

NEWSLETTER

International Regulatory Developments

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EUROPE

Commission announces Decision on Court Ruling against RDE Package 2

On 20 February 2019, the Environment (ENVI) Committee of the European Parliament hosted an exchange of views with Industry Commissioner Ms Elżbieta Bieńkowska on the follow-up to the inquiries of the Committee on Emission Measurements in the Automotive Sector (EMIS).

During the exchange Ms Bieńkowska announced that the European Commission decided on a way forward regarding the European Court of Justice's ruling on the second package of Real-Driving Emissions (RDE). According to the legal analysis of the December 2018 ruling by the Commission, it is the process (comitology) and not the content (Conformity Factors) that the Court argued against. As a result, the Commission will very shortly (within a couple of weeks) issue a co-decision proposal that will include NO_x Conformity Factors of 2.1 and 1.43, she said. The review of the error margin of the NO_x CF continues and a proposal for a lower value than 0.43 can be expected in the second half of 2019. The aim is to be as close as possible to a CF of 1 by 2023.

There is only one year to adopt this new co-decision regulation and 2019 is a special year because of the elections that will slow down the adoption process. As a consequence, the EC will appeal to the Court ruling in parallel. It is the intention of the Commission to withdraw their appeal as soon as the new co-decision act is published though.



MEPs from the Socialists and Democrats (S&D) and the Greens strongly opposed any support from the Parliament to introduce CFs in a legislation that was adopted in 2007 and would make it less stringent.

In the discussion on the impact of new RDE legislation, Ms Bieńkowska highlighted that the latest generation diesel cars emit only 20 to 60 mg/km of NO_x, while older models were in the range of 700 to 800 mg/km. Collective actions that have been speeded up by the diesel scandal can be

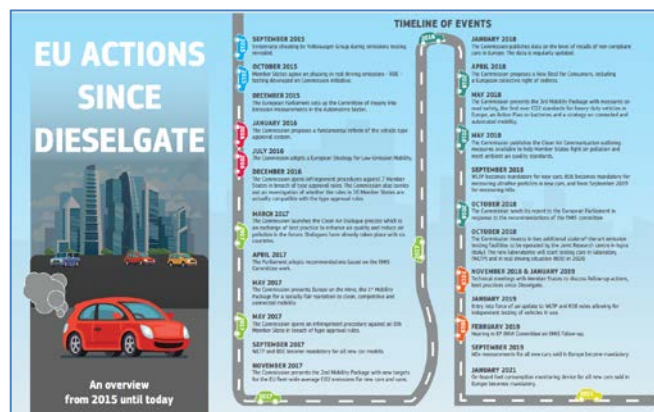
considered as a big success. Nevertheless, some elements are still not so positive, with relatively low recall rates in many Member States and little action such as hardware retrofit. She also regretted that industry has been slow in embracing electric mobility which is key to both CO₂ and air quality.

Questioned by MEP Gieseke (EPP, Germany) on the need for technology-neutrality regulations and incentives to ensure high innovation in other low emission technologies such as e-fuels, alternative fuels, and power-to-x; Ms Bieńkowska answered that the Commission always talks about zero-emission vehicles which is a general term that encompasses many different technologies such as hydrogen and not only electric vehicles.

S&D MEPs repeatedly asked questions about a Euro 7 standard proposal which would be largely supported in Parliament. The Commissioner replied that the work on Euro 7 started last year and will lead to a co-decision proposal submitted to Parliament. It remains possible that a proposal is tabled before the end of the term of this Commission (end October 2019), she added.

The debate can be watched at www.europarl.europa.eu/website/webstreaming.html?event=20190220-1430-COMMITTEE-ENVI.

The European Commission released a summary timeline of EU actions taken since "dieselgate".



The EC leaflet is at <https://ec.europa.eu/docsroom/documents/34028>.

European Commission reaffirms NO₂ Ambient Air Quality Limit

On 13 February 2019, the European Commission issued a statement rejecting media reports according to which it had authorized Germany to raise the NO₂ air quality limit value in Germany to 50 µg/m³.

The NO₂ limit of 40 µg/m³ is binding throughout the EU and has been adopted by the Member States and the European Parliament. This does not change.

How each Member State meets this threshold is its sole decision. In November 2018, Germany informed the Commission of the decision to amend the Federal Pollution Control Act to avoid disproportionate diesel bans in cities facing air quality issues (see *AECC News of 23 November 2018*).

According to the text, in areas where the average annual ambient air concentration of NO₂ does not exceed 50 µg/m³, existing measures are expected to bring air quality in line with the EU Directive but in areas where NO₂ average concentration exceeds 50 µg/m³, diesel vehicle bans could be considered.

The Commission's notification procedure allows technical regulations to be considered before their adoption to ensure that they comply with EU law. The European Commission responded to Germany in time on 13 February 2019. The Commission has referred to a number of points which need further clarification. However, the Commission's comments do not require Germany to comment further and have no bearing on the timetable for the adoption of the measure.

The EC statement (in German) is at https://ec.europa.eu/germany/news/20190213-klarstellung-stickoxid-grenzwerte_de.

Commission addresses ENVI Questions on Clean Air during Plenary Session

On 14 February 2019, during a plenary session of the European Parliament (EP), the European Commission addressed five oral questions from the EP Environment (ENVI) committee.

Opening the debate, Commissioner for the Environment Karmenu Vella indicated that the Commission is taking decisive action on the 30 air quality infringement procedures. For two cases, the European Court of Justice (ECJ) already ruled against Member States, he said.

On the adequacy and effectiveness of the Ambient Air Quality Directive (AAQD), Commissioner Vella stated that the Commission is currently carrying out a fitness check of the AAQD that will be completed in the second half of 2019. He added that the fitness check will serve as a basis to assess whether it still constitute an appropriate tool to address challenges deriving from air pollution.

On funding to reduce emissions in the transport sector, the Commissioner insisted that, for the period between 2014 and 2020, €1.8 billion were allocated under the European Structural and Investment Fund to support air quality measures. He further noted that other indirect investment was provided through the low carbon economy, environmental protection, resource efficiency and the transport network infrastructure.

With regard to emissions from the agricultural sector, Commissioner Vella noted that measures to mitigate ammonia emissions are already in place, mentioning agronomic, life stock and energy production measures.



Finally, regarding studies on emerging pollution concerns, Commissioner Vella pointed out that EU legislation is based on the scientific evidence provided by the World Health Organization (WHO) and, more specifically its air quality guidance. He further noted that this scientific evidence is regularly reviewed and up to date.

Most of MEPs who then took the floor expressed their concern on the negative effects of air pollution on the environment and on citizens' health. José Inácio Faria (EPP, Portugal), Christel Schaldemose (S&D, Denmark) and Ivan Jakovčić (ALDE, Croatia) insisted on the danger of air pollution as a cause of premature death.

Eleonora Evi (EFDD, Italy) and Paloma López Bermejo (GUE/NGL, Spain) stressed the need to promote transformation in the transport sector, while Urszula Krupa (ECR, Poland) recalled that measures should be specifically taken to tackle emission caused by aviation. Jozo Radoš (ALDE, Croatia) noted that the AAQD should be amended according to new legislation entering into force in 2019 and Jiří Pospíšil (EPP, Czech Republic) insisted that the Commission should put pressure on Member States to effectively apply the legislation in place.

A Parliament motion for a resolution on 'Clean Air for All' is expected to be voted during the plenary week of 11-14 March 2019.

The debate can be watched at www.europarl.europa.eu/plenary/en/vod.html?mode=chapter&vodLanguage=EN&vodId=1550153941168#.

Provisional Agreement on CO₂ Standards for Heavy-duty Vehicles

On 19 February 2019, a trilogue agreement was reached by the European Parliament's representatives and the Council Romanian Presidency on CO₂ emissions standards for heavy-duty vehicles.

Under the agreement, between 2025 and 2029, new trucks will have to emit on average 15% less CO₂ compared to 2019 emission levels. From 2030 onwards, they will be required to emit on average 30% less CO₂. Those targets are binding, and truck manufacturers which do not comply will have to pay a financial penalty in the form of an excess emissions premium.

In addition to setting binding targets, the co-legislators agreed to strengthen the incentive system for zero- and low-emission vehicles (ZLEVs) in the heavy-duty sector compared to what was proposed by the European Commission. Buses and coaches are excluded from the ZLEV system because these vehicles are already incentivized through other measures.

The co-legislators also agreed specific measures which will ensure the availability of robust and reliable data. Data will be obtained through on-board devices which monitor the actual fuel and energy consumption of heavy-duty vehicles.

The agreement was confirmed by Member States' ambassadors in the Council on 22 February 2019 and then by the Environment Committee of the European Parliament on 27 February 2019. There it was adopted with 33 votes in favour, 2 against and 2 abstentions.

The provisional agreement is now expected to be submitted for adoption in the European Parliament's plenary session of 15 to 18 April 2019.

The text of the HDV CO₂ Regulation is at www.europarl.europa.eu/meetdocs/2014_2019/plmrep/COMMITTEE/ES/ENVI/DV/2019/02-27/CO2_HDV-consolidated_text_EN.pdf.

The European Commission welcomed the deal and said that tackling emissions from road transport is a key building block of the EU's efforts to achieve its target to reduce greenhouse gas emissions by at least 40% by 2030 compared to 1990 levels. The CO₂ emission standards for trucks complete the EU's economy-wide legislative framework for achieving this target. They are part of the EU's contribution to fighting climate change under the Paris Agreement and the Juncker Commission's priority of a resilient Energy Union and a forward-looking climate change policy.

