

NEWSLETTER

International Regulatory Developments

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EUROPE

2nd AECC Ultra-low Emissions Diesel Driving Event

On 7 November 2019, AECC hosted a second driving event in Brussels to experience first-hand the ultra-low NOx emissions from the AECC-IPA-IAV demonstrator car.



Guests from the European Parliament, European Commission, Member States and Regions attended, as well as representatives from trade associations and research companies.

AECC staff and members were on hand to explain the emissions control system. As with the first event, (see AECC Newsletter of July 2019), feedback was positive as guests found that seeing the emissions in real-time helped them understand much better how diesel can be future proof.

AECC Exhibit at POLIS 2019 Annual Conference

On 27 and 28 November 2019, AECC was present as an exhibitor at the POLIS 2019 Annual Conference in Brussels, presenting information on the ultra-low emission diesel (ULED) demonstrator project. A record 650 delegates from a wide range of European cities, industry, academia and other policymaking institutions attended.

Visitors from a number of cities and regions came to the AECC stand to see how diesel cars can continue to be an option in urban settings.

The exhibition was situated alongside the conference, where sessions on urban infrastructure, transport management, safety, the use of data, active travel, smart cities, emissions measurement and urban vehicle access regulations took place.



For more information on the conference, go to www.polisnetwork.eu/wp-content/uploads/2019/10/2019-Polis-Conference-Programme-Final.pdf.

Parliament Hearings of Commissioners-designate Vălean, Breton and Várhelyi

On 14 November 2019, nominees for Ursula von der Leyen's European Commission from the three countries whose first choices were rejected by the European Parliament – France, Hungary and Romania – appeared before MEPs.

Olivér Várhelyi, Neighbourhood and Enlargement Policy (Foreign Affairs Committee - AFET), Thierry Breton, Internal Market (Industry, Research and Energy - ITRE, Internal Market - IMCO) and Adina-Ioana Vălean, Transport (TRAN) faced hearings in front of their relevant committees.

In his introductory speech, Mr Breton spoke of the digital, environmental and social challenges the EU is facing and how he plans to address them during his mandate. The digital transformation and climate change will be high on his agenda, in line with President-elect Ursula von der Leyen's priorities. Mr Breton gave some important remarks on the Green Deal, categorising it as essential, and added that the goal of reaching carbon neutrality by 2050 will depend on decisions taken by the incoming Commission.



In her introductory speech, Mrs Vălean said that the European Green Deal cannot be completed without transport at its core, but greening mobility must serve the citizens' interests. While additional efforts are needed to reach carbon neutrality targets, this has to be economically feasible to be accepted by the people. Mrs Vălean went on to make some important remarks about urban car restrictions. The commissioner-designate mentioned that the Commission has taken a "soft" approach on urban air quality and vehicle bans and that more measures are needed to "solve the problems of congestion and air quality". She also pointed out that she wants a European approach. She promised to push policies that increase transport efficiency, and the uptake of clean vehicles with a view to making sure the EU economy is climate neutral by 2050. That means transport emissions need to fall by 90%, but currently only a 20% saving is being made, she said. "We should stop talking about the antagonism between transport and climate policies," said Vălean. The commissioner-designate said she will work to extend the Emissions Trading Scheme and reduce free allowances for airlines. Mrs Vălean also emphasised that "We need to keep the competitiveness of the industry; we need to be socially sustainable".



Mr Breton and Mrs Vălean both gained approval from the respective parliamentary groups following their hearings. The Hungarian Commission candidate Olivér Várhelyi was elected after responding to additional questions from MEPs after his initial hearing.

More information on the hearings can be found at www.europarl.europa.eu/news/en/press-room/20191112IPR66319/hearing-of-thierry-breton and at www.europarl.europa.eu/news/en/press-room/20191112IPR66318/hearing-of-adina-ioana-valean.

Election of new European Commission

On 27 November 2019, the European Parliament elected the new European Commission by 461 votes to 157, with 89 abstentions. The new College of Commissioners will take office on 1 December for a period of five years.

Commission President-elect Ursula von der Leyen made a statement to Parliament prior to the vote, in which she highlighted that appropriate investment and regulatory frameworks will be put into place for Europe to lead the way internationally on a range of critical issues: environmental protection and climate change, growth, inclusion, innovation and digitalisation, as well as the protection of democracy, European values, citizens' rights and the rule of law.

