

NEWSLETTER

International Regulatory Developments

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EUROPE

Slovenian EU Council Presidency

On 24 June 2021, Slovenia's Minister of Foreign Affairs Mr Anže Logar outlined the priorities and objectives of the Slovenian EU Presidency, which starts on 1 July.

The Slovenian EU Presidency will be based on four substantive pillars, brought together under the slogan "Together. Resilient. Europe." Slovenia has given priority to strengthening the Union's resilience, recovery and strategic autonomy. Special attention will be paid to the Recovery Mechanism and the Next Generation EU recovery package, the latter of which is based on green and digital transitions.

Slovenia points out that the European Union is committed to the objective of achieving a climate-neutral EU by 2050 and reducing greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels. It says this also provides guidelines for the Slovenian EU Presidency, which will strive for the transposition of the set objectives into binding European legislation. It adds that the United Nations Climate Change conference (COP26) in Glasgow will provide an additional opportunity for the EU to 'show its determination and convince the rest of the world that we must take action now'.

Press releases from the Slovenian EU Presidency are at presidency.consilium.europa.eu/en/news/minister-logar-presents-slovenias-priorities and slovenian-presidency.consilium.europa.eu/en/programme/priorities.

European Climate Law Debate in European Parliament and Adoption by Council

On 24 June 2021, Members of the European Parliament endorsed the Climate Law, agreed informally with Member States in April, by 442 votes to 203 and 51 abstentions. It transforms the European Green Deal's political commitment to EU climate neutrality by 2050 into a binding obligation.

The new EU Climate Law increases the EU's target for reduction of greenhouse gas (GHG) emissions by 2030 from 40% to at least 55%, compared to 1990 levels. Additionally, an upcoming proposal from the EU Commission on the LULUCF Regulation to regulate GHG emissions and removals from land use, land use change and forestry, will increase EU carbon sinks and will de facto increase the 2030 EU's target to 57%.

The EU Commission will make a proposal for a 2040 target at the latest six months after the first global review in 2023 foreseen in the Paris Agreement. In line with EU Parliament's proposal, the Commission will publish the maximum amount of GHG emissions estimated the EU can emit until 2050 without endangering the EU's commitments under the Agreement. This so-called 'GHG budget' will be one of the criteria to define the EU's revised 2040 target.

The European Parliament press release is at europarl.europa.eu/news/en/press-room/20210621IPR06627/eu-climate-law-meps-confirm-deal-on-climate-neutrality-by-2050.

On 28 June 2021, the European Council adopted its position at first reading on the European Climate Law, ending the adoption procedure and setting into legislation the objective of a climate-neutral EU by 2050. This follows a political agreement reached with the European Parliament on 21 April and the Parliament's adoption of its position at first reading on 24 June.

The European Council press release can be found at consilium.europa.eu/en/press/press-releases/2021/06/28/council-adopts-european-climate-law.

Advocate General Recommendation on Commission Appeal on Euro 6 Standard

On 10 June 2021, the Advocate General of the Court of Justice of the European Union recommended that the Court should dismiss the appeals against the General Court's judgment annulling the excessive oxides of nitrogen emission limits the Commission set for real driving tests in the wake of the 'Dieselgate' scandal.

The cities of Paris, Brussels and Madrid disputed the emission limits adopted by the Commission in 2016 and each city brought an action for annulment before the General Court of the European Union. In its judgment of 13 December 2018, the General Court upheld these actions and annulled the Amending Regulation to the extent that it set excessively high oxides of nitrogen emission limits. In essence, the General Court found that, by setting those values too high, the Commission had in practice amended the Euro 6 standard adopted by the Parliament and the Council, for which it lacked the power. The Commission, Germany and Hungary each brought an appeal against the General Court's judgment before the Court of Justice.

The Advocate General takes the view that the General Court erred in concluding that these cities were directly affected by the Amending Regulation through its interaction with the Type Approval Framework Directive. On this point, he stresses that the directive only regulates the technical, product standards to be set for type-approval at the moment of the initial placement of the vehicle on the market. However, it does not aim to prevent local authorities from introducing measures regulating the subsequent use of vehicles and their traffic in their respective territories, in particular on environmental grounds. Therefore, a local regulation that the cities in question may introduce in order to limit the circulation of vehicles in some specific areas, even where potentially using parameters on emissions that are stricter than those used for the Euro 6 standard, is not capable of interfering with the directive.

Nevertheless, the Advocate General considers that the Amending Regulation indeed has an impact on the way in which local entities are able to lawfully exercise their specific powers and fulfil their obligations. In fact, the choice of the

measures to be adopted by these entities is bound to be reduced in a significant manner as a direct consequence of the Amending Regulation. The Advocate General is therefore of the view that the Amending Regulation directly affects the three cities in question. He comes to the conclusion that the actions these municipalities brought against the Amending Regulation are admissible.

The Advocate General takes the view that the oxides of nitrogen emission limits set out in the Type Approval Regulation constitute an essential element of that piece of legislation. Therefore, only the authors of the Type Approval Regulation, namely the Parliament and the Council, were entitled to amend the emission limits with the Commission lacking the power in that regard. In this context, the Advocate General comes to the conclusion that the General Court did not err in taking the view that, through the Amending Regulation, the Commission had in practice amended the Euro 6 standard specified in the Type Approval Regulation. He therefore proposes that the Court should dismiss the appeals of the Commission, Germany and Hungary in their entirety.

The press release states the Judges of the Court are now beginning their deliberations in this case. Judgment will be given at a later date.

A summary of the Court's judgement can be found at curia.europa.eu/jcms/upload/docs/application/pdf/2021-06/cp210102en.pdf.

ENVI Committee Exchange with Director-General of DG GROW

On 15 June 2021, the Director-General of DG GROW, Ms Kerstin Jorna, held an exchange with the Parliament's Environment (ENVI) Committee Members on the Commission's work with respect to the post Euro 6/VI emission standards for cars, vans, lorries and buses.

Ms Jorna said that the proposal will cover all emissions from internal combustion engines (ICE) but not CO₂ and will therefore not be part of Fit for 55. She said DG GROW is working on the impact assessment. She highlighted four items: scope, value limits, test (linked to the life cycle of the vehicle) and simplification.

