

# NEWSLETTER

International Regulatory Developments

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## EUROPE

### Parliament adopts New Vehicle Type-Approval Framework Regulation

On 19 April 2018, the European Parliament adopted at its plenary session in Strasbourg the new vehicle type-approval framework Regulation.

The new Regulation, on which an inter-institutional agreement was reached in December of last year (see *AECC Newsletter of December 2017*), clarifies the responsibilities of national type-approval authorities, technical services and market surveillance bodies, in order to make them more independent and prevent conflicts of interest.

The new rules, applicable from 1 September 2020, will require every EU country to conduct a minimum number of checks on cars each year, i.e. at least one for every 40 000 new motor vehicles registered in that Member State in the preceding year. At least 20% of these tests will have to be emissions-related, including Real-Driving Emissions tests. For countries with a low number of car registrations, there will be a minimum of five tests to be conducted.

The European Commission will also be able to carry out tests and inspections of vehicles to verify compliance, to trigger EU-wide recalls and to impose administrative fines on carmakers of up to €30 000 per non-compliant vehicle.

The legislation introduces a new testing regime to ensure cars remain within emission limits throughout their lifetime. Technical services which are testing vehicles to be approved will be regularly and independently audited.

In addition, the Certificate of Conformity (CoC) - the document issued by the manufacturer which certifies that a produced vehicle conforms to the approved type of vehicle and complies with all regulatory acts at the time of its production - will follow standardised paper and electronic formats, to be drafted by the Commission by means of implementing acts.

The Regulation, approved by 547 votes in favour and 83 against, with 16 abstentions, still needs to be formally adopted by the other co-legislator, the Council of the EU before publication in the Official Journal.

The adopted text of the vehicle type-approval framework Regulation is at [www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2018-0179+0+DOC+PDF+V0//EN](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2018-0179+0+DOC+PDF+V0//EN).

### Public Consultation on RDE4 Legislative Package finalized

On 5 April 2018, the public consultation on a draft Regulation for amending the light-duty Euro 6 Regulation (see *AECC Newsletter of March 2018*) for the purpose of improving the emission type approval tests and procedures for light passenger and commercial vehicles, including those for in-service conformity and real-driving emissions

and introducing devices for monitoring the consumption of fuel and electric energy, came to a close.

The new draft Regulation will contain the 4<sup>th</sup> RDE package provisions as well as the 2<sup>nd</sup> act of WLTP requirements to the light-duty Euro 6 Regulation.

At the closing of the consultation period, some 26 contributions were submitted and featured on the public consultation web site. These include contributions from business associations (e.g. ACEA, JAMA, CLEPA, SMMT, VdTÜV, and AECC) as well as from industry, public authorities and various NGOs (e.g. T&E, ICCT, BEUC, EEB, ADAC, VCD, DUH, ClientEarth).

The European Commission's DG Growth considered these responses and submitted an updated proposal for adoption by Member States in the Technical Committee Motor Vehicles (TCMV) on 3 May 2018.

Feedback received to the consultation process is at <http://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-1297632/>.

### Environment Ministers meet on Ambient Air Quality

On 10 and 11 April 2018, an informal meeting of EU environment Ministers took place in Sofia, Bulgaria. On the first day, the ministers of the 28 EU Member States, the Western Balkans and EFTA partners and the European Commission exchanged views on ambient air quality and better regulation, calling for urgent action and better coordination between different levels of governance.



According to the statement issued by the Bulgarian Presidency of the Council after the meeting, air pollution is the most important environmental risk to human health. Therefore, the Bulgarian Presidency has designated air quality improvement as one of its top environmental priorities.

The delegates agreed that although air quality in the EU is improving, more urgent action is needed. The discussion highlighted the need for better coordination among the different levels of governance and the various economic sectors involved. The role of socio-economic conditions in the fight for cleaner air was another focus of the discussion.

When it comes to improving air quality, funding is key. Therefore, the delegates discussed the opportunities to revise the way in which EU funds support the clean air efforts in the framework of a debate on the EU Multiannual Financial Framework 2021-2030.

## UN Retrofit Regulation published in the Official Journal

On 27 April 2018, UN Regulation No 132 on Retrofit Emission Control (REC) devices was published in the Official Journal of the EU.

This Regulation provides a harmonized method for the classification, evaluation and approval REC systems for particulate matter (PM), for nitrogen oxides (NOx), or for both PM and NOx, and for the determination of the levels of emissions from diesel engines fitted in heavy-duty vehicles, agricultural and forestry tractors and non-road mobile machinery (NRMM).

The Regulation provides a framework for approval of REC for different applications with corresponding environmental performance levels and for the identification in Type-Approval of those levels.

The text published incorporates all valid versions up to the 01 series of amendments to the UN Regulation No 132 which entered into force on 22 January 2015. It is now available in the 23 official EU languages.

The Retrofit Regulation is at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42018X0630&from=EN>.

## Draft Parliamentary Report on Post-2020 CO<sub>2</sub> Standards for Cars and Vans

On 16 April 2018, the Environment, Public Health and Food Safety (ENVI) Committee of the European Parliament published the draft Report on the proposal for post-2020 CO<sub>2</sub> standards for new passenger cars and light commercial vehicles.

The Rapporteur MEP Miriam Dalli (S&D, MT) proposes more ambitious CO<sub>2</sub> reduction targets, namely a 25% fleet-average reduction by 2025 and a 50% reduction by 2030 (vs. 15 and 30% respectively proposed by the European Commission).

Also the Rapporteur suggests removing the utility parameter that accounts for vehicle's weight. In order to allow for the environmental and other benefits of downsizing and light weighting to be captured, CO<sub>2</sub> targets for passenger cars should no longer be differentiated by vehicle mass.

In addition, the Rapporteur suggests that from 1 January 2025 manufacturers should report to the Commission on the lifecycle CO<sub>2</sub> emissions of the vehicle types they put on the market based on a harmonised methodology. The Commission would therefore be empowered to adopt delegated acts that would develop detailed rules on the procedures for reporting lifecycle CO<sub>2</sub> emissions of all fuel types and vehicle powertrains found on the EU market.

Finally, no later than 31 December 2026, the Commission should provide an analysis of the overall lifecycle emissions from new light-duty vehicles in the EU in order to better direct future policy efforts in emissions cuts in the sector.

While the switch from NEDC to WLTP procedure is likely to yield more representative type-approval CO<sub>2</sub> emission figures, the Rapporteur does not expect it will completely close the real-world emissions gap. This growing gap has significant implications for consumers, air quality, cities and policy makers and needs to be addressed seriously and effectively. The Rapporteur's view is that the most reliable way to ensure the real-world representativeness of type-approval values is by introducing a real-world CO<sub>2</sub> emissions test, which the Commission will have to be empowered to develop. However, in the meantime and until such a real-world test comes into force and becomes applicable, compliance should be ensured by using data from the fuel consumption meters that are reported by manufacturers together with a Not-To-Exceed (NTE) limit which should be fixed. A 15% NTE value above a manufacturer's specific CO<sub>2</sub> emissions is proposed.

Finally, the Rapporteur suggests deleting the derogation suggested by the Commission to niche manufacturers, producing between 10 000 and 300 000 cars a year.

The deadline to table amendments to the text is set for 23 May 2018 and the vote on the draft Report and tabled amendments is provisionally scheduled on 10 September 2018.

The draft ENVI report on post-2020 CO<sub>2</sub> standards is at [www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fNONSGML%2bCOMPARL%2bPE-619.135%2b01%2bDOC%2bPDF%2bV0%2f%2fEN](http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-%2f%2fEP%2f%2fNONSGML%2bCOMPARL%2bPE-619.135%2b01%2bDOC%2bPDF%2bV0%2f%2fEN).

## EESC Opinion on Low Emission Mobility

On 19 April 2018, the European Economic and Social Committee (EESC) adopted an opinion on 'delivering on low-emission mobility', the Commission's Communication outlining the long-term strategy to fight climate change while improving the quality of life for Europe citizens and fostering competitiveness for its industry that was published in November 2017 as part of the Clean Mobility package (see *AECC Newsletter of November 2017*).

The EESC notes that the European automotive industry produces about 14 million new cars every year. However, only about 5% of the total fleet of 253 million cars in the EU is replaced by the newly launched cars. It is estimated that even with this rate of replacement alone, CO<sub>2</sub> emissions will be reduced by more than 30% by 2030 compared with 2005. Nevertheless, the EESC believes that more initiatives could be introduced that would accelerate the renewal rate. In addition to its focus on new technologies such as electric cars, the Commission should consider the large potential for improvements in the existing fleet.

The EESC draws attention to the general, technology-neutral approach set by the Commission, which is not followed fully by the proposed initiatives. Depending on technological progress, it is far from sure that our future mobility will be all electric and other propulsion technologies also provide great potential for clean mobility.

A breakthrough could happen not only in battery-powered electric vehicles, but also in the area of fuels. For example, Sweden or Finland use biofuels, which are fossil-free and climate-friendly but these fuels are not supported enough by the Commission. The EESC therefore recommends a more flexible approach rather than, for example, fixed emission thresholds or procurement targets.

