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EUROPE

Euro 7 Commission Proposal Further Delayed

On 20 June 2022, a tentative agenda for the future College of EU Commissioners meetings was leaked. The meeting planned for 20 July 2022, where the Euro 7 proposal was scheduled to be adopted, was cancelled. The leaked agenda showed the Euro 7 would now be discussed on 30 November 2022.

The European Commission has previously delayed its consideration of this Euro 7 proposal within the College of Commissioners, and based on the latest information, the delay will now amount to almost one year.

An updated tentative agenda was published on 28 June where the Euro 7 adoption is now planned for 12 October 2022.

The tentative College meetings list can be accessed at ec.europa.eu/transparency/documents-register/detail?ref=SEC(2022)2424&lang=en.

Parliament Debate and Vote on Car and Van CO_2 Emission Standards

On 7 June 2022, the European Parliament held a plenary debate and vote on the components of the Commission's 'Fit for 55' package, including CO_2 emission standards for new cars and vans.

Executive Vice President Frans Timmermans opened and closed the debate, putting forward his arguments as to why the Parliament should vote for the plans. His comments followed the vote to reduce emissions trading proposals for fuels and road transport, so he emphasised the importance of delivering car standards "that bring affordable zero emission mobility to citizens". Mr Timmermans said the proposal is technology-neutral in setting targets for all.

He went on to say that many carmakers have already embraced the 2035 100% zero emissions target, with some planning to only sell electric cars in advance of that date. The Commissioner added that "electric cars are the affordable and sustainable solution", saying that e-fuels for combustion engines will never be available in sufficient quantities and will make driving an internal combustion engine vehicle "far more expensive than driving an electric car".

In the plenary vote on 8 June, MEPs adopted their position on proposed rules to revise the CO_2 emissions performance standards for new cars and vans with 339 votes in favour, 249 against and 24 abstentions.

With the adopted text, which constitutes Parliament's position to negotiate with Member States, MEPs support the Commission proposal for an EU fleet-wide target to reduce the CO_2 emissions produced by new passenger cars and light commercial vehicles by 100% compared to 2021. Intermediate emissions reduction targets for 2030 would be set at 55% for cars and 50% for vans.

A compromise amendment to revise the target to a 90% CO_2 emissions cut by 2035 was rejected. An attempt by the Greens to bring the deadline forward to 2030 also failed. Amendments on having a car's production-related carbon footprint taken into consideration as well – potentially allowing carmakers credits for synthetic e-fuels – were also defeated. However, in 2023 the Commission should publish a report setting out a common Union methodology for the assessment and the consistent data reporting of the full life-cycle CO_2 emissions for cars and vans.

The result is now the adopted position of the European Parliament.

Mr Timmermans' opening and closing remarks are at ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_3534.
with the European Parliament press release at europarl.europa.eu/news/20220603IPR32129/fit-for-55-meps-back-objective-of-zero-emissions-for-cars-and-vans-in-2035.
and Euractiv report at euractiv.com/section/transport/news/eu-parliament-passes-ban-on-new-petrol-diesel-cars-by-2035.
The adopted text can be found at europarl.europa.eu/doceo/document/TA-9-2022-0234_EN.pdf.

European Environment Council Position on 'Fit for 55' Emissions Reductions

On 29 June 2022, the European Council adopted its negotiating positions (general approaches) on important legislative proposals in the 'Fit for 55' package. Presented by the European Commission on 14 July 2021, this package will enable the European Union to reduce its net greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels and to achieve climate neutrality in 2050.

The EU Member States adopted a common position on EU emissions trading system (EU ETS), effort-sharing between member states in non-ETS sectors (ESR), emissions and removals from land use, land-use change and forestry (LULUCF), the creation of a social climate fund (SCF) and new CO_2 emission performance standards for cars and vans.

The Council agreed to create a new, separate emissions trading system for the buildings and road transport sectors. The new system will apply to distributors that supply fuels for consumption in the buildings and road transport sectors. However, the start of the auctioning and surrender obligations will be delayed by one year compared to the Commission proposal (auctioning of allowances from 2027 onwards and surrender from 2028 onwards).

Regarding CO_2 emissions targets for cars and vans, the Council agreed to raise the targets for reducing CO_2 emissions by 2030 to 55% for cars and to 50% for vans. The Council also agreed to introduce a 100% CO_2 emissions reduction target by 2035 for new cars and vans.

The Council states that enabling drivers to recharge their vehicles across the member states will be ensured by the related revision of the deployment of an alternative fuels infrastructure (AFIR).

In 2026, the Commission will assess the progress made towards achieving the 100% emission reduction targets and the need to review these targets taking into account technological developments, including with regard to plug-in hybrid technologies and the importance of a viable and socially equitable transition towards zero emissions.

The Council agreed to put an end to the regulatory incentive mechanism for zero- and low-emission vehicles (ZLEV) as of 2030.

Full details of the Council's negotiating positions are at consilium.europa.eu/en/press-releases/2022/06/29/ff55-general-approaches-emissions-reductions-removals-social-impacts.

In his closing remarks to the Environment Council, Commission Executive Vice-President Timmermans said he was glad that Council has also "embraced a notion that by 2035 we need to move to a zero-emission mobility". Commenting on the additional recital and review clause, he said the Commission will continue to support the Council in implementing this policy but they should understand that for institutional reasons, he has to point to the fact that the Commission has the right to initiative. The Commission will therefore use that right in accordance with the provisions in the treaty and Mr Timmermans will submit a declaration to point that out, in order to "make sure the Commission's right to initiative is respected".

Mr Timmermans' remarks can be found at ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_4251.

Subsequent to this, on 30 June, the European Council published its amendments to the proposed CO_2 emissions regulation.

The document states in Recital 9a that "Following consultation with stakeholders, the Commission will make a proposal for registering after 2035 vehicles running exclusively on CO_2 neutral fuels in conformity with EU law, outside the scope of the fleet standards, and in conformity with the Union's climate neutrality objective".

Article 10, which describes the derogation from the specific emissions target for small volume manufacturers, now includes a paragraph where the derogation will be valid until 2035.

Article 23a recognises that several Member States have national targets for phasing-out fossil-fuelled light-duty vehicles before 2035, and that the Commission should consider the need for additional measures to facilitate that transition.

This Council document is available to read at data.consilium.europa.eu/doc/document/ST-10777-2022-INIT/x/pdf.

Outcome of Energy Ministers' Summit on 'Fit for 55' Package

On 27 June 2022, the European Council adopted its negotiating positions (general approaches) on two legislative proposals that tackle the energy aspects of the EU's climate transition under the 'Fit for 55' package: the renewable energy directive and the energy efficiency directive. The agreements pave the way for the Council to start negotiations with the European Parliament.

The Council agreed to set a binding EU-level target of 40% of energy from renewable sources in the overall energy mix by 2030. The current EU-level target is at least 32%. Member States will need to increase their national contributions set in their integrated national energy and climate plans (NECPs), to be updated in 2023 and 2024, in order to collectively achieve the new target.