Regarding the scope of the Regulation, Euro 7 will build on the basis of Euro 6. Further pollutants will be added, including formaldehyde, nitrous oxide, brake and tyre particles. The European Commission has a number of studies ongoing as well as consultations that have contributed to the work.

On the subject of value limits, Ms Jorna said that it was too early based on the information to give ranges to the different elements mentioned. She did however say that for NO_x there will be quite a decrease, probably even halving it.

There is an ongoing trilogue on testing. The Director-General said that conformity factors (CF) will not be needed for Euro 7 as this will be based solely on on-road testing. She added

that the EC is looking at the complete life cycle of the vehicle as part of the work.

Talking about simplification, Ms Jorna said that cars, vans and heavy-duty vehicles will be included, not with the same values or limits, but in one legislation with the same architecture to make it easier for industry to understand. There is also market surveillance (MaS) to build upon.

Ms Jorna made three further points before questions from MEPs. She said that it is not Euro 7 that will define the end of the ICE, it is the proposals on CO₂ emissions as part of Fit for 55. She added that the Commission is estimating the additional cost of Euro 7 to be between around €100 and €500 per car. Ms Jorna also commented on the ongoing RDE trilogue, saying that the EC is committed to bringing down the CF. It is hoping to see some movement from the co-legislators on this topic.

Questions from MEPs focused largely on conformity factors and when these will be eliminated.

A video of the exchange is available to view at emeeting.europarl.europa.eu/emeeting/committee/en/agenda/202106/ENVI.

AECC Position Paper on Euro 7/VI

On 28 June 2021, AECC published its updated position paper on Euro 7/VI.

AECC supports an ambitious proposal for future Euro 7 emission legislations for light- and heavy-duty vehicles to further decrease road traffic pollutant emissions by the use of advanced emission control systems integrated in engine systems. The Euro 7 is a key element of the Smart and Sustainable Mobility Strategy under the EU's Green Deal. It should embrace an all-inclusive strategy in a technology neutral context ensuring all powertrain technologies contribute to the EU's Green Deal long-term goals.

AECC continues to provide robust scientific data to discuss on how to improve local air quality and to mitigate climate change whilst maintaining the global competitiveness of the European automotive industry through the application of modern emission control technologies to ICEs. AECC will soon issue a separate technical note with specific comments on light- and heavy-duty vehicles emissions performances based on the latest AECC test programmes' data.

The updated AECC position paper is available at aecc.eu/wp-content/uploads/2021/06/210628-AECC-position-on-Euro-7-final.pdf.

Response to Parliamentary Question on Nitrous Oxide and Methane in Euro 7

On 2 June 2021, European Commissioner for Internal Market, Mr Thierry Breton, answered a question from MEP Andreas Glück (DE, Renew) regarding the proposed classification of nitrous oxide (N₂O) and methane (CH₄) as air pollutants rather than greenhouse gases.

Mr Glück said that as neither of the substances are toxic, the reclassification proposed by the CLOVE (Consortium for Ultra Low Emission Vehicles) consortium is inappropriate. He asked for clarification as to the justification for reclassifying N₂O and CH₄ and also asked for the Commission's view of the social, economic and environmental impact of the reclassification.

Mr Breton replied that there is growing scientific evidence that N₂O contributes to stratospheric ozone depletion, which increases cancer-inducing UVB radiation, while CH₄ contributes significantly to the formation of tropospheric ozone. He added that the socioeconomic and environmental consequences of the future rules, including the possible addition of those two gases to the Euro 7 regulation, will be assessed in the impact assessment that will accompany the proposal.

The question and answer can be found at europarl.europa.eu/doceo/document/P-9-2021-002126_EN.html and europarl.europa.eu/doceo/document/P-9-2021-002126-ASW_EN.html.

Amendments to NRMM Transitional Provisions

On 30 June 2021, Regulation (EU) 2021/1068 amending Regulation (EU) 2016/1628 as regards its transitional provisions for certain non-road mobile machinery, was published in the Official Journal of the European Union. It entered into force on the same day. The Regulation relates to machinery fitted with engines in the power ranges greater than or equal to 56 kW and less than 130 kW, and greater than or equal to 300 kW, in order to address the impact of the COVID-19 crisis.

Due to the COVID-19 outbreak and the associated supply chain and production disruptions, non-road mobile machinery manufacturers had difficulties meeting the deadlines of 30 June 2020 and 31 December 2020 set out in the Regulation for the production and the placing on the market of machinery fitted with certain categories of engines that comply with less stringent emission limit values than those of Stage V. Therefore, Regulation (EU) 2016/1628 was amended by Regulation (EU) 2020/1040 of the European Parliament and of the Council (4) in order to prolong those deadlines by 12 months.

The new Regulation states that since the continued supply chain and production disruptions caused by the COVID-19 pandemic still lead to delays in the production and the placing on the market of machinery fitted with other categories of engines (namely, engines in the power ranges greater than or equal to 56 kW and less than 130 kW, and greater than or equal to 300 kW) that comply with less stringent emission limit values than those of Stage V, it is very likely that OEMs will not be able to meet the deadlines of 30 June 2021 and 31 December 2021 set out in Regulation (EU) 2016/1628 for the production and the placing on the market of the machinery fitted with those engines without those manufacturers sustaining serious economic damage. It goes

on to say that, given the current circumstances, and in order to ensure the smooth functioning of the internal market, to provide legal certainty and to avoid potential market disruption, it is necessary to prolong the transitional provisions of Regulation (EU) 2016/1628 for those categories of engines.

As the prolongation of the transitional provisions will have no environmental impact, because the transition engines concerned have already been produced, the extension of the relevant periods should be six months for the production of the machinery fitted with those engines and nine months for the placing on the market of the machinery fitted with those engines.

Regulation (EU) 2021/1068 can be found at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.230.01.0001.01.

