

# NEWSLETTER

International Regulatory Developments

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## EUROPE

### European Parliament passes Resolution on European Green Deal

On 15 January 2020, the European Parliament (EP) passed a resolution on the European Green Deal. It says that the EP will reach more detailed positions on specific measures as the Green Deal progresses, but in the meantime, it comments on all aspects of the European Green Deal.

Specifically, on the zero-pollution target, it welcomes the Commission's plans to present a zero-pollution action plan for air, water and soil, ...[which] should include enhanced monitoring and should focus its actions on pollution prevention.

The resolution calls on the Commission to raise the level of protection of the quality of our air, in line with latest scientific findings and the World Health Organization (WHO) guidelines; urges better monitoring of air pollution in Member States through the implementation of robust and harmonised measurement methods, and easy access to the information for European citizens.

The resolution in full can be found at [www.europarl.europa.eu/doceo/document/TA-9-2020-0005\\_EN.html](http://www.europarl.europa.eu/doceo/document/TA-9-2020-0005_EN.html).

### European Commission Work Programme for 2020

On 29 January 2020, the European Commission published its Work Programme for 2020. It says the Commission will put the United Nations Sustainable Development Goals at the heart of policymaking. "For the first time, we have integrated insights on long-term trends that are shaping our economies and societies," said Maros Šefčovič, EU Commission Vice-President in charge of interinstitutional relations and foresight.

On the subject of the European Green Deal, the first European Climate Law will contain a binding climate neutrality target for 2050, and the Commission will propose a new EU ambition to reduce greenhouse gas emissions by 2030. A European Climate Pact will bring together all relevant stakeholders to preserve the climate and environment.

The work programme is available to read at [ec.europa.eu/info/sites/info/files/cwp-2020\\_en.pdf](http://ec.europa.eu/info/sites/info/files/cwp-2020_en.pdf)

with the timetable for initiatives at [ec.europa.eu/info/sites/info/files/cwp-2020-annex-1\\_en.pdf](http://ec.europa.eu/info/sites/info/files/cwp-2020-annex-1_en.pdf).

### ENVI Committee Draft Report on Proposal to amend Euro 5/6 Regulation

On 18 December 2019, the Environment (ENVI) Committee published a draft report on the proposal to amend Regulation (EC) No 715/2007 on emissions type approval for Euro 5 and 6. The report was discussed by the committee on 20 January 2020.

The report says that the Rapporteur, MEP De Lange (EPP, NL), finds it appropriate to re-install conformity factors (CF) into the regulation and to include a margin of error resulting from statistical and technical uncertainties of Portable Emission Measurement Systems (PEMS).

The report introduces amendments to make clear that the conformity factor consists of the emission limits and the device-related error margin. It also empowers the Commission to annually review downwards the conformity factors as a result of the improved quality of the measuring procedure or technical progress of the PEMS. Moreover, the Rapporteur calls on the Commission to present its post-Euro 6 proposal by mid-2021 taking into account the upcoming results of the European Committee for Standardization (CEN TC301) on a draft international standard to assess PEMS equipment.

During the discussion of the report in January, some MEPs underlined the need to wait for a Joint Research Centre (JRC) report on the performance of the test instrumentation, the results of which are expected to be published in February.

The ENVI Committee has also published its amendments to this proposal, where some shadow rapporteurs supported re-installing the CF, while other shadow rapporteurs proposed rejecting the introduction of CF and tightening the NOx Euro 6 emission limits for diesel vehicles.

The ENVI Committee is expected to vote on the report and its amendments on 18 March.

The draft ENVI report is at [www.europarl.europa.eu/doceo/document/ENVI-PR-644883\\_EN.pdf](http://www.europarl.europa.eu/doceo/document/ENVI-PR-644883_EN.pdf).

The amendments to the report can be found here: [www.europarl.europa.eu/doceo/document/ENVI-AM-646951\\_EN.pdf](http://www.europarl.europa.eu/doceo/document/ENVI-AM-646951_EN.pdf).

### IMCO and TRAN Committee Proposals on Amended Euro 5/6 Regulation

On 6 January 2020, the Committee on the Internal Market and Consumer Protection (IMCO) published its proposed amendments to the regulation amending Regulation (EC) No 715/2007 on emissions type approval for Euro 5 and 6.

The amendments specifically cover consumer rights and include a requirement that individuals should not be penalised by actions to 'correct the situation' around NOx from diesel engines or particles from gasoline direct injection engines. IMCO also calls for transparency of and access to repair and maintenance information, along with 'adequate compensation' in the form of hardware changes and conversion premiums for consumers.