In addition, to advance the integration of renewables in sectors where incorporation has been slower, the Council agreed on more ambitious sector-specific targets and measures. Regarding the sub-targets for transport, the Council introduced the possibility for member states to choose between: a binding target of 13% greenhouse gas intensity reduction in transport by 2030. More options will be available for member states to reach this objective, such as a possibility to set a differentiated goal for maritime transport as long as the overall goal is met; or a binding target of at least 29% renewable energy within the final consumption of energy in the transport sector by 2030.

The Council set a binding sub-target for advanced biofuels in the share of renewable energies supplied to the transport sector at 0.2% in 2022, 1% in 2025 and 4.4% in 2030, integrating the addition of a double counting for these fuels. Regarding renewable fuels of non-biological origin in transport (mostly renewable hydrogen and hydrogen-based synthetic fuels), the Council agreed on an indicative sub-target of 2.6%, which corresponds to 5.2% also with the addition of a multiplier.

The Council and the Parliament will now enter interinstitutional negotiations to agree on the final text of the two directives.

The Council's press release can be read in full at consilium.europa.eu/en/press/press-releases/2022/06/27/ff55-council-agrees-higher-targets-for-renewables-energy-efficiency.

Priorities for Czech EU Presidency

On 15 June 2022, the Czech Prime Minister Mr Petr Fiala outlined his priorities for the Czech Republic's Presidency of the Council of the EU from July to December. These will be carried out under the motto "Rethink, Rebuild, Repower".

Mr Fiala said that the need for an accelerated transformation of Europe's energy sector is even more urgent today and that its decarbonisation is no longer only about climate protection,

but a condition for our independence and energy security. He added that the transformation must be carried out in an economically and socially sensitive manner, so as to not jeopardise the standard of living of EU citizens and the competitiveness of EU industry.

The Czech EU Presidency will also prioritise focusing on effective European cooperation and solidarity to achieve long-term successful integration of refugees; the post-war reconstruction of Ukraine; strengthening European defence capabilities; and strengthening supply chains and increase the resilience of the European economy as a whole to external threats.

The Czech Prime Minister's message can be found at czech-presidency.consilium.europa.eu/en/news/message-from-the-prime-minister.

Regulation on Emission Limits and Type-Approval of NRMM

On 27 June 2022, new EU rules on emission limits and type-approval of non-road mobile machinery (NRMM) as regards the extension of the empowerment of the Commission to adopt delegated acts were published in the EU Official Journal. Regulation (EU) 2022/992 of the European Parliament and of the Council of 8 June 2022 amends Regulation (EU) 2016/1628.

Regulation (EU) 2016/1628 establishes emission limits for gaseous and particulate pollutants from engines that are installed in or are intended to be installed in NRMM. It furthermore sets out the administrative and technical requirements related to the EU type-approval of those engines, as well as requirements for market surveillance. The new measure amends Article 55(2) of Regulation 2016/1628 to extend the Commission's power to adopt delegated acts in relation to the type-approval of non-road mobile machinery (NRMM) until 6 January 2026. Regulation (EU) 2016/1628 limited all empowerments of the Commission to adopt delegated acts to a period of five years, which expired on 6 October 2021.

In addition, the measure provides that the delegation of power can be tacitly extended for periods of five years, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

The Regulation will enter into force on 17 July 2022.

It can be found in the Official Journal at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2022.169.01.0043.01.

European Council Position on UNECE WP.29 Regulations

On 22 June 2022, the European Council decision EU 2022/969 on the position to be taken on behalf of the European Union in the World Forum for Harmonization of Vehicle Regulations (WP.29) of the United Nations Economic Commission for Europe as regards the proposals for modifications to UN Regulations was published in the Official Journal.

These regulations relate to the proposal for a new UN Global Technical Regulation (GTR) on durability of pollution control devices for two- and three-wheelers, and the proposal for a new Consolidated Resolution concerning exhaust ultra-fine particle numbers measurement for heavy duty vehicles.

The Council Decision can be found at eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.

European Parliament Position on Revision of EU Emissions Trading Scheme

On 22 June 2022, the European Parliament (EP) adopted its position on the revision of the EU Emissions Trading System (ETS) with 439 votes for, 157 against and 32 abstentions. This followed a Plenary debate on 7 June.

The EP's press release says that MEPs believe the ETS is at the core of European climate policy and has triggered significant reductions in emissions, as putting a price on greenhouse gas (GHG) emissions has given economic actors an incentive to reduce their emissions and invest in low-carbon technologies.

Parliament wants to increase the Commission's overall ambition to reduce emissions in the ETS sectors from 61% to 63% by 2030, compared to 2005. This is to be achieved through further one-off cuts to the EU-wide quantity of allowances in circulation, in combination with an increase in the annual reduction of allowances to 4.4% until the end of 2025, rising to 4.5% from 2026 and to 4.6% from 2029.

A separate new emissions trading system for fuel distribution for commercial road transport and buildings shall be established on 1 January 2024 - one year earlier than proposed by the Commission.

To prevent citizens from having to bear additional energy costs, residential buildings and private transport should not be included in the new ETS before 2029 and only subject to a thorough assessment by the Commission followed by a new legislative proposal to be agreed upon by Council and Parliament. MEPs also propose to insert a price cap of €50 so that if the average price of allowances in ETS II exceeds this cap prior to 2030, 10 million allowances should be released from the Market Stability Reserve.

The European Parliament's press release is at europarl.europa.eu/news/en/press-room/20220603IPR32158/fit-for-55-in-2030-parliament-wants-a-more-ambitious-ets.

ITRE Committee Hearing on Automotive Industry

On 16 June 2022, the Industry Committee of the European Parliament held a public hearing on the automotive industry.

Representatives from industry and NGOs attended and made statements.

Huitema (ACEA) said that Europe needs to be ready for the transition from ICE to EV, for which skills and support are needed from the same people banning the ICE. He added that it is clear that the market is making the transition but it would be much better not to ban technologies and leave the market to decide. Mr Huitema went on to say that the EV of the future will be an export product and that the Chinese will be the main competition. He said 13 years from now is a long time and a thorough review of CO_2 standards in 2027 to re-assess if the target for 2035 is still viable at that point in time, as well as to evaluate the amount of infrastructure available.

De Vries (CLEPA) reflected on the many questions posed by the MEPs. She said electrification is needed but is not the only solution available. Speaking for CLEPA's members and the people working for them, Ms de Vries said all available solutions will be needed, but the risk of de-industrialisation of a cutting-edge industry is real. She added that the market should drive the transformation, but the market is not one-size fit all. Her view is that it is an illusion to think there are many opportunities left when production will not be done in Europe. She reiterated the need for a comprehensive approach, with all powertrain technologies on a level playing field. The role of ICE with sustainable renewable fuels should therefore be considered, along with a move to a Well to Wheel WtW and subsequently to a life cycle analysis approach.