The press release confirming the vote is available at www.europarl.europa.eu/news/en/20191121IPR67111/parliament-elects-the-von-der-leyen-commission.

European Parliament declares Climate and Environmental Emergency

On 28 November 2019, the European Parliament declared a climate and environmental emergency, stating that the EU should commit to net-zero greenhouse gas emissions by 2050.

MEPs also want the Commission to ensure that all relevant legislative and budgetary proposals are fully aligned with the objective of limiting global warming to under 1.5 °C.

In a separate resolution, Parliament urges the EU to submit its strategy to reach climate neutrality as soon as possible, and by 2050 at the latest, to the UN Convention on Climate Change. MEPs also call on the new European Commission President Ursula von der Leyen to include a 55% reduction target of greenhouse gas emissions by 2030 in the European Green Deal.

Parliament says that EU countries should at least double the contributions to the Green Climate Fund and phase out all direct and indirect fossil fuel subsidies by 2020.

The Parliament's press release can be found at www.europarl.europa.eu/news/en/20191121IPR67110/the-european-parliament-declares-climate-emergency.

Agencies present Responsibilities and Activities to ENVI Committee

On 7 November 2019, the European Environment Agency (EEA) and four other agencies under the remit of the Environment (ENVI) committee, presented their main responsibilities and activities in the ENVI Committee meeting.

The EEA explained that its mission is to inform policymakers and European citizens, providing timely, reliable, targeted and relevant information in order to achieve significant and measurable improvements in Europe's environment.

EEA's Executive Director Dr Hans Bruyninckx said that there is no longer any 'business as usual' as far as the climate is concerned; only 'business as unusual'.

The 2020 EEA report on the state of the European environment and the outlook (SOER) will be published on 4 December. This is published every five years.

A short presentation is available at www.europarl.europa.eu/cmsdata/188527/EEA-original.pdf and a video of the presentation by Dr Bruyninckx can be seen (starts at 10:34:50) at www.europarl.europa.eu/ep-live/en/committees/20191107-0900-ENVI.

EEA reports Significant Drop in EU GHG Emissions in 2018

On 31 October 2019, the European Environment Agency (EEA) published its report *Trends and Projections in Europe 2019 – Tracking Progress towards Europe's Climate and Energy Targets*. The EEA analysis shows that the EU is firmly on track to achieve its 2020 target to reduce GHG emissions by 20%, compared with 1990 levels. Preliminary data from Member States indicate that the EU's total emissions decreased by 2.0% in 2018, bringing the total reductions to 23.2% below 1990 levels.

However, Member States' projections are not yet in line with the target for 2030 of at least a 40% reduction in GHG emissions. According to the EEA analysis, Member States' current policies can deliver only a 30% reduction by 2030, while implementing all reported planned policies could bring the total reduction to 36%.

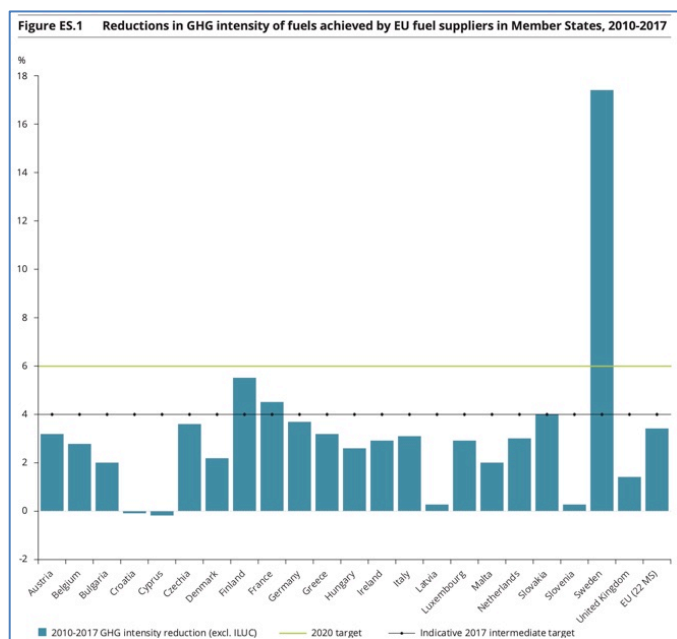
The EEA report can be found at www.eea.europa.eu/publications/trends-and-projections-in-europe.