The IMCO proposals are available at [www.europarl.europa.eu/doceo/document/IMCO-AM-644807\\_EN.pdf](http://www.europarl.europa.eu/doceo/document/IMCO-AM-644807_EN.pdf).

On 16 January 2020, the Committee on Transport and Tourism (TRAN) published its Draft Opinion containing amendments to proposed regulation. Many of TRAN's

amendments make reference to other Regulations or provide clarification to existing text. It does also propose that the conformity factor and error margin are separated as 'the Commission proposal is open to misinterpretation', suggesting that the conformity factors for NOx and PN respectively are 1.43 and 1.5 (rather than 1+0.43 and 1+0.5).

TRAN's draft opinion can be found at [www.europarl.europa.eu/doceo/document/TRAN-PA-644889\\_EN.pdf](http://www.europarl.europa.eu/doceo/document/TRAN-PA-644889_EN.pdf).

## Committee of the Regions publishes Implementation Report on Air Quality

On 20 December 2019, the European Committee of the Regions published a report following its consultation on the implementation of the EU's Air Quality Directives.

Questions were asked of representatives in European Regions, addressing issues including the integration between air quality and climate plans, collection of information, effects of air quality policies and implementation challenges.

The report says that it is extremely important for the EU to take account of regions and cities and consider them for the design of future policies.

The report is available to read at [cor.europa.eu/en/engage/Documents/RegHub/Full-AQ-implementation-report.pdf](http://cor.europa.eu/en/engage/Documents/RegHub/Full-AQ-implementation-report.pdf).

## Permanent Representatives Committee Discussion on Emissions Regulation

On 8 January 2020, the EU Council published a Summary Record of the December meeting of the Permanent Representatives Committee. Amongst other things they discussed Regulation (EC) No 715/2007 on type approval of Euro 5 and 6 light-duty vehicles.

The Committee agreed on a mandate for negotiations with the European Parliament and released a statement by Denmark, Ireland and the Netherlands. This states that they see no justification to apply a final or temporary conformity factor (CF) of more than 1.32, based on a study provided by the Joint Research Centre.

These three aforementioned EU Member States called upon the European Commission to ensure that the CF is reduced to 1 in the shortest possible time, lowering it annually on the basis of scientific analyses.

The Council's Summary Record can be found at [data.consilium.europa.eu/doc/document/ST-5094-2020-INIT/en/pdf](http://data.consilium.europa.eu/doc/document/ST-5094-2020-INIT/en/pdf).

## Amendments to Regulation on Monitoring of CO<sub>2</sub> Emissions from LCVs

On 14 January 2020, amendments to Regulation (EU) 2019/631 regarding the monitoring of CO<sub>2</sub> emissions from new light commercial vehicles type-approved in a multi-stage process were published in the Official Journal of the EU.

This relates to vehicles made by the base vehicle manufacturer and adapted by a final stage manufacturer. The Regulation provides for the base manufacturer to know the CO<sub>2</sub> emissions and mass of completed vehicles that will be allocated to it are known at the moment of the production and sale of the base vehicle whether complete or incomplete, and not only at the moment when the final stage manufacturer places the completed vehicle on the market.

A specific methodology for determining the CO<sub>2</sub> emissions of an incomplete base vehicle is therefore provided. On the basis of reported data, the Commission should continuously assess the representativeness of the monitoring CO<sub>2</sub> emissions of the base vehicle and inform the manufacturers of any divergences found. In the case of a significant and continued divergence between the average of the monitoring CO<sub>2</sub> values of the base vehicles and the average of the specific emissions of CO<sub>2</sub> of the completed vehicles, the values for the completed vehicles should be used for the purposes of determining whether manufacturers comply with their specific emissions targets.

The document is available to read in full at [eurlex.europa.eu/EN/TXT/OJ.L\\_2020.008.01.0002.01.ENG&toc=OJ:L:2020:008:TOC](http://eurlex.europa.eu/EN/TXT/OJ.L_2020.008.01.0002.01.ENG&toc=OJ:L:2020:008:TOC).

## AECC Open Letter on European Green Deal

On 24 January 2020, the AECC sent an open letter to the President of the European Commission, Ursula von der Leyen, and the Commission Executive Vice-President, Frans Timmermans.