In addition, the EESC urges the Commission to take more rigorous action in facilitating consumers' access to new, cleaner and affordable forms of mobility and to make sure that the benefits of new mobility services are equally available to all Member States. It would be unacceptable if, for example, older diesel cars were banned in some Member States and then sold in others that have weaker economies.

The opinion was adopted with 201 votes in favour, 0 against and 3 abstentions.

The EESC opinion is at [www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/achieving-low-emission-mobility-targets-communication](http://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/achieving-low-emission-mobility-targets-communication).

## Parliament Debate on GEAR 2030 Report

On 12 April 2018, the European Parliament's Transport Committee (TRAN) held a debate on the report of the High Level Expert Group on the Competitiveness and Sustainable Growth of the Automotive Industry in the European Union (GEAR 2030).

Established by the European Commission in October 2015, the High Level Group (HLG) was made up of authorities from EU countries and key stakeholders representing the automotive industry, services, consumers, road safety and environmental protection. AECC was an observer.

The HLG was tasked with developing medium and long-term recommendations to address the main challenges and opportunities for the European automotive industry in the run-up to 2030 and beyond. More concretely, recommendations were made on: new technologies and business models; climate and health concerns; changing in consumer behaviours; the challenges of globalisation; structural changes within the workforce. The report was published in October 2017.

The European Commission (EC) DG GROW (Industrial Transformation and Advanced Value Chains) presented the results of the report and explained that the EC would try to develop an adequate harmonisation legislation at UNECE level as well as enhanced competitiveness (e.g. support an appropriate technology neutral regulatory framework) and fairer trade in the sector in general. The HLG recognised the ever-increasing importance of Zero Emissions Vehicles (ZEVs) and Zero Emissions-Capable vehicles (ZECs). The EU and Member States would need to take further actions to tackle urban air pollution via this kind of technology.

On behalf of the EP, a number of TRAN Committee MEPs, including Delli (Greens/EFA, FR), Caputo (S&D, Italy) and Clune (EPP, Ireland) generally welcomed the GEAR 2030 report and the presentation by the experts.

However, questions were asked about the purpose of the HLG and their shaping impact on the automotive industry in general (MEP Delli). The EC explained that a cross-check with the industry would be needed because the industrial sector has to cope with the transformation of transport and infrastructure. MEP Michael Cramer (Greens/EFA, DE) asked about the potential impact of the GEAR 2030 on the "Dieselgate". The EC answered that they have been very active to upgrade tests and on the new legal framework adoption, nevertheless they face competence limits when it comes to Member States infringements.

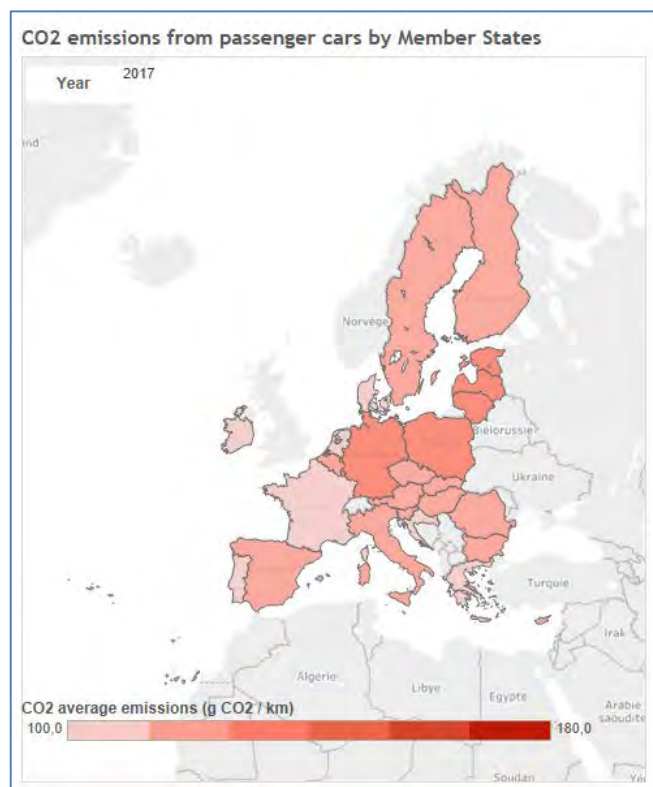
The debate can be watched at <http://web.ep.streamovations.be/index.php/event/stream/20180412-0900-committee-tran>.

## EEA Data on CO<sub>2</sub> Emissions from New Passenger Cars

On 23 April 2018, the European Environment Agency (EEA) published provisional data on average CO<sub>2</sub> emissions of new cars sold in the EU in 2017.

Sales of new passenger cars in the EU increased by 3% in 2017 compared to the previous year. A total of 15.1 million new cars were registered, the highest number since 2007. Registrations increased in all EU Member States except Finland, Ireland and the UK.

New cars sold in 2017 emitted on average 118.5 g CO<sub>2</sub>/km, a slight increase of 0.4 g/km compared to 2016. For 17 EU Member States the average CO<sub>2</sub> emissions were higher than in 2016.



For the first year since monitoring started, petrol cars became the most sold vehicles in the EU, constituting

almost 53% of sales. Diesel cars made up 45% of the new registrations. Compared to 2016, the registrations of diesel cars decreased in all EU Member States except in Italy (+0.6 percentage point) and in Denmark (+6.9 percentage point). The biggest decrease of diesel cars was registered in Greece and Luxemburg (-19 and -17 percentage points respectively). The countries with the highest proportions of diesel sales included Ireland (65%), Portugal (61%) and Italy (56%).

The difference between average CO<sub>2</sub> emissions of petrol cars (121.6 g CO<sub>2</sub>/km) and diesel cars (117.9 g CO<sub>2</sub>/km) is reducing compared to 2016. Petrol cars' average CO<sub>2</sub> emissions have been constant in the last two years; whereas those of diesel cars increased compared to 2016 (116.8 g CO<sub>2</sub>/km).

Sales of plug-in hybrid electric vehicles (PHEV) and battery-electric vehicles (BEV) continued to increase, last year by 42%. However the share of these categories in the new fleet remains low (1.5%). Around 97 000 BEV were registered in 2017, a 51% increase compared to 2016, while sales of new PHEVs increased by 35%. The largest number of BEV were registered in France (more than 26 110 vehicles), Germany (more than 24 350 vehicles) and the UK (more than 13 580 vehicles).

Combined, the relative share of PHEV and BEV sales was highest in Sweden, Belgium and Finland, reaching 5.5%, 2.7% and 2.6% respectively of national car sales in 2017.

The average mass of new cars sold in the EU (1 390 kg) remained broadly the same as in previous years. The average diesel car sold was 283 kg heavier than the average petrol car, 20 kg less than in 2016. While the average mass of diesel cars remained constant in the last two years, the average weight of petrol cars increased by 27 kg.

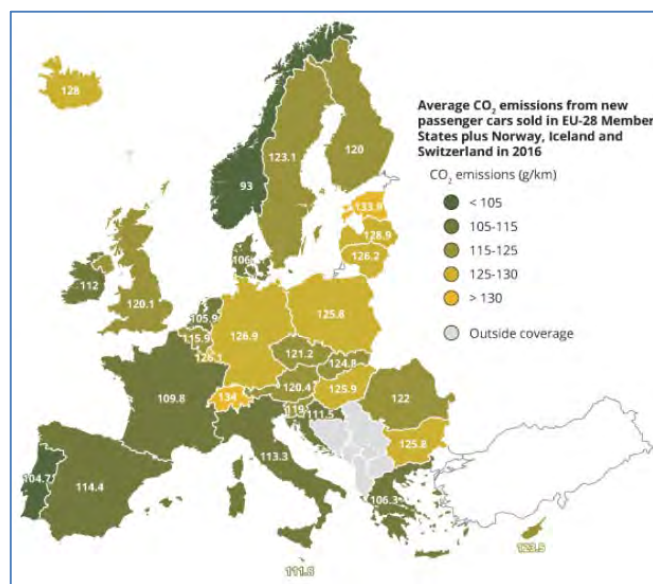
Since 1 September 2017, the 'Worldwide harmonized Light vehicles Test Procedure' (WLTP) has been introduced so that laboratory results better represent actual vehicle emissions on the road. For 2017 EU Member States had for the first time the possibility to report WLTP emission factors, but values were reported for just 7300 vehicles (0.05% of new registrations). The low number of WLTP values means it is not yet possible to provide a representative assessment of the new measurement protocol, the EEA concluded.

The EEA data on CO<sub>2</sub> from cars is at [www.eea.europa.eu/data-and-maps/data/co2-cars-emission-14](http://www.eea.europa.eu/data-and-maps/data/co2-cars-emission-14).

## EEA Briefing on Taxes and Incentives to promote Low-Emission Vehicle Sales

On 12 April 2018, the European Environment Agency (EEA) published a briefing on how financial incentives set by Member States, such as taxes, can drive reductions in average CO<sub>2</sub> emissions from new passenger cars in Europe.

The briefing, based on a study done by the EEA's European Topic Centre on Air Pollution and Climate Change Mitigation (ETC/ACM), examines what financial incentives EU Member States, plus Iceland, Liechtenstein, Norway and Switzerland are using to steer consumers to drive more eco-friendly cars and what the impact of these incentives has been. The analysis includes seven case studies which explore the different approaches used for taxation and incentives across France, Germany, Greece, Ireland, the Netherlands, Norway and Poland.