EEA Report on GHG Intensities of Transport Fuels in EU in 2017

On 31 October 2019, the European Environment Agency (EEA) published a report on the *Quality and Greenhouse Gas Intensities of Transport Fuels in the EU in 2017*.

The report states that fuel suppliers are not sufficiently reducing the greenhouse gas (GHG) intensity of fuels supplied in the EU. According to the data reported by 22 Member States (all except Estonia, Lithuania, Poland, Portugal, Romania and Spain), the average GHG intensity of the fuels consumed in these countries in

2017 (excluding the indirect land use charge (ILUC) emissions intensity for biofuels) was 3.4% lower than the 2010 levels. This corresponds to a saving of 29 Mt carbon dioxide equivalent (CO₂e) in the year 2017. To ensure the delivery of the minimum 6% reduction target by 2020, the Fuel Quality Directive specifies that Member States may require suppliers to comply with an intermediate reduction target of 4% for the year 2017. Using this as a reference to assess the progress achieved indicates, therefore, that in 2017, EU fuel suppliers in the 22 reporting Member States were, on average, behind their objective of reducing the GHG intensity of transport fuels by 6% by 2020, compared with 2010.



The progress achieved by fuel suppliers varies greatly across Member States. In only five of the 22 reporting Member States, reductions are equal to or greater than 4%, with Sweden being the only Member State having already exceeded the 6% reduction target for 2020 (by 11.4 percentage points). Taking ILUC emissions into account, the average GHG intensity of the fuels consumed in 2017 was 2.3% lower than the 2010 levels. This corresponds to a saving of 20 MtCO₂e in the year 2017.

The full EEA report can be found at www.eea.europa.eu/publications/quality-and-greenhouse-gas-intensities-1.

First EP ENVI Committee Discussion on new Commission RDE Proposal

On 6 November 2019, the European Commission presented its proposal on real-driving emissions (RDE) regulation to the European Parliament's Environment (ENVI) Committee. The Commission said that, according to preliminary results from its Joint Research Centre (JRC), the uncertainty margin in the conformity factors could be lowered down to 0.32. The JRC is expected to finalise its research by the end of the year. MEP De Lange, the ENVI Rapporteur, may take into account the JRC's Research as she declared she intends to draft a science-based

report. The Shadow Rapporteurs MEP Dalli (S&D, Malta) and MEP Eickhout (Greens/EFA, Netherlands) criticised the proposal as, in their views, it would weaken the preestablished standards.

The Commission, together with the Rapporteur, called on the MEPs to refrain from deflecting the debate on the emissions standards. The Commission notably confirmed it is currently working on the development of post Euro 6/VI emission standards for light- and heavy-duty vehicles (Euro 7).

In the meantime, the Council is working on its general approach, which may be reached before the end of the year. It appears that some countries are pushing for this general approach to be swiftly decided in order to push the European Parliament to accelerate the timeline. There is wide support for leaving the conformity factors untouched, however JRC has also presented to them the preliminary result of their research and there is a possibility that the publication of the JRC report may also impact the Council positioning.

You can listen to the Commission's presentation in Parliament at www.europarl.europa.eu/ep-live/en/committees/20191106-1430-COMMITTEE-ENVI and the presentation from the Commission at www.europarl.europa.eu/meetdocs/COMMITTEES/ENVI/2019/11-06/item25_RDEregulation_EN.pdf.

IMCO Draft Opinion on Amendment of Regulation (EC)715/2007

On 15 November, the Committee on the Internal Market and Consumer Protection (IMCO) published its Draft Opinion on the proposal for a regulation to amend Regulation (EC)715/2007 on Euro 5 and 6 emissions.

The Rapporteur for opinion Anna Cavazzini (Greens/EFA – DE) is 'of the opinion that the introduction of conformity factors for RDE measurements is a wrong signal at a time where urgent action is required to enable Member States to comply with the Air Quality Directive (2008/50/EC) and to ensure that Euro 6 emission limits are met under normal conditions. She said car manufacturers should be designing vehicles to comply with the emission limits and not receive leeway. She added it also leads to uncertainty by introducing a margin of error that makes it difficult to determine whether vehicles comply or not with the agreed standards.

The Rapporteur would also shorten the period from five years to two years to assess by end 2022 whether further measures are needed. Amendments to the Commission's proposal have been made, but do not touch on environment-related aspects, as those are covered by the ENVI Committee.