The letter supports the Commission's ambition to reach zero pollution and for increased greenhouse gas emission reductions. It points out that the internal combustion engine will remain a major element in the powertrain mix for at least the next

decade and can be even cleaner with advanced emission control systems.

AECC also supports the increased use of sustainable transport fuels to help deliver further reduction of greenhouse gases, as they can directly impact existing and new vehicles.

AECC's open letter is available to read at [www.aecc.eu/wp-content/uploads/2020/01/200124-AECC-open-letter-on-Green-Deal.pdf](http://www.aecc.eu/wp-content/uploads/2020/01/200124-AECC-open-letter-on-Green-Deal.pdf)

## Clean Air Organisations' Letter to European Commission

On 14 January 2020, a group of organisations 'working on clean air from the health, environmental, climate and transport angles' wrote to European Commission Executive

Vice-Presidents Timmermans (Green Deal) and Dombrovskis (Economy) urging them to take steps immediately to start tackling air pollution.



The letter specifically calls for the Commission to immediately (2020) adopt legislation to strengthen air quality plans and improve air quality monitoring, to enforce existing legislation through infringement procedures and to set a clear roadmap to align EU air quality limit values with the World Health Organization guidelines.

The letter is available to read at [www.envy-health.org/wp-content/uploads/2020/01/joint-clean-air-letter-2020-EC-WP.pdf](http://www.envy-health.org/wp-content/uploads/2020/01/joint-clean-air-letter-2020-EC-WP.pdf).

## Fossil Fuel Car New Sales Ban in Ireland draft Climate Action Plan

On 6 January 2020, the Irish Government published the Draft General Scheme of the Climate Action (Amendment) Bill 2019, confirming that it is priority legislation.

Amongst other plans, the Bill aims to enshrine in law the banning of new fossil fuel car sales by 2030. It will also effectively prevent the use of fossil fuel cars by 2045 by withdrawing the issuing of NCTs, the annual periodic inspection test certification.

Details of the Climate Action Plan are available at [www.dccae.gov.ie/en-ie/press-releases/Pages/Minister-Bruton-Publishes-Draft-Scheme-of-New-Climate-Law.aspx](http://www.dccae.gov.ie/en-ie/press-releases/Pages/Minister-Bruton-Publishes-Draft-Scheme-of-New-Climate-Law.aspx).

## IMEchE Report on Acceleration of Road Transport Decarbonisation

On 28 January 2020, the UK's Institute of Mechanical Engineers (IMEchE) released a report titled Accelerating Road Transport Decarbonisation: A Complementary Approach Using Sustainable and Low Carbon Fuels.

Its main conclusion is that as the 'electric car revolution' will take time, more needs to be done to reduce emissions from petrol and diesel vehicles. The report says that there will still be millions of fossil-fuelled vehicles on the road in the 2030s and 2040s, so more research and development effort should go into reducing emissions from internal combustion engines. A switch to renewable and low carbon fuels should also take place as soon as possible, the report says.

It also calls for a life cycle approach for all Government policy, arguing that it takes a holistic view of greenhouse gas emissions and avoids unforeseen consequences of backing

particular technologies at the expense of exploring alternative and complementary approaches.

The IMechE report is available to download at [www.imeche.org/news/news-article/more-needs-to-be-done-to-reduce-emissions-from-petrol-and-diesel-vehicles](http://www.imeche.org/news/news-article/more-needs-to-be-done-to-reduce-emissions-from-petrol-and-diesel-vehicles).

## NORTH AMERICA

### US EPA Advance Notice of Proposed Rule on Cleaner Trucks Initiative

On 6 January 2020, the US EPA issued an Advance Notice of Proposed Rule (ANPR) calling for comments on the Cleaner Trucks Initiative (CTI).

This ANPR would establish new emission standards for nitrogen oxides and other pollutants for on-road heavy-duty engines, although the ANPR does not include proposed limits. It also looks at streamlining and improving certification procedures in order to reduce costs for engine manufacturers.

The Manufacturers of Emission Controls Association (MECA) responded with its support, saying that further NOx emissions reductions are achievable and cost-effective. MECA has calculated that a 90% reduction of NOx below current levels could generate total NOx reduction of 130 000 tons per year across the USA (excluding California) in 2030.