The European Automobile Manufacturers' Association (ACEA) said it was most particularly concerned about the highly ambitious CO₂ reduction targets set for trucks: -15% by 2025 and -30% by 2030. These targets are highly demanding, especially as their implementation does not depend solely on the commercial vehicle industry, and the baseline for the targets is still unknown. ACEA's concern stems from the total lack of such infrastructure today. Currently there is no public charging or refuelling infrastructure suitable for electric or hydrogen trucks whatsoever. Even in the case of truck-specific filling stations for natural gas (CNG and LNG), availability remains very low and patchy across Europe. The need for the 28

national governments to implement an EU-wide infrastructure action plan is all the more urgent in light of the mandatory sales quotas for zero-emission trucks that the EU institutions have agreed to introduce from 2025 onwards.

Updated Certification of CO₂ Emissions from Heavy-Duty Vehicles

On 26 February 2019, Commission Regulation (EU) 2019/318 was published in the Official Journal; it amends Commission Regulation (EU) 2017/2400 on the determination of the CO₂ emissions and fuel consumption of Heavy-Duty Vehicles (HDVs).

The measure clarifies the method for determining CO₂ emissions and fuel consumption of HDVs, the operation of the VECTO simulation tool, the certification of components and the procedure for conformity checking.

Additionally, the measure includes Liquefied Natural Gas (LNG) as an additional reference fuel in the certification of engines and a specific sub-group for what concerns vocational vehicles.

Finally, the obligation to verify CO₂ emissions and fuel consumption of new vehicles using the on-road Verification Testing Procedure (VTP) will be applicable as of 1 July 2020.

The new Regulation enters into force on 1 March 2019.

Commission regulation (EU) 2019/318 is at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0318&from=EN>.

Updated UN Regulation No 83 published in the Official Journal

On 15 February 2019, an updated version of the United Nations (UN) Regulation No 83 on the approval of light-duty vehicles with regard to pollutant emissions was published in the official Journal of the EU.

It incorporates all text up to Supplement 7 to the 07 series of amendments which entered into force on 29 December 2018.

The latest UN Regulation No 83 is at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42019X0253&from=EN>.

Briefing of Court of Auditors on EU's Response to the 'Dieselgate' Scandal

On 7 February 2019, the European Court of Auditors released a briefing paper on the EU's response to the 'dieselgate' scandal.

EU laws on vehicle emissions have been improved since the Dieselgate scandal, but challenges remain, according to the report. The auditors welcome the improvements in

market surveillance but point out that its effectiveness depends on implementation by the Member States. They also warn that manufacturers may find ways around the new testing systems which have been introduced and that scope for independent third-party testing may be limited because of the high costs involved.

Despite the recent legislative actions, it may take many years to improve city air quality, given the large number of highly-polluting cars already on the roads. While over 10 million vehicles of different brands have been recalled, the limited data available indicates that the impact on NOx emissions has been small.

The new Real-Driving Emission (RDE) test has led to a significant reduction of NOx emissions by new diesel cars, say the auditors, but the impact could have been even greater if the initially proposed temporary limit of 128 mg/km had been adopted, instead of 168 mg/km.

There is also a risk that manufacturers optimise vehicles for the RDE test and that NOx emissions outside the RDE boundaries remain high. Testing cars in circulation beyond RDE limits may address this risk.

The briefing of the EU Court of Auditors is at www.eca.europa.eu/lists/ecadocuments/brp_vehicle_emissions/brp_vehicle_emissions_en.pdf.

ECA presents Briefing on EU's Response to Dieselgate to Parliament

On 27 February 2019, Samo Jereb of the European Court of Auditors (ECA) presented the briefing paper on the EU's response to Dieselgate (*see above*) to the European Parliament's Environment (ENVI) Committee.

The European Parliament's conference of Committee Chairs had requested the ECA to provide an audit; nevertheless ECA decided to only issue a briefing for the following reasons: the EMIS report is already very comprehensive; the European Commission has taken actions but not all are implemented yet (e.g. new framework Regulation and market surveillance enhancement); and the ECA report had to be issued before the European elections.

In addition to the key conclusions of the ECA briefing, Mr Jereb noted that they found some scientific arguments related to on-road emissions measurement inaccuracy that can support the NOx Conformity Factor (CF) error margin for the 1.5 CF but not for the 2.1. He also raised the issue of tampering with emission controls, in particular with Diesel Particulate Filters (DPFs), and the lack of proper periodic technical inspection tests that could detect DPF removal on vehicles in circulation.

MEP Gerbrandy (ALDE, the Netherlands) and MEP Evi (EFDD, Italy) thanked the ECA for their strong report and raised some further questions and concerns. The European

Commission appealing to the Court of Justice's ruling on CFs was questioned. Software and hardware retrofit of fraudulent diesel cars was mentioned as still lagging in many Member States. Coordination at European level is lacking and could only come from the European Commission, MEP Gerbrandy added.

Mehdi Hocine (DG-GROW) said this is the responsibility of the EU Member States. He commented that a €1 million retrofit project will be run. He also stressed that preparatory work on Euro 7 (or post-Euro 6) has already started.

The exchange of views can be watched at www.europarl.europa.eu/streaming/?event=20190227-1000-COMMITTEE-ENVI (starts from 10:13).

Interinstitutional Agreement on the Revision of the Clean Vehicle Directive

On 11 February 2019, the Romanian presidency of the Council reached a provisional agreement with the European Parliament on a reform of the Clean Vehicle Directive for green public procurement.

The European Commission presented the proposal in November 2017 as part of its second mobility package. The EU is stimulating the market for zero- and low-emission vehicles by encouraging their use in public procurement.

The reform sets out minimum procurement targets for clean light-duty vehicles, trucks and buses for 2025 and 2030. The targets are expressed as minimum percentages of clean vehicles in the total number of road transport vehicles covered by the aggregate of all procurement contracts and public service contracts.

"National public procurement targets for clean buses will range from 24% to 45% in 2025, and from 33% to 66% in 2030 – depending on a country's population and GDP," according to Transport & Environment who reported about the deal.

The text includes a new definition of a 'clean vehicle'. The definition of a clean light-duty vehicle is based on CO₂ emission standards. The definition of clean heavy-duty vehicles is based on the use of alternative fuels.

The scope of the rules is extended in terms of the procurement practices covered. The new rules will also apply to a wider range of services, including public road transport services, special-purpose passenger services, refuse collection, and postal and parcel delivery services.

The agreement was confirmed by Member States' Permanent Representatives in the Council (COREPER) on 20 February 2019. The Environment committee of the European parliament voted the text on 27 February 2019 with 29 votes in favour, seven against and one abstention

The provisional agreement is now expected to be submitted for adoption in the European Parliament's plenary session of 15 to 18 April 2019.

The text of the agreement is at [www.europarl.europa.eu/RegData/commissions/envi/lcag/2019/02-20/ENVI_LA\(2019\)001650_EN.pdf](http://www.europarl.europa.eu/RegData/commissions/envi/lcag/2019/02-20/ENVI_LA(2019)001650_EN.pdf).

Council Conclusions on Climate Diplomacy

On 18 February 2019, the Council of the EU adopted conclusions on climate diplomacy.

The Council recalled that climate change is a direct and existential threat, which will spare no country. The Council noted that the world is already witnessing multiple devastating impacts of climate change, yet action to stem it remains insufficient.

The EU reaffirms its steadfast commitment to the Paris Agreement as the essential multilateral framework governing global action to deal with climate change and welcomes the positive outcome of the COP 24.

The Council reiterated that ambition in climate action is not only about reducing greenhouse gas emissions, it is also about addressing the implications of climate change on peace and security.

The Council recalled that 2019 is a critical year for accelerating domestic climate action and raising global ambition in the context of the pursuit of sustainable development, with leadership from the United Nations.

The EU's leadership on climate action is founded on a progressive stance at home. The Council welcomed the European Commission's strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy.

The Council reconfirmed that the EU will continue to lead the way in the global pursuit of climate action and will work towards further enhancing international climate cooperation.

The Council conclusions are at www.consilium.europa.eu/media/38215/st06153-en19.pdf.

Court of Justice Opinion on Air Quality Monitoring Stations' Location

On 28 February 2018 an Advocate General at the EU Court of Justice issued an opinion in a case brought against Brussels' regional authorities for failure to curb air pollution.

According to Advocate General Kokott, under the European Air Quality Directive, fixed sampling points are to be sited in particular in areas where the highest concentrations of SO₂, NO₂ and NO_x, particulate matter (PM₁₀, PM_{2.5}), lead, benzene and CO occur, to which the population is likely to be exposed for a significant period. Moreover, the

dimensions of those areas are defined in greater detail in the directive.

As a result, national courts must examine whether fixed sampling points were sited in accordance with the criteria set out in the Directive and, if they were not, must take all necessary measures within the scope of their judicial powers against the national authority with a view to ensuring that sampling points are sited in accordance with those criteria.

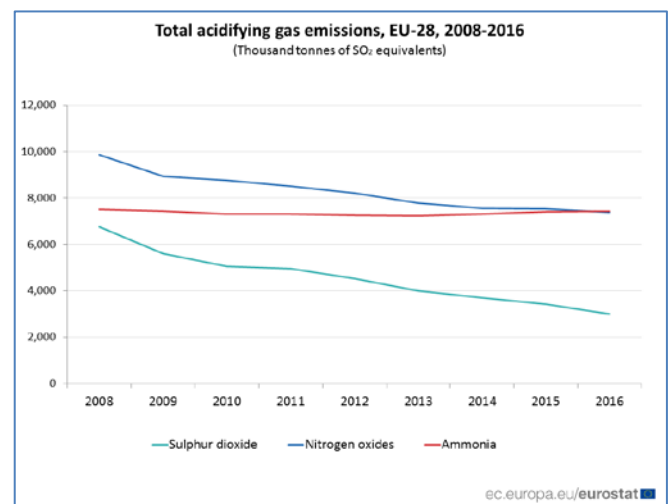
The Advocate General added that compliance with the limit values for SO₂, NO₂, PM₁₀, lead, benzene and CO should be assessed by reference to the measurement results from the fixed sampling points, without obtaining an average from all the sampling points.