The Rapporteur for opinion will present her draft to the IMCO Committee on 4 December 2019. The IMCO MEPs would then submit their amendments to the text prior to the vote in early 2020.

The detailed draft opinion is available at www.europarl.europa.eu/doceo/document/IMCO-PA-643178_EN.pdf.

Amendment of Regulations regarding WLTP CO₂ Determination and Reporting

On 4 November 2019, Commission Implementing Regulations 2019/1840 and 2019/1839 were published in the Official Journal of the European Union. They amend Implementing Regulations 2017/1152 and 2017/1153 regarding the determination and reporting of WLTP (Worldwide Harmonised Light Vehicle Test Procedure) CO₂ values for certain categories of light commercial vehicles and passenger cars.

These regulations are to clarify how measured CO₂ emission values are to be determined where several CO₂ emissions tests are carried out for type-approval. They also specify that the correlation of CO₂ emissions of NOVC-HEVs (Not-Off-Vehicle Charging Hybrid Electric Vehicles) and OVC-HEVs (Off-Vehicle Charging Hybrid Electric Vehicles) should be performed on the basis of physical vehicle tests and not on the basis of simulations.

The regulations will enter into force 20 days after publication in the Official Journal and can be found at eur-lex.europa.eu/legal-content/EN/TXT/OJ.L_2019.282.01.0001.01 and at eur-lex.europa.eu/legal-content/EN/TXT/OJ.L_2019.282.01.0009.01.

Implementing Regulation regarding Reporting of HDV CO₂ Data

On 7 November 2019, Commission Implementing Regulation 2019/1859 was published in the Official Journal regarding collection of data to determine CO₂ emissions from new heavy-duty vehicles. Manufacturers should monitor and report data simulated during the reporting periods 2019 and 2020. The reporting date is set as 30 September 2021, as some manufacturers may have found it difficult to report information before October 2019.

The Regulation entered into force on 10 November 2019. It can be found at eur-lex.europa.eu/legal-content/EN/TXT/OJ.L_2019.286.01.0010.01.

Publication of Euro VI Step E Regulation in Official Journal

On 25 November 2019, Regulation 2019/1939 was published in the Official Journal of the European Union.

This Regulation amends various aspects of emissions legislation, including requirements for aligning Auxiliary Emission Strategies (AES) for heavy duty vehicles with those of light passenger and commercial vehicles; requiring in-service conformity testing for type-approval to be carried out by a portable emissions measurement system (PEMS) and setting a maximum allowable particle number conformity factor of 1.63; including cold-start emissions of heavy duty vehicles during type-approval testing; and requiring gas-fuelled vehicles to comply with the particle number conformity factor (with a 2 year lead time derogation for gas-fuelled engines compared to diesel).

The Regulation has been published at eur-lex.europa.eu/legal-content/OJ.L_2019.303.01.0001.01.ENG&toc=OJ:L:2019:303.

JRC Report on Potential of Remote Sensing Devices

On 28 October 2019, the Joint Research Centre (JRC) of the European Commission published a report on the *Potential of Remote Sensing Devices to screen vehicle emissions*.

The report summarises the findings of a one-week measurement campaign performed in July 2017. Two remote sensing devices (RSDs) were installed on the roadside at the JRC Ispra site. Reference vehicles equipped with Portable Emission Measurement System (PEMS) were driven past the instruments serving as reference measurement systems, in order to compare their results to the RSDs for different emissions. The focus during this exercise was on the gaseous pollutants nitric oxide (NO), nitrogen dioxide (NO₂) and carbon monoxide (CO) from light duty vehicles. RSD and PEMS based measurements showed good agreement of the observed pollutants to CO₂ ratios within the instruments' range of observation. With a larger set of different vehicles, the RSD measurements provided an overview of expected observations for different vehicle types and emission standards. The RSD performance has been put in relation to emissions that are expected from latest Euro 6 compliant vehicles on the road. The findings indicate that Remote Sensing Devices constitute a promising technology for the screening of vehicle emissions in order to identify high or low polluting vehicles and vehicle types under specific driving conditions.

The full JRC report is available at op.europa.eu/en/publication-detail/-/publication/9f6af994-fa26-11e9-8c1f-01aa75ed71a1/language-en.

JRC 2018 Light-duty Vehicles Emissions Testing Report

On 6 November 2019, the Joint Research Centre (JRC) of the European Commission published its 2018 report on light-duty vehicles emissions testing.