The Advance Notice of Proposed Rule is available to read at [www.epa.gov/regulations-emissions-vehicles-and-engines/advance-notice-proposed-rule-control-air-pollution-new](http://www.epa.gov/regulations-emissions-vehicles-and-engines/advance-notice-proposed-rule-control-air-pollution-new).

with MECA's response at [www.meca.org/attachments/3446/MECA\\_press\\_release\\_on\\_EPA\\_CTI\\_ANPRM\\_010620\\_FINAL.pdf](http://www.meca.org/attachments/3446/MECA_press_release_on_EPA_CTI_ANPRM_010620_FINAL.pdf).

### Alliance for Automotive Innovation formed from US Association Merger

On 8 January 2020, the two largest US automotive associations, Global Automakers and Alliance of Automobile Manufacturers, merged to create the Alliance for Automotive Innovation. It says it will focus its advocacy work on 'creating a safe and transformative path for the industry's growth'.

Members of the new organisation include vehicle manufacturers, original equipment suppliers, technology and other automotive-related companies, as well as trade associations.

The announcement of the new association is at [www.autosinnovate.org/press-release/auto-industry-trade-associations-unite-forming-unified-voice](http://www.autosinnovate.org/press-release/auto-industry-trade-associations-unite-forming-unified-voice).

### Energy & Commerce Committee releases Framework of CLEAN Future Act

On 8 January 2020, the House Energy & Commerce Committee released its draft Climate Leadership and Environmental Action for our Nation's (CLEAN) Future Act.



This aims to ensure the United States achieves net-zero greenhouse gas (GHG) emissions by 2050.

For the transport sector, the draft legislation reduces emissions by improving vehicle efficiency, accelerating the transition to low- to zero-carbon fuels and building the infrastructure needed for a clean transportation system. The bill directs the Environmental Protection Agency (EPA) to set new, increasingly stringent GHG emission standards for light-, medium-, and heavy-duty vehicles, including non-road modes of transport. It further requires year-on-year improvements to those standards – and that the level of the standards be set in accordance with the path to net-zero emissions by 2050.

Cars and light-duty trucks would have to achieve a 6% year-on-year emissions reduction, while larger medium-duty passenger vehicles and heavy-duty vehicles would have to cut emissions at least 4% per year. EPA would also move to develop first-time federal GHG standards for non-road engines and vehicles, including locomotives. The act further requires the EPA Administrator to conduct a study of methane slip in engine exhaust and submit a report to Congress outlining the findings and policy recommendations for addressing these emissions.

Details of the draft CLEAN Future Act are at [energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/CLEAN\\_Future\\_Act\\_Memo.pdf](https://energycommerce.house.gov/sites/democrats.energycommerce.house.gov/files/documents/CLEAN_Future_Act_Memo.pdf).

## SOUTH AND CENTRAL AMERICA

### ICCT Analysis of Brazil's Emission Standards for Light-duty Vehicles

On 30 January 2020, the International Council for Clean Transportation (ICCT) published its analysis of Brazil's PROCONVE L-7 and L-8 emission standards, coming into effect in 2022 and 2025 respectively.

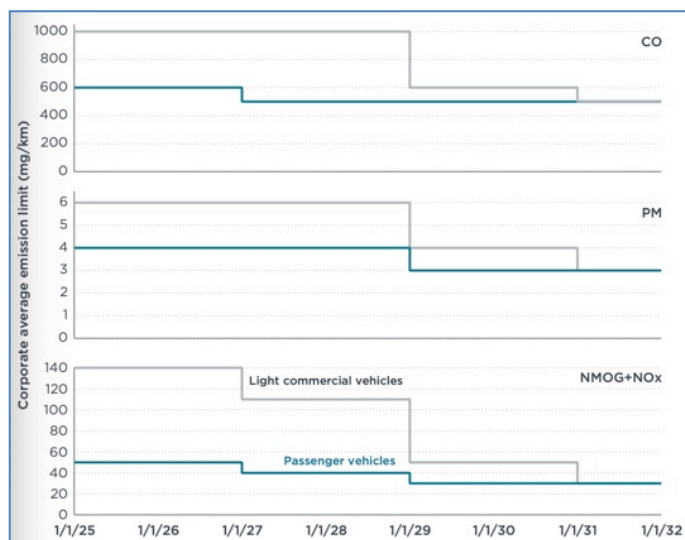


Figure 3. Implementation timeline for PROCONVE L-8 corporate average emission limits for light-duty passenger and commercial vehicles.

ICCT says that the standards contain new and strengthened provisions that fill important gaps in previous phases of the PROCONVE programme, including the adoption of more stringent evaporative emission requirements and the introduction of a refuelling emission limit.

