in press), doi: 10.1016/j.envpol.2020.116081.

Chemical and Toxicological Characterization of Particulate Emissions from Diesel Vehicles, Bei Wang, et al.; *Journal of Hazardous Materials* (in press), doi: 10.1016/j.jhazmat.2020.124613.

Effects of ambient temperature and cold starts on excess NOx emissions in a gasoline direct injection vehicle, Ran Tu, et al.; *Science of The Total Environment* (in press), doi: 10.1016/j.scitotenv.2020.143402.

Emissions Control, Catalysis, Filtration

Automobile pollution control using catalysis, S. Deya and N. Mehta; *Resources, Environment and Sustainability* (December 2020), Vol. 2, 100006, doi: 10.1016/j.resenv.2020.100006.

Transport, Climate Change & Emissions

A review on biofuels for light-duty vehicles in Europe, S. Puricelli, et al.; *Renewable and Sustainable Energy Reviews* (in press), doi: 10.1016/j.rser.2020.110398.

How can technology on the automotive industry save the future? Teresa Dieguez, et al.; *Procedia Manufacturing* (2020), Vol. 51, pp. 1763-1772, doi: 10.1016/j.promfg.2020.10.245.

FORTHCOMING CONFERENCES

An ambitious AFID consistent with the Green Deal

7 December 2020, Online
www.platformelectromobility.eu/2020/11/05/an-ambitious-afid-consistent-with-the-green-deal.

Hydrogen and P2X European Conference

9-10 February 2021, Copenhagen, Denmark (postponed from November 2020)
fortesmedia.com/hydrogen-p2x-2020,4,en,2,1,4.html

11th VERT Forum

25 March 2021, Dübendorf, Switzerland (postponed from March 2020)
www.vert-certification.eu

International Transport and Air Pollution Conference

30-31 March 2021, Graz, Austria (postponed from September 2020)
www.tapconference.org
The main topics of the 24th TAP Conference include energy consumption and GHG emissions from vehicles, open issues for pollutant emissions, such as tampering, retrofits of software and hardware and non-regulated pollutants, emissions from non-road mobile machinery and other transport modes and measurements and simulation of traffic related environmental impacts and air quality.

9th AVL Large Engines Techdays

21-22 April 2021, Graz, Austria
www.avl.com/large-engines-techdays

42nd International Vienna Motor Symposium

28-30 April 2021, Vienna, Austria
wiener-motorensymposium.at/en

8th International MinNOx Conference

16-17 June 2021, Berlin, Germany (postponed from September 2020)
www.iav.com/en/events/minnox

SAE Heavy-Duty Diesel Emissions Control Symposium

5-6 October 2021, Gothenburg, Sweden (postponed from October 2020)
www.sae.org/attend/heavy-duty-diesel-emissions-control-symposium

CITA International Conference

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