The advocate general opinion is at <https://curia.europa.eu/jcms/upload/docs/application/pdf/2019-02/cp190021en.pdf>.

Eurostat's Air Emissions Accounts

On 26 February 2019, Eurostat published data on air pollution decrease in 2016.

According to Eurostat, between 2008 and 2016, the total emissions of acidifying gases emitted by EU businesses and households decreased by 6.3 million tonnes of SO₂ equivalents, which represents a reduction of 26%. Over this period, emissions of sulfur dioxide fell by 55%, nitrogen oxides by 25%, but ammonia by only 1%.



Agriculture, forestry and fishing contributed 43% of the total acidifying gas emissions in 2016 (mostly ammonia), while transportation and storage accounted for 20% (mostly NO_x) and manufacturing 11%.

More info is at <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20190226-1>.

European Anti-Fraud Office Report into Alleged Misuse of EIB Loan by VW

On 18 February 2019, the European Investment Bank (EIB) published a detailed summary of the investigation report by the European Anti-Fraud Office (OLAF) into alleged misuse of EIB loan by Volkswagen AG.

The investigation concerns practices which have been the centre of controversy and legal action ever since 2015, when environmental authorities in the US issued a notice of violation against VW for producing and selling diesel cars that featured sophisticated software to circumvent emissions standards for air pollutants.

OLAF opened its investigation in November 2015. The investigation focused on one sub-project under the loan 'VW Antrieb RDI', which was granted to VW by the EIB in February 2009. The aim of EIB loan "Antrieb RDI" was to provide financing for the development of engines and powertrain components for passenger cars and commercial vehicles.

The report states: "The investigation established that VW never informed the EIB throughout the duration of the loan from 24 February 2009 to 24 February 2014 about the continuous use and implementation of this 'defeat device' on the EA 189 engine in the context of the R&D activities financed by the EIB loan." OLAF's report further indicates that this information should have been communicated to the EIB and, had the EIB been informed of this relevant information, the EIB would not have granted the loan or would have requested full repayment.

Following the OLAF investigation, EIB and VW finalised an agreement in December 2018. As part of the agreement VW voluntarily committed to contribute €10 million to environmental and/or sustainability projects in Europe. In addition, according to this agreement, the EIB concluded its investigation and VW in turn agreed voluntarily not to participate in any EIB project for an exclusion period of 18 months.

The EIB summary is at www.eib.org/attachments/press/summary-olaf-report-antrieb-rdi-volkswagen-ag.pdf.

EEA Report on Social Vulnerability to Air Pollution and Environmental Hazard

On 4 February 2019, the European Environment Agency (EEA) published a report on unequal exposure and unequal impacts: social vulnerability to air pollution, noise and extreme temperatures in Europe.

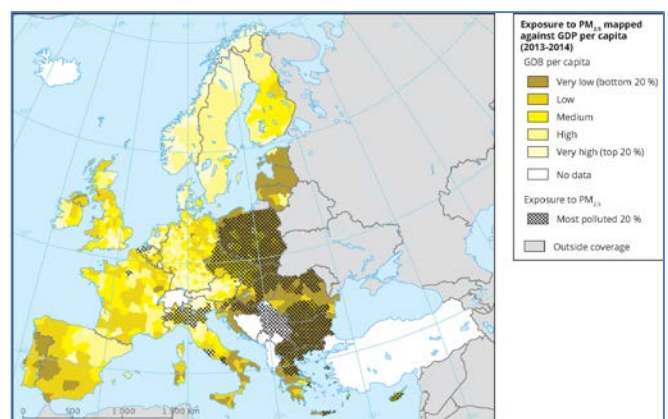
The EEA report draws attention to the close links between social and environmental problems across Europe. The distribution of these environmental threats and the impacts they have on human health closely mirror differences in

income, unemployment and education levels across Europe.

While EU policy and legislation over past decades have led to significant improvements in living conditions, both economically and in terms of environmental quality, regional inequalities persist. The report stresses that better alignment of social and environment policies and improved local action are needed to successfully tackle environmental justice issues.

The uneven distribution of the impacts of air pollution, noise and extreme temperatures on the health of Europeans closely reflects the socio-demographic differences within our society. The elderly, children and those in poor health tend to be more adversely affected by such environmental health hazards than the general population (i.e. they are more vulnerable). Groups of lower socio-economic status (the unemployed, those on low incomes or with lower levels of education) also tend to be more negatively affected by environmental health hazards, as a result of their both greater exposure and higher vulnerability. In many European countries, the disproportionate exposure of lower socio-economic groups to air pollution, noise and high temperatures occurs in urban areas.

There are pronounced regional differences in social vulnerability and exposure to environmental health hazards across Europe. Regions with lower average socio-economic status and higher proportions of elderly people in southern and south-eastern Europe experience greater exposure to ground-level ozone and high air temperatures. Regions that are both relatively poorer and more polluted in terms of particulate matter (PM) are located mainly in eastern and south-eastern Europe. The link between socio-economic status and exposure to PM is also present at a finer-scale, local level.



Wealthier sub-national regions tend to have higher average levels of nitrogen dioxide (NO₂), mostly because of the concentration of traffic and industrial activities in these locations. However, it is still the poorer communities that

tend to be exposed to higher local levels of NO₂, as shown by studies at finer spatial scales.

Inequalities in exposure to environmental health hazards and their impacts on European society are only somewhat addressed by current policy and practice.

The social inequalities in the impacts of and exposure to environmental health hazards are likely to continue in the future and thus require increased recognition in policy across governance levels. The projected climate change, air quality and noise trends combined with an ageing society and persisting socio-economic inequalities suggest that the geographical and societal differences in vulnerability and exposure are likely to continue in the future. Enhancing the coherence between EU policies on human health, climate change and the air pollution agenda in the EU policy framework may help to address the inequalities in environmental impacts. At a local level, multiple policy areas, from welfare policies to urban design, can help to reduce vulnerability as well as the population's exposure to environmental health hazards.

The EEA report is at www.eea.europa.eu/publications/unequal-exposure-and-unequal-impacts/.

JRC Report on revising EU Green Public Procurement Criteria for Transport

On 4 February 2019, the Joint Research Centre (JRC) of the European Commission released a report on the revision of the EU Green Public Procurement (GPP) criteria for transport.

Public authorities' expenditures in the purchase of goods, services and works (excluding utilities and defence) constitute approximately 14% of the overall Gross Domestic Product (GDP) in Europe, accounting for roughly €1.8 trillion annually. Thus, public procurement has the potential to provide significant leverage in seeking to influence the market and to achieve environmental improvements in the public sector. This effect can be particularly significant for goods, services and works (referred to collectively as products) that account for a high share of public purchasing combined with the substantial improvement potential for environmental performance. The European Commission has identified road transport as one such product group.

Road transport covers a wide scope of vehicles (cars, LCVs, L-category vehicles, buses and waste collection vehicles) and services (mobility services, public bus services, waste collection services and post and courier services). The main environmental issues at the use phase addressed by the criteria are GHG tailpipe emissions (but not well-to-wheel), air pollutant emissions and noise emissions. The impacts from the manufacture of batteries used in electric vehicle are also considered, leading to criteria on minimum and extended warranty of batteries.

This revision has coincided with the evaluation of the Clean Vehicle Directive and the introduction of new test procedures to measure CO₂ and air pollutant emissions of vehicles (WLTP, Real Driving Emissions in Euro 6). All these policies have been taken into account in the revision process of the EU GPP criteria for transport, to ensure a full harmonisation of the EU policies.

The JRC report is at http://publications.jrc.ec.europa.eu/repository/bitstream/JRC115414/eu_gpp_transport_technical_report_final.pdf.

Commission proposes to classify Palm Oil Diesel as Unsustainable

On 8 February 2019, the European Commission adopted a draft delegated regulation which acknowledges that palm oil cultivation causes significant deforestation, and thus biodiesel produced from palm oil cannot be counted towards meeting EU green fuel targets.

However, the draft regulation includes several exemptions, such as an exemption for additional palm oil produced in independent small plantations (less than five hectares) or produced on 'unused' land.

The draft regulation also allows soybeans to be used for biofuel.

A number of studies modelling emissions from indirect changes in the use of land (ILUC) show that palm oil has higher ILUC emissions than any other feedstocks for biodiesel, followed by soy oil. The Globiom study for the European Commission found that biodiesel from palm oil is three times worse for the climate than petroleum diesel, while soy oil diesel is two times worse.

The draft regulation is open for public comments until 8 March 2019 and is at https://ec.europa.eu/info/law/better-regulation/initiatives/ares-2019-762855_en.

National Energy and Climate Plans

On 25 February 2019, the European Commission published the 28 draft National Energy and Climate Plans (NECPs) submitted by EU Member States.

Draft NECPs are covering for the period 2021 to 2030 (and every subsequent ten-year period) the five dimensions of the Energy Union (security, solidarity and trust; a fully-integrated internal energy market; energy efficiency; climate action – decarbonizing the economy; and research, innovation and competitiveness).

The Commission is assessing the plans, after which each Member State has until the end of 2019 to submit its final NECP.

These plans are required by the governance of the energy union and climate action rules which entered into force on 24 December 2018.

The national plans can be found at <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/governance-energy-union/national-energy-climate-plans>.

NGOs send Open Letter to German Chancellor on EU Air Quality Legislation

On 5 February 2019, a coalition of Non-Governmental organizations (NGOs) sent an open letter to Chancellor Angela Merkel on the EU Air Quality legislation.

The open letter by health, environmental, transport and legal civil society organisations, including asthma, chronic obstructive pulmonary disease (COPD) and cancer patients expresses deep concerns about attempts by a member of the German government, Transport Minister Andreas Scheuer, to undermine EU air quality legislation – namely, the science-based limits on nitrogen dioxide (NO₂).