The report also says that the new standards do not require in-use testing or postproduction monitoring and mean that diesel light commercial vehicles (including some sport utility vehicles and pick-up trucks) may not use best available emission control technologies until 2025 or later.

The new regulations will however introduce real-driving emissions tests and extend the durability requirements for exhaust emission limits.

The ICCT report can be read at [theicct.org/sites/default/files/publications/Brazil\\_L7L8\\_policy\\_update\\_01302020.pdf](https://theicct.org/sites/default/files/publications/Brazil_L7L8_policy_update_01302020.pdf).

## ASIA PACIFIC

### Pakistan approves National Electric Vehicle Policy

On 10 January 2020, The International Council on Clean Transportation (ICCT) reported that Pakistan has approved a National Electric Vehicle Policy (NEVP). This is targeting 30% of all passenger vehicle and heavy-duty truck sales as electric vehicles by 2030 and 90% by 2040. For two- and three-wheelers and buses the targets are 50% and 90% respectively.

The NEVP incorporates incentives for direct foreign investment in electric vehicles (EVs), lower taxes for EV manufacturing, assembly and related industries, as well as lower import duty for charging equipment. There will also be investment in charging stations.

ICCT says that alongside this, regulation, purchasing incentives, charging infrastructure, a reliable power supply and consumer awareness programmes are needed to ensure successful adoption of the technology.

ICCT's blog on the subject is available at [theicct.org/blog/staff/pakistan's-national-electric-vehicle-policy-charging-towards-future](https://theicct.org/blog/staff/pakistan's-national-electric-vehicle-policy-charging-towards-future).

## UNITED NATIONS

### UNECE endorses new Vehicle Emissions Regulation

On 20 January 2020, the UNECE (United Nations Economic Commission for Europe) confirmed that a new UN Regulation featuring the Worldwide Harmonised Light Vehicles Test Procedure (WLTP) was endorsed on 17 January by the Working Party on Pollution and Energy (GRPE). It will now be submitted to the World Forum for Harmonisation of Vehicle Regulation (WP.29) for adoption at its next meeting in June 2020, and entry into force in January 2021.

It is intended to make it easier for countries around the world to implement the emissions test procedures, thereby giving consumers more confidence in car manufacturers' emissions information when choosing which new model to buy.

Once in force, the majority of cars sold worldwide will comply with some of the most stringent emissions requirements in the world. Vehicle manufacturers will then be able to acquire a single approval for all major markets adopting this regulation - the 53 countries that are signatories to the 1958 Agreement as well as other countries which unilaterally adopt UN Regulations.

The draft UN Regulation builds on the Global Technical Regulation for WLTP adopted by the World Forum in 2015, adding administrative provisions, conformity of production, durability and pollutant emission limits.

Vehicles approved for mutual recognition under the 1958 Agreement will need to meet stringent emission limits for hydrocarbons (HC), carbon monoxide (CO), nitrogen oxides (NOx) and particulate matter (PM).

This will ensure that emissions remain under the set limits whether the vehicle is driven in urban (Low phase), rural (Medium and High phases) or highway (Extra high phase) environments.

The new UN Regulation will also include procedures to ensure that mass-produced vehicles maintain the same environmental performance. Furthermore, a specific accelerated ageing test will be introduced to guarantee that new vehicles' pollution control devices remain fully effective up to 160,000 km.

GRPE is actively working to complement this new UN Regulation on WLTP with a globally agreed Real Driving Emissions (RDE) test. This will introduce procedures to test vehicles in real life conditions on public roads, to demonstrate real world compliance in addition to the WLTP test performed in controlled conditions in laboratories.

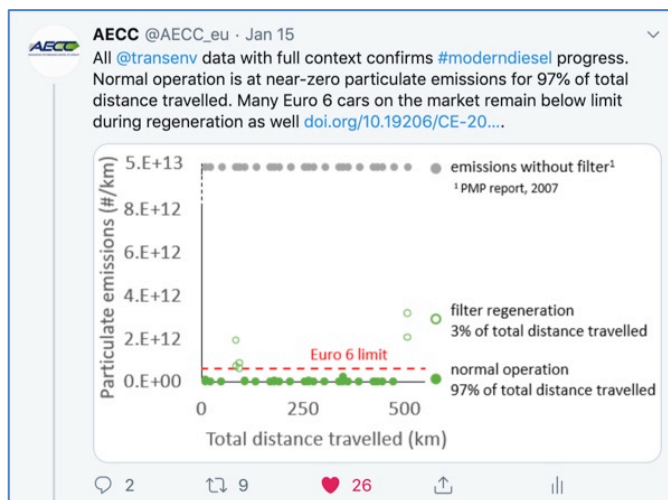
The UNECE press release in full can be found at [www.unece.org/info/media/press-h/transport/2020/unece-endorses-stringent-new-vehicle-emissions-regulation/doc.html](http://www.unece.org/info/media/press-h/transport/2020/unece-endorses-stringent-new-vehicle-emissions-regulation/doc.html).