In 2016 most EU Member States employed incentives or taxes based on emissions to steer purchasing decisions on cars. The number of countries offering incentives for electric vehicles increased considerably between 2010 and 2016. Where appropriate incentives were in place, people bought vehicles with lower CO<sub>2</sub> emissions. However, other factors such as availability of new technologies and economic conditions were also important.

Policies must be carefully designed to avoid rebound effects and unintended adverse impacts such as increased emissions of other pollutants.

The EEA briefing is at [www.eea.europa.eu/themes/transport/vehicles-taxation/appropriate-taxes-and-incentives-do](http://www.eea.europa.eu/themes/transport/vehicles-taxation/appropriate-taxes-and-incentives-do).

## Commission Roadmap on Type-Approval Issues related to Brexit

On 26 April 2018, the European Commission released a roadmap aiming to ensure continued compliance with EU law by vehicle manufacturers holding type-approvals issued by the UK in the context of Brexit.

The proposal intends to allow manufacturers with type-approvals issued by the UK to apply with the type-approval authority of an EU-27 Member State for new type-approvals for the same types already in production.

It also intends to allow, where the tested requirements have not changed, reusing existing test reports for the new applications.

The proposal intends to allow type-approving against requirements that apply to “all new vehicles” and not against the requirements for the “new types”.

Finally, the proposal intends to ensure full responsibility of EU-27 type-approval authorities for the new approvals they have issued, and also obligations for in-service conformity and conformity of production for vehicles (products) already on the market under the UK type-approval.

The Commission roadmap is open for comments until 10 May 2018 and is at [http://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-2236797\\_en](http://ec.europa.eu/info/law/better-regulation/initiatives/ares-2018-2236797_en).

## Seven Member States call for EU Climate Ambition in Line with Paris Agreement

On 25 April 2018, ministers in charge of Climate change of France, the Netherlands, Sweden, Finland, Portugal, Germany and Luxembourg met in Paris in the context the “2050 Pathways Platform”.

The seven ministers called for the development and implementation in all countries, and particularly in the European Union, of an ambitious long term strategy in line with the objectives of the Paris Agreement.

Brune Poirson for France, Eva Svedling for Sweden, Eric Wiebes for the Netherlands, Kimmo Tiilikainen for Finland, José Mendes for Portugal, André Weidenhaupt for Luxembourg and Karsten Sach for Germany called for the European Commission to consider in its long-term strategy to raise the levels of ambition of the EU and to present pathways, towards net zero greenhouse gas emissions in accordance with the Paris agreement, including intermediary steps. They emphasized the commitment of each of their countries in the development of such a strategy at the national level, covering all sectors.

This transition towards a decarbonised economy should also contribute to achieving the UN’s 2030 Agenda for sustainable development, through a just and integrated transition, for the EU, and the rest of the world, the ministers said.

More info is at [www.ecologique-solidaire.gouv.fr/sites/default/files/2018.04.25\\_cp\\_en\\_corrige.pdf](http://www.ecologique-solidaire.gouv.fr/sites/default/files/2018.04.25_cp_en_corrige.pdf)

## German Transport Minister supports Diesel

On 17 April 2018, German transport Minister Andreas Scheuer published an op-ed in *Handelsblatt Global*, supporting diesel crucial role for the future.

Mr Scheuer said his job is to combine increased mobility with clean air. The German government wants to prevent driving bans, avoid the expropriation of millions of diesel drivers, protect hundreds of thousands of jobs, and enable

large companies and small businesses and the millions of commuters to travel freely.

The future belongs to alternative fuels including e-mobility but until they can be introduced nationwide, Germany resorts to a technology that is also a figurehead of German engineering: the diesel.

“We must, therefore, put an end to the ideological demonization of an engine that will help us comply with nitrogen oxide limits and achieve our climate protection goals. It is indisputable: we need the diesel engine – just like all other driving technologies! Its most modern form is a very efficient engine”, Mr Scheuer said.

“The fact is: nitrogen oxide pollution has fallen continuously and significantly in recent years, and in road traffic since 2000 by almost 70%. Our clean air measures are also already showing results: The number of cities with nitrogen oxide excesses has fallen – from 90 in 2016 to 66 in 2017. I am convinced that by 2020 we will be able to ensure that almost all cities comply with nitrogen oxide limits. Where this is not the case, we will follow up and, together with the affected municipalities, find intelligent measures that also eliminate this pollution.”

The full statement is at <https://global.handelsblatt.com/opinion/diesel-help-germany-achieve-goals-912626>.

## German Retrofit Programme for Busses

On 23 March 2018, the German Ministry for Transport and Digital Infrastructure announced the coming into force of the directive on the support programme to retrofit diesel busses. This new funding guideline is part of the so called emergency programme “Clean Air 2017 - 2020” which was put in place to counter air pollution in German cities.

The ministry is making €107 million available for the retrofitting of diesel busses. The Clean Air programme has a total budget of €1 billion and targets in particular the electrification of transport infrastructure. The busses in public transport that are going to be supported by the retrofit programme are part the Euro III, IV, V and EEV ones. SCR catalysts will probably be used for the retrofitting. The Federal Motor Vehicle Office needs to prove if the retrofit for each public bus concerned is handled according to rule and effected properly.

“Air quality will shortly be significantly improved”, according to the German transport Minister Andreas Scheuer. Urban transport should be particularly supported to increase air quality in Germany. The vehicles concerned are located in urban areas where the NO<sub>2</sub> limit is exceeded. The retrofit programme covers costs for the installation of exhaust aftertreatment systems that reduce NO<sub>2</sub> emissions.

The German subsidy directive for retrofitting public busses refers to performance requirement of the 01 series of amendments of UN Regulation No. 132: Class III REC for

NOx reduction only when the bus is already equipped with a Diesel Particulate Filter or Class IV REC for NOx and PM reduction. Germany is one of the rare Contracting Parties to make reference to the international UN Regulation No 132.

More info (in German) is at [www.bmvi.de/SharedDocs/DE/Pressemitteilungen/2018/019-scheuer-dieselbusse-nachruetzung.html](http://www.bmvi.de/SharedDocs/DE/Pressemitteilungen/2018/019-scheuer-dieselbusse-nachruetzung.html)

The subsidy directive is available (in German) at [www.bmvi.de/SharedDocs/DE/Anlage/DG/foerderrichtlinie-nachruetzung-dieselbusse.pdf?\\_\\_blob=publicationFile](http://www.bmvi.de/SharedDocs/DE/Anlage/DG/foerderrichtlinie-nachruetzung-dieselbusse.pdf?__blob=publicationFile).

## UK updates Diesel Car Environmental Label and Tax

On 1 April 2018, the Vehicle Excise Duty (car tax) in the UK changed for diesel cars.

Any new diesel car that does not comply with Euro 6d is required to pay tax at the next higher band. So for example, a diesel car emitting 120 g/km of CO<sub>2</sub> would currently pay car tax at band G on first registration. Unless the car has been certified to Euro 6d, then it now pays tax at band H on first registration.

Similarly, any new diesel company car attracts a 1% increase in benefit-in-kind tax, unless it meets the Euro 6d standard.

To accommodate these changes, the UK Vehicle Certification Agency (VCA) made some alterations to the New Car Fuel Consumption database and associated tools. For instance, the Euro standard field was amended so that the Euro standard can be expressed in full, e.g. "6d(TEMP)". To aid consumers in choosing cleaner vehicles, the database also allows manufacturers to include the maximum declared RDE NOx values (for both the urban and combined cycles). This comes on top of the NOx value obtained through the Type-Approval test which is already included within the database. However, it is voluntary information and has no impact on the first registration tax.

More info is at [www.dft.gov.uk/vca/additional/files/fcb-co2/point-of-sale-pos-system/label-changes-2018.pdf](http://www.dft.gov.uk/vca/additional/files/fcb-co2/point-of-sale-pos-system/label-changes-2018.pdf).

## French Roadmaps on Air Quality

On 13 April 2018, French Ministry for Ecological and Inclusive Transition Nicolas Hulot released roadmaps on air quality that have been developed for the 14 zones particularly affected by air pollution.

For each of these polluted area, measures are proposed to reduce air pollution in the short term, tackling sources from transport, housing, urban planning, agriculture, industry, but also financing and public awareness raising.

The Minister underlined in particular the success of the scrapping scheme under which French consumers can benefit from a €1000-2000 incentive when they replace an old, polluting vehicle. 25 000 people have benefited from

the scheme in the first three months. Also, more than 10 million 'Crit'Air' stickers which identify vehicle pollution level and are used for city access restrictions have been distributed to date.

The roadmaps (in French) are at [https://umap.openstreetmap.fr/fr/map/feuilles-de-route-qualite-de-lair\\_208822#5/48.575/7.734](https://umap.openstreetmap.fr/fr/map/feuilles-de-route-qualite-de-lair_208822#5/48.575/7.734).

## Denmark Heavy-duty Eurovignette to refer to Vehicle Emission Standard

On 5 April 2018, Denmark notified the European Commission of amendments to its Eurovignette for heavy-duty vehicles above 12 tonnes.