Regulation on CO₂ Emissions of Vocational Vehicles

On 11 June 2021, Commission Implementing Regulation (EU) 2021/941 was published in the Official Journal of the European Union. This lays down a specific procedure for identifying heavy-duty vehicles certified as vocational vehicles but not registered as such and applies corrections to the annual average specific CO₂ emissions of a manufacturer to take those vehicles into account.

The Regulation requires the Commission to establish a list with heavy-duty vehicles that have been certified in the meaning of Article 2(3) of Regulation (EU) 2019/1242 as vocational vehicles based on the data reported by the manufacturer in accordance with Article 5 of Regulation (EU) 2018/956 but which were not registered as vocational vehicles based on the data reported by the Member States in accordance with Article 4 of Regulation (EU) 2018/956. Competent authorities and manufacturers may then provide clarifications on the correctness of the data to the Commission within a month after receiving the list. If the Commission concludes that heavy-duty vehicles identified were correctly registered as vehicles other than vocational, it shall apply corrections to the annual average specific CO₂ emissions of a manufacturer to take those vehicles into account. If the Commission concludes that heavy-duty vehicles should have been registered as vocational vehicles, it shall correct the data reported by the Member State and inform the Member State where those heavy-duty vehicles were registered of that correction.

The full text of the Implementing regulation is at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2021.205.01.0077.01.

Council adopts Sustainable and Smart Mobility Strategy Conclusions

On 3 June 2021, the European Council adopted conclusions on the Commission's Sustainable and Smart Mobility Strategy. In its conclusions, the Council welcomes the

Commission's strategy, subscribes to its 'ambitious' vision for the transport sector and sets out its understanding regarding the sector's contribution to sustainability over the coming years and decades.

The Council supports the Commission's vision to make European transport more sustainable, inclusive, intelligent, safe and resilient, and to ensure a major contribution by the transport sector to meeting the objective of a climate-neutral EU by 2050 in line with the Paris Agreement, as well as the binding target of a net domestic reduction in greenhouse gas (GHG) emissions in the EU of at least 55% by 2030 compared to 1990.

In this respect, the Council considers that, in parallel with a shift to more sustainable modes, all transport modes should contribute to a substantial reduction in the transport sector's emissions by 2030 and by 2050 in a way that preserves their competitiveness and takes into account their emission reduction potential. It also invites the Commission to assess, in line with the 'Better Regulation' requirements, how each measure envisaged in the Sustainable and Smart Mobility Strategy will ensure that transport modes can best contribute to the achievement of the 2030 and 2050 targets, including by conducting an in-depth examination of the environmental, economic and social impact at Member State level.

The Council's statement goes on to say that efforts to achieve the emission reduction targets should be delivered collectively in the most cost-effective manner possible, with all Member States participating in those efforts. It also states that an ambitious but balanced shift towards zero-emission vehicles, vessels, aircraft systems and fleets requires an update of the EU legislative framework, in line with the principles of a functioning internal market, to facilitate the placing on the market and the take-up of alternative propulsion systems, such as those powered by electricity or hydrogen, complemented by an extensive roll-out of supporting infrastructure, including the deployment of recharging and refuelling points for alternative fuels. It says that it considers that low emission solutions and low carbon or renewable transport fuels may provide effective solutions for the transition, and that efforts to avoid the placing on the market of the most polluting means of transport should be stepped up for each transport mode.

The Council report on the Commission's Sustainable and Smart Mobility Strategy is available to read at data.consilium.europa.eu/doc/document/ST-8824-2021-INIT/en/pdf.

Commission Communication on Inland Waterway Transport

On 24 June 2021, the European Commission published a Communication on 'Boosting future-proof European inland waterway transport (IWT)'. IWT is considered by the Commission as one of the most CO₂-efficient modes of transport (per tonnes of goods carried) along with rail and is seen as central to the Union's efforts to decarbonise the transport system.

The document says that the newly established Zero-Emissions Waterborne Partnership will promote research in zero-emission vessels technology, innovative propulsion systems and sustainable fuels, also in close collaboration with the Battery Alliance, the European Clean Hydrogen Alliance and the Renewable and Low-Carbon Fuels Value Chain Alliance.

The Commission wants to see the greening of the inland waterway fleet promoted through regulatory and financial incentives to ensure and speed up the deployment of affordable zero-emissions vessels and related low-carbon fuels and infrastructure. It says innovative solutions should also promote the reduction of air and water pollutant emissions in order to reach the objectives of the Zero Pollution Action Plan.

The Commission will also encourage the take-up of renewable low-carbon fuels through tax incentives in the revision of the Energy Taxation Directive. The revised Energy Taxation Directive will promote the shift to less polluting fuels in inland waterway transport by introducing a harmonised EU minimum rate for the fuels used in inland waterway transport according to their environmental performance. This tax will also incentivise energy efficiencies.

The Commission Communication can be found at ec.europa.eu/transport/sites/default/files/com20210324-naiades.pdf.

EU Green Week Conference on Zero Pollution Ambition

According to the European Commission, this year's edition of EU Green Week, Europe's biggest annual environmental event, has closed with record involvement from citizens and stakeholders around the EU. Dedicated to the EU ambition of a zero pollution, the event zoomed in on efforts to tackle pollution of air, soil and water.

EU Green Week brought different groups in society together with stakeholders and policymakers to thrash out solutions and discuss how we can all work together to make our ambition for a zero pollution, toxic-free environment a reality. Green Week highlighted the power of small individual actions alongside the structural changes that the European Green Deal aims to bring about. The event looked at how zero-pollution ambitions translate into revised ambient air quality laws, and how to align EU directives more closely with World Health Organisation guidelines.

The Commission says that "green" stimulus packages are needed in the Member States, and that finance needs to be channelled to sustainable projects. That could include a better tax system, for example, so no one pollutes for free. It adds that if taxes are moved away from labour towards pollution and resource use, 'we would lay the foundations of a more sustainable future'.

The Commission's Green Week conclusions are at

ec.europa.eu/environment/news/eu-green-week-2021-zero-pollution-conclusions-2021-06-04_en.