## GENERAL

### AECC Response to T&E DPF Report

On 15 January 2020, AECC responded on Twitter to the Transport & Environment (T&E) report on particulate emissions from diesel cars (see article below).

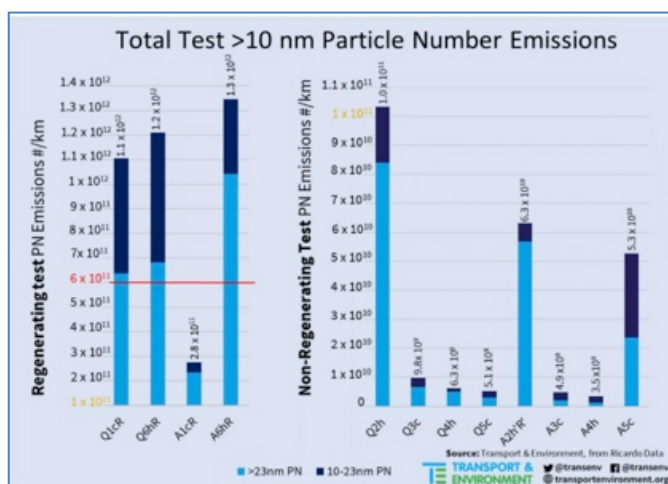
AECC's view is that the focus of the T&E report about test results of two cars with increased PN emissions during the filter regeneration process, failed to accurately reflect all the data generated in Ricardo's testing.



### T&E Report on DPF and Particulate Emissions from Diesel Cars

On 10 January 2020, Transport & Environment (T&E) published a report produced for the NGO by Ricardo, claiming that diesel particulate filter (DPF) regeneration causes diesel vehicles to emit 'large amounts of pollution roughly every 480km'.

Based on tests carried out on two Euro 6d-Temp cars (Nissan Qashqai and Opel/Vauxhall Astra), T&E said that 1 000 times more particles were emitted during DPF regeneration than in the regulated part of the EU's real-driving emissions tests. T&E said that this took them over the legal limit of 6 x 10<sup>11</sup>/km by 32-115% on tests where a full regeneration took place.



As well as the regulated (>23nm) particles, smaller particles between 10-23nm were measured. The report stated that the number emitted on regenerating tests exceeds the emissions of regulated particles on non-regenerating tests, as shown above.

The other regulated pollutants also increased during regeneration, but all stayed within their respective legal limits.

T&E uses these findings to make two main policy recommendations. The first is that 'actual' pollution from Euro 6d (Temp) diesel cars should be taken into account when providing fiscal incentives and access to low emission zones. Secondly, T&E calls for legal limits to be reduced as soon as possible, with post-Euro 6 standards to be the most stringent globally. It also says that new vehicles with internal combustion engines (ICE) should be phased out by 2035, with all ICE vehicles off the roads of the EU by 2050.

The T&E report can be found at [www.transportenvironment.org/sites/te/files/publications/2020\\_01\\_New\\_diesels\\_new\\_problems\\_full\\_report.pdf](http://www.transportenvironment.org/sites/te/files/publications/2020_01_New_diesels_new_problems_full_report.pdf).

## Stakeholder Responses to the T&E DPF Report

FuelsEurope praised the work carried out by Ricardo for Transport & Environment but pointed out that by omitting key statements from the Ricardo report, T&E 'could lead one to believe there is a major problem'. It quotes Ricardo's original report as saying that "...the results...were comfortably compliant with Euro 6 limits...", and that even after taking regeneration into account, particulate emissions were "still less than 20% of the limit value".

The FuelsEurope statement is at [www.fuelseurope.eu/wp-content/uploads/FuelsEurope-comments-on-the-TE-Study-January-2020.pdf](http://www.fuelseurope.eu/wp-content/uploads/FuelsEurope-comments-on-the-TE-Study-January-2020.pdf).