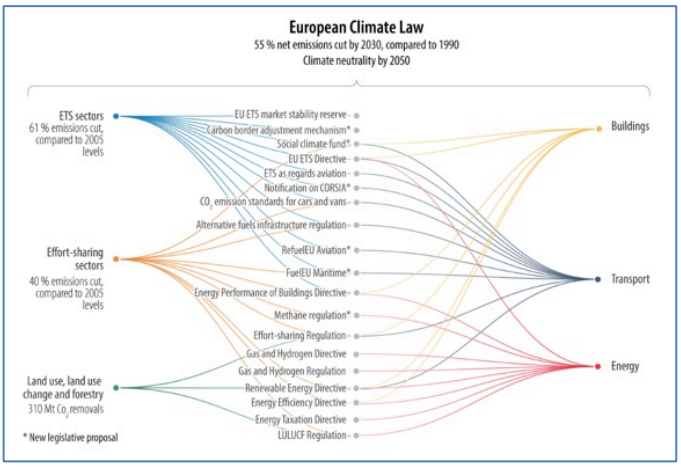
Poliscanova (T&E) said that the world is shifting to electric vehicles and that those OEMS moving to mass manufacturing of EVs will catch the global market of the future. She mentioned that it is a transition about skills rather than jobs. She added that it is a question of technology openness, although it does not mean all technologies need to be pushed in one sector, for example e-fuels will be needed but not in road transport.

Further information of the hearing can be found at europarl.europa.eu/committees/en/itre-public-hearing-on-automotive-indust/product-details/20220614CHE10342.

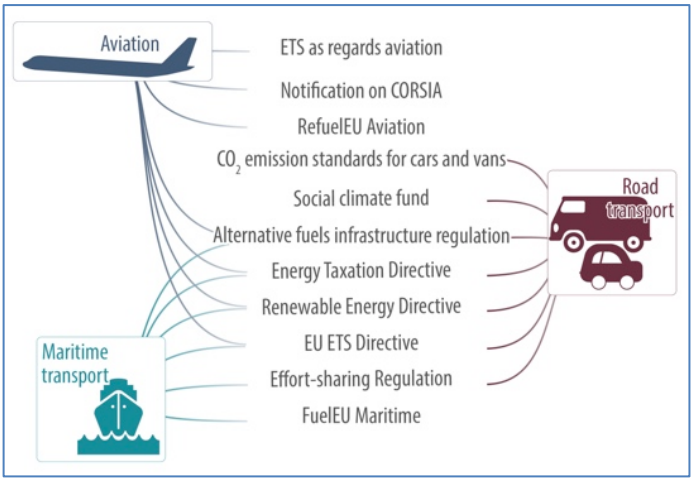
Think Tank Briefing on 'Fit for 55' Package

On 3 June 2022, the European Parliament's Think Tank published a briefing on the European Commission's 'Fit for 55' package.

The document explains that under the new package, road transport and buildings would be included in the revised EU Emission Trading System (ETS) but would still be covered by the Effort-sharing Regulation. To reduce transport sector emissions, the new ETS for transport fuels would be complemented by stronger CO_2 emission standards for new cars and vans, revised rules for alternative fuels infrastructure and new legislation on maritime and aviation fuels. Energy production and use across the economy are addressed by the revision of key EU energy legislation, a new regulation on energy-related methane emissions (within the effort-sharing sector), and a reform of the EU gas markets (Gas and Hydrogen Regulation and Directive). The proposals on ETS, effort sharing, energy performance of buildings, renewable energy, energy efficiency and the social climate fund address energy use in buildings. Finally, the revision of the Land Use, Land-Use Change and Forestry (LULUCF) Regulation is geared towards ensuring that the sector achieves 310 Mt CO_2 removals by 2030. There would be certain flexibilities between the LULUCF sector and the effort-sharing sector. The revised Renewable Energy Directive contains sustainability criteria for biofuels, which affect the LULUCF sector.



Looking specifically at transport, the briefing says that greenhouse gas emissions from the transport sector have stagnated over the past decade, while other sectors such as electricity generation and industry achieved substantial emissions reductions, not least thanks to the EU ETS. To ensure that the transport sector contributes to the EU's climate objectives, the maritime and road transport sectors are to be included in the EU ETS (while still covered by the Effort-sharing Regulation).



Together with a review of the Energy Taxation Directive, this would raise the price of GHG emissions in the transport sector. The proposed revision of the Renewable Energy Directive sets requirements for renewable transport fuels, and introduces a credit mechanism to promote electromobility. Specific legislative proposals address emissions reductions and the supply of alternative fuels in the road transport, maritime transport and aviation sub-sectors.

The EP briefing document is available to read at europarl.europa.eu/RegData/etudes/BRIE/2022/733513/EPRS_BRI(2022)733513_EN.pdf.

Think Tank Briefing on CO_2 Emission Standards for New Cars and Vans

On 3 June 2022, the European Parliament's Think Tank published a briefing on CO_2 emission standards for new cars and vans, part of the 'Fit for 55' package. This gives an overview of the current situation and explains the preparation of the proposal and the changes it would bring. It then highlights the opinions of advisory committees as well as the positions of key stakeholders in the process. Finally, the briefing outlines the legislative process.

After explaining how the CO_2 standards fit in with the overall 'Fit for 55' package, the document outlines the recent trajectory of emissions and how the market share of electric vehicles has changed.

It then covers the regulation, with the current CO_2 standards for cars and vans, explaining the transition from New European Driving Cycle measurement standard to the World Harmonised Light Vehicle Test Procedure (WLTP), which has been used since 2021. It also sets out monitoring and reporting requirements that are further specified in delegated and implementing acts. Each Member State has to monitor and report relevant data to the European Commission each year.

The briefing comments on manufacturers' responsibilities under the regulation, along with incentives available. It explains how the regulation does not apply to manufacturers responsible for fewer than 1 000 annual registrations. Small-volume manufacturers (responsible for 1 000 to 10 000 registrations for cars, and 1 000 to 22 000 registrations for vans) can propose their own emissions reduction target (subject to approval by the European Commission based on agreed criteria). Niche manufacturers of cars (between 10 000 and 300 000 new registered vehicles) can apply for a target of a 45% reduction from the 2007 level between 2020 and 2024.

The principal objectives of the regulation are described, followed by an outline of the CO_2 reduction targets and the responsibility of the Commission to report on progress by the end of December and every two years thereafter.

	2025 target for cars and vans	2030 target for cars	2030 target for vans	2035 target
Existing Regulation (EU) 2019/631	15 % below 2021 target	37.5 % below 2021 target	31 % below 2021 target	Same as 2030 (no 2035 target)
Proposed amendments	unchanged	55 % below 2021 target	50 % below 2021 target	100 % reduction

The expected impacts of the proposal were also highlighted in terms of CO_2 reductions, economic savings for society and end-users, total cost of ownership savings and projected costs for new cars and vans.