The report presents the activities of the JRC on tailpipe emissions compliance assessment of light-duty vehicles conducted throughout 2018. Criteria pollutant and CO₂ emissions of 19 vehicles were measured in the laboratory and on the road in a wide range of driving conditions.

Gasoline vehicles of all tested Euro 6 stages (i.e., Euro 6b, 6c, and 6d-TEMP) met the NO_x emission limits in the laboratory (60 mg/km) as well as on RDE compliant tests (126 mg/km, considering the temporary conformity factor of 2.1) except one Euro 6b (to which the RDE requirements did not apply).

Euro 6b diesel vehicles emit on average 3.5 and 7.5 times as many nitrogen oxides (NO_x) than gasoline Euro 6b vehicles in standard laboratory and road conditions, respectively. Under RDE conditions, diesel Euro 6b vehicles averaged 210 mg/km. Among those vehicles, those not equipped with a Selective Catalytic Reduction catalyst were said to perform poorly on the modified

laboratory tests and on the road. Euro 6d-TEMP diesel vehicles averaged 46 mg/km and 75 mg/km under WLTP and RDE conditions. On non-RDE compliant tests, Euro 6d-TEMP diesel vehicles remained below the NTE NOx limit except on the dynamically-driven tests in which two out of three tested vehicles exceeded 225 mg/km. Certain diesel vehicles equipped with SCR exhibited NOx emissions consistently lower than the NTE limit on all on-road tests including dynamically-driven non-RDE compliant tests.

All tested diesel vehicles emitted less than half of the particle number (PN) laboratory limit under all testing conditions. On average on the road, Euro 6 diesel vehicles emitted ~1e10 #/km, two orders of magnitude less PN than their gasoline counterparts (~1e12 #/km). Gasoline vehicles with direct injection (GDI) and port-fuel injection (PFI) emitted similar amounts of particles on the road. Four Euro 6b gasoline vehicles, two PFIs and two GDIs emitted more PN than the Not-to-exceed limit applicable for Euro 6d-TEMP vehicles. One of the Euro 6b GDI vehicles was equipped with a gasoline particle filter and it showed consistent emissions two orders of magnitude lower than its applicable limit.

The report says that as an outcome of the testing activities it has become clear that the current version of the Guidance note used for the identification of defeat devices needs to be updated to cover Euro 6d-TEMP vehicles and to consider other pollutants beyond NOx, namely PN and CO.

The full report is available to read at publications.jrc.ec.europa.eu/repository/JRC117625/jrc_2018_market_surveillance_report_vehicle_emissions_online.pdf.

Eurobarometer Report on Attitudes of Europeans towards Air Quality

On 27 November 2019, the European Commission published a Eurobarometer report (497) on the *Attitudes of Europeans towards Air Quality*. The survey, carried out in September 2019, shows that a majority of respondents (54%) do not feel well-informed about air quality problems in their country. In 20 Member States, a majority of respondents do not feel well-informed. However, this ranges from 75% in Portugal to 18% in Finland.

More than 50% of respondents think that respiratory diseases, cardio-vascular diseases and asthma and allergy are a very serious problem in their countries, and respondents are more likely to think that air quality has deteriorated (58%) rather than stayed the same (28%) or improved (10%) over the past ten years. Respondents who are more informed about air quality are less likely to think that air quality has deteriorated.

Seven in ten respondents have taken at least one action to reduce harmful emissions in the air. This is an eight-percentage point increase in the respondents taking at least one action. The main action taken by respondents is the replacement of older energy-intensive equipment with new equipment with a better energy rating (41%). Respondents who are informed about air quality are more likely to have taken at least one action.

More than seven in ten respondents say that air pollution should be addressed at the international level (72%). Half of respondents say it should be addressed at European level and the same proportion say it should be addressed at the national level. More than two-thirds of respondents (71%) say they think the EU should propose additional measures to address air quality-related problems in Europe.

The complete report can be found at ec.europa.eu/commfrontoffice/publicopinion/index.cfm/survey/getsurveydetail/instruments/spacial/surveyky/2239.

T&E launches Interactive Fuel Tax Tool

On 5 November 2019, Transport & Environment (T&E) launched its Interactive Tax Tool, which shows the differences between petrol and diesel tax in countries across Europe.