It is proposed that the rates for road user charges for heavy goods vehicles (the Eurovignette) be further differentiated than they are currently, on the basis of the vehicles' environmental characteristics categorised using emission standards. They have not been changed since 2001. A vehicle meeting, for example, the Euro V standard is now subject to the same tax as a vehicle that only meets the Euro II standard. It is therefore proposed that the charges be adapted so that new emission standards and the new maximum rates laid down by the European Commission are taken into account.

The aim of the draft act is also to make it possible for undertakings charging for the use of roads, bridges, ferries or tunnels to have access to the Vehicle Register so that they can send an outstanding payment reminder to the vehicle owner or user via information associated with a number plate.

More info at <http://ec.europa.eu/growth/tools-databases/tris/en/index.cfm/search/?trisaction=search.detail&year=2018&num=152&mLang=EN>.

## Low Emission Zones in Sweden

On 4 April 2018, the Swedish Minister for Infrastructure Tomas Eneroth and Minister for Environment Karolina Skog announced how the new provisions on Low Emission Zones (LEZ) would be designed.

The Government will give municipalities in Sweden the possibility of introducing three different kinds of LEZ as of 1 January 2020:

- The first type of LEZ regulates heavy duty vehicles. Municipalities can already implement LEZ for certain heavy-duty vehicles (lorries and buses). Such LEZ already exist in eight municipalities across Sweden.
- The second type of LEZ sets standards for cars. Initially, Euro 5 & 6 diesel cars may drive in LEZ but on 1 July 2022, the standards will be made stricter, allowing only Euro 6 diesel cars. The same restriction applies to hybrid electric vehicles and plug-in hybrids with diesel engines. Euro 5 and higher petrol cars will have access. This also applies to hybrid electric vehicles, plug-in hybrids, natural gas vehicles and E85 vehicles. Electric cars and fuel cell vehicles may also drive in the LEZ.

- The third type of LEZ sets the highest standard. This zone only allows purely electric cars, fuel cell cars and Euro 6 gas cars. High standards are also set for heavy-duty vehicles. This zone only allows electric vehicles, fuel cell vehicles, plug-in hybrids and gas vehicles that meet the Euro VI standard.

Once the European Commission notified, Sweden will adopt the necessary legislative amendments in the Road Traffic Ordinance making it possible for municipalities to introduce the new LEZs.

More info at [www.government.se/press-releases/2018/04/government-makes-announcement-on-low-emission-zones](http://www.government.se/press-releases/2018/04/government-makes-announcement-on-low-emission-zones).

## Austrian Environment Agency Report on Fine Particles

On 6 April 2018, the Austrian Environmental Agency (UBA) published a new report analysing the development of the particulate matter (PM) concentrations in Austria between 2009 and 2017.

The report was elaborated on behalf of the platform "Cleaner Air" which gathers experts of the Austrian federal states, the Ministry for Sustainability and Tourism as well as the Environmental Agency.

In Austria, fine dust pollution (both PM<sub>10</sub> and PM<sub>2.5</sub>) has decreased at most monitoring stations since 2011. Nevertheless, there has been relatively high levels of pollution in some regions of the country at the beginning of 2017.

The report focusses on the influencing factors of the particulate matter development. It explains that the main reasons for general pollution by fine dust are: PM emissions in Austria and bordering areas; emissions from PM precursors such as SO<sub>2</sub>, NO<sub>x</sub> and ammonia; spreading conditions like weather; and transport of polluted air to Austria. The decreasing concentration of PM is mainly linked to less fine dust emissions in the country in general and also in neighbouring countries. Advantageous weather conditions also played a role in the positive results. During the cold months of the years, the measurements of fine dust were nevertheless much higher. The trend of the fine dust pollution is therefore particularly influenced by the average values of the winter months.

A comparison of the development of the PM<sub>10</sub> and PM<sub>2.5</sub> concentrations shows that the decline was mainly determined by PM<sub>2.5</sub>; the "coarse fraction" (i.e. PM<sub>10</sub>-PM<sub>2.5</sub>) has hardly changed.

According to the report, further decreasing of fine dust pollution is going to be expected. Particulate matter caused by traffic and off-road transport will probably not increase. However, dust produced by abrasion and resuspension is developing differently and is probably going to be higher, depending on traffic performance.

The Austrian UBA report (in German) is at [www.umweltbundesamt.at/fileadmin/site/publikationen/REP0646.pdf](http://www.umweltbundesamt.at/fileadmin/site/publikationen/REP0646.pdf).

## German Transport Ministers calls for Review of NO<sub>2</sub> Monitoring Stations

On 20 April 2018, the Conference of Federal and State Transport Ministers of Germany agreed in Nurnberg on a review of the monitoring stations measuring NO<sub>2</sub> concentrations across Germany.

The request was made by Federal Minister Andreas Scheuer who called to verify the correct installation of air quality monitoring stations. In case that any city would measure too high NO<sub>x</sub> levels and decide to ban diesel vehicles, the measurement results should be correct and "legally watertight", according to him.

Further on, Mr Scheuer reminded that compliance with thresholds agreed on EU level as very important. Nevertheless, he doubted that in other European cities, like Rome or Brussels, monitoring stations would measure NO<sub>2</sub> levels correctly.

Germany was exceeding the NO<sub>2</sub> levels in 70 municipalities in 2017, 20 less than the year before. Now, the review will focus on the examination of several different aspects: the ability of a monitoring station to represent the NO<sub>2</sub> level over a wider area, proper placement of the measuring devices and avoiding placing monitoring stations under trees.

However, the German federal Environment Ministry rejected any concerns regarding the accuracy of German NO<sub>2</sub> monitoring stations.

## NORTH-AMERICA

### US EPA Revision of GHG Emissions Standards for Cars and Light Trucks

On 4 April 2018, the US Environmental Protection Agency (EPA) Administrator Scott Pruitt announced a revision of the US greenhouse gas (GHG) emissions standards for cars and light trucks for model years 2022-2025.

In addition, EPA announced the start of a joint process with the National Highway Traffic Safety Administration (NHTSA) to develop a notice and comment rulemaking to set more appropriate GHG emissions standards and Corporate Average Fuel Economy (CAFE) standards. According to Mr Pruitt, the previous standards set by the Midterm Evaluation process were "too high" and "did not comport with reality".

The overall goal of this revision is the setting of national US-wide standards, also including the state of California, even if it is currently possible for the state to impose stricter standards in the frame of the Clean Air Act (CAA). With the introduction of nationwide standards, the US EPA intends to support the production of "affordable and efficient" cars at a uniform level of GHG emissions, "while expanding environmental and safety benefits of newer cars."

More info is at [www.epa.gov/newsreleases/epa-administrator-pruitt-ghg-emissions-standards-cars-and-light-trucks-should-be](http://www.epa.gov/newsreleases/epa-administrator-pruitt-ghg-emissions-standards-cars-and-light-trucks-should-be).



On 2 April 2018, AECC's sister association in the US, MECA, anticipated the announcement of revision together with US auto parts makers and advanced materials manufacturers by outlining particular "principles for moving forward with fuel economy and emissions standards that allow for companies to remain competitive and invest in the development of new technologies".

According to automotive suppliers, it is essential to prevent market uncertainty. They jointly agreed that it is highly important to ensure predictable standards that allow reliable investment. Dr Rasto Brezny, Executive Director of MECA stated: "Certainty on national fuel economy and GHG policies will allow suppliers to make investments in research and manufacturing that lead to more jobs and more innovation for the long term. [...] We want to deliver advanced emission control and efficient propulsion technologies to the market."

The auto suppliers' joint press release is at <https://advancedengines.org/wp-content/uploads/2018/04/PressRelease-Mid-term-Review-4-3-18.pdf>.

## US NO<sub>2</sub> Air Quality Standards confirmed by EPA

On 6 April 2018, the US Environmental Protection Agency (EPA) issued a final rule keeping in place its two primary National Ambient Air Quality Standards (NAAQS) for nitrogen dioxide (NO<sub>2</sub>).

The US EPA left the one-hour standard at 100 parts per billion (ppb), and the annual average remains at 53 ppb.

Under the Clean Air Act, the primary standards for NO<sub>2</sub> and five other criteria pollutants are intended to protect public health with an adequate margin of safety. Based on a review of existing scientific evidence, EPA Administrator Scott Pruitt found that the status quo sufficed, according to the rule. The Clean Air Scientific Advisory Committee, a panel of outside experts, endorsed the decision.

The last review of the primary NO<sub>2</sub> standards was concluded in 2010. While the US EPA is supposed to revisit the benchmarks for NO<sub>2</sub> and the other five criteria pollutants every five years, the annual 53 ppb standard has been in place since 1971 while the agency set the hourly 100 ppb threshold as a result of the 2010 review.

The final rule is at [www.epa.gov/sites/production/files/2018-04/documents/no2\\_final\\_notice\\_4.6.18.pdf](http://www.epa.gov/sites/production/files/2018-04/documents/no2_final_notice_4.6.18.pdf).

## ASIA PACIFIC

### Indian's Bharat Stage VI Light-duty Test Procedure

On 27 March 2018, India's Ministry of Road Transport and Highways released final draft test procedures for Bharat Stage VI (BS VI) approval of light-duty and commercial vehicles (up to 3500 kg).