	2030	2035	2040
Reduction of CO_2 emissions from all cars and vans in the EU	32-33 %	56-66 %	83-89 %
Net economic savings for society and end-users over the lifetime of each new car, including the external cost of CO_2 emissions.	€860-€1 600	€1 500-€3 400	€4 600-€5 100
Savings in total cost of ownership for first users of new cars	€330-€600	€ 970-€2 200	€2 800-€3 100
Savings in total cost of ownership for second users of new cars	€450-€800	€1 300-€2 700	€2 800-€3 000
Projected costs for each new car for manufacturers	€300-€550	€940-€1 700	€1 400-€1 700
Projected costs for each new van for manufacturers	€450-€940	€1 500-€2 800	€2 300-€2 700

The views of different stakeholders were outlined. Manufacturer associations ACEA and CLEPA positions were summarised, with ACEA's concern about 2030 targets and the required infrastructure identified. CLEPA's criticism of the perceived lack of technology neutrality was raised, along with its desire to shift the focus away from tailpipe emissions towards a holistic view of the climate contribution of the combination of energy and power train technology, and calls for a strategy for renewable sustainable fuels.

NGOs are also mentioned, with ICCT welcoming the proposals and making recommendations for the design of the standards, and T&E calling for stronger targets.

The EP briefing paper can be found at europarl.europa.eu/RegData/etudes/BRIE/2022/698920/EPRS_BRI(2022)698920_EN.pdf.

EEA Report on Environmental Causes of Cancer

On 28 June 2022, the European Environment Agency (EEA) published a report on environmental risks and their associations with cancer.

The report states that exposure to air pollution, carcinogenic chemicals, radon, UV radiation and second-hand smoke together may contribute over 10% of the cancer burden in Europe. It adds that environmental and occupational cancer risks can be reduced by cleaning up pollution and changing behaviours, but that the long latency periods of many cancers mean that many future cases will be due to pollution and occupational exposure happening today.

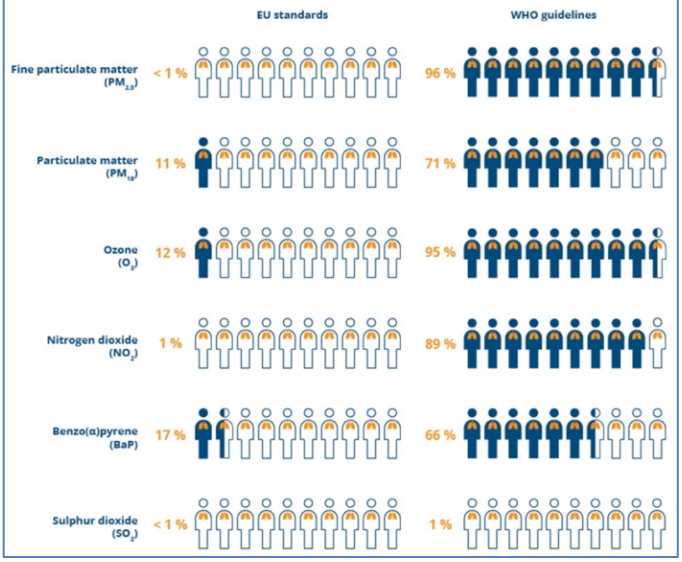
The EEA goes on to say that better data is needed on Europe-wide exposure to environmental and occupational cancer risks and more evidence is required on the risk arising from

low levels of exposure to multiple carcinogens. Despite the uncertainties, what is already known about the links between environment and cancer clearly supports implementing ambitious 'zero pollution' policies as tools for cancer prevention, according to the EEA.

Regarding air pollution in particular the report states that 91% of the urban population are still exposed to air pollutant concentrations above the 2021 World Health Organization (WHO) air quality guidelines and more than 300 000 premature deaths each year are attributed to chronic exposure to fine particulate matter (PM2.5) alone. Part of this premature mortality is due to cancer. Around 2% of all cancer deaths can be attributed to air pollution in Europe. The proportion of lung cancer deaths attributable to air pollution is much higher, with a conservative estimate of 9% (IHME, 2020) and a likelier one of around 17%.

EEA says that despite progress, we are far from achieving safe air quality levels across Europe.

Figure 1. Share of urban EU population exposed to air pollutant concentrations above EU standards and WHO guidelines in 2020



The report concludes by describing the three main pillars of the EU's clean air policy: the National Emissions reduction Commitments (NEC) Directive; source-specific legislation for key sources of air pollution: and the Ambient Air Quality Directives (EU, 2004, 2008), which set air quality standards. EEA says closer alignment of the EU standards with WHO recommendations is key to achieving one of the goals of the zero pollution action plan: reducing by 2030 the number of premature deaths caused by exposure to PM2.5 by at least 55% compared with 2005 levels.

The EEA report can be found at eea.europa.eu/publications/environmental-burden-of-cancer?utm_source=EEA.

End of UK Plug-In Car Grant

On 14 June 2022, the UK government announced that it is closing the plug-in car grant scheme to new orders after supporting the sale of nearly half a million electric cars.

It says the scheme has created a mature market for ultra-low emission vehicles, helping to increase the sales of fully electric cars from less than 1 000 in 2011 to almost 100 000 in the first 5 months of 2022 alone.

The government says it is now refocusing funding towards the main barriers to the EV transition, including public charging and supporting the purchase of other road vehicles where the switch to electric requires further development.

£300 million in grant funding will now be refocused towards extending plug-in grants to boost sales of plug-in taxis, motorcycles, vans and trucks and wheelchair accessible vehicles.

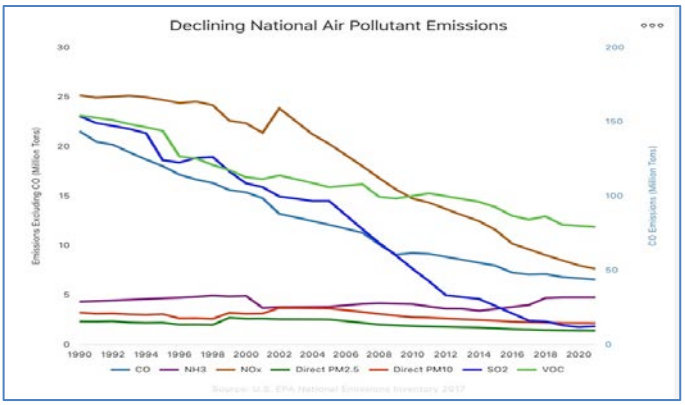
The shift in focus will also help allow government funding to target expanding the public chargepoint network, helping to eradicate "range anxiety" and ensure the transition to zero-emission transport is easy and convenient for all drivers across the UK. The government has already committed £1.6 billion to building the UK's public chargepoint network.

The announcement can be read in full at gov.uk/government/news/plug-in-grant-for-cars-to-end-as-focus-moves-to-improving-electric-vehicle-charging.