It shows that only two countries, Belgium and the United Kingdom, tax both fuels at the same rate. The others all tax diesel less than petrol. T&E says that the gap is closing but that significant differences exist in some countries, notably Greece and the Netherlands with gaps of €0.29 per litre.

The 'live' map can be accessed at www.transportenvironment.org/what-we-do/sustainable-finance/fuel-taxes.

Towards a Circular Economy for Platinum in Europe

On 14 November 2019, the European Commission (EC) published a *Science for Environment Policy* news brief on the subject of the circular economy for platinum in Europe.

The brief states that around 40% of the platinum (one of the 27 critical raw materials listed by the EC) used in EU catalytic converters is not recovered for recycling. It says that increasing recycling rates is important in order to meet rising demand for the material, to create a more secure supply chain, and to cut the significant environmental impact of producing platinum.

The briefing note is based on a comprehensive study based on 2017 data and which showed that around 14.2 tons of platinum 'leaked' from the EU-28 value chain in that year. It concludes that 'actions to increase overall collection, recovery and input rates of secondary platinum in the value chain are of utmost importance in securing future and sustainable production of new generations of catalytic converters and fuel cells'.

The news brief can be found at ec.europa.eu/environment/integration/research/newsalert/pdf/circular_economy_platinum_europe_535_na2_en.pdf.

Bristol City Council Approves Diesel Ban to improve Air Quality

On 5 November 2019, Bristol (United Kingdom) City Council approved plans to meet its air quality obligations in relation to nitrogen dioxide (NO₂). These plans include a diesel ban for private cars in the city centre and harbourside area, operating between 07.00h and 15.00h every day.

There would also be a wider Clean Air Zone (CAZ) where commercial vehicles such as buses, taxis, heavy and light goods vehicles not meeting Euro 6/VI standards would be charged.

The proposals are now being reviewed by the UK government.

More details are available at www.cleanairforbristol.org.

Dutch Prime Minister announces Motorway Speed Limit Reduction

On 13 November 2019, the Dutch Prime Minister, Mark Rutte, announced a reduction in the maximum speed limit from 130km/h to 100km/h. The measure is in response to a Dutch court ruling that nitrogen dioxide emissions have to be reduced.

The new limit will come into effect in 2020 and will apply between the hours of 06.00h and 19.00h, outside which the current limits will apply. It is part of a package of measures including agriculture and construction.

The announcement (in Dutch) is available to read at www.rijksoverheid.nl/ministerie-van-infrastructuur/2019/11/13/maatregelen-voor-natuur and a report in English can be found at www.bbc.co.uk/news/world-europe-50396037.

AIR issues Plea to Cities to use AIR Index for Ultra-Low Emission Zones

On 8 November 2019, Nick Molden of AIR (Allow Independent Road-testing) issued a plea to cities who have or are about to implement an ultra-low emission zone (ULEZ) to use the AIR Index 'to bring true improvements to air quality.

The index is based on actual urban NOx emissions and intends to expand to include CO₂ and other pollutants. AIR claims that around half of the pre-RDE Euro 6 diesels are not clean and could be banned from cities if they used the index.

Mr. Molden also pointed out the Bristol, United Kingdom plan to ban all diesel cars would mean that a diesel with 14mg/km NOx emissions would not be allowed in, whereas a petrol car with emissions of 137mg/km would have access to the city.

The article, published in Air Quality News, is at airqualitynews.com/2019/11/08/is-londons-ulez-doing-enough-to-stop-dirty-diesels/.

Berlin 'Diesel Ban' comes into Force

On 22 November 2019, Berlin's Fahrverbot (so-called Diesel Ban) entered into force for the first street to be included.

The restrictions will be enforced on seven more streets by the end of the month. Under these measures, the only diesel cars allowed into these streets are those meeting Euro 6 regulations.

More information can be found at urbanaccessregulations.eu/countries-mainmenu-147/germany-mainmenu-61/berlin.

Dutch PTI Filter Test to start from January 2020

On 26 November 2019, the Dutch government published regulations to enable control of diesel particulate filters (DPFs) with a particle counter.

The government intends to introduce a DPF particle counter test for periodic technical inspection (PTI) from 2021 and expects in the meantime that the Netherlands Metrology institute will have certified PTI particle counters from multiple manufacturers by spring 2020. This would mean that the minister responsible could take an official decision to make the DPF particle counter test compulsory for the PTI of diesel cars.