Launch of Zero Pollution Stakeholder Platform

On 4 June 2021, the European Commission and the European Committee of the Regions have launched a Stakeholder Platform to help implement the EU Action Plan: "Towards Zero Pollution for Air, Water and Soil". The Action Plan – a key deliverable of the European Green Deal and the main topic of this year's EU Green Week – was adopted on 12 May 2021. It sets out an integrated vision for 2050 to reduce pollution to levels that are no longer harmful to human health and natural ecosystems, as well as intermediary targets for 2030, and actions to achieve the objectives.

The Zero Pollution Stakeholder Platform will help deliver on the flagship initiatives and actions set out in the Zero Pollution Action Plan by: bringing together actors from different communities and areas of expertise to tackle inter-related challenges, e.g., strengthening a joint environment and health agenda; defining a common vision on how to achieve zero pollution objectives; developing and sharing good practices on cross-cutting topics such as financing for zero pollution innovation and jobs, boosting sustainable production and consumption, and creating thematic hubs like the Clean Air Tech Hub.

Further details on the Stakeholder Platform are available at ec.europa.eu/environment/news/commission-and-committee-regions-zero-pollution-stakeholder-platform_en.

Court of Justice Ruling on German Air Quality

On 3 June 2021, the Court of Justice of the European Union (CJEU) held that Germany had infringed the Air Quality Directive by systematically and persistently exceeding, as from 1 January 2010 up to and including 2016, the annual limit value for nitrogen dioxide (NO₂) in 26 of the 89 zones and agglomerations assessed.

Furthermore, Germany infringed the directive by systematically and persistently exceeding, during that period, the hourly limit value for NO₂ in two of those zones, namely the agglomeration of Stuttgart and the agglomeration I Rhine-Main.

In addition, by not adopting, as from 11 June 2010, appropriate measures to ensure compliance with the limit values for NO₂ in all the zones at issue, Germany has failed to fulfil its obligations under the directive and in particular, the obligation to ensure that air quality plans provide appropriate measures so that the period during which the limit values are exceeded is kept as short as possible.

The full judgement of the Court can be found at curia.europa.eu/jcms/upload/docs/application/pdf/2021-06/cp210094en.pdf.

New Car and Heavy-Duty Vehicle CO₂ Emissions in Europe

On 1 June 2021, the European Environment Agency (EEA) published final data on emissions from new passenger cars in Europe, along with a new dataset regarding emissions of new heavy-duty vehicles.

In 2019, average emissions of new passenger cars registered in the European Union, Iceland, Norway and the United Kingdom (UK) were 122.3 g CO₂/km. This figure is below the 2015-2019 target of 130 g CO₂/km but well above the 2020-2024 target of 95 g CO₂/km. The results confirm the provisional data published last year.

According to the EEA analysis, several reasons have contributed to the increase in average emissions, including the increasing demand for sport utility vehicles (SUVs) and other larger and heavier cars. Electric vehicles constituted 3.5% of new car registrations in 2019.

The EEA indicator 'CO₂ performance of new vans in Europe' also shows a trend of relatively stable or slightly increasing emissions. In 2019, average emissions of new vans were 158.0 g CO₂/km, which is about 7 % above the 2020 target of 147 g CO₂/km. The share of electric vans in registrations nearly doubled between from 2018 (0.8%) to 2019 (1.4%), but the vast majority (94%) of new vans still ran on diesel, the EEA indicator shows.

The EEA has also released a new dataset about emissions of new heavy-duty vehicles. The average specific CO₂ emissions of all new heavy-duty vehicles registered in the EU from 2019 to mid-2020 stood at 53 g CO₂/tkm (i.e., for the transport of one tonne of goods over one kilometre). The EEA's 2019-2020 data set a baseline for these vehicles' emission reductions, with targets to reach 15% lower emissions in 2025, and 30% lower in 2030.

The EEA datasets are available to download from eea.europa.eu/highlights/average-car-emissions-kept-increasing?utm_source=EEASubscriptions&utm_medium=RSS.

EEA CO₂ Emissions for New Cars in 2020 Provisional Data

On 29 June 2021, the European Environment Agency (EEA) published its provisional data regarding the emissions of newly registered passenger cars and vans in Europe in 2020.

For cars, the data show a 12% decrease in average carbon dioxide (CO₂) emissions, compared with 2019. Average van emissions also decreased slightly, by about 1.5%. The emissions of new vehicles are systematically tested using 'type approval' procedures. Since 2017, the new Worldwide Harmonized Light Vehicle Test Procedure (WLTP) has been put in place with the objective of gradually replacing the outdated New European Driving Cycle (NEDC). The WLTP allows more realistic information on vehicle emissions to be obtained in the type approval tests.

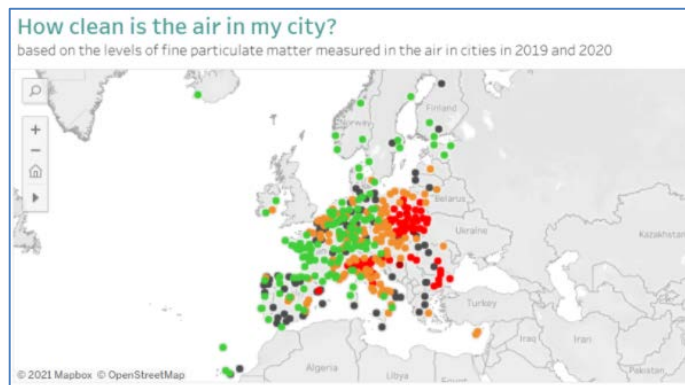
The data are reported by all EU Member States, United Kingdom, Iceland (since 1 January 2018) and Norway (since 1 January 2019) in order to evaluate the efficiency of the new vehicle fleet and includes information on CO₂ emissions and vehicle mass. The next data release will include the final results for new registrations in 2020.

The CO₂ data for cars can be found at eea.europa.eu/data-and-maps/data/co2-cars-emission-20 and vans: eea.europa.eu/data-and-maps/data/vans-16.

EEA's New European City Air Quality Viewer

On 17 June 2021, the European Environment Agency (EEA) launched the European city air quality viewer. This tool enables anyone to check air quality over the past two years in cities across Europe.