Test procedures include exhaust and evaporative emission testing associated with vehicle type-approval (including

measurement of fuel consumption/ CO<sub>2</sub> emissions), conformity of production testing, On-Board Diagnostic (OBD) validation testing, in-service conformity testing, and testing of Real-Driving Emissions (RDE). A conformity factor for RDE emission standards for India is delayed until April 2023.

The draft procedures document also covers testing issues related to measuring particle number (PN) emissions, specific testing requirements for alternative-fuelled and hybrid vehicles, and testing issues related to vehicles equipped with periodically regenerating emission controls (e.g. Diesel Particulate Filters) and/or vehicles equipped with emission controls that utilize a reagent (e.g. urea-SCR systems). The type approval testing proposal generally follows the pre-RDE/ pre-WLTC Euro 6 light-duty requirements (e.g. the emission test cycle is the modified Indian Driving Cycle that is based on the NEDC test cycle with urban and extra-urban features).

The initial nationwide implementation date of BS VI is April 2020 in India.

The final draft BS VI procedure is at <http://morth.nic.in/showfile.asp?id=3179>.

### Ultra-low Sulfur Fuels introduced in Delhi

On 1 April 2018 higher quality, lower sulfur, and less polluting Euro VI-compliant fuels were rolled out in India's capital city, Delhi.

The rollout is expected to reduce emissions of particulate matter (PM) by 10-20%, according to B.V. Rama Gopal, director (refineries) of Indian Oil Corp. Ltd. "The fuel shall be made available from 187 petrol pumps of Indian Oil within Delhi. For the next milestone on 1 April 2019 (NCR and metro cities), 1013 Indian Oil retail outlets shall be covered," according to Indian Oil Corp. The plan is to supply Alwar, Bharatpur, Karauli and Dhaulpur by 1 January 2019, to be followed by Meerut, Muzaffarnagar, Ghaziabad, Gautam Budh Nagar, Baghpat, Hapur, Buland Shahar and Shamli by 1 April 2019. Faridabad, Gurugram, Mahendranagar, Rewari, Jhajjar, Palwal and Mewat will follow on 1 October 2019.

A particular challenge during this transition period is the logistics in delivering Euro VI fuels to the pump, as these cannot be sent via pipeline. For the moment, all Euro VI fuels will have to be brought to retail outlets from the refineries and terminals via tank trucks.

### South Korea introduces Revised Vehicle Emissions Rating Scheme

On 25 April 2018, the Ministry of Environment of South Korea announced that all vehicles are now rated based on their levels of air pollutant emissions under a new rating system designed to encourage drivers to opt for greener cars.

Under the new system, electric cars and hydrogen fuel cars will get Grade 1, while hybrid cars will receive Grades

1 through 3. Gasoline or liquid petroleum gas (LPG) cars will get Grades 1 through 5, while diesel vehicles will score Grades 3 through 5. The rating system does not immediately lead to restrictions on the operation of cars that receive low grades, but provincial and municipal governments are expected to use the rating system if necessary to control traffic to address fine dust pollution in their jurisdictions.

The revision to the South Korean emissions rating regulation divides cars into five different grades. The existing rating system has been applied only to cars rolled out since 2012, but all cars are now subject to the revised system.

## Singapore to ban Older Motorcycles by 2028

On 6 April 2018, Singapore's National Environment Agency (NEA) announced that motorcycles registered before 1 July 2003 will no longer be allowed on roads from 1 July 2028 and must be exported or scrapped.

The move aims to improve air quality in Singapore as these older bikes produce more air pollutants. NEA said its studies have shown that motorcycles make up just 15% of vehicles in Singapore, but contribute more than 53% of carbon monoxide (CO) emissions from vehicles. NEA also said motorcycles registered before 1 July 2003, which will be at least 15 years old by this year, have higher emissions than newer models, emitting up to about 10 times more CO and 30 times more hydrocarbons than motorcycles compliant with the Euro 4 standard.

Motorcyclists affected by the new rule questioned the reliability of the data used to calculate the emissions of affected bikes. Owners said they rode their bikes mainly on weekends or a few times a week, not nearly as much to be emitting the same amounts of harmful gases as commercial vehicles. Only motorcycles under the Classic Vehicle, Vintage (Restricted) Vehicle and Revised Vintage Vehicle schemes are exempted from the new rule.

As an incentive, NEA is offering up to \$3500 (€2170) for eligible machines that are deregistered over the next five years. Owners of motorcycles registered before 1 July 2003 are eligible for the incentive if their vehicles have a valid 10-year certificate of entitlement as of 6 April 2018.

## Taiwan to tighten Vehicle Emission Inspection Requirements

On 9 April 2018, amendments to Taiwan's Air Pollution Control Act were approved by the legislature and will place tighter emissions restrictions on old cars, two-stroke scooters and diesel trucks.

As part of the updates to Article 35, emissions standards for cars over 10 years in age will be raised, and if a driver's vehicle fails an emissions inspection or does not have their vehicle inspected, their license plate will be confiscated.

If the proposed amendment passes its third reading, Taiwan's 5 million two-stroke scooters owners as well as its 76 000 diesel truck drivers will be directly affected. Under the proposed law, cars and scooters that fail to pass an emissions test have one month to make improvements, and if they fail on the second inspection, fines of between NT\$1500 to NT\$30 000 (€45-€830) will be levied. Those who have neglected to submit their vehicle for an emissions inspection for more than six months after being notified, or those who have failed to make improvements to their vehicle after a set period following their second failed emissions test, will face a fine of NT\$3000 to NT\$60 000 (€85-€1665). If the driver continues to fail to take steps to rectify their low emissions score, authorities may remove their license plate.

Meanwhile, a modification to Article 40 will create air quality control districts (i.e. Low Emission Zones) in which older vehicles will be prohibited from being driven in and violators could face a fine between NT\$500 and NT\$60 000 (€15-€1665).

## China announces Plan to allow Foreign Ownership of Automotive Ventures

In mid-April 2018, China announced that it is scrapping its limit on foreign ownership of automotive ventures, representing a major shift from policy in place for more than two decades.

The country will remove foreign ownership caps on companies making fully electric and plug-in hybrid vehicles in 2018, for makers of commercial vehicles in 2020, and the wider car market by 2022. It signals the end of a rule put in place in 1994, in which the world's largest auto market limited foreign carmakers to owning no more than a 50% share of any local venture. The policy was implemented to help domestic carmakers to compete against more advanced international rivals.

Analysts said the main beneficiaries, at least in the short term, would be manufacturers focused on new-energy vehicles.

## GENERAL

### Daimler Statement on Diesel

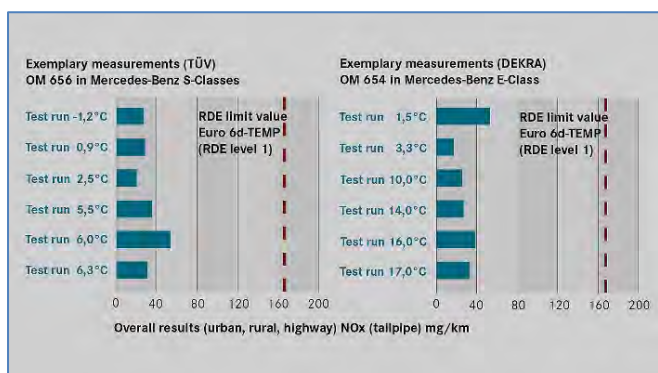
Daimler has published a webpage emphasizing that improving diesel is better than banning it.

The article explains why we still need a mix of drive technologies in the future, the role the modern diesel engine has to play and why Daimler relies on innovation instead of bans.

Daimler modestly says that they "bear responsibility for reconciling the demands for individual mobility, climate protection and clean air. And that is precisely why [they] fully back the diesel engines of today as a part of the drive mix of tomorrow:

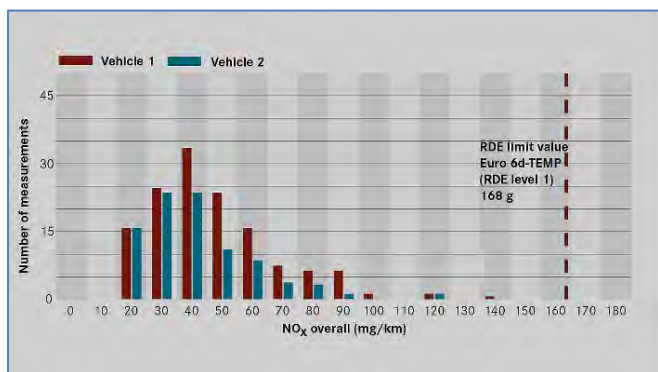
- First, diesel engines enjoy an undisputed advantage in respect to CO<sub>2</sub> over comparable gas engines.

- Second, as a result of [their] experience over the last few years [they] can improve the NOx emissions of many vehicles on the road – both effectively and relatively swiftly – through software updates.
- And, third, the market penetration of vehicles with the new generation of engines, as well as vehicles with Euro 6d-Temp certification, is really picking up speed. These record emissions are in many cases under - and in some cases significantly under - the laboratory threshold value of 80 mg/km in normal driving operation.”



German Technical Inspection Authority and DEKRA PEMS measurements at differing temperatures of the OM 656 and OM 654 diesel engines in Mercedes Benz vehicles.