The regulation (in Dutch) is published at zoek.officielebekendmakingen.nl/stcrt-2019-63953.html.

NORTH AMERICA

ICCT Report on Current State of US HDV NOx Emissions

On 26 November 2019, the International Council on Clean Transportation (ICCT) published a report on the current state of NOx emissions from in-use heavy-duty vehicles (HDVs) in the United States. Real-world emissions data from the EPA's Heavy Duty In-Use Testing programme, based on 160 PEMS (Portable Emissions Measurement System) tests from engines certified to 0.2 grams per brake horsepower-hour (g/bhp-hr) of NOx.

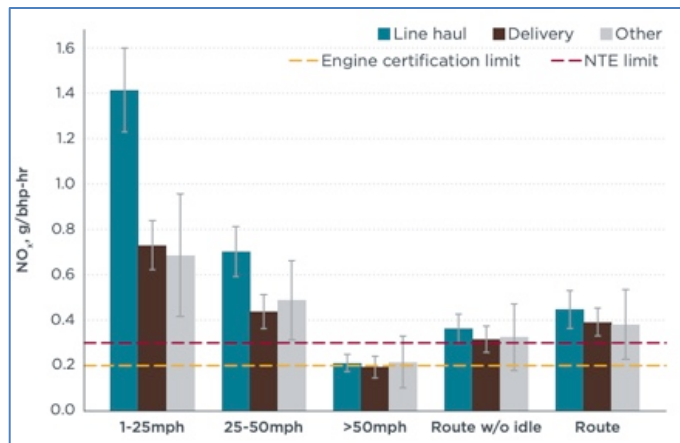
The report found that The Not-to-Exceed (NTE) protocol evaluates less than 10% of the total emissions data to determine compliance for heavy-duty in-use NOx emissions. A disproportionate amount of NOx emissions from heavy-duty vehicles is emitted during the low-speed operation characteristic of urban driving. Vehicle operation at speeds of less than 25 mph results in NOx emissions of more than five times the certification limit for the average heavy-duty vehicle in the study.

The study shows that at mid-speed driving conditions, between 25 and 50 mph and characteristic of suburban driving, average NOx emissions from heavy-duty vehicles (HDVs) are 2.7 times the certification limit. Only at speeds above 50 mph do HDVs present average NOx emissions at the certification limit and below the in-use NTE emissions limit of 0.3 g/bhp-hr.

The average line-haul truck NOx emissions of 1.41 g/bhp-hr are more than seven times the engine certification limit in urban driving and more than three times the limit in suburban driving. Line-haul trucks only emit NOx at engine certification limit levels during high-speed operation.

A single line-haul truck emits the NOx equivalent of 100 cars for each mile driven in urban driving. The data shows that under urban driving conditions, line-haul trucks are emitting on average 7.0 grams per mile of NOx, compared with less than 0.07 for a gasoline car. The PEMS data shows that these trucks, which are optimised for highway driving, spend on average 43% of their time and emit

40% of the total mass of NO_x in urban-like operation, including low-speed driving and idling.



The report concludes that the current NTE in-use testing protocol is inadequate to evaluate the in-use performance of HDVs in the U.S., especially at low speed conditions. A new tool is required and should ensure that in-use compliance is evaluated not only with highway data but also includes low speed, low load, and idle data. ICCT says this would ensure that engine dynamometer emission results obtained in the laboratory translate to real-world benefits.

The full report can be found at theicct.org/sites/default/files/publications/NOx_Emissions_In_Use_HDV_US_20191125.pdf.

ASIA PACIFIC

Hong Kong Timescale for phasing out Fossil Fuel Cars

At the end of October 2019, the Hong Kong government was reported to have announced plans to phase out all fossil fuel vehicles over the next 10 to 20 years. The exact time frame will be decided after consultation with the public. In the meantime, the government will invest in charging facilities for electric vehicles.

The report can be found at www.scmp.com/news/hong-kong/health-environment/article/3035165/hong-kong-phase-out-fossil-fuel-cars.

ICCT Report on Accuracy of Remote Sensing

On 19 November 2019, the International Council for Clean Transportation (ICCT) published a briefing paper on technical considerations for choosing a metric for vehicle remote-sensing regulations.