The letter says that the body of evidence on the health impacts of air pollution is large and robust. The latest review of the science by the World Health Organization (WHO), the leading authority on this issue, showed that health effects of air pollution exposure can occur at even lower levels than previously thought. The questioning of the evidence by a small minority goes against the scientific consensus about the detrimental and far-reaching health impacts of air pollution.

Regarding NO₂ specifically, there is now considerable research demonstrating short- and long-term health impacts, occurring at lower pollution concentrations than the current EU limit value. For this reason, the WHO is expected to tighten its NO₂ limit recommendations in the near future.

NGOs said that the letter of the transport minister to Commissioner Bulc and the silence of the health minister suggest that the German government's priority is not the protection of people's health while the Court of Justice of the EU is investigating Germany for its continued non-compliance with air quality laws.

There are many possible measures in the transport and mobility sector that will boost health, reduce air pollution and help mitigate climate change. The solution to Germany's air quality crisis is not to try and soften the laws that protect people's health; it is to finally take action for cleaner air, the NGOs say.

NGOs therefore urge the German government to refrain from any attempts to weaken air quality standards. Instead, they call for a show of leadership on improving air quality in Germany, to protect people's health and foster sustainable cities with a high quality of life.

The NGOs' open letter is at <https://epha.org/wp-content/uploads/2019/02/open-letter-re-evidence-and-air-quality-standards.pdf>.

Mayor of London issues High Pollution Alert

On 26 February 2019, the Mayor of London, Sadiq Khan, issued a high pollution alert.

There has been a marked increase in particulate levels during Sunday evening (24 February) which have persisted into Monday (25 February). This is due to a combination of poorly dispersed local emissions and sustained import of particulates from Germany and France.

A spokesperson for the Mayor of London said: "The high levels of pollution expected over the next few days is evidence of the scale of London's air quality crisis and is exactly why the Mayor is taking hard-hitting measures to clean it up. April's launch of the world's first Ultra Low Emission Zone (ULEZ) in central London is expected to reduce harmful emissions in the zone by around 45%. The Mayor is also cleaning up the capital's bus and taxi fleets, rolling out rapid charging infrastructure and delivering improvements to schools in some of London's most polluted areas".

"The Mayor has launched scrappage schemes for micro-businesses and charities that use polluting vans and minibuses and will launch a similar scheme to help lower-income households scrap polluting cars later this year. He is calling on the Government to help fund a national scrappage scheme targeted at cities across the UK."

More info is at www.london.gov.uk/press-releases/mayoral/mayor-of-london-issues-high-pollution-alert-3.

Germany fines BMW €8.5 Million over Diesel Emissions

On 25 February 2019, AFP news agency reported that German prosecutors said they had fined BMW €8.5 million over diesel cars with higher NO_x emissions than allowed, while adding the infraction was down to error rather than deliberate fraud.

Authorities had been probing BMW since early 2018 over suspicions it could have built a so-called "defeat device" into some diesel cars. The number of vehicles showing irregularities in BMW's case is just under 8000. Prosecutors said that they believed "mistaken labelling of the part of the motor control software responsible for

exhaust treatment" was behind increased on-road emissions.

"Extensive investigations" had found neither evidence of a purposely designed defeat device, nor of intent to commit fraud by BMW employees, they added. Rather, "the company had not set up an appropriate quality control system" that could have prevented the error or revealed it after the fact, the prosecutors found.

Denmark tightens Environmental Requirements for Taxis

On 20 February 2019, Denmark notified the European Commission of an amendment to its Order on energy and environmental requirements for taxis.

The amendment brings a phased tightening of the energy requirements for vehicles used for commercial passenger transport or the commercial carriage of passengers, so that these vehicles gradually conform to lower energy classes upon registration.

In addition, from 1 July 2019 onwards, all cars registered for the first time in the Vehicle Register of taxis will have to be certified at least to the Euro 6b emission standard.

More info is at http://ec.europa.eu/growth/tools-databases/tris/nview.cfm?p=2019_72_EN_EN.

NORTH-AMERICA

US EPA "2018 Year in Review" Report

On 28 January 2019, the US Environmental Protection Agency (EPA) released its "2018 Year in Review" report outlining major accomplishments and environmental progress during the Trump Administration.

Regarding the air sector, the report highlights data released over the past year showing progress on the improvement of air quality and a decrease in greenhouse gas (GHG) emissions. EPA's most recent Trends report highlights that, between 1970 and 2017, the combined emissions of six key pollutants dropped by 73%, while the U.S. economy grew more than three times. GHG data collected under EPA's GHG reporting programme showed overall decreases across sectors and that total U.S. GHG emissions reported decreased by 2.7% during 2017.

The report also highlights the release of the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule in August 2018 and the launch of the Cleaner Trucks Initiative in November 2018, as well as accomplishments related to the National Ambient Air Quality Standards and the Renewable Fuel Standard.

The US EPA year in review report is at www.epa.gov/sites/production/files/2019-01/documents/epa_2018_yearinreview_0128-4.pdf.

US Administration ends Talks with California over Light-Duty GHG Rule

On 21 February 2019, the Trump administration announced that it would cease discussions with California officials over future light-duty vehicle greenhouse gas (GHG) emission and fuel economy standards.

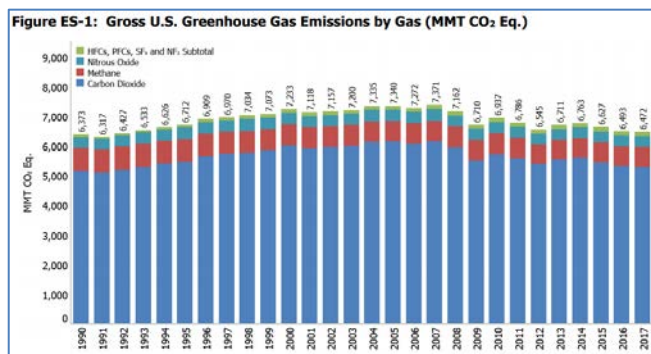
In a joint statement with the U.S. Department of Transportation and the U.S. Environmental Protection Agency (EPA), the White House wrote that they "decided to discontinue discussions with the California Air Resources Board (CARB) regarding the proposed Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. Despite the Administration's best efforts to reach a common-sense solution, it is time to acknowledge that CARB has failed to put forward a productive alternative since the SAFE Vehicles Rule was proposed. Accordingly, the Administration is moving forward to finalize a rule later this year with the goal of promoting safer, cleaner, and more affordable vehicles."

The White House's announcement sets the stage for what could be a lengthy legal fight over California's ability to regulate GHG emissions. California could be joined in any court fight by 12 other states that have adopted its low-emission vehicle standards.

The joint statement is at www.whitehouse.gov/briefings-statements/joint-statement-white-house-department-transportation-environmental-protection-agency-safe-vehicles-rule/.

2017 US EPA Greenhouse Gas Inventory

On 12 February 2019, the U.S. Environmental Protection Agency (EPA) published its "Draft Inventory of U.S. Greenhouse Gas (GHG) Emissions and Sinks: 1990-2017".



According to the EPA, total gross US GHG emissions were 6472.3 million tonnes CO₂ equivalent in 2017, a decrease of 0.3% from 2016. The decrease in total GHG emissions between 2016 and 2017 was driven in part by a decrease in CO₂ emissions from fossil fuel combustion. The decrease in CO₂ emissions from fossil fuel combustion was a result of multiple factors, including a continued shift from coal to natural gas, increased use of renewables in

the electric power sector, and milder weather that contributed to less overall electricity use.

Relative to the 1990 baseline, gross emissions in 2017 were higher by 1.6%, down from a high of 15.7% above 1990 levels in 2007. Overall, net emissions in 2017 were 12.7% below 2005 levels.

Regarding the transportation sector, when electricity-related emissions are distributed to economic end-use sectors, transportation activities accounted for 36.5% of US CO₂ emissions from fossil fuel combustion in 2017. The largest sources of transportation CO₂ emissions in 2017 were passenger cars (41.4%); medium- and heavy-duty trucks (23.1%); light-duty trucks, which include sport-utility vehicles, pickup trucks, and minivans (17.1%); commercial aircraft (6.7%); other aircraft (3.1%); rail (2.3%); pipelines (2.3%); and ships and boats (2.2%).

From 1990 to 2017, transportation emissions from fossil fuel combustion rose by 19% due, in large part, to increased demand for travel. The number of vehicle miles travelled by light-duty motor vehicles (passenger cars and light-duty trucks) increased by 46% between 1990 and 2017.

From 2016 to 2017, CO₂ emissions from the transportation end-use sector increased by 0.84%. The small increase in emissions is attributed to both a decrease in on-road fuel use and an increase in non-road fuel use, particularly jet fuel consumption. Almost all of the energy consumed for transportation was supplied by petroleum-based products, with more than half being related to gasoline consumption in automobiles and other highway vehicles. Other fuel uses, especially diesel fuel for freight trucks and jet fuel for aircraft, accounted for the remainder.

The EPA report is at www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2017.

EPA proposes Consent Decree to complete Study for Renewable Fuel Volumes

On 22 February 2019, the US Environmental Protection Agency (EPA) announced that it will study the effects of ethanol emissions from vehicles on air quality as it seeks to settle a legal dispute with environmentalists who are sceptical of the environmental benefits of corn-based fuels.

The agency is planning a report on air pollution potentially tied to ethanol by 30 March 2020. The information could ultimately affect the annual volumes of the alternative fuel that EPA mandates are included in the nation's fuel supply under the federal renewable fuel standard.

The study, announced as a proposed consent decree, would partially settle a lawsuit the Sierra Club filed against EPA in 2017. The Sierra Club said EPA failed to do environmental reviews of the Renewable Fuel Standards

(RFS) as required by the Clean Air Act. That includes an "anti-backsliding study" to examine the effects on vehicle emissions and air quality.

The Sierra Club's fight against ethanol mandates is part of a broader concern among environmental groups over whether the measure has brought the benefits initially promised when the RFS was established in 2005. Among other complaints, they say ethanol poses its own emissions challenges and that previously beneficial grassland has been converted to corn, which requires heavier use of farm chemicals.