NORTH AMERICA

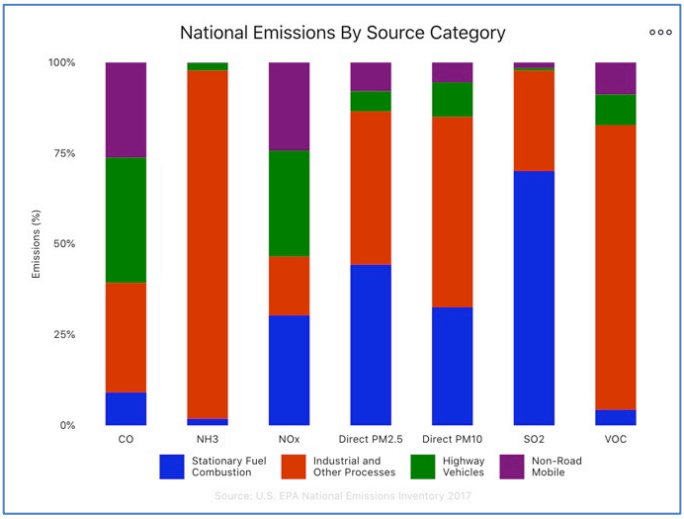
US EPA Air Trends Report

On 1 June 2022, the US Environmental Protection Agency (EPA) published its annual report on air quality, 'Our Nation's Air: trends through 2021'. The report shows trends of toxic air pollutants since 1990, looks at emissions by source category, considers the health and environmental impacts of air pollution, compares emissions trends with economic growth and studies performance against National Ambient Air Quality Standards (NAAQS).



The data shows that most of the key air pollutants have continued to decline from 1990 levels, with the exception of

ammonia, largely driven by federal and state implementation of stationary and mobile source regulations, and "technological advancements from American innovators".



Looking at emissions by source category shows that highway vehicles and non-road mobile machinery are responsible for 29% and 24% respectively of national NOx emissions, 35% and 26% of CO emissions and 6% and 8% of direct $PM_{2.5}$ emissions.

US EPA's data also shows that whilst gross domestic product, vehicle miles travelled, population and energy consumption have all grown since 1970, aggregate emissions of six common pollutants have reduced by 78%.

The EPA's air trends report is available to read at gispub.epa.gov/air/trendsreport/2022/#growth.

EMA Lawsuit Against CARB on Low NOx Omnibus Regulation

On 27 May 2022, the Truck and Engine Manufacturers Association (EMA) filed a lawsuit against the California Air Resources Board (CARB), alleging that the agency's low NOx emission standards for heavy-duty engines – the CARB Omnibus regulation – fails to provide manufacturers with legally-required minimum four years of leadtime. The lawsuit seeks to delay the implementation dates of the regulation and 'reinstate' the leadtime periods.

Under the US Clean Air Act (CAA), heavy-duty on-highway engine and vehicle manufacturers must be provided at least four full model years of leadtime before new emission standards become effective. The CAA requires California to provide manufacturers the same minimum four-year leadtime that applies to federal emission standards adopted by the US Environmental Protection Agency (EPA), according to EMA.

The lawsuit, filed in the US District Court for the Central District of California, seeks to reaffirm the minimum four-year leadtime requirement, and to delay CARB enforcement of the provisions of the Omnibus regulation that are scheduled to take effect from 2024 until 2026.

The text of the lawsuit is at static1.squarespace.com/static/624ddf53a2360b6600755b47/t/629005ddf1ca8012671e0b1e/EMA+v.+CARB+Complaint.pdf.

US EPA Renewable Fuel Standards

On June 3, 2022, the US EPA finalised a package of actions setting biofuel volumes for the Renewable Fuel Standard (RFS) programme for years 2020, 2021, and 2022, and introducing regulatory changes intended to enhance the programme's objectives.

EPA also established a 250-million-gallon "supplemental obligation" to the volumes finalised for 2022 and stated its intent to add another 250 million gallons in 2023.

To promote efficiency and opportunity in producing biofuels, this action also establishes a regulatory framework that allows bio-intermediates to be included in the RFS program, while ensuring environmental and programmatic safeguards are in place.

Final Volume Requirements for 2020-2022 (billion gallons)

	2020	2021	2022
Cellulosic Biofuel	0.51	0.56	0.63
Biomass-Based Diesel	2.43**	2.43**	2.76
Advanced Biofuel	4.63	5.05	5.63
Total Renewable Fuel	17.13	18.84	20.63
Supplemental Standard	n/a	n/a	0.25

Details of the standards can be found at epa.gov/renewable-fuel-standard-program/final-volume-standards-2020-2021-and-2022.

US Supreme Court Ruling on Greenhouse Gas Emission Reductions

On 30 June 2022, the US Supreme Court ruled in a case brought by West Virginia against the US Environmental Protection Agency (EPA) on behalf of 18 other states and some of the nation's largest coal companies. This concerned whether Congress constitutionally authorised the EPA to issue significant rules including those "capable of reshaping the nation's electricity grids and unilaterally decarbonising virtually any sector of the economy, without any limits on what the agency can require so long as it considers cost, non-air impacts, and energy requirements".

In a 6-3 ruling, the court sided with the conservative states and fossil-fuel companies, agreeing that Congress had not "intended to delegate... decision[s] of such economic and political significance".

The court has not completely prevented the EPA from making these regulations in the future - but says that Congress would have to clearly say it authorises this power.

In response, EPA Administrator Michael S. Regan issued a statement expressing disappointment with the ruling and committing to use the full scope of EPA's authorities to protect communities and reduce the pollution that is driving climate change. He added that the EPA will move forward to provide certainty and transparency for the energy sector, which will support the industry's ongoing efforts to grow a clean energy economy. Mr Regan said that EPA will move forward with lawfully setting and implementing environmental standards that meet its obligation to protect all people and all communities from environmental harm.

The US Supreme Court ruling can be found at supremecourt.gov/.
with the EPA response at epa.gov/newsreleases/epa-administrator-regan-issues-statement-west-virginia-v-environmental-protection.

UNITED NATIONS

UNECE Podcast: One World Zero Waste? The Circular Economy Explained

On 21 June 2022, the United Nations Economic Commission for Europe (UNECE) released the podcast 'One World Zero Waste? The Circular Economy Explained'.

The podcast guests include Ms Maya Ben Dror from the World Economic Forum and Mr Duncan Kay, Vice chair of the Group of Rapporteurs on Pollution and Energy of the World Forum for Harmonization of Vehicle Regulations, as well as the GRPE secretary Mr Cuenot.

The environmental footprint of transport is subject to much attention, given its impact on health, the environment, climate change, and the extraction of natural resources. The podcast explores how the circular economy approach could help address these challenges. It also reflects on why solutions are needed to make the entire life cycle of vehicles as efficient as possible, reducing waste and pollution at all stages and to minimise resource intensity for any given trip.

The UNECE's podcast can be accessed at soundcloud.com/unece/mobility-one-world-zero-waste-the-circular-economy-explained.

Creation of an Informal Working Group on Life Cycle Assessment

On 2 June 2022, the Working Party on Pollution and Energy (GRPE) endorsed the creation of a new Informal Working Group on Life Cycle Assessment (IWG LCA) during its 86th session.