The paper notes that an increasing number of countries, including mainland China, are considering enforcing emission regulations for in-use diesel vehicles via remote sensing. To improve the utility of using remote sensing, the briefing first explains the current lack of accuracy in estimating tailpipe pollutant concentrations in diesel vehicles, notably for nitrogen oxides (NO_x), and then discusses ways to overcome it.

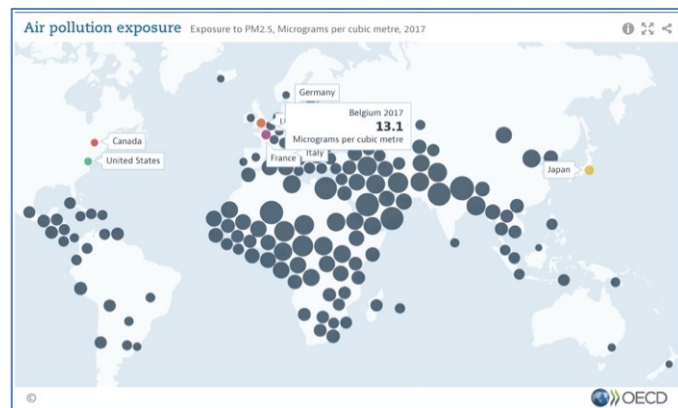
Estimating tailpipe concentration is difficult with diesel engines because combustion almost always happens under conditions of variable excess air. The precise optical path length of the pollutant (e.g., NO_x) through the exhaust plume is unknown, and the pollutants disperse rapidly once exiting the tailpipe of a diesel vehicle. While that makes the concentration of an individual species in the plume hard to measure or estimate, remote sensing can precisely measure the ratio between them (NO_x/CO₂), because that remains relatively constant. The authors suggest that converting these pollutant-to-CO₂ ratios to a fuel-specific metric is the best approach for setting regulatory limits, as it means high-emitting vehicles are identified with available remote-sensing technologies and would allow China in particular to keep the stringency of current thresholds in its remote-sensing regulation. Additionally, this approach can be applied to both diesel and gasoline vehicles.

The briefing paper can be found at theicct.org/sites/default/files/publications/China_remotesensing.FINAL_.pdf.

GENERAL

OECD launches 'Environment at a Glance' Platform

On 18 November 2019, the Organisation for Economic Cooperation and Development (OECD) launched its Environment at a Glance platform. This platform for environmental indicators gives access to recent data through interactive graphics and provides trends on major environmental issues. The indicators help track environmental performance and progress towards sustainable development.



Despite some progress, exposure to fine particulate matter (PM_{2.5}) remains high. Mean population exposure to fine particulate matter has decreased in all OECD countries; however, two out of three still exceed the WHO guideline of 10 μg/m³. Worldwide, population exposure to air pollution has on average recently stabilised but is particularly severe in some countries in Asia, the Middle East and Africa.

Premature deaths due to PM_{2.5} pollution have increased worldwide whereas they dropped in the OECD area. East European countries are the most affected (Czech Republic, Hungary,

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FORTHCOMING CONFERENCES

Internal Combustion Engines and Powertrain Systems for Future Transport

11-12 December 2019, West Midlands, UK

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

CLEPA 2020 Aftermarket Conference

25-26 March 2020, Brussels

clepa.eu/events/clepa-2020-aftermarket-conference

SAE World Congress Experience (WCX)

21-23 April 2020, Detroit, USA

www.sae.org/attend/wcx

41st International Vienna Motor Symposium

22-24 April 2020, Vienna, Austria

wiener-motorensymposium.at/en

TRA2020 Rethinking Transport towards Clean and Inclusive Mobility

27-30 April 2020, Helsinki, Finland

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.

SIA Powertrain & Energy

3-4 June 2020, Rouen, France

www.sia.fr/evenements/193-sia-powertrain-energy-rouen-2020

CO₂ Reduction for Transport Systems Conference

7-8 July, Turin, Italy

conferences.ata.it

SAE Powertrains, Fuels and Lubricants

22-24 September 2020, Krakow, Poland

www.sae.org/pfl

Deadline for abstract: 18 February 2020

29th Aachen Colloquium

5-7 October 2020, Aachen, Germany

www.aachener-kolloquium.de/en

Deadline for abstract: 31 January 2020

SAE Heavy-Duty Diesel Emissions Control Symposium

13-14 October 2020, Gothenburg, Sweden

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

IRU World Congress

19-21 October 2020, Berlin, Germany

www.iruworldcongress.com