The viewer provides data on the levels of fine particulate matter in over 300 cities across EEA member countries. It uses data reported to the EEA by its member countries under the EU's Ambient Air Quality Directives. Data comes from ground measurements of PM_{2.5} taken by over 400 monitoring stations in urban and suburban areas within cities. These stations provide a robust picture of the exposure of the population to air pollution.



Readings and rankings are based on a the annual mean PM_{2.5} concentration over the past two calendar years, using up-to-date data for the most recent year and validated air quality data for the year before last.

The European city air quality viewer can be accessed at eea.europa.eu/themes/air/urban-air-quality/european-city-air-quality-viewer.

NORTH AMERICA

US President Biden Regulatory Priorities on Climate and Air Pollution

On 11 June 2021, US President Biden released his first Unified Agenda, revealing regulatory priorities and timings to continue unraveling the Trump administration's environmental rollbacks on climate, air pollution, and toxics. The Unified Agenda builds on a list of agency actions President Biden ordered officials to review on his first day in

the White House which will be critical to implementing his climate agenda.

In the shorter term, the administration plans to advance the light-duty vehicle greenhouse gas (GHG) standard by July. The Environmental Protection Agency (EPA) is under pressure from industry and environmental groups to propose a rule to limit NO_x and possibly GHGs from heavy-duty vehicles by the end of the year and to finalise it in 2022, but the agency's new unified agenda shows officials have reclassified the rulemaking as a "long-term" action with no specific deadline.

According to the agenda's regulatory listing for the rulemaking, both the target proposal date and target final rule date are "to be determined," even though in January 2020 EPA issued an advanced notice of proposed rulemaking for the sector, with comments closed for more than a year. The prior administration was unable to issue a proposal before its term ended in January.

The US President's Unified Agenda can be accessed at [reginfo.gov/public/do/eAgendaMain](https://www.reginfo.gov/public/do/eAgendaMain) and the regulatory listing for the rulemaking for low NO_x for trucks can be found at [reginfo.gov/public/do/eAgendaViewRule?publd=202104&RIN=2060-AU41](https://www.reginfo.gov/public/do/eAgendaViewRule?publd=202104&RIN=2060-AU41).

CARB Modifications to Heavy-Duty Low-NO_x Omnibus Regulation

On 18 June 2021, the California Air Resources Board (CARB) released the second notice of public availability of modified text for the HD Engine and Vehicle Omnibus (Omnibus) regulation.

These amendments are intended to provide additional flexibilities for a set of engines for which market availability may be limited in early years. The proposed changes are due to CARB staff receiving comments from stakeholders regarding a potential lack of availability of heavy-duty diesel engines, particularly vocational engines rated at 260-450 horsepower, in model years (MY) 2024-2025.

The proposed modifications will apply to MY 2024-2025 engines with rated power under 525 horsepower. The HD Omnibus Regulation set the MY 2024-2026 limit for NO_x and PM to 0.100 g/bhp-hr and 0.005 g/bhp-hr, respectively. CARB is proposing to allow sales of a fraction of an OEM's sales to include legacy engines up to the current FTP NO_x emission limit of 0.20 g/bhp-hr and FTP PM emission limit of 0.01 g/bhp-hr. These legacy engines must meet most other MY 2024-2026 requirements, although current in-use compliance, durability and OBD requirements will be allowed.

The 15-day rule changes proposed by CARB staff are open for public comment until 6 July 2021.

Details of the CARB proposals are at arb.ca.gov/rulemaking/2020/hdomnibuslownox.

SOUTH-CENTRAL AMERICA

Mexican Trucking Sector Request to Delay Low-Sulfur Diesel Fuel Rule

On 14 June 2021, Reuters reported that the Mexican trucking sector is asking for a further delay of an environmental rule that would mandate that all new vehicles use Ultra-low Sulfur Diesel (ULSD).

According to an industry letter to the environment minister, seen by Reuters, the failure to postpone the rule will cause more reliance on older, heavily polluting trucks, and due to uncertainty over fuel supplies, stall the purchase of newer models with technologies that sharply cut tailpipe emissions despite using conventional diesel.

The regulation, which was already postponed last September to January 2022, requires companies to make, import or sell only heavy trucks or buses that exclusively use ULSD, beginning next year. The letter asks to postpone it again due to insufficient access to ULSD. The industry says the government must ensure 100% availability.

In late 2019, the government gave state-owned oil company Pemex a five-year extension for when it would need to comply with a requirement to stop making conventional diesel and produce only ULSD. Prior to 2025, Pemex is only required by law to provide ULSD to about a fifth of the country's municipalities, a detail the industry says underscores a lack of adequate availability.

The joint statement by the industry can be found at anpact.com.mx/index.php/comunicados/91-otros/421-la-cadena-de-valor-del-autotransporte-hace-un-llamado-para-ajustar-la-nom-044-de-la-semarnat and the Reuters report at reuters.com/business/energy/mexican-trucking-sector-asks-delay-low-sulfur-diesel-rule-2021-06-14/.

ASIA PACIFIC

Analysis of China's New Energy Vehicle Development Plan for 2021 to 2035

On 17 June 2021, the International Council on Clean Transportation (ICCT) issued a policy update analysing China's New Energy Vehicle (NEV) Industrial Development Plan for 2021 to 2035, published in October 2020.

The three overarching goals of the plan are to form a globally competitive auto industry with advanced NEV technologies and good brand reputation, to transition to an energy-efficient and low-carbon society with a convenient charging service network and pure electric vehicles (BEVs) as the mainstream in sales, and to improve national energy security and air quality, mitigate climate change, and stimulate economic growth in the automobile, energy, transportation, and information and communications industries.

The ICCT compares the new plan with the 2012-2020 plan, which covered energy-efficient internal combustion engine (ICE) vehicles and NEVs, whereas Plan 2021–2035 is solely

about NEVs. ICCT says that Plan 2012–2020 focused on expanding the NEV market, as reflected by the targets set for the production and sale of BEVs and PHEVs. Plan 2021–2035 lifts the market goals by setting sales penetration targets for the entire NEV fleet and particular targets for public fleets.