To achieve certification, the Euro 6d-Temp RDE threshold limit of 168 mg/km may not be exceeded. In the vast majority of journeys, however, emissions are significantly lower. This explains why rapid penetration of the existing base of vehicles by vehicles with the new certificate will significantly improve air quality.



Example of the frequency distribution of RDE measurements in two Mercedes-Benz vehicles.

The Daimler page on Diesel is at [www.daimler.com/innovation/diesel/diesel-debate.html](http://www.daimler.com/innovation/diesel/diesel-debate.html).

## ADAC Ecotest of New Diesel shows Low NOx Emissions

On 23 April 2018, the German automobile club ADAC published results of NOx emission tests of three RDE-compliant diesel cars.

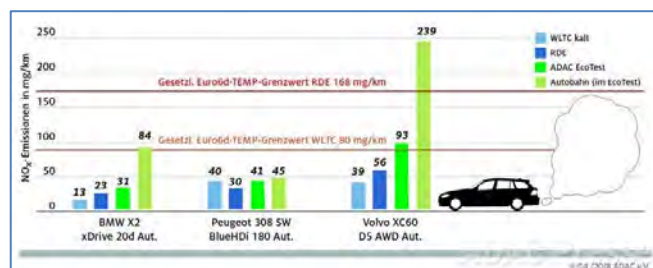
ADAC has tested on the ADAC Ecotest, which includes dyno and on-road tests, three Euro 6d-Temp diesel

passenger cars: a BMW X2 xDrive20d Steptronic, a Peugeot 308 SW 2.0 BlueHDi 180 EAT8 and a Volvo XC60 D5 AWD Geartronic.

Thanks to the latest emissions control technology, NOx emissions can be effectively reduced. The values were consistently low with the BMW and the Peugeot, below the regulatory limit of 80 mg/km in almost all Ecotest cycles, including under heavy load driving conditions.

The Volvo, which also performed well overall in terms of NOx emissions, most likely due to its higher weight, emitted significantly more NOx on the highway than in city driving.

ADAC noted also that the good results of the on-road measurements are also to be emphasized because they came about at lower ambient temperatures than usual on the test bench.



More info (in German) on ADAC tests at <https://presse.adac.de/meldungen/adac-ev/technik/nur-noch-geringer-stickoxid-ausstoss-bei-neuesten-diesel-modellen.html>.

## Bosch Announcement on Low-Emission Diesel

On 25 April 2018, German company Bosch hosted their annual press conference and announced a decisive breakthrough in diesel technology.

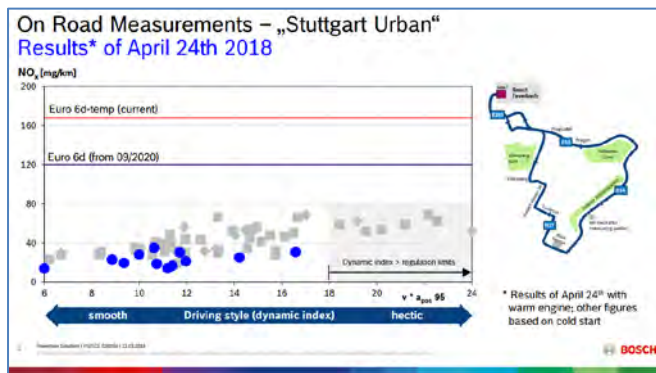
Bosch’s CEO Dr Volkmar Denner said “There’s a future for diesel. Today, we want to put a stop, once and for all, to the debate about the demise of diesel technology.”



New developments from Bosch could enable vehicle manufacturers to reduce emissions of NOx so drastically that they already comply with future limits. Even in Real-Driving Emissions (RDE) testing, emissions from vehicles

equipped with the newly premiered Bosch diesel technology are not only significantly below current limits but also those scheduled to come into force from 2020. Bosch engineers achieved these results by refining existing technologies. There is no need for additional components, which would drive up costs.

Today, vehicles equipped with Bosch diesel technology can achieve as little as 13 milligrams of NO<sub>x</sub> per kilometre in standard legally-compliant RDE cycles. That is approximately one-tenth of the prescribed limit that will apply after 2020. And even when driving in particularly challenging urban conditions, where test parameters are well in excess of legal requirements, the average NO<sub>x</sub> emissions of the Bosch test vehicles are as low as 40 mg/km.



This is achieved through a combination of advanced fuel-injection technology, a newly developed air management system, and intelligent temperature management.

To date, two factors have hindered the reduction of NO<sub>x</sub> emissions in diesel vehicles. The first of these is driving style. The technological solution developed by Bosch is a highly responsive air-flow management system for the engine. A dynamic driving style demands an equally dynamic recirculation of exhaust gases. This can be achieved with the use of a RDE-optimized turbocharger that reacts more quickly than conventional turbochargers. Thanks to a combination of high- and low-pressure exhaust-gas recirculation (EGR), the air-flow management system becomes even more flexible. This means drivers can drive off at speed without a spike in emissions.

Equally important is the influence of temperature. To ensure optimum NO<sub>x</sub> conversion, the exhaust gases must be hotter than 200°C. In urban driving, vehicles frequently fail to reach this temperature. Bosch has therefore opted for a sophisticated thermal management system for the diesel engine. This actively regulates the exhaust gas temperature, thereby ensuring that the exhaust system stays hot enough to function within a stable temperature range and that emissions remain at a low level.

“Diesel will remain an option in urban traffic, whether drivers are tradespeople or commuters,” Dr Denner said. Even with this technological advance, the diesel engine has not yet reached its full development potential. Bosch now aims to use artificial intelligence to build on these

latest advances. This will mark another step toward a major landmark: the development of a combustion engine that – with the exception of CO<sub>2</sub> – has virtually no impact on the ambient air.

More info is at [www.bosch-presse.de/pressportal/de/en/breakthrough-new-bosch-diesel-technology-provides-solution-to-nox-problem-155524.html](http://www.bosch-presse.de/pressportal/de/en/breakthrough-new-bosch-diesel-technology-provides-solution-to-nox-problem-155524.html).

## Manufacturers and Cities call for EU Dialogue on Urban Access Restrictions

On 24 April 2018, representatives of European cities and automobile manufacturers called on the European Commission to continue to support the ongoing dialogue between all players involved in Urban Vehicle Access Regulations (UVARs).

This call was made yesterday at a workshop jointly organised by POLIS, the network of cities and regions on transport innovation, the European Automobile Manufacturers’ Association (ACEA) and the European Council for Automotive R&D (EUCAR). The aim of the workshop was to examine the role of EU institutions in the uptake of UVARs, as well as the future technological outlook in this area.

Participants stated that UVARs should be more efficiently deployed throughout the EU, helping reach policy goals at a minimal cost for implementers and road users. Issues such as better scheme design, monitoring, evaluation and enforcement should be coordinated in a European rather than a national context.

## ICCT Report on EU Heavy-duty Vehicles Emissions

On 8 April 2018, the International Council on Clean Transportation (ICCT) published a new report prepared by the Institute for Internal Combustion Engines and Thermodynamics of the Graz University of Technology (TU Graz) comparing fuel consumption and emissions of representative heavy-duty vehicles in Europe.

TU Graz conducted track and chassis dynamometer testing to determine the aerodynamic drag, pollutant emissions, and fuel consumption of three European heavy-duty vehicles: a typical 18-tonne, Euro VI rigid truck used for mid-distance distribution; a typical Euro VI tractor-trailer used for long-haul operation; and a best-in-class Euro VI tractor-trailer used for long-haul operation.

The testing campaign identified a large fuel consumption difference between a typical tractor-trailer, representative of the EU fleet, and a best-in-class vehicle. Over the regulatory Long Haul cycle, the best-in-class tractor trailer consumed 29.9 l/100 km. The typical tractor-trailer consumed 9% more fuel at 32.6 l/100 km. The source of the measured difference in fuel consumption is the powertrain efficiency. While the best-in-class vehicle required 3% more energy at the wheel, it also had a powertrain 11% more efficient than the typical truck.

The TU Graz report is at [www.theicct.org/sites/default/files/publications/HDV-EU-fuel-consumption\\_TU-Graz\\_ICCT-Consultant-Report\\_27022018\\_vF.pdf](http://www.theicct.org/sites/default/files/publications/HDV-EU-fuel-consumption_TU-Graz_ICCT-Consultant-Report_27022018_vF.pdf).

The ICCT also released a fact sheet summarizing the study outcome.