The GRPE considered the result of the Carbon Life Cycle Assessment workshop held on 31 May 2022. It was noted that there is a strong need to define a harmonised approach on this subject. Contracting Parties including the European Commission, Japan, Korea, Russian Federation, Sweden, Switzerland, UK and USA, as well as stakeholders including OICA and CLEPA. presented their views.

Draft terms of reference for the new IWG were introduced by Japan and Korea. These are available for comments from other Contracting Parties and will be discussed during the next GRPE session.

The draft terms of reference of the LCA IWG can be found at unece.org/transport/documents/2022/05/informal-documents/japan-and-republic-korea-draft-terms-reference.

GENERAL

ICCT White Paper on Real-World Usage of Plug-In Hybrid Vehicles in Europe

On 8 June 2022, the International Council on Clean Transportation (ICCT) published a white paper on real-world usage of plug-in hybrid electric vehicles (PHEVs) in Europe. It provides an update on fuel consumption, electric driving and CO_2 emissions.

ICCT says earlier studies on the real-world usage of PHEVs certified under the New European Driving Cycle (NEDC) have shown that those vehicle models are driven much less on electricity than the type-approval procedure assumes. This study presents an analysis of the average real-world fuel consumption and electric driving share of about 9 000 private and company car PHEVs in Europe, with an emphasis on Worldwide harmonised Light vehicles Test Procedure (WLTP) type-approved vehicle models.

The analysis finds that the real-world fuel consumption of PHEVs in Europe is on average three to five times higher than WLTP type-approval values. The values correspond to tailpipe emissions of 90–105 g CO_2/km for private vehicles and 175–195 g CO_2/km for company cars compared to only 37–39 g CO_2/km in WLTP type approval.

ICCT goes on to say that the deviation between real-world and type-approval fuel consumption is growing. This long-term growth corresponds to an average increase of 0.1–0.2 L/100 km with every build year. The deviation from type-approval values is higher for WLTP certified cars than for NEDC vehicles as newer WLTP certified cars show slightly higher average real-world fuel consumption.

The average real-world electric driving share is about 45%–49% for private cars and about 11%–15% for company cars. In contrast, the official WLTP type-approval procedure

assumes the share of driving in the mostly, but not fully, electric charge-depleting mode at around 70%–85%.

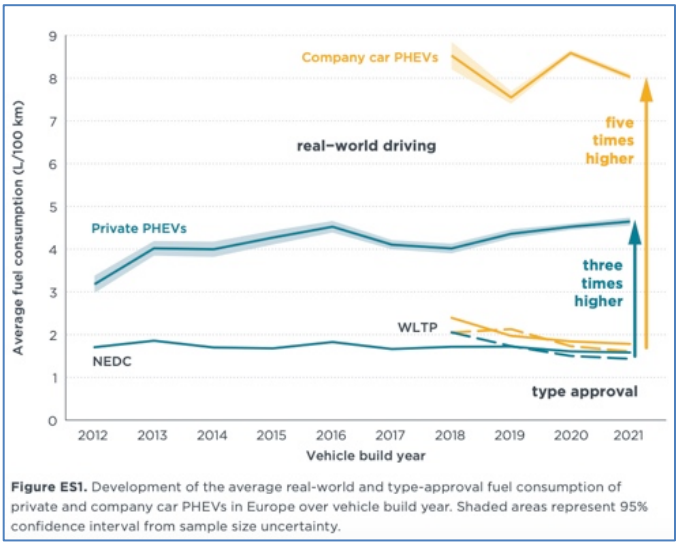


Figure ES1. Development of the average real-world and type-approval fuel consumption of private and company car PHEVs in Europe over vehicle build year. Shaded areas represent 95% confidence interval from sample size uncertainty.

Based on the analysis, ICCT makes policy recommendations, including that PHEV usage assumptions in WLTP type approval should be adjusted to empirical evidence, and that PHEVs should be excluded from zero- and low-emission vehicle (ZLEV) credits in the CO_2 emission standards. The NGO also proposes that fiscal incentives for PHEVs should be abolished or limited to vehicles with demonstratively low fuel consumption or high electric driving share, with the required WLTP equivalent all-electric range increased to about 90 km. ICCT wants to see charging of PHEVs incentivised and for manufacturers and vehicle dealers should provide more transparent information.

ICCT's white paper can be found at theicct.org/wp-content/uploads/2022/06/real-world-phev-use-jun22.pdf.

ICCT Report on TCO Comparisons for Last-Mile Delivery Trucks

On 15 June 2022, the International Council on Clean Transportation (ICCT) published a report looking at total cost of ownership (TCO) comparison of battery-electric and diesel trucks in Europe. The study also provides policy recommendations to overcome the differential cost between battery electric trucks and their diesel counterparts. The geographic scope of the study covers six major European cities: Berlin, Paris, Rome, London, Warsaw, and Amsterdam.

ICCT's report finds that battery electric trucks for last-mile delivery can reach TCO parity with their diesel counterparts today in most of the European cities considered in this study with the purchase premiums currently available. Without these premiums, they would not reach economic viability relative to diesel trucks until the second half of the decade.

It also finds that adjusting the battery size to a truck's daily mileage and route-level energy needs can help to reduce the truck's purchase price gap relative to its diesel counterpart. While oversized batteries provide more flexibilities to overcome scheduling disruptions during operation, this results in a high purchase price.

The report says that battery electric powertrains are more energy efficient, which results in lower energy consumption per km than diesel trucks. ICCT states that this makes their TCO less sensitive to charging costs variation than diesel trucks' sensitivity to the increase in diesel fuel price.

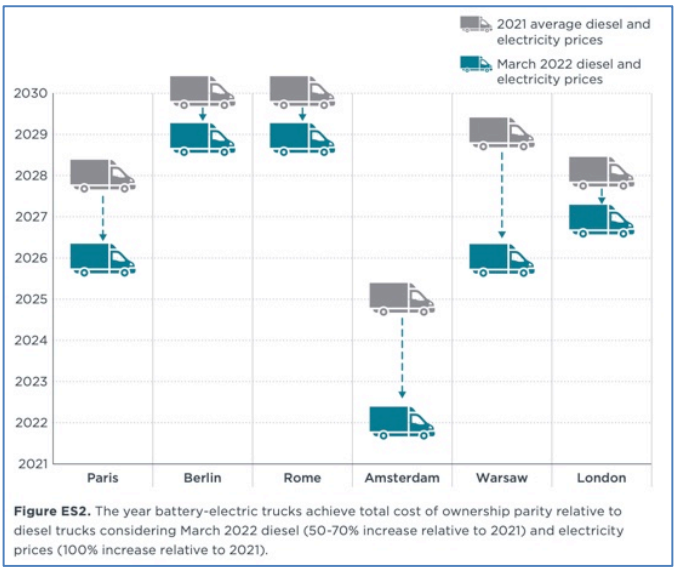


Figure ES2. The year battery-electric trucks achieve total cost of ownership parity relative to diesel trucks considering March 2022 diesel (50-70% increase relative to 2021) and electricity prices (100% increase relative to 2021).