The consent decree is at www.govinfo.gov/content/pkg/FR-2019-02-22/pdf/2019-03108.pdf.

CENTRAL & SOUTH-AMERICA

ICCT Paper on São Paulo Bus Options for Climate and Air Quality Targets

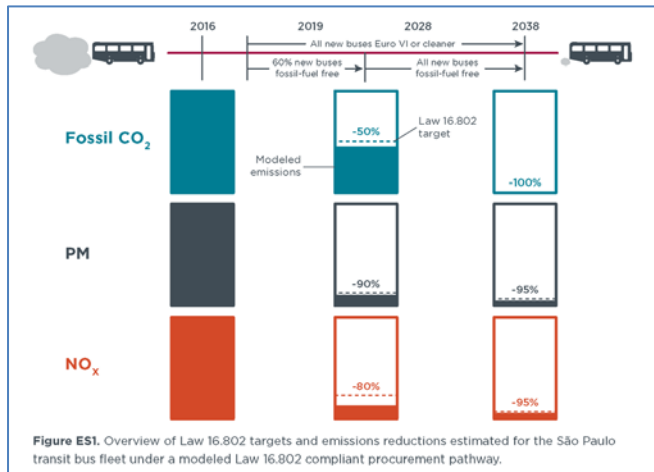
On 1 February 2019, the International Council on Clean Transportation (ICCT) published a white paper on climate and air pollutant emissions benefits of bus technology options in São Paulo, Brazil.

In January 2018, the city of São Paulo, Brazil, adopted an amendment to its Climate Change Law (Law 16.802) that sets 10-year and 20-year targets for fleetwide reductions in tailpipe emissions, with the aim to eliminate emissions of fossil fuel-derived CO₂ and reduce emissions of PM and NO_x by 95% from 2016 levels by January 2038.

The ICCT estimated that all new buses purchased from 2019 onwards will need to meet Euro VI or better emissions performance in order to achieve sufficient PM and NO_x emissions reductions to comply with intermediate, 10-year targets. A substantial fraction of these buses will also have to be fossil fuel-free in order to meet the 10-year fossil CO₂ emissions reduction requirement. This fraction is estimated to be 60% of all bus purchases if the transition starts in 2019 and increases to 70% and 80% if the transition is delayed until 2020 or 2021, respectively. If the transition to zero fossil fuel buses is delayed to 2023, it is unlikely that intermediate targets can be met without early retirement and replacement of buses that have not reached the end of their 10-year service life. The ICCT's procurement model indicates all new buses entering the fleet should be fossil fuel-free by the beginning of 2028 in order to meet the 20-year fossil CO₂ emissions target.

The ICCT found that a fleetwide transition to zero emission electric drive bus technologies would provide the greatest climate benefits of the zero fossil fuel technologies considered in this analysis. Transitions to biomethane- and ethanol-fuelled bus technologies also are estimated to reduce the climate impact of the São Paulo fleet, although not to the same extent as electric buses. Transitions to

Euro VI buses fuelled with soy-based biofuels, although providing some near-term climate benefits through the control of black carbon emissions, may not meaningfully reduce CO₂ emissions relative to current procurement practices.



With the exception of ethanol bus, the total lifetime costs of owning and operating alternative technology bus options were found to be within 10% of the lifetime costs of the baseline P-7 diesel bus. Euro VI diesel, diesel-hybrid, and battery electric buses are estimated to offer cost savings relative to P-7 diesel buses when all costs incurred over the service life are considered. Especially in the case of battery electric buses, traditional procurement practices that favour bus technology options with the lowest purchase price may bias against technologies that have a higher purchase price but lead to substantially reduced operating costs over the lifetime of the bus. Changes to existing procurement practices and implementation of innovative financing models that take into account lifetime operational savings of alternative bus technologies may be needed to accelerate the uptake of these technology options.

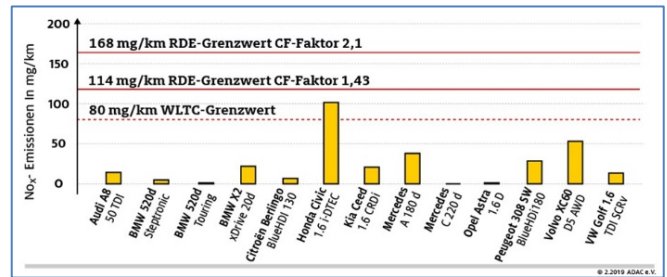
The ICCT paper is at www.theicct.org/sites/default/files/publications/Emissions_benefits_bus_sao%20paulo_201902014.pdf.

GENERAL

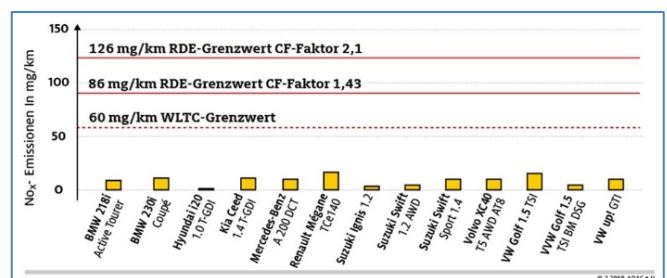
ADAC Ecotest confirms Low Emissions of RDE-compliant Diesel and Petrol Cars

On 18 February 2019, the German automobile club ADAC published their Ecotest on-road emission results for 26 diesel and gasoline cars.

The on-road tests of these Real-Driving Emissions (RDE)-compliant cars show that all, except one diesel (Honda Civic), have NO_x emissions far below the regulatory limit of 80 or 60 mg/km for diesels and gasoline respectively.



The diesel 'outlier' nevertheless meets the 2020 Euro 6d Not-to-Exceed NO_x limit with a conformity factor of 1.43.



More info (in German) is at www.adac.de/rund-ums-fahrzeug/abgas-diesel-fahrverbote/dieselkauf-abgasnorm/rde-messungen-cf-faktor.

On 21 February 2019, ADAC published additional emissions data from Euro 6d-temp diesel cars, showing the low real-world NO_x values are also measured at low ambient temperatures.

Diesel-Modelle	Außen-temperatur	RDE: NO _x in mg/km
BMW 520d touring	5,4 °C	1
Citroën Berlingo BlueHDi	5,8 °C	7
Mercedes A 180 d	1,2 °C	40
Opel Astra 1.6 D	3,3 °C	1
Volkswagen Golf 1.5 TSI	7,9 °C	56
VW Golf 1.6 TDI SCR	-0,4 °C	14
Renault Mégane TCe 140 (Benziner)	3,8 °C	15

According to ADAC, the average on-road NO_x value of the Euro 6d-temp models tested was less than 20 mg/km at low ambient temperatures, well below the not-to-exceed RDE limit (168 mg/km) and the Euro 6 regulatory limit (80 mg/km). "No comparison with older diesel vehicles, which have still emitted more than 1000 mg/km of NO_x below 10°C ambient temperature", ADAC concluded.

More info (in German) is at www.adac.de/rund-ums-fahrzeug/abgas-diesel-fahrverbote/dieselkauf-abgasnorm/test-euro-6d-temp.

ACEA Euro 6 RDE Database Update

On 22 February 2019, the European Automobile Manufacturers' Association (ACEA) announced an update

of its page containing Euro 6 Real-Driving Emissions (RDE) data from a number of the OEMs.

This page provides users with access to that RDE data according to the defined data input parameters required in the RDE regulation (EU) 2017/1154 from April 2016 until December 2018, as well as according to the newly defined data input parameters amended by Commission Regulation (EU) 2018/1832 starting January 2019.

The following ACEA members (and/or affiliated brands) have decided to provide that RDE data on this website: Bentley; BMW Group; Fiat Chrysler Automobiles; Ford of Europe; Honda Motor Europe; Hyundai Motor Group; Iveco; Jaguar Land Rover; Opel Group; Porsche; PSA Group; Toyota Motor Europe; Volvo Cars.

Volkswagen Group, Renault Group and Daimler are providing the data on their own platforms.

The Euro 6 RDE data are at www.acea.be/publications/article/access-to-euro-6-rde-monitoring-data.

Green NCAP Rating launched

On 28 February 2019, Green NCAP, the new consumer programme to promote greener cars, launched its first round of results at an event in Brussels.

Green NCAP is a new consortium, comprising European governments, motoring clubs, consumer groups and universities, hosted and supported by the European New Car Assessment Programme (Euro NCAP). It aims to promote cars that are less polluting and more fuel- and energy-efficient by providing consumers with independent information about cars' performance in tests that go well beyond legislative requirements to uncover the differences between manufacturers' emissions-control strategies.

With members and independent test laboratories in 8 European countries, Green NCAP aims at motivating car manufacturers to develop cars that make the most efficient use of the energy they use and to minimise the pollutant and greenhouse gases they emit.

It will also provide clarity to consumers in a field awash with confusing information and city-imposed driving restrictions.

An introductory video to Green NCAP can be watched at www.youtube.com/watch?v=pSt4GdYdEF0.

For now, Green NCAP considers only the energy used while driving ('tank to wheel'), but in time, well-to-wheel and ultimately the whole life-cycle will be considered, including the energy used to produce the vehicle, the energy it consumes in its lifetime and the energy needed to scrap and recycle its parts.