	Fuel consumption		Road load energy use		Powertrain BSFC	
	Long Haul	Regional Delivery	Long Haul	Regional Delivery	Long Haul	Regional Delivery
Typical tractor	32.6 l/100km	34.3 l/100km	1.17 g/kWh	1.18 g/kWh	227 g/kWh	236 g/kWh
Best-in-class tractor	29.9 l/100km	31.6 l/100km	1.21 g/kWh	1.21 g/kWh	202 g/kWh	210 g/kWh
Rigid truck	31.1 l/100km	21.6 l/100km	0.85 g/kWh	0.73 g/kWh	225 g/kWh	238 g/kWh

Summary of the key results for the three EU HDVs tested

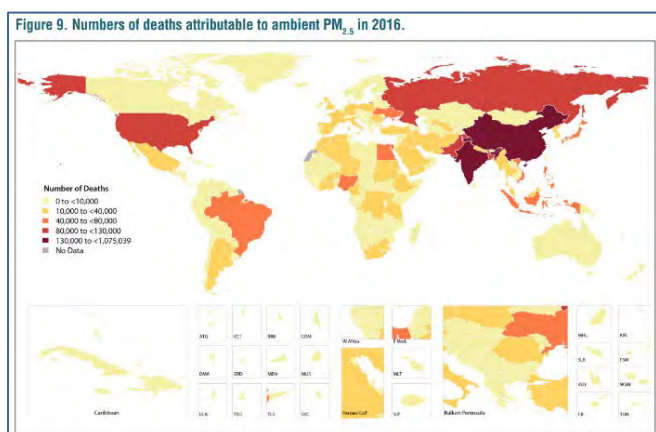
The ICCT fact sheet is at [www.theicct.org/sites/default/files/HDV-EU-fuel-consumption\\_ICCT-Fact-Sheet\\_08042018\\_vF.pdf](http://www.theicct.org/sites/default/files/HDV-EU-fuel-consumption_ICCT-Fact-Sheet_08042018_vF.pdf).

## State of Global Air 2018 Report

On 17 April 2018, the Health Effects Institute (HEI) published the second issue of the State of Global Air report.

It expands on last year's report by adding household air pollution (by burning solid fuel in homes) and total air pollution to the discussion on air quality and health for all countries around the globe. The report is based on the most recent data available (for 2016) and provides a comprehensive picture of global air pollution and health levels and trends since 1990.

Seven billion people, more than 95% of the world's population, live in areas of unhealthy air, according to the report. All told, long-term exposure to outdoor and indoor air pollution contributed to 6.1 million premature deaths from stroke, heart attack, lung cancer and chronic lung disease. That makes air pollution the fourth highest cause of death among all health risks, exceeded only by high blood pressure, diet and smoking.



The analysis found that China and India together were responsible for over half of the total global attributable deaths. The study also finds that increasing exposure and a growing and aging population have meant that India now rivals China for among the highest air pollution health burdens in the world, with both countries facing some 1.1 million early deaths from outdoor air pollution in 2016. China has made initial progress, beginning to achieve air

pollution declines; in contrast, Pakistan, Bangladesh and India have experienced the steepest increases in air pollution levels since 2010.

The State of Global Air 2018 report is at [www.stateofglobalair.org](http://www.stateofglobalair.org).

## GFEI Report on Vehicle Size Evolution

The Global Fuel Economy Initiative (GFEI) has published a new working paper "Wider, taller heavier: Evolution of light duty vehicle size over generations".

The GFEI paper states that vehicle size and weight has evolved significantly in the last decades, with the vehicle getting larger, taller and substantially heavier. The evidence gathered in this paper shows that the growing share of Sport Utility Vehicles (SUVs) is drastically accelerating the size and weight increase trends and threatens the EU CO<sub>2</sub> improvement rates.

The new report suggests that it is time to start considering regulating average vehicle weight. Corporate average weight reduction targets might be a good option to strongly encourage weight-reduction strategies. This would benefit not only fuel economy but also safety, road wear, and road occupation, with smaller vehicles expected. It would also decrease the need for high engine power, further reducing vehicle weight.

The GFEI working paper and a summary are available at [www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-17](http://www.globalfueleconomy.org/data-and-research/publications/gfei-working-paper-17).

## Amminex wins EU Horizon 2020 Retrofit Award

On 17 April 2018, Amminex, a Faurecia company, announced that together with its three partners Johnson Matthey, the International Council on Clean Transportation (ICCT) and the Technical University of Graz, that they have won the European Commission's Horizon 2020 Prize in the engine retrofit for clean air category.

The Horizon 2020 prize of €1.5 million was given for the retrofit of Euro 5 diesel cars in order to reduce their NOx emissions. Award winners retrofitted a Euro 5 diesel car with the Amminex ASDS™ technology combined with an SCR catalyst from Johnson Matthey; this reduced NOx emissions to Euro 6-equivalent levels in real-driving conditions.

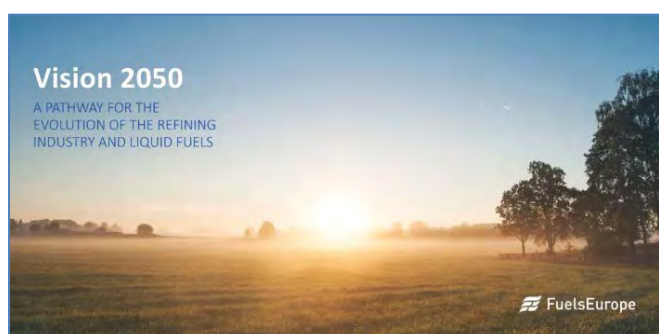
## EU Refining Industry's Vision 2050

On 19 April 2018, the European refining industry represented by FuelsEurope announced its Vision 2050, a pathway for the evolution of the refining industry and liquid fuels.

The refining industry is committed to contribute to this objective by continuing to reduce its CO<sub>2</sub> emissions and providing the economy and citizens with low-carbon fuels and other products that society needs.

Development of a diversity of energies and energy carriers will give an economy flexibility, resilience and the possibility for the market to select the optimal solution for every sector and use. Liquid fuels, with their unique characteristics will continue to be employed in many transport fields. Therefore, the EU refining industry has an important and enduring role to play in the energy choices of the future, by providing low-carbon liquid fuels to complement low-carbon electrons, gas and hydrogen as energy carriers.

Low-carbon liquid fuels include sustainable biofuels, Carbon Capture and Storage (CCS) / Carbon Capture and Utilization (CCU), renewable hydrogen and power-to-liquids, each having potential to reduce GHG intensity across the lifecycle in all the transport segments.



Based on current technologies and anticipated learning curves, the cost for implementing low-carbon solutions is likely to be high. Therefore, appropriate measures will be needed to safeguard the international competitiveness of EU industries and avoid off-shoring of manufacturing activities to countries with lower climate ambitions, resulting in the increase of product imports and lower security of supply, FuelsEurope said.

FuelsEurope Vision 2050 is at [www.fuelseurope.eu/wp-content/uploads/2018/04/DEF\\_EN\\_FE\\_Vision2050\\_digital.pdf](http://www.fuelseurope.eu/wp-content/uploads/2018/04/DEF_EN_FE_Vision2050_digital.pdf).

## RESEARCH SUMMARY

### Effects of Emissions and Pollution

Variability in impact of air pollution on subjective well-being, Guodong Du, et al.; *Atmospheric Environment* (in press), [doi: 10.1016/j.atmosenv.2018.04.018](https://doi.org/10.1016/j.atmosenv.2018.04.018).

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## Transport, Climate Change & Emissions

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## FORTHCOMING CONFERENCES

### 7<sup>th</sup> Freiburg Workshop 'Luftreinhaltung und Modelle'

15-16 May 2018, Freiburg, Germany

[www.ivu-umwelt.de/front\\_content.php?idcat=3](http://www.ivu-umwelt.de/front_content.php?idcat=3)

### SIA Powertrain 2018: the New Compression Engine for Passenger Cars & Commercial Vehicles

16-17 May 2018, Rouen, France

[www.sia.fr/evenements/93-sia-powertrain-rouen-2018](http://www.sia.fr/evenements/93-sia-powertrain-rouen-2018)

*The conference will support the automotive community in providing an overall picture of state-of-the-art technologies and by anticipating future development challenges. Reflecting the ongoing focus shift in transportation decarbonisation to a well-to-wheel basis, new topics will be introduced on alternative powertrain energy types (sustainable liquid and gaseous fuels) and fuel cells.*

### European Commission Green Week "Green Cities for a Greener Future"

22-24 May 2018, Brussels, Belgium

[www.eugreenweek.eu](http://www.eugreenweek.eu)

*EU Green Week 2018 will explore ways in which the EU is helping cities to become better places to live and work. Showcasing policy developments on air quality, noise, nature and biodiversity, waste and water management, it will promote participatory approaches to urban development, networking schemes, and tools for sharing best practices, engaging local authorities and citizens, and encouraging them to share their vision of a sustainable future.*

**AECC will intervene in the session 6.4 about "Air quality in cities; solutions and synergies with Climate Action" on 24 May 2018.** This session will focus on integrated, coordinated local strategies to improve air quality, help mitigating climate change and address further urban challenges such as mobility and energy efficiency. Today, still 3 out of 10 EU citizens are exposed to particulate matter concentrations above the EU limit value and 9 out of 10 to concentrations above the stricter World Health Organisation guidelines. One of the most important sources of local air pollution is transport. Therefore, it is necessary to inform local authorities about possibilities of clean and sustainable transportation to be achieved jointly with the industry.