On 17 January 2020, Dr Andreas Mayer of the VERT Association wrote an open letter, published on Dieselnet, in response to the T&E report, in which he stated that diesel particulate filters are a key part of the solution to air quality problems and not one of the problems. He also says that there is nothing new in the report and that most of T&E's interpretations are incorrect. Dr Mayer points out that the very small sample size (two vehicles) makes it difficult to draw conclusions and 'present it as another "scandal"'.

He does accept that T&E makes a strong case for the measurement of particles smaller than 23nm, but says the expected change to 10nm under a future Euro 7 regulation is 'not important for diesel engines with DPFs', as the 'required filtration performance is defined well enough under the current approach'.

Dr Mayer's letter can be found at [dieselnet.com/news/2020/01/vert.php](http://dieselnet.com/news/2020/01/vert.php).

Dieselnet itself posted a summary of the Ricardo report, under the headline "Ricardo testing shows Euro 6d diesels remarkably clean". The article concluded that the results confirm that the diesel particulate problem was solved by the introduction of diesel particulate filter (DPF) technology for Euro 5b vehicles. It also says that the testing suggests that Euro 6d diesels meet regulatory limits under real driving conditions as well as the laboratory test cycle – the first generation of vehicles to do this. Dieselnet goes on to say

that improvement seems likely in the future as more emission control technologies are expected for Euro 6d-final.

The Dieselnet article can be read in full at [dieselnet.com/news/2020/01/ricardo.php](http://dieselnet.com/news/2020/01/ricardo.php).

## RESEARCH SUMMARY

### Effects of Emissions and Pollution

Health Benefits of Air Pollution Reduction, Dean Schraufnagel, et al.; *Annals of the American Thoracic Society* (December 2019), Vol. 16, No. 12, doi: [10.1513/AnnalsATS.201907-538CME](https://doi.org/10.1513/AnnalsATS.201907-538CME).

Health effects of PM<sub>2.5</sub> emissions from on-road vehicles during weekdays and weekends in Beijing, China, Ruipeng Tong, et al.; *Atmospheric Environment* (February 2020), Vol. 223: 117258, doi: [10.1016/j.atmosenv.2019.117258](https://doi.org/10.1016/j.atmosenv.2019.117258).

The contribution of improved air quality to reduced cardiovascular mortality: Declines in socioeconomic differences over time, H. Wyatt, et al.; *Environment International* (March 2020), Vol. 136: 105430, doi: [10.1016/j.envint.2019.105430](https://doi.org/10.1016/j.envint.2019.105430).

Prenatal exposure to traffic and ambient air pollution and infant weight and adiposity: The Healthy Start study, Anne Starling, et al.; *Environmental Research* (in press), doi: [10.1016/j.envres.2020.109130](https://doi.org/10.1016/j.envres.2020.109130).

Oxidative stress and the cardiovascular effects of air pollution, Mark Miller; *Free Radical Biology and Medicine* (in press), doi: [10.1016/j.freeradbiomed.2020.01.004](https://doi.org/10.1016/j.freeradbiomed.2020.01.004).

Maternal exposure to air pollution during pregnancy and cortisol level in cord blood, Ramezan AliKhamirchi, et al.; *Science of The Total Environment* (in press), doi: [10.1016/j.scitotenv.2020.136622](https://doi.org/10.1016/j.scitotenv.2020.136622).

Quantifying the air quality and health benefits of greening freight movements, Laura Minet, et al.; *Environmental Research* (in press), doi: [10.1016/j.envres.2020.109193](https://doi.org/10.1016/j.envres.2020.109193).

Exposure to multiple air pollutants and the incidence of coronary heart disease: A fine-scale geographic analysis, Florent Occelli, et al.; *Science of The Total Environment* (April 2020), Vol. 714: 136608, doi: [10.1016/j.scitotenv.2020.136608](https://doi.org/10.1016/j.scitotenv.2020.136608).

### Air Quality, Sources and Exposure

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## Transport, Climate Change & Emissions

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## FORTHCOMING CONFERENCES

### Direct-Injection Two-Stroke Engines International Workshop & Conference

13-14 February 2020, Rueil-Malmaison, France  
[di2-stroke-engine.ifp-school.com](https://www.di2-stroke-engine.ifp-school.com)

### 11th International AVL Exhaust Gas and Particulate Emissions Forum

3-4 March 2020, Ludwigsburg, Germany  
[www.avl.com/web/de/-/11th-international-avl-exhaust-gas-and-particulate-emissions-forum](https://www.avl.com/web/de/-/11th-international-avl-exhaust-gas-and-particulate-emissions-forum)

Top-class speakers from Germany and abroad will present the latest results of the enhancements of low-emission propulsions and report on current results in exhaust gas aftertreatment, CO<sub>2</sub> reduction, reduction of air pollution, regenerative fuels, hybridized propulsions, well-to-wheel considerations and new exhaust gas measurement technology. This informative conference will also include an exhibition with a presentation on the latest solutions in the field of exhaust gas measurement technology.