For this, Green NCAP's first round of tests, twelve cars have been rated against a new test regime which explores

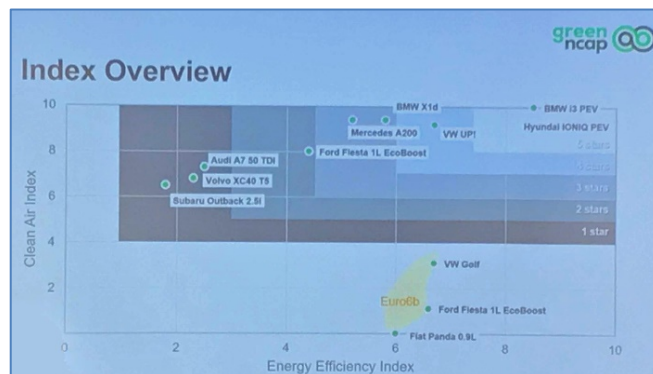
the gap between manufacturers' claims and real-world performance, both for pollutant emissions (Clean Air Index) and fuel and energy consumption (Energy Efficiency Index). The combination of both indexes leads to a rating varying from 0 to 5 stars.

Green NCAP Program Introductory Test Procedures			
Laboratory	Robustness (Laboratory & Real-World)	PEMS (Real-World)	Maximum Engine Load Curve Mapping
Fuel / Energy efficiency, pollutant and GHG emissions*	Fuel / Energy efficiency and pollutant emissions*	Fuel / Energy efficiency, pollutant and GHG emissions*	Maximum engine load versus engine speed test
Approval test cycles under average ambient conditions (23 ± 1°C)	Custom-tailored tests with variations of vehicle settings, low and high engine load	Custom-tailored approval driving tests under real-world ambient conditions	Custom-tailored sweep test to visualise maximum engine load operation and emissions sampling
<ul style="list-style-type: none"> WLTC cold engine (2x) 	<ul style="list-style-type: none"> WLTC warm engine (regular) WLTC warm (eco-mode) WLTC warm (sport mode) BAB130 Motorway PEMS+ warm Eco PEMS+ warm Heavy load 	<ul style="list-style-type: none"> PEMS+ cold engine (regular) 	<ul style="list-style-type: none"> Sweep test to log maximum engine load versus engine speed (fully depressed accelerator pedal)
*NB Fuel Efficiency, CO ₂ Emissions, Fuel / Energy Consumption, (in future real-world Driving Range to be added)			

FIG. 2: THE TEST PILLARS OF THE GREEN NCAP ASSESSMENT AS OUTCOME OF THE PILOT PROGRAM

The Hyundai Ioniq and BMW i3, both electric vehicles, achieve a maximum five-star rating; the VW up! GTI gets four stars; BMW's X1 2.0d and the Mercedes-Benz A200 are both awarded three stars; the Ford Fiesta 1.0 EcoBoost is rated as two stars in its latest guise, and a one-star rating is given to the Audi A7 50 TDI, the Volvo XC40 T5 and the Subaru Outback 2.5. Three cars – the VW Golf 1.6TDI, the FIAT Panda 1.0 and the previous level Ford Fiesta 1.0 EcoBoost – get zero-star ratings. All three of the zero-star cars are approved to Euro 6b emissions standards, still valid for models introduced before September 2017. However, from September 2019, all cars will have to meet the tougher standards of Euro 6d-temp and updated versions of these cars will be rated in the next round of tests.

For now, electric cars offer consumers the greenest option. They are the cleanest and most efficient choice currently available. However, Green NCAP will soon include driving range in its assessment, and ultimately, will look at the whole life-cycle of the vehicle, which may close the gap between electric cars and those powered by internal combustion engines.



Green NCAP won the EU Green Vehicle Index award and will use the funding to test 50 more vehicles.

Hybrid vehicles are more complex to test as their performance strongly depends on how they are operated; they will be added to the scheme later in the year.

The Green NCAP roadmap 2030 was also released. It provides guidance on the evolution of the independent consumer test program Green NCAP, starting from the results of the Green NCAP “pilot project”. It gives explanations and justifications for future tests and assessments and suggests suitable introduction timing in the context of regulatory and technology developments.

The Green NCAP website is at www.greenncap.com.

New International AIR Index launched

On 28 February 2019, the AIR Index, an independent vehicle emissions rating for cars, was launched.

The AIR Index rates cars from A (the best) to E (the worst) based on their on-road urban NO_x emissions using the same test on every vehicle, to show the relative impact a specific vehicle has on air quality.

The test follows the new CEN Workshop Agreement CWA 17379 methodology.

Make	Model	Year	AIR Index Rating	Fuel Type	Official NO _x limit	Euro Standard
Land Rover	Discovery 3.0 TD6	2018	A	Diesel	80 mg/km	Euro 6
Nissan	Qashqai 1.2 DiG-T	2017	B	Petrol	60 mg/km	Euro 6
MINI	Cooper S 3dr 2.0 d	2015	C	Diesel	80 mg/km	Euro 6
Dacia	Duster 1.5 DCI	2018	D	Diesel	80 mg/km	Euro 6
Ford	Focus 1.5 TDCI	2017	D	Diesel	80 mg/km	Euro 6
Renault	Clio 1.5 DCI	2017	E	Diesel	80 mg/km	Euro 6

AIR has now commissioned a programme of vehicle testing and more results will be added to the AIR Index periodically.

Nick Molden, co-founder of AIR, said “In our testing, we have found that a number of the newest Euro 6 cars still emit significantly more NO_x on the road than in the laboratory test used for their type-approval. Our tests also reveal that some diesel cars are cleaner than petrol ones and some older cars are cleaner than newer ones. Change is already underway for new diesel cars and we believe the AIR Index can accelerate that change with car makers and policy makers aligned to changing our cities’ air quality – for the better.”

The AIR Index website is at www.airindex.com.

ICCT Study quantifies the Global Health Impacts of Vehicle Exhaust

On 26 February 2019, the International Council on Clean transportation (ICCT) published a new study providing a detailed picture of the global, regional, and local health impacts attributable to emissions from four transportation subsectors: on-road diesel vehicles, other on-road vehicles, shipping, and non-road mobile engines such as agricultural and construction equipment.

The study, by the ICCT, George Washington University Milken Institute School of Public Health, and the University of Colorado Boulder, links state-of-the-art vehicle emissions, air pollution, and epidemiological models to estimate health impacts at the global, regional, national, and local levels in 2010 and 2015.

The study estimates that vehicle tailpipe emissions were linked to ~361 000 premature deaths from ambient PM_{2.5} and ozone worldwide in 2010 and ~385 000 in 2015. An estimated 70% of these impacts occurred in the four largest vehicle markets in 2015: China, India, the EU, and the US. Exhaust from on-road diesel vehicles was responsible for nearly half of the impacts (~181 000 premature deaths) worldwide, and fully two-thirds in India, France, Germany, and Italy. The global health burden of on-road diesel vehicles, including the PM_{2.5} and ozone impacts of all tailpipe emissions, is 68% higher than previously estimated for diesel NO_x emissions, because it includes the effects of tailpipe PM_{2.5}.

In addition to estimated health effects on global, regional, and national scales, the study also evaluated the impacts in 100 major urban areas worldwide. The number of transportation-attributable deaths per 100 000 population in London and Paris are approximately 2 to 3 times higher than the global average.

The ICCT report is at www.theicct.org/publications/health-impacts-transport-emissions-2010-2015.

Cooperation Agreement of European and Chinese Automobile Manufacturers

On 15 February 2019, the European Automobile Manufacturers’ Association (ACEA) and the Chinese Association of Automobile Manufacturers (CAAM) signed a cooperation agreement in Brussels.



Together, China and the EU – the world’s number one and two markets respectively – make up about half of global passenger car sales and production. Although last year the Chinese car market contracted for the first time in 28 years, sales still reached over 28 million units, accounting for some 30% of total world sales. The EU car market was up just +0.1% last year. While this increase is very modest, it

marks the fifth consecutive year of growth. With almost 15.2 million cars registered, the EU accounts for more than 19% of the global car market – in second place after China.

“ACEA’s 15 members are truly global companies, with a strong presence in China and other world regions. China is also the number two destination for EU passenger car exports,” said Erik Jonnaert, ACEA Secretary General. “That is why we strongly believe in further strengthening the ties between our associations. Today’s signing of the agreement is a landmark moment in this process.”

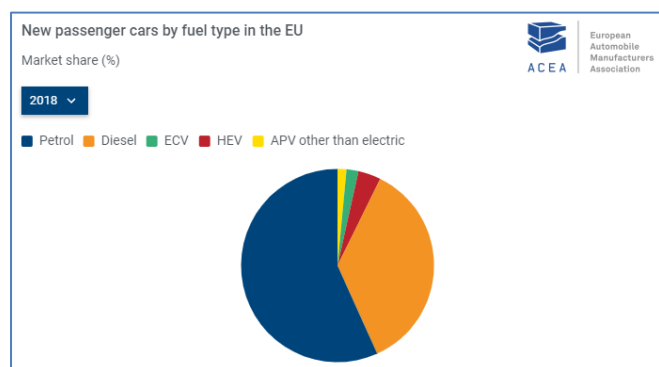
Dong Yang, CAAM Executive Vice-Chairman stated: “So that the Chinese auto industry can continue to flourish, we need to strengthen our policies, standards and regulations. To this end, we are seeking extensive international cooperation to align our industry more strongly with the global market. Our cooperation with ACEA is extremely important, as it will enable us to learn from Europe’s mature standards and regulation system. This partnership will be of mutual benefit to the Chinese and European automobile industries.”

Future collaboration between the two regions will focus on three areas: ‘new energy’ vehicles and the infrastructure for charging and refuelling such alternatively-powered vehicles; the widespread introduction of connected and automated driving; and emission standards and testing for both CO₂ and pollutants. The associations also plan to join forces at the global level in order to drive international harmonisation of auto standards and regulations.

The cooperation agreement was signed in the presence of representatives of both the European Commission and the Chinese Mission to the EU.