### Integer Emissions Summit & AdBlue® Forum China 2018

5-7 June 2018, Beijing, China

[www.integer-research.com/conferences/ies-china-2018](http://www.integer-research.com/conferences/ies-china-2018)

## Connectivity – Key to future emission and consumption reduction in vehicle and powertrain?

7-8 June 2018, Graz, Austria

[www.avl.com/-/30th-international-avl-conference-engine-environment-2018](http://www.avl.com/-/30th-international-avl-conference-engine-environment-2018)

*On the one hand, connectivity enables predictive and adaptive management of energy and emissions with advantages regarding energy consumption, emissions, wear and durability thanks to the online monitoring of all relevant system parameters. On the other hand, the subject "Online Vehicle" necessitates stricter requirements being placed on data security and also causes a paradigm shift in the development and validation of vehicles. The questions "what does networking make possible, what is meaningful, and how do we control the corresponding risks" pose quite possibly the most intriguing range of topics in automotive development today.*

## 6<sup>th</sup> International Exhaust Emissions Symposium

14-15 June 2018, Bielsko-Biala, Poland

[www.bosmal.com.pl/693-symposium\\_2018](http://www.bosmal.com.pl/693-symposium_2018)

*The main topics of the symposium are emissions legislation - for all jurisdictions; WLTP- and RDE-focused R&D test methods; fuel economy in light of Euro 6d, WLTP and RDE; new methods of PM testing; compounds which are potential candidates for emissions regulation; emissions test equipment (including PEMS); emissions reduction technology; aftertreatment systems, technologies and strategies; emissions simulation; powertrain development and electrification; IC Engine test method development; vehicular fuel development; alternative fuels, fuel additives and fuel blends; gaseous fuels CNG & LPG; engine oil development; commercial vehicles, discussion of other automotive sectors: synergies and shared challenges/solutions.*

## Cambridge Particle Meeting 2018

15 June 2018, Cambridge, UK

[www.cambridgeparticlemeeting.org/2018](http://www.cambridgeparticlemeeting.org/2018)

## 22<sup>nd</sup> ETH- Conference on Combustion Generated Nanoparticles

18-21 June 2018, Zurich, Switzerland

[www.nanoparticles.ethz.ch](http://www.nanoparticles.ethz.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.*

## 7<sup>th</sup> International MinNOx Conference

19-20 June 2018, Berlin, Germany

[www.iav.com/MinNOx](http://www.iav.com/MinNOx)

*Topics of the conference include: exhaust emission legislation, MinNOx systems in diesel, gasoline and hybrid powertrains from passenger car to heavy-duty as well as off-highway applications; global optimization of engine and MinNOx systems to reduce both NOx and CO<sub>2</sub> emissions; innovative ideas and methods for the development, modelling or control of component and overall systems; emission control technologies; boundary conditions for operating MinNOx systems monitoring and diagnostics of MinNOx systems; and potential for cost reduction of future concepts.*

## The Future of Transportation World Conference

19-20 June 2018, Cologne, Germany

[www.thefutureoftransportconference.com](http://www.thefutureoftransportconference.com)

*Conference streams include urban mobility & smart cities; mobility as a service; quantum shifts; sustainability in transportation; changing landscape for automotive industry; etc.*

## Integer Emissions Summit & AdBlue<sup>®</sup> Forum Europe 2018

26-28 June 2018, Brussels, Belgium

[www.integer-research.com/conferences/integer-emissions-summit-adblue-forum-europe-2018](http://www.integer-research.com/conferences/integer-emissions-summit-adblue-forum-europe-2018)

*The summit will cover emissions control for heavy-duty commercial vehicles, non-road mobile machinery, light-duty vehicles and passenger cars, and the European AdBlue<sup>®</sup> market.*



**AECC will give a presentation on the evolution of advanced emissions control system to meet NOx and particulates regulations.**

FEV Conference Diesel Powertrain 3.0

3-4 July 2018, Coventry, UK

[www.fev.com/events/fev-conferences/fev-conference-diesel-powertrains-30/introduction.html](http://www.fev.com/events/fev-conferences/fev-conference-diesel-powertrains-30/introduction.html)

*The international conference will highlight current developments in the Light-Duty Diesel Powertrain segment with a widespread list of topics, offering multiple interesting paths for best compliance with upcoming demands.*

Powertrain Modelling and Control Conference 2018

10-11 September 2018, Leicester, UK

[www.pmc-conf.com](http://www.pmc-conf.com)

*Topics of interest include electric drivetrains; hybrid powertrains; system identification; powertrain optimization; emission legislation; powertrain / engine testing; fuel cell; noise, vibration and harshness; combustion engine modelling; performance /drivability; ECU development; drive cycles; mapping and calibration; Hardware-in-Loop (HIL) testing; driveline and transmission; and tribology and friction*

SAE International Powertrains, Fuels & Lubricants Meeting

17-19 September 2018, Heidelberg, Germany

[www.pfl18.org](http://www.pfl18.org)

*Topics of interest include general powertrain development; engine combustion; exhaust, aftertreatment & emissions; fuels and lubricants; new engines, components, actuators & sensors; hybrid & electric powertrains; and transmission and driveline technology.*

37<sup>th</sup> FISITA World Automotive Congress: Disruptive Technologies for Affordable and Sustainable Mobility

2-5 October 2018, Chennai, India

[www.fisita-congress.com](http://www.fisita-congress.com)

*The congress topics include powertrain & emissions, fuels & lubricants, noise & vibration, vehicle dynamics, active and passive safety, electric & hybrid vehicles, autonomous & connected vehicles, manufacturing & materials, vehicle concepts, and sustainability.*

2018 Aachen Colloquium Automobile and Engine Technology

8-10 October 2018, Aachen, Germany

[www.aachener-kolloquium.de](http://www.aachener-kolloquium.de)

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

6<sup>th</sup> International Conference Real-Driving Emissions

15-17 October 2018, Berlin, Germany

<https://real-driving-emissions.iqpc.de>

SAE Heavy Duty Diesel Emissions Control Symposium

16-17 October 2018, Gothenburg, Sweden

<https://hddec18.org>

*At the bi-annual symposium, the very latest trends in global emissions control legislation and the implications of these regulations on engine and after treatment technology will be discussed.*

Integer Emissions Summit & AdBlue<sup>®</sup> Forum India 2018

17-18 October 2018, New Delhi, India

[www.integer-research.com/conferences/ies-india-2018/](http://www.integer-research.com/conferences/ies-india-2018/)

11<sup>th</sup> International Congress on Catalysis and Automotive Pollution Control CAPoC11

29-31 October 2018, Brussels, Belgium

<http://capoc.ulb.ac.be>

*The International Congress on Catalysis and Automotive Pollution Control will discuss applications and requirements of catalysis in automotive emission control such as catalyst and sorption technologies; particulate emission control for both diesel and gasoline engines; aftertreatment for gaseous HC, H<sub>2</sub> and renewable or reformulated fuel mixtures; emission control for natural-gas and dual-fuel engines; emission control for hybrid vehicles; off-cycles emissions and unregulated pollutants (e.g. greenhouse gases); materials for catalysts, washcoat and fuel-borne catalysts; modelling of aftertreatment systems and catalyst characterization; integrated emission control systems, on-board diagnostics; sustainable fuel technologies; and innovative technologies (new materials, recovery of precious metals).*

### WHO 1<sup>st</sup> Global Conference on Air Pollution and Health

30 October - 1 November 2018, Geneva, Switzerland

[www.who.int/airpollution/events/conference/en](http://www.who.int/airpollution/events/conference/en)

*The conference will bring together global, national and local partners to share knowledge and mobilize action for cleaner air and better health globally. The conference will update the evidence on the health impacts of air pollution; methods of monitoring pollution and health exposures; and tools for assessing and implementing effective interventions. It will support strong health sector leadership for change, in partnership with other sectors. Cities and countries will be invited to join the BreatheLife campaign and commit to reducing air pollution by 2030 in line with WHO Air Quality Guidelines.*

### Ricardo Motorcycle Conference 5.0

5 November 2018, Milan, Italy

<https://motorcycle.ricardo.com/motorcycle-conference>

*A niche annual event that brings together leading global motorcycle industry experts to discuss new technologies and future drivers within the motorcycle and urban mobility arenas.*

### Integer Emissions Summit USA 2018

6-7 November 2018, Indianapolis, USA

[www.integer-research.com/conferences/ies-usa-2018/](http://www.integer-research.com/conferences/ies-usa-2018/)

### 2<sup>nd</sup> International FEV Conference Zero CO<sub>2</sub> Mobility

13-14 November 2018, Aachen, Germany

[www.fev.com/events/fev-conferences/fev-conference-zero-co2-mobility/introduction.html](http://www.fev.com/events/fev-conferences/fev-conference-zero-co2-mobility/introduction.html)

*The conference will offer a platform for strategic discussion on the potential and performance of various forms of energy storage – from battery technologies to eco- and e-fuels.*

### 10<sup>th</sup> Better Air Quality Conference

14-16 November 2018, Kuching, Malaysia

<http://baq2018.org>

*The 10<sup>th</sup> Better Air Quality (BAQ) is themed, Regional Action, Global Impact. It is organized by Clean Air Asia, the Clean Air Forum Society of Malaysia (MyCAS), Malaysia's Ministry of Natural Resources and Environment, and the Natural Resources and Environment Board of Sarawak.*

### Deadline for abstracts: 15 May 2018

### 2018 Polis Conference on "Transport innovation for sustainable cities and regions"

22-23 November 2018, Manchester, UK

[www.polisnetwork.eu/2018conference](http://www.polisnetwork.eu/2018conference)

### Deadline for abstracts: 18 May 2018

### 40<sup>th</sup> International Vienna Motor Symposium

16-17 May 2019, Vienna, Austria

<https://wiener-motorensymposium.at>