Plan 2012–2020 focused on establishing a set of core regulatory standards and test procedures for NEVs, parts, and infrastructure. These included regulations for vehicle product certification, vehicle safety, battery reuse and recycling, components maintenance and testing, and technological standards for charging, hydrogen refuelling, and battery swapping facilities. In particular, Plan 2012–2020 required establishing and implementing a series of fuel consumption standards for passenger, light commercial, and heavy-duty commercial vehicles, and related fiscal policies.

According to ICCT, Plan 2021–2035 enhances the current policies to address some of the recent issues associated with NEV development (e.g., local protectionism) and expands the regulatory and technical requirements to include smart driving, shared mobility, and other emerging industries. It shifts from direct subsidies for NEVs to taxation exemptions (e.g., no vehicle purchase tax and no vehicle and vessel tax), charging subsidies, and parking incentives, and incentivising R&D investment from state-owned enterprises.

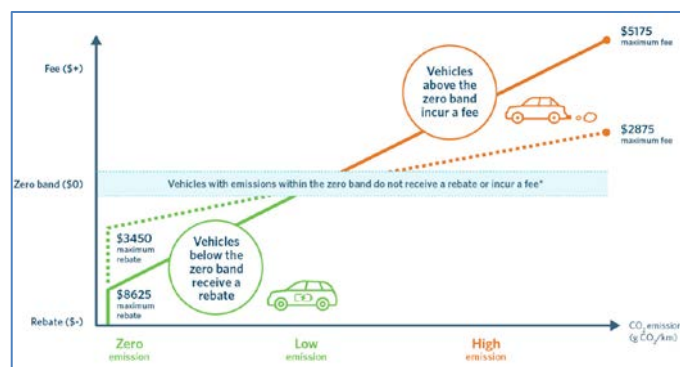
By 2035, the intention is that battery electric vehicles will become the mainstream of new vehicle sales and that there will be 100% electrification of the stock of public fleets.

ICCT's policy update can be read in full at theicct.org/sites/default/files/publications/China-new-vehicle-industrial-dev-plan-jun2021.pdf.

New Zealand Clean Car Discount to Reduce CO₂ Emissions from LD Vehicles

On 13 June 2021, the New Zealand Government announced that from 1 July 2021, rebates will be available for buying electric vehicles and plug-in hybrids.

Rebates are NZ\$8 625 (€5 100) on brand new electric vehicles and NZ\$3 450 (€2 040) on used import electric vehicles, and smaller amounts for new plug-in hybrid vehicles of NZ\$5 750 (€3 400) and NZ\$2 300 (€1 360) for used imports.



From 2022, buyers purchasing high CO₂ emission vehicles will pay a higher price in recognition of the increased environmental and economic costs they are imposing. The higher the CO₂ rating the greater the fee. Buyers choosing zero or low-emission vehicles will receive a rebate; the lower the emissions the greater the rebate.

Further information on the programme can be found at nzta.govt.nz/vehicles/clean-car-programme/clean-car-discount.

GENERAL

ICCT Open Letter on Euro 7/VII to European Commissioners

On 3 June 2021, the International Council on Clean Transportation (ICCT) published an open letter to the European Commissioners for Climate Action, Internal Market, Environment and Transport.

The letter says that the ICCT supports an ambitious proposal for setting future Euro 7/VII pollutant emission standards for cars, trucks, and buses.

It goes on to say that pollutant emission standards have been the driving force behind the wide deployment of emission control technologies, that would have not seen the light of mass production in the absence of a strong regulatory pull. While the most recent implementation of the Euro 6/VI standards - and their on-road test requirements - have been successful in improving the real-world performance of new vehicles, the ICCT says that the potential of emission control technologies has not been fully exploited. It says the technology landscape from a decade ago, when Euro 6/VI standards were developed, has changed. Emission control technologies have continued to evolve, with recent car and truck prototypes demonstrating ultra-low emissions in various driving conditions. As examples of this, AECC papers are cited. Such technological advances have the potential to continue reducing air pollutant emissions from motor vehicles, improving air quality in urban centres, says ICCT.

It concludes that an ambitious Euro 7/VII regulation can deliver substantial health benefits (see above) and that stringent pollutant emission standards are technically feasible and will lead to a healthier living environment for Europeans.

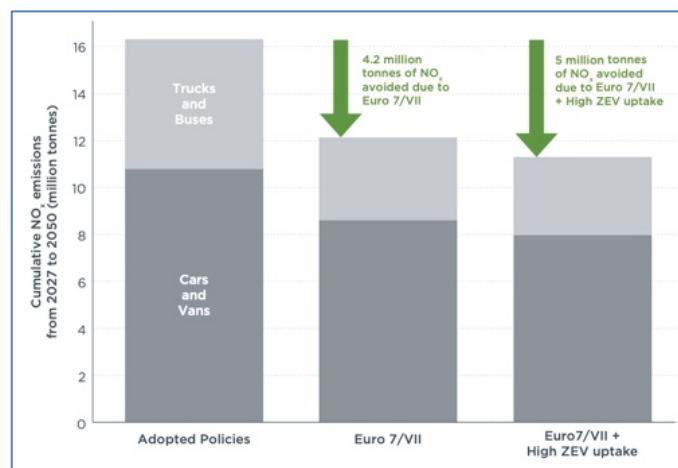
The open ICCT letter is available to read at theicct.org/news/letter-eu-commission-euro-7-and-vi-june2021.

ICCT Briefing on Air Quality and Health Benefits of Euro 7/VII

On 1 June 2021, the International Council on Clean Transportation (ICCT) published a briefing quantifying the long-term air quality and health benefits from Euro 7/VII standards in Europe.

ICCT's analysis found that Euro 7/VII standards will significantly accelerate the reduction in NO_x emissions, achieving a 93% reduction in annual emissions by 2050 relative to 2027 (the assumed adoption year of Euro 7/VII standards) compared to a 74% reduction under currently adopted policies. In addition, cumulative NO_x emissions over the 2027-2050 period will be reduced by 26% compared to currently adopted policies. Increasing the level of electrification further increases the reduction in emissions.