ICCT goes on to recommend policy measures to help overcome the TCO gap between battery electric and diesel trucks and stimulate the early market uptake of last-mile delivery battery-electric trucks. These include implementation of a bonus-malus tax scheme to finance purchase incentives for zero emission trucks, imposition of emissions charges on all diesel vehicles entering low- and zero-emission zones, encouraging smart charging infrastructure deployment at urban logistics depots, and requiring grid operators to set time-varying network tariffs that consider available grid capacity.

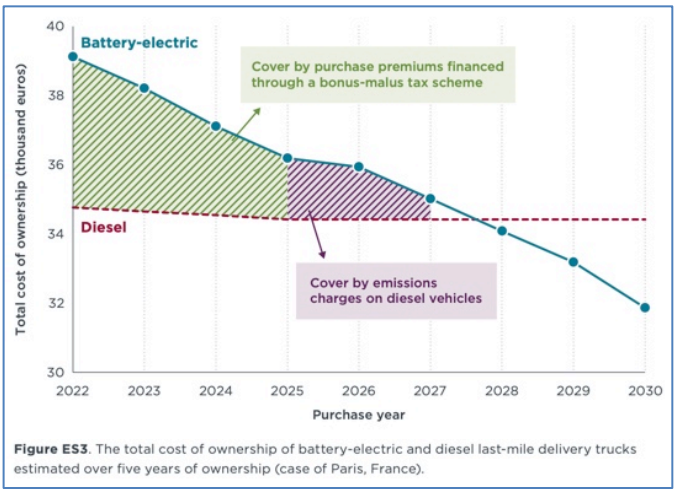


Figure ES3. The total cost of ownership of battery-electric and diesel last-mile delivery trucks estimated over five years of ownership (case of Paris, France).

The ICCT report is available to read at theicct.org/wp-content/uploads/2022/06/tco-battery-diesel-delivery-trucks-jun2022.pdf.

NGO Letter to European Commission on Euro 7

On 15 June 2022, a group of NGOs, cities and regions wrote to the European Commission stating that Euro 7 is the last chance to remove air pollution from vehicle engines.

The group calls on the Commission to ensure that its proposal sets the lowest limits globally, based on best available technology. At a minimum it says this should be aligned with the most ambitious limit scenarios presented by CLOVE, with more ambition on cold start emissions.

It also wants regulation of all relevant pollutants harmful to human health and the environment including ultra-fine, ammonia, nitrous oxide, methane, and brake particles.

Finally, the group calls for Euro 7 to cover all driving conditions by ensuring emission limits apply wherever and whenever a car is driven, and wants them to ensure lifetime emission compliance and to require durability and in-service testing that covers the entire lifetime of vehicles across all Member States.

The NGOs and cities want to see the Euro 7 standard introduced by 2025 at the latest.

The letter can be found at transportenvironment.org/wp-content/uploads/2022/06/20220615_Euro7_letter_final-2.pdf.

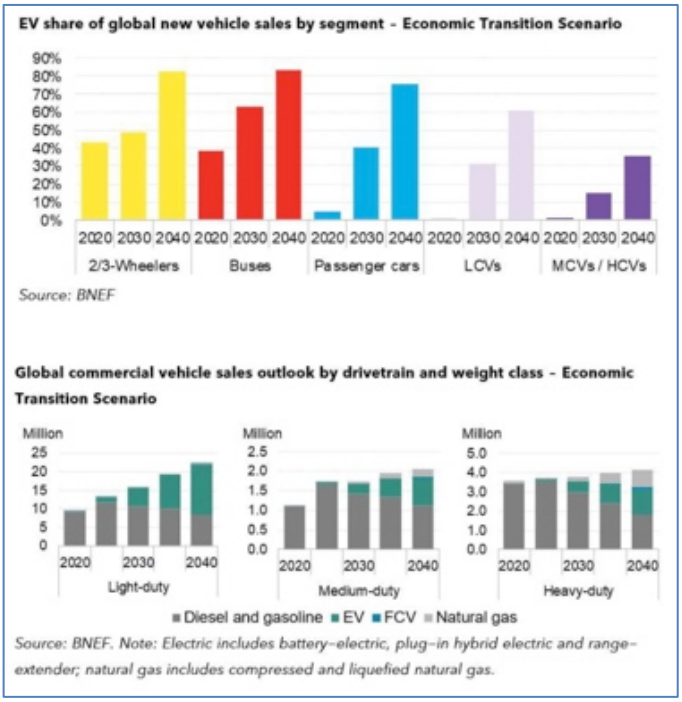
BloombergNEF Electric Vehicle Outlook

In June 2022, BloombergNEF (BNEF) published its Electric Vehicle (EV) Outlook 2022. The report includes global near-term (2025) and long-term (2040) outlooks and considers two scenarios: Economic Transition Scenario (ETS) and Net Zero Scenario (NZS).

BNEF says passenger EV sales are set to continue rising sharply in the years ahead as policy pressure continues to increase, more models hit the market, and consumer interest takes off. Plug-in vehicle sales rise from 6.6 million in 2021 to 20.6 million in 2025. By 2025, plug-in vehicles represent 23% of new passenger vehicle sales globally, up from just under 10% in 2021. Three quarters of those are full battery electric vehicles (BEV). Plug-in hybrids do not gain a significant share of the market outside Europe and peak globally around 2026.

Under the ETS, BNEF expects a two-tiered global auto market to emerge and says the difference between air quality in wealthy and emerging economies will widen further if the EV adoption gap is not addressed.

The Economic Transition Scenario is primarily driven by techno-economic trends and market forces, and assumes no new policies or regulations are enacted that impact the market. After increasing rapidly over the next 10-15 years, EV sales growth in the Economic Transition Scenario slows down slightly in the 2030s in the main EV markets like Europe, China and North America, as they begin to saturate and exit the steepest part of the s-curve.



This scenario does not assume that the EU's 2035 combustion vehicle phase out target is hit, but the region gets quite close with almost 80% of sales going fully electric by that date.

EVs take longer to spread in India, Southeast Asia and our Rest of World countries, including markets like Mexico, Brazil and Russia where policy support is limited or non-existent.

Electrification of heavier vehicles has started at low levels and, by 2040, one third of medium- and heavy-duty truck sales globally are electric. For these vehicles, adoption varies more between countries. Electric truck sales in Europe, the US and China are between 45-55% by that time, but are just over 20% elsewhere.

Electric bus sales continue to rise steadily, with 44% of new sales and 18% of the global fleet already electric. 98% of the global e-bus fleet is still in China, but activity is picking up in other countries. The global e-bus fleet reaches 1.75 million by 2040, representing 62% of all buses on the road.