### 11<sup>th</sup> VERT Forum

18 March 2020, Dübendorf, Switzerland  
[www.vert-certification.eu](https://www.vert-certification.eu)

### CLEPA 2020 Aftermarket Conference

25-26 March 2020, Brussels  
[clepa.eu/events/clepa-2020-aftermarket-conference](https://clepa.eu/events/clepa-2020-aftermarket-conference)

### VDA Technischer Kongress

25-26 March 2020, Berlin, Germany  
[www.technischer-kongress.de/](https://www.technischer-kongress.de/)



## SAE World Congress Experience (WCX)

21-23 April 2020, Detroit, USA

[www.sae.org/attend/wcx](http://www.sae.org/attend/wcx)

## 41<sup>st</sup> International Vienna Motor Symposium

22-24 April 2020, Vienna, Austria

[wiener-motorensymposium.at/en](http://wiener-motorensymposium.at/en)

## TRA2020 Rethinking Transport towards Clean and Inclusive Mobility

27-30 April 2020, Helsinki, Finland

[traconference.eu](http://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](http://www.sia.fr/evenements/193-sia-powertrain-energy-rouen-2020)

## 24<sup>th</sup> ETH-Conference on Combustion Generated Nanoparticles

22-25 June 2020, Zürich, Switzerland

[www.nanoparticles.ch](http://www.nanoparticles.ch)

*The ETH Conference on Combustion-Generated Nanoparticles 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. The conference brings together representatives from research, industry and legislation.*

## CO<sub>2</sub> Reduction for Transport Systems Conference

7-8 July, Turin, Italy

[conferences.ata.it](http://conferences.ata.it)

## 6<sup>th</sup> International Conference Diesel Powertrains 3.0

8-9 July 2020, Turin, Italy

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

*Despite the ongoing public discussion, the modern Diesel engine represents a highly attractive powertrain. The latest developments demonstrate, that Diesel-powered vehicles are among the cleanest vehicles available in the marketplace, while maintaining their superior fuel economy compared to other propulsion systems. Its high efficiency positions the Diesel engine as an attractive element for future powertrain line-ups, even under more tightened regulatory boundary conditions and simultaneously altering market conditions. The conference is for the first time integrating heavy-duty On-/Off-Highway themes into the programme.*

**Deadline for abstract: 21 February 2020**

## International Transport and Air Pollution Conference

15-16 September 2020, Graz, Austria

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

*The main topics of the 24th TAP Conference include energy consumption and GHG emissions from vehicles, open issues for pollutant emissions, such as tampering, retrofits of software and hardware and non-regulated pollutants, emissions from non-road mobile machinery and other transport modes and measurements and simulation of traffic related environmental impacts and air quality.*

**Deadline for abstract: 30 March 2020**

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

22-23 September 2020, Berlin, Germany

[www.iav.com/en/events/minnox](http://www.iav.com/en/events/minnox)

**Deadline for abstract: 27 March 2020**

## SAE Powertrains, Fuels and Lubricants

22-24 September 2020, Krakow, Poland

[www.sae.org/pfl](http://www.sae.org/pfl)

**Deadline for abstract: 18 February 2020**

## 29<sup>th</sup> Aachen Colloquium

5-7 October 2020, Aachen, Germany

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

## SAE Heavy-Duty Diesel Emissions Control Symposium

13-14 October 2020, Gothenburg, Sweden

[www.sae.org/attend/heavy-duty-diesel-emissions-control-symposium](http://www.sae.org/attend/heavy-duty-diesel-emissions-control-symposium)

## IRU World Congress

19-21 October 2020, Berlin, Germany

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

## 2020 Annual POLIS Conference

2-3 December 2020

[www.polisnetwork.eu/2020-annual-polis-conference](http://www.polisnetwork.eu/2020-annual-polis-conference)

*The Polis Annual Conference provides an opportunity for cities and regions to showcase their transport achievement to large audience of mobility experts, practitioners and decision makers.*

**Call for speakers opens in March 2020**