Implementing Euro 7/VII standards and excluding a high zero-emission vehicle uptake are shown to also realise greater emissions reductions and associated health benefits compared to our currently adopted policies including a high zero-emission vehicle uptake scenario.



The reductions in tailpipe NO_x emissions from Euro 7/VII standards will improve air quality across the EU, reducing ambient PM_{2.5} and ozone concentrations. ICCT projects this reduction in emissions will prevent 35 000 premature deaths and avoid 568 000 years of life lost over the period 2027-2050.

Heavy-duty vehicles will benefit proportionately more from Euro 7/VII standards as even achieving 100% zero-emission vehicle sales by 2040, nearly a quarter of the heavy-duty stock will remain powered by an internal combustion engine powertrain by 2050. Compared to currently adopted policies, ICCT states that cumulative NO_x emissions from heavy-duty vehicles over the 2027-2050 period are reduced by 37% under Euro 7/VII, compared to 20% for light-duty vehicles.

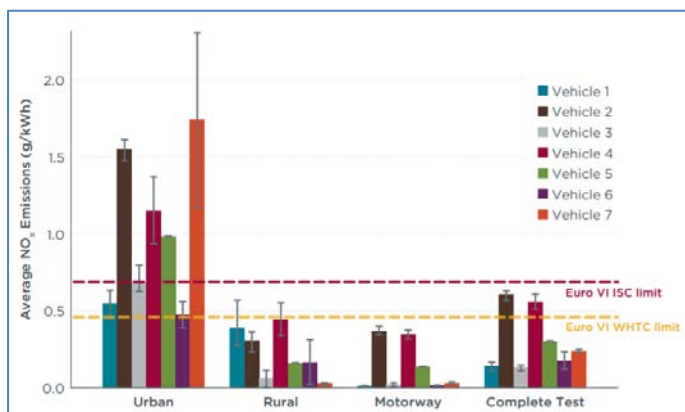
The ICCT briefing can be found at theicct.org/publications/eu-euro7-standards-health-benefits-jun21.

ICCT Report on Real-World NO_x Performance of Euro VI-D Trucks

On 30 June 2021, the International Council on Clean Transportation (ICCT) published a study analysing the real-world emissions of seven Euro VI-D trucks and evaluating the avenues for extending the in-use PEMS test provisions to

better capture a wider range of frequently occurring conditions in real operation.

The analysis finds that urban operation is responsible for 50% to 90% of total NO_x emissions from the trucks tested. However, the Euro VI In-service Conformity (ISC) methodology to assess compliance, as set by implementation steps D and E, does not capture the real-world NO_x performance in cold-start conditions and low-load or low-speed operation typical of urban driving.



The ICCT concluded that for the ISC test evaluation to be representative of the real-world urban emissions, the power threshold would need to be lowered, all cold-start data must be included, and the percentile for evaluation must be increased to 100%. These extensions to the ISC procedure would ensure that the work-specific NO_x emissions used for compliance evaluation are comparable to the measured real-world emissions in urban operation.

The study included an evaluation of these vehicles on the latest for Euro VII scenarios as presented by the Consortium for ultra-Low Vehicle Emissions (CLOVE). In the most stringent Euro VII scenario, the NO_x emissions of Euro VI-D vehicles tested would have to be reduced, on average, to one-quarter of current values to comply in cold-start and low-load operation. Upcoming standards in California, on the other hand, would require larger relative improvements mandating emissions to be reduced to one-seventh of current values.

The ICCT recommended the future Euro VII standards to be aligned with that set by the regulation in California. Euro VII provisions should ensure that low power operation is adequately included and that the limits are set, at a minimum, at the most stringent level in the current proposal.

The study can be found at theicct.org/publications/performance-EuroVII-recommendations-jul2021.

RESEARCH SUMMARY

Effects of Emissions and Pollution

Associations between sources of particle number and mortality in four European cities, Ioar Rivas, et al.; *Environment International* (October 2021), Vol. 155, 106662, [doi: 10.1016/j.envint.2021.106662](https://doi.org/10.1016/j.envint.2021.106662).

The impact of Traffic-Related air pollution on child and adolescent academic Performance: A systematic review, Chloe Stenson, et al.; *Environment International* (October 2021), Vol. 155, 106696, [doi: 10.1016/j.envint.2021.106696](https://doi.org/10.1016/j.envint.2021.106696).

Prenatal exposure to traffic-related air pollution and glucose homeostasis: A cross-sectional study, Hafez Heydari, et al.; *Environmental Research* (in press), [doi: 10.1016/j.envres.2021.111504](https://doi.org/10.1016/j.envres.2021.111504).

Early postnatal exposure to traffic-related air pollution and asthma in adolescents: Vulnerability factors in the PARIS birth cohort, Antoine Citerne, et al.; *Environmental Research* (in press), [doi: 10.1016/j.envres.2021.111473](https://doi.org/10.1016/j.envres.2021.111473).

The association between ambient air pollutants and pancreatic cancer in the Multiethnic Cohort Study, David Bogumil, et al.; *Environmental Research* (in press), [doi: 10.1016/j.envres.2021.111608](https://doi.org/10.1016/j.envres.2021.111608).

Long-term residential exposure to air pollution is associated with hair cortisol concentration and differential leucocyte count in Flemish adolescent boys, Veerle Verheyen, et al.; *Environmental Research* (in press), [doi: 10.1016/j.envres.2021.111595](https://doi.org/10.1016/j.envres.2021.111595).

Acute cardiovascular effects of controlled exposure to dilute Petrodiesel and biodiesel exhaust in healthy volunteers: a crossover study, Jon Unosson, et al.; *Particle and Fibre Toxicology* (2021), Vol. 18:22, [doi: 10.1186/s12989-021-00412-3](https://doi.org/10.1186/s12989-021-00412-3).

Prolonged exposure to traffic-related particulate matter and gaseous pollutants implicate distinct molecular mechanisms of lung injury in rats, Yu-Teng Jheng, et al.; *Particle and Fibre Toxicology* (2021), Vol. 18:24, [doi: 10.1186/s12989-021-00417-y](https://doi.org/10.1186/s12989-021-00417-y).