BNEF states that to get on track for a net-zero global fleet by 2050, zero-emission vehicles need to represent 61% of global new passenger vehicle sales by 2030, 93% by 2035, and 100% by 2038. In the Economic Transition Scenario, none of the analysed countries achieves a full phase-out of combustion vehicle sales by 2038.

The Net Zero Scenario investigates what a potential route to net-zero emissions looks like for the road transport sector by 2050. This scenario looks primarily at economics as the deciding factor for which drivetrain technologies are implemented to hit the 2050 target.

To get on track for a net-zero global fleet by 2050, zero-emission vehicles need to represent 61% of global new passenger vehicle sales by 2030, 93% by 2035, and 100% by 2038.

BNEF recommends that developed countries and multilateral institutions should include electric vehicle investments, incentives and charging infrastructure deployments in their international climate finance plans, making capital available to emerging economies with credible plans to develop this sector.

The fleet of passenger electric vehicles hits 469 million in 2035 in the Economic Transition Scenario but needs to jump to 612 million by the same date in the Net Zero Scenario. Much of the gap will have to be met in emerging economies.

In addition to introducing tighter fuel economy or CO_2 standards for trucks, the reports suggests that governments may need to consider mandates for the electrification of fleets, including those of governments and transport operators. Governments should also consider zero-emissions zones in cites, and incentives to push freight into smaller trucks which can electrify faster than larger ones.

Road transport segment progress toward Net Zero

Segment	Current share of road transport CO2 emissions	Current estimated global fleet size	Zero-emission vehicle (ZEV) fleet share in 2050 - Economic Transition Scenario	Level of policy intervention needed to hit Net Zero Scenario (100% ZEV share) by 2050
Two- and three-wheeled vehicles	5%	1.1 billion	Two-wheelers: 74% Three-wheelers: 94%	Almost on track: minor additional measures needed
Municipal buses	1%	3.8 million	84%	Almost on track: minor additional measures needed
Passenger vehicles	53%	1.3 billion	69%	Positive trajectory: moderate additional measures needed
Light commercial vehicles	11%	160 million	75%	Positive trajectory: moderate additional measures needed
Medium + heavy commercial vehicles	30%	80 million	29%	Not on track: strong additional measures needed urgently

Source: BNEF, various government sources. Note: Fleet size represents vehicles of all drivetrain types and are estimates based on various sources and BNEF data. Some values rounded. Current emissions and fleet size data are for 2021.

BNEF's view is that direct electrification via batteries is still the most economically attractive and efficient approach to decarbonising road transport and should be pursued wherever possible. Hydrogen fuel cell vehicles can help fill the small gaps left by electrification in some heavy vehicles, in regions or duty cycles where batteries struggle.

The BNEF report is available to read at bnef.turtl.co/story/evo-2022/page/5/3?teaser=yes.

HEI Report on Adverse Health Effects from Traffic Pollution

On 22 June 2022, the Health Effects Institute (HEI) published a scientific review looking at the links between adverse health effects and traffic related air pollution (TRAP). The review, the largest of its type to date, was conducted by a panel of thirteen renowned experts who evaluated 353 published scientific reports on traffic pollution and related health effects between 1980 and 2019.

The panel found a high level of confidence that strong connections exist between TRAP and early death due to cardiovascular diseases. A strong link was also found between TRAP and lung cancer mortality, asthma onset in children and adults, and acute lower respiratory infections in children. Of the studies reviewed, 118 examined respiratory effects in children and included populations residing in a wide range of countries, with a majority based in Europe and North America.

HEI says that the improvements in tailpipe emissions do not fully offset the growth and increased congestion of the world's motor vehicles due to population growth, urbanisation, and economic activity. The panel found that epidemiological studies that focused on exposures at the local level (less than one kilometre) and neighbourhood level (one to five kilometres) offered the greatest potential in determining TRAP impacts. The panel found that TRAP will continue to have important health effects globally, especially in urban settings and areas close to busy roadways.

The HEI review can be found at healtheffects.org/system/files/traffic-press-release-final2.pdf.

New Green NCAP Results under Toughened Rating Regime

On 30 June 2022, Green NCAP published results of six vehicles under its updated and improved rating scheme of 2022. It says its test protocols and rating scheme have been adjusted "to better suit the rapidly evolving technology and sustainability trends".

Green NCAP's new rating covers a Well-to-Wheel greenhouse gas assessment. This means that the greenhouse gas emissions related to the extraction, production and distribution of energy from the source ("well") are added to the measured tailpipe emissions ("wheel"). The construction of powerplants and refineries is also considered in the calculation, but not yet the vehicle and battery production itself. As before, the rating combines the results of real-world on-road tests and different laboratory roller-bench investigations, however, cars are now subjected to a two-stage testing process.

Green NCAP says the new rating of greenhouse gases gives a much more realistic assessment of the real environmental impact of cars, whether they are combustion-engined, electric or some combination of the two. With the new approach, it hopes to encourage the understanding that not only delivering a clean end product is important, but the whole process should be made greener and transparent.

The press release giving details of test results is at greenncap.com/press-releases/green-ncap-posts-new-results-under-toughened-rating-regime/.

RESEARCH SUMMARY

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FORTHCOMING CONFERENCES

Catalysis and Automotive Pollution Control (CAPoC12)
29-31 August 2022, Brussels, Belgium
capoc.ulb.ac.be

SAE Powertrains, Fuels and Lubricants
6-8 September 2022, Krakow, Poland
sae.org/attend/pfl

Cenex-LCV
7-8 September 2022, Millbrook, UK
cenex-lcv.co.uk/

7th Rostock Large Engine Symposium
15-16 September 2022, Rostock, Germany
rgmt.de

3rd SAENA Conference on Sustainable Mobility
25-28 September 2022, Catania, Italy
universitacusano.com/csm2022

Aachen Colloquium Sustainable Mobility
10-12 October 2022, Aachen, Germany
aachener-kolloquium.de/en
AECC will make a presentation.

8th International MinNOx Conference
26-27 October 2022, Berlin, Germany
iav.com/en/events/8-internationale-minnox-conference

Transport Research Arena 2022
14-17 November 2022, Lisbon, Portugal
traconference.eu/about-tra

FEV Zero CO_2 Mobility
15-16 November 2022, Aachen, Germany
fev-live.com/zero-co2-mobility/conference-program/

POLIS Annual Conference
30 November – 1 December 2022, Brussels, Belgium
polisnetwork.eu/2022-annual-polis-conference.

WCX SAE World Congress Experience
18-20 April 2023, Detroit, USA
sae.org/highlights/wcx
Deadline for abstracts 13 September 2022.

44th International Vienna Motor Symposium
26-28 April 2023, Vienna, Austria
wiener-motorensymposium.at/fileadmin/Media
Deadline for abstracts 30 September 2022.

SAE Heavy-Duty Diesel Sustainable Transport Symposium
3-4 May 2023, Gothenburg, Sweden

AVL Vehicle & Environment Conference
25-26 May 2023, Graz, Austria
avl.com/-/vehicle-environment?j=3464186&sfmc_sub