ACEA EU 2018 Car Registrations per Fuel Type

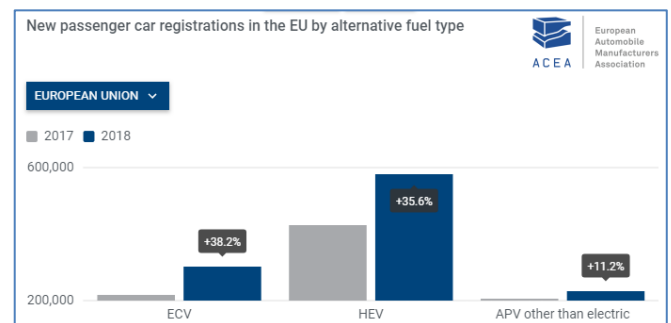
On 7 February 2019, the European Automobile Manufacturers’ Association (ACEA) published data on fuel types of cars registered in the EU in 2018.



Overall in 2018, more than half of all new passenger cars registered in the EU ran on petrol (56.7%, compared to 50.3% in 2017), while diesel accounted for 35.9% and only

2% of new cars were electrically-chargeable vehicles (ECVs).

Hybrid electric vehicles (HEVs) performed very well (+35.6%) in 2018 compared to 2017, representing more than half of alternatively-powered vehicles. Electrically-chargeable vehicles (battery electric and plug-in hybrids) also saw a large increase (+38.2%) in 2018 even though absolute numbers are not as high as HEVs. Demand for Liquefied Petroleum Gas (LPG) and Natural Gas (NG) vehicles increased more moderately (+ 11.2%) in 2018.



During a press conference in Paris on 13 February 2019, ACEA President Carlos Tavares added that ACEA expects for 2019 at best a stable EU car market, with a growth rate of under 1%.

More info, including data per EU Member State, is at www.acea.be/press-releases/article/fuel-types-of-new-cars-diesel-23.6-electric-33.1-in-fourth-quarter-of-2018.

2018 JATO Report on European Car Market

On 30 January 2019, JATO Dynamics issued a report the European car market in 2018.

The European car market remained stable during 2018, as 15.6 million vehicles were registered –the best result since 2007. Strong results in Q2, where the market was up by 4.8%, and Q3, where the market was up by 1.1%, were enough to offset the large decline posted in Q4, where the market dropped by 7.5% and recorded its lowest volume since 2014.

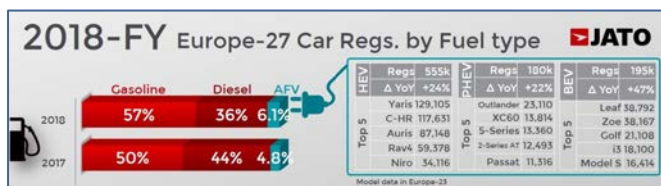
Commenting on the year’s results, Felipe Munoz, JATO’s global analyst, said: “The effects of WLTP and the lack of availability of many key versions affected registrations in Q4, which is not surprising given that by late November less than two in three versions available in Europe were homologated.”

Diesel vehicles posted their lowest market share since 2001, as demand fell by double digits in 20 of the 27 markets of the JATO’s analysis, with the biggest drops in the UK (-30%), Scandinavia (-22%) and Benelux (-22%).

The majority of vehicles registered in 2018 were powered by gasoline engines, with the fuel type making up 57% of

all registrations. This result marks a 7-point market share increase on 2017 and a 12-point increase in 10 years, confirming that gasoline vehicles continue to benefit from the demise of diesel.

Diesel vehicles counted for just 36% of all registrations, as their market share dropped 8 points on 2017 and 19 points on 2011 – the peak year for the fuel type. Almost one million more consumers opted for a gasoline vehicle in 2018 than in 2017, while Alternative Fuelled Vehicles also benefitted with almost 200 000 more registrations than in 2017. 2018 marked the best ever performance for AFVs, recording 944 800 registrations and a 6.1% market share.



Notably, most of the fuel type's growth was driven by pure electric vehicles, which outsold plug-in hybrid vehicles, as their volume increased by 47% from 132 800 vehicles in 2017 to 195 300 vehicles in 2018. Norway was the biggest market for electric vehicles, where they held a 31% market share, while the Netherlands outsold the UK and became the fourth largest EV market, behind Germany and France.

Despite growing at a slower rate than in previous years, the shift from traditional cars to SUVs continued in 2018. In total, 5.4 million SUVs were registered in Europe throughout the year, up 19% on 2017, as their market share increased from 29.2% to 34.6%. Demand for SUVs grew by 20% between 2016 and 2017, by 21% between 2015 and 2016, and by 24% between 2014 and 2015, and has more than doubled over the last four years.



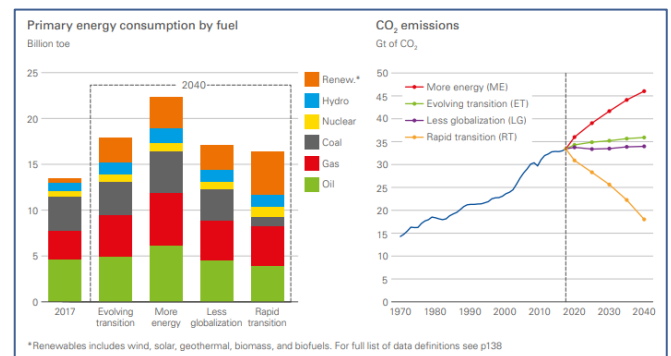
The JATO report is at www.jato.com/european-car-market-stabilises-during-2018-as-alternative-fuelled-vehicles-record-best-ever-year-but-diesel-sees-lowest-market-share-since-2001.

BP Energy Outlook 2019

On 14 February 2019, BP published the 2019 edition of its Energy Outlook report which explores the key uncertainties that could impact the shape of global energy markets out to 2040.

The greatest uncertainties over this period involve the need for more energy to support continued global

economic growth and rising prosperity, together with the need for a more rapid transition to a lower-carbon future. These scenarios highlight the dual challenge that the world is facing. The Outlook also considers a number of other issues including the possible impact of an escalation in trade disputes and the implications of a significant tightening in the regulation of plastics.



In the 'Evolving Transition' scenario, which assumes that government policies, technologies and societal preferences evolve in a manner and speed similar to the recent past, global energy demand increases by around a third by 2040, driven by improvements in living standards, particularly in India, China and across Asia. Energy consumed by industry and buildings accounts for around 75% of this increase in overall energy demand, while growth in energy demand from transport slows sharply relative to the past as gains in vehicle efficiency accelerate. The power sector uses around 75% of the increase in primary energy. 85% of the growth in energy supply is generated through renewable energy and natural gas, with renewables becoming the largest source of global power generation by 2040.

The pace at which renewable energy penetrates the global energy system is faster than for any fuel in history.

Demand for oil grows in the first half of the Outlook period before gradually plateauing, while global coal consumption remains broadly flat.

Across all the scenarios considered in the Outlook, significant levels of continued investment in new oil will be required to meet oil demand in 2040.

Global carbon emissions continue to rise, signalling the need for a comprehensive set of policy measures to achieve a substantial reduction in carbon emissions.

The BP Energy Outlook 2019 is at www.bp.com/energyoutlook.

RESEARCH SUMMARY

Effects of Emissions and Pollution

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Effects of neonatal inhalation exposure to ultrafine carbon particles on pathology and behavioral outcomes in C57BL/6J mice, Keith Morris-Schaffer, et al.; *Particle and Fibre Toxicology* (2019), Vol. 16:10, doi: [10.1186/s12989-019-0293-5](https://doi.org/10.1186/s12989-019-0293-5).

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Emissions Control, Catalysis, Filtration

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FORTHCOMING CONFERENCES

10th VERT Forum

14 March 2019, Dübendorf, Switzerland

<https://www.vert-dpf.eu/j3/index.php/start-page/events/2-uncategorised/54-10th-vert-forum-march-15th-at-empa-switzerland>

This 10th Forum is organized again in cooperation with EMPA and the VERT association and will focus on SCRT retrofit solutions for HDV and LDV. Best practices of emission reduction methodology are shared as they are available from VERT member companies.

21st Technical Congress of the VDA

14-15 March 2019, Berlin, Germany

www.vda.de/en/services/events/technical-congress-2019.html

The 21st Technical Congress of the VDA will address the future challenges of the automotive industry and the future of the automobile and, among others, present and discuss topics such as connectivity and automated driving, climate-friendly and environmentally friendly drives and road safety.

10th CLEPA Aftermarket Conference

27-28 March 2019, Brussels, Belgium

<https://clepa.eu/events/10th-clepa-aftermarket-conference/>

The conference will discuss the future challenges in an increasingly digitalized automotive aftermarket

Selective Catalytic Reduction of NO_x over Cu- and Fe-exchanged zeolites and their mechanical mixture, Houeida Hamoud, et al.; *Applied Catalysis B: Environmental* (in press), doi: [10.1016/j.apcatb.2019.02.022](https://doi.org/10.1016/j.apcatb.2019.02.022).

Performance of a conventional diesel aftertreatment system used in a medium-duty multi-cylinder dual-mode dual-fuel engine, Antonio García, et al.; *Energy Conversion and Management* (15 March 2019), Vol. 184, pp. 327-337, doi: [10.1016/j.enconman.2019.01.069](https://doi.org/10.1016/j.enconman.2019.01.069).

Synergistic Effect of Cu/CeO₂ and Pt-BaO/CeO₂ Catalysts for a Low-Temperature Lean NO_x Trap, Beom-Sik Kim, et al.; *Environ. Sci. Technol.* (in press), doi: [10.1021/acs.est.8b05329](https://doi.org/10.1021/acs.est.8b05329).

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Effect of preparation methods on the performance of CuFe-SSZ-13 catalysts for selective catalytic reduction of NO_x with NH₃, Yijiao Wang, et al.; *Journal of Environmental Sciences* (in press), doi: [10.1016/j.jes.2019.01.013](https://doi.org/10.1016/j.jes.2019.01.013).

Transport, Climate Change & Emissions

Method for assessing the environmental benefit of road transport electrification and its influence on greenhouse gas inventories, Roberto Fernández, et al.; *Journal of Cleaner Production* (1 May 2019), Vol. 218, pp. 476-485, doi: [10.1016/j.jclepro.2019.01.269](https://doi.org/10.1016/j.jclepro.2019.01.269).