Air Quality, Sources and Exposure

Impacts of partial to complete COVID-19 lockdown on NO₂ and PM_{2.5} levels in major urban cities of Europe and USA, Somnath Bar, et al.; *Cities* (Oct. 2021), Vol. 117, 103308, [doi: 10.1016/j.cities.2021.103308](https://doi.org/10.1016/j.cities.2021.103308).

Air quality changes in a Central European city during COVID-19 lockdown, Bernard Polednik; *Sustainable Cities and Society* (in press), [doi: 10.1016/j.scs.2021.103096](https://doi.org/10.1016/j.scs.2021.103096).

Changes in air quality in Mexico City, London and Delhi in response to various stages and levels of lockdowns and easing of restrictions during COVID-19 pandemic, E. Vega, et al.; *Environmental Pollution* (in press), [doi: 10.1016/j.envpol.2021.117664](https://doi.org/10.1016/j.envpol.2021.117664).

The effect of COVID-19 pandemic on human mobility and ambient air quality around the world: A systematic review, Sasan Faridi, et al.; *Urban Climate* (July 2021), Vol. 38, 100888, [doi: 10.1016/j.uclim.2021.100888](https://doi.org/10.1016/j.uclim.2021.100888).

Emissions Measurements and Modelling

Volatile organic compounds from a mixed fleet with numerous E10-fuelled vehicles in a tunnel study in China: Emission characteristics, ozone formation and secondary organic aerosol formation, Boqiang Jin, et al.; *Environmental Research* (September 2021), Vol. 200, 111463, [doi: 10.1016/j.envres.2021.111463](https://doi.org/10.1016/j.envres.2021.111463).

Emissions reduction by using e-components in 48 V mild hybrid trucks under dual-mode dual-fuel combustion, Antonio García, et al.; *Applied Energy* (October 2021), Vol. 299, 117305, [doi: 10.1016/j.apenergy.2021.117305](https://doi.org/10.1016/j.apenergy.2021.117305).

Characterisation of ammonia emissions from gasoline and gasoline hybrid passenger cars, Naomi Farren, et al.; *Atmospheric Environment: X* (in press), doi: [10.1016/j.aeaoa.2021.100117](https://doi.org/10.1016/j.aeaoa.2021.100117).

Performance and emissions of renewable blends with OME3-5 and HVO in heavy duty and light duty compression ignition engines, Josefine Preuß, et al.; *Fuel* (November 2021), Vol. 303, 121275, doi: [10.1016/j.fuel.2021.121275](https://doi.org/10.1016/j.fuel.2021.121275).

Vehicular air pollutant emissions in a developing economy with the widespread use of biofuels, Fábio Santos, et al.; *Urban Climate* (July 2021), Vol. 38, 100889, doi: [10.1016/j.uclim.2021.100889](https://doi.org/10.1016/j.uclim.2021.100889)

Emissions Control, Catalysis, Filtration

Analysis of emission reduction in VCR diesel engine using urea based catalytic convertor, J. Kumar, et al.; *Materials Today* (in press), doi: [10.1016/j.matpr.2021.05.329](https://doi.org/10.1016/j.matpr.2021.05.329).

AgY zeolite as catalyst for the selective catalytic oxidation of NH₃, Joaquin Martinez-Ortigosa, et al.; *Microporous and Mesoporous Materials* (August 2021), Vol. 323, 111230, doi: [10.1016/j.micromeso.2021.111230](https://doi.org/10.1016/j.micromeso.2021.111230).

The effect of biodiesel on activity of diesel oxidation catalyst and selective catalytic reduction catalysts in diesel engine, Ibrahim Resitoglu; *Renewable and Sustainable Energy Reviews* (September 2021), Vol. 148, 111286, doi: [10.1016/j.rser.2021.111286](https://doi.org/10.1016/j.rser.2021.111286).

Roles of the Basic Metals La, Ba and Sr as Additives in Al₂O₃-supported Pd-based Three-Way Catalysts, Yuan Jing, et al.; *Journal of Catalysis* (in press), doi: [10.1016/j.jcat.2021.06.016](https://doi.org/10.1016/j.jcat.2021.06.016).

Transport, Climate Change & Emissions

Internal combustion engines and biofuels: Examining why this robust combination should not be ignored for future sustainable transportation, Nathália Santos, et al.; *Renewable and Sustainable Energy Reviews* (September 2021), Vol. 148, 111292, doi: [10.1016/j.rser.2021.111292](https://doi.org/10.1016/j.rser.2021.111292).

A Review of Current and Future Powertrain Technologies and Trends in 2020, Graham Conway, et al.; *Transportation Engineering* (in press), doi: [10.1016/j.treng.2021.100080](https://doi.org/10.1016/j.treng.2021.100080).

FORTHCOMING CONFERENCES

VERT PTI Focus Event

7 July 2021, Online

vert-dpf.eu/3/images/pdf/VERT_npti_focus_event/v20_save-the-date_NPTI-20210707.pdf

ICE 2021 - 15th International Conference on Engines & Vehicles

12-16 September 2021, Naples, Italy

drive.google.com/file/d/1ZXsA9F8fI8OP_2qOesDhLCC_4PzEsAem/view

AECC will make a presentation.

Cenex-LCV

22-23 September 2021, Millbrook, UK and online

cenex-lcv.co.uk

SAE Powertrains, Fuels & Lubricants Digital Summit

28-30 September 2021, Online

sae.org/attend/virtual-events/pfi

AECC will make a presentation.

30th Aachen Colloquium Sustainable Mobility

4-6 October 2021, Aachen, Germany

aachener-kolloquium.de/en/?idU=1

AECC will make a presentation.

SAE Heavy-Duty Diesel Emissions Control Symposium

5-6 October 2021, Gothenburg, Sweden (postponed from October 2020)

sae.org/attend/heavy-duty-diesel-emissions-control-symposium

AECC will make a presentation.

EU Sustainable Energy Week

25-29 October 2021, Online

eusew.eu

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/ViewEvent?code=CON7242

AECC will make a presentation.

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