Energy and environmental assessment of a traction lithium-ion battery pack for plug-in hybrid electric vehicles, Maria Cusenza, et al.; *Journal of Cleaner Production* (1 April 2019), Vol. 215, pp. 634-649, doi: [10.1016/j.jclepro.2019.01.056](https://doi.org/10.1016/j.jclepro.2019.01.056).

A Dynamic Fleet Model of U.S Light-Duty Vehicle Lightweighting and Associated Greenhouse Gas Emissions from 2016 to 2050, Alexandre Milovanoff, et al.; *Environ. Sci. Technol.* (2019), Vol. 53 (4), pp. 2199-2208, doi: [10.1021/acs.est.8b04249](https://doi.org/10.1021/acs.est.8b04249).

Future Diesel Engine Summit China 2019

27-28 March 2019, Shanghai, China

www.fiveoit.com/desc/#/desc/home

SAE World Congress Experience (WCX)

9-11 April 2019, Detroit, USA

www.sae.org/attend/wcx

Integer Emissions Summit & AdBlue® Forum China

7-9 May 2019, Shanghai, China

www.integer-research.com/conferences/ies-china-2019/

International VDI Conference: Electrified Off-Highway Machines

14-15 May 2019, Düsseldorf, Germany

www.vdi-wissensforum.de/en/event/electrified-off-highway-machines/

The conference will focus on developments on electrified powertrains and battery technology specifically used in off-highway machines, and their implications on safety, standardization, maintenance and life cycle cost.

Ultrafine Particles – Air Quality and Climate

15-16 May 2019, Brussels, Belgium

www.ufp.efca.net

International Symposium of the European Federation of Clean Air and Environmental Protection Associations (EFCA).

23rd International Transport and Air Pollution (TAP) Conference

15-17 May 2019, Thessaloniki, Greece

www.tapconference.org

The theme of TAP2019 is 2020-2030: Transport in critical transition. Indeed, this decade will determine whether transport systems will succeed in moving ahead, fulfilling their sustainability targets.

EU Green Week High-Level Summit

15-17 May 2019, Brussels, Belgium

https://ec.europa.eu/info/events/eu-green-week-2019_en

The 2019 EU Green Week will be focusing on the implementation of EU environmental legislation, highlighting the benefit of EU environmental policies and showing their benefits for citizens.

40th International Vienna Motor Symposium

16-17 May 2019, Vienna, Austria

<https://wiener-motorensymposium.at>

AECC, IPA and IAV will present a joint paper on “Integrated Diesel System Achieving Ultra-Low Urban NO_x Emissions on the Road”

International Conference on Calibration Methods and Automotive Data Analytics

21-22 May 2019, Berlin, Germany

www.iav.com/termine/tagungen/international-calibration-conference

The Path towards Euro 7 Conference

21-23 May 2019, Stuttgart, Germany

www.euro7conference.com

The conference is organized by the publishers of Engine Technology International magazine and will bring together leading experts to present exclusive papers about the numerous technologies and engineering solutions that exist to help gasoline and even diesel engines meet possible future emission targets.

10th AVL International Commercial Powertrain Conference

22-23 May 2019, Graz, Austria

www.avl.com/icpc

The conference will tackle the challenges that the commercial vehicle industry is facing globally. How will emission legislation, trend for electrification and digitalization affect the powertrains of the future?

2nd Asia-Pacific Diesel Engine and Emission Summit 2019

23-24 May 2019, Bangkok, Thailand

www.borscon.com/2019apde/en/index.asp

The conference will discuss emission standards and technology roadmaps of Asia-Pacific countries, emission technologies, and the future of the diesel engine.

10th Emission Control

4-5 June 2019, Dresden, Germany

<http://wordpress.emission-control-dresden.de>

Integer Emissions Summit & AdBlue® Forum Asia Pacific

5-6 June 2019, Tokyo, Japan

www.integer-research.com/conferences/ies-apac-2019

31st International AVL Conference "Engine & Environment"

6-7 June 2019, Graz, Austria

www.avl.com/engine-environment

The conference will focus on three thematic blocks: production, storage, transport/distribution of energy carriers; energy storage media in the vehicle; and the main focus will be laid on the consequences for the powertrain portfolio.

SIA Paris 2019 Power Train & Electronics

12-13 June 2019, Port-Marly, France

www.sia.fr/evenements/136-sia-power-train-electronics-2019

To support the automotive industry in the transition towards ever more environmentally friendly mobility, a new automotive event in France named SIA power train & Electronics broadens the scope of the Powertrain Conference to include electric traction technologies, along with internal combustion engines (ICE), low carbon fuels, and transmissions.

8th International Congress on Combustion Engines

17-18 June 2019, Krakow, Poland

www.congress.ptnss.pl

The main topics of the congress include fuel injection systems and mixture formation; combustion processes control in SI and CI engines; engine thermal loading and utilization of heat released; alternative fuels; emission measurements and aftertreatment; alternative sources of power; engine testing, durability, reliability and diagnostics; modelling and optimization of engine processes; and global trends in engine technology.

ETH Conference on Combustion Generated Nanoparticles

18-20 June 2019, Zurich, Switzerland

www.nanoparticles.ch

The conference serves as an interdisciplinary platform for expert discussions on all aspects of nanoparticles, freshly emitted from various sources, aged in ambient air, technical mitigation aspects, impact of particles on health, environment and climate and particle legislation.

Deadline for abstract: 24 March 2019

Integer Emissions Summit & AdBlue® Forum Europe

25-27 June 2019, Munich, Germany

www.integer-research.com/conferences/ies-europe-2019

India & ASEAN Diesel Powertrain Summit

26-28 June 2019, Chennai, India

www.fiveoit.com/iadp

India & ASEAN Diesel Powertrain Summit 2019 is dedicated to providing the next 5-10 years of policy direction and supporting technological innovations as well as exploiting the market opportunities in India and ASEAN countries.

Combustion Aerosol Conference & Cambridge Particle Meeting 2019

26-28 June 2019, Cambridge, UK

<https://aerosol-soc.com/events/combustion-conference-2019>

The conference focuses on the fundamentals of particle formation, combustors and engine technology, emissions and emissions measurements and regulation and regulated emissions.

Deadline for abstract: 1 April 2019

5th International FEV Conference Diesel Powertrain 3.0

2-3 July 2019, Rouen, France

www.fev.com/coming-up/fev-conferences/fev-conference-diesel-powertrains-30/introduction.html

The conference will highlight that the modern Diesel engine still represents a favourable platform for a highly-valuable future propulsion system unit even under changing regulatory boundary conditions and an altering market environment.

SAE Powertrains, Fuels and Lubricants

26-29 August 2019, Kyoto, Japan

www.pfl2019.jp

14th International Conference on Engines & Vehicles

15-19 September 2019, Capri, Italy

www.sae-na.it

Topics of the conference include engine modelling and diagnostics; engine combustion; new engines, components, actuators and sensors; hybrid and electric powertrains and eco-CAV; fuels and lubricants; and exhaust aftertreatment and emissions.

3rd Annual Real Driving Emissions Forum

24-25 September 2019, Berlin, Germany

www.rde-realdrivingemissions.com

The Forum will showcase the forefront practices and approaches towards RDE and Energy Consumption reduction, compliance with recent update of the legislation on RDE, main automotive technology trends based on cost-and-energy-efficient solutions.

28th Aachen Colloquium Automobile and Engine Technology

7-9 October 2019, Aachen, Germany

www.aachener-kolloquium.de

The congress provides a wide range of technical presentations addressing current challenges of the vehicle and engine industry.

European Transport Conference

9-11 October 2019, Dublin, Ireland

www.aetransport.org

The conference attracts transport practitioners and researchers from all over Europe where they can find in-depth presentations on policy issues, best practice and research findings across the broad spectrum of transport.

13th Conference on Gaseous Fuel Powered Vehicles

22-23 October 2019, Stuttgart, Germany

<https://fkfs-veranstaltungen.de/3/conference-on-gaseous-fuel-powered-vehicles>

Integer Emissions Summit USA

12-13 November 2019, Indianapolis, USA

Info will be at www.integer-research.com/conferences/ies-usa-2019/

POLIS Annual Conference

27-28 November 2019, Brussels, Belgium

www.polisnetwork.eu/2019conference

Europe's leading event on sustainable urban mobility in cities and regions

Call for speakers opens in March 2019

EU Clean Air Forum

28-29 November 2019, Bratislava, Slovakia

https://ec.europa.eu/info/events/eu-clean-air-forum-2019-nov-28_en

The European Commission is organizing the 2nd Clean Air Forum in close collaboration with the Ministry of Environment of the Slovak Republic. It will focus on three themes: air quality and energy; air quality and agriculture; and clean air funding mechanisms.

Internal Combustion Engines and Powertrain Systems for Future Transport

11-12 December 2019, West Midlands, UK

<http://events.imeche.org/ViewEvent?code=CON6849>

The 2019 conference will provide a forum for IC engine, fuels and powertrain experts to look closely at developments in powertrain technology required to meet the demands of the low carbon economy

SAE World Congress Experience (WCX)

21-23 April 2020, Detroit, USA

Info will be at www.sae.org/attend/wcx

TRA2020

27-30 April 2020, Helsinki, Finland

<https://traconference.eu/>

TRA, The Transport Research Arena is the biggest European Research and Technology Conference on transport and mobility. In 2020 TRA is themed "Rethinking transport - towards clean and inclusive mobility" and brings together the experts from around the world to discuss the newest innovations and the future of mobility and transport.

Deadline for abstract: 30 April 2019

SAE Powertrains, Fuels and Lubricants

22-24 September 2020, Krakow, Poland

Info will be at www.pfl20.org

Call for abstracts opens in August 2019

Deadline for abstract: 18 February 2020