

NEWSLETTER

International Regulatory Developments

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EUROPE

Commission's Effect Study on Euro 5 Standard for Motorcycles

On 6 September 2017, the European Commission released the final report on the effect study of the environmental step Euro 5 for L-category vehicles (powered two- and three-wheelers).

The study, mandated in the Euro 4 & 5 Regulation (EU) No 168/2013 for two- and three-wheelers, was conducted by a consortium made of TNO, Emisia, LAT, and Heinz Steven to provide additional underpinning of the Euro 5 emissions step through modelling, technical feasibility, and cost effectiveness analysis. It also provides recommendations beyond Euro 5.

Euro 5-related conclusions of the consultants' study are as follows:

- The revised WMTC appears suitable to be used as a Type I test for all L-category/sub-categories and is expected to provide enhanced environmental protection over real-world operation, than the driving cycles it substitutes.
- Euro 5 emission limits of CO, NMHC, THC and NOx appear technically feasible for introduction in 2020/21 (new/all types) and will lead to overall net monetary benefits.
- A lead time of four years (2024/25) is recommended for introducing Euro 5 in the case of L6e-B vehicles (diesel mini-cars), to allow new powertrain concepts to be developed for compliance with the new limits.
- Retaining separate THC and NMHC limits, as foreseen in Regulation (EU) 168/2013, is recommended. They offer the possibility for natural gas vehicles to report separately air pollutants and greenhouse gases emissions levels.
- Including NOx emissions recording in the roadworthiness Type II test for diesel and gasoline vehicles is recommended. Developing a reference list of NOx levels during Type II type approval testing could potentially increase very much the roadworthiness test impact, if a decision is later taken to include NOx for identifying high emitters.
- On durability, the AMA cycle should be phased out by 2020 only for WMTC class 3 vehicles; a Standard Road Cycle (SRC-LeCV) sub-classification is prescribed; the mathematical method should be phased out in 2020; the bench ageing procedure should be introduced after validation of the application of the procedure on L-category vehicles; Useful Life values for mopeds should be revised, following a specific data collection survey; and finally, an additive deterioration factor should be introduced in the calculation method of the partial mileage accumulation procedure.

Table ES.2: Recommended revised SRC-LeCV sub-classification and proposal for harmonisation with the WMTC classification and introduction of a Net Power criterion for the WMTC classification

SRC-LeCV Cycle classification	WMTC classification	Vehicle maximum design speed (km/h)		Vehicle engine capacity (cm ³)		Net Power (kW)
		Min.	Max.	Min.	Max.	
1	Class 1		< 100 km/h		< 150 cm ³	< 14kW
2	Class 2-1	≥ 100km/h	< 115km/h	-	< 150 cm ³	≥ 14kW
		-	< 115km/h	≥ 150cm ³	≤ 1500 cm ³	≥ 14kW
2	Class 2-2	≥ 115km/h	< 130km/h	-	≤ 1500 cm ³	≥ 14kW
3	Class 3-1	≥ 130km/h	< 140km/h	-	≤ 1500 cm ³	≥ 14kW
4	Class 3-2	≥ 140 km/h	-	-	> 1500 cm ³	≥ 14kW

- A number of recommendations on On-Board Diagnostics (OBD) including requiring OBD II for all malfunctions with OBD Threshold Limits (OTL) I, excluding catalyst monitoring in 2020-2023 and the full implementation of OBD II with OTL II, including catalyst monitoring in 2024.
- OBD Stage II (and maybe OBD I) should be removed for L6e-A vehicles (light on-road quads) which are designed and built around moped specifications (no OBD requirements are enforced for other moped categories).
- OBD Stage II should be required for L4e vehicles (motorcycles with side-car) as they have identical powertrains to the equivalent L3e motorcycles.
- Exclusion from OBD Stage II provisions for Enduro (L3e-AxE) and Trial (L3e-AxT) motorcycles is advised not to significantly distort the market.
- The combination of the Type-Approval Authority (TAA) evidence-based assessment and the prescribed Type III test procedures, guarantees that crankcase gas emissions are thoroughly assessed during the type-approval.
- On evaporative emissions, the permeation test procedure should be mandated for the L1e, L2e, L5e-B, L6e-B, L7e-B and L7e-C sub-categories. The Euro 5 limit for the L3e, L4e, L5e-A, L6e-A and L7e-A categories should not be reduced.
- D_{av} , the average distance between two battery recharges, should be retained for the time being in the energy efficiency and electric range procedure but for future improvement of the procedure values for D_{av} that lead to CO₂ emissions and fuel consumption that reflect real-world conditions should be investigated, as soon as more hybrid electric L-category vehicles penetrate the market and more real-world data becomes available.

The study also provides recommendations beyond the Euro 5 step. Off-Cycle Emissions (OCE) requirements is a possible option to safeguard and control low emissions of L-category vehicles during everyday operation; those may be introduced after 2020. Also, In-Service Conformity (ISC) requirements for 28% of the vehicle families, where 20% of the selection of families is based on representativeness in terms of sales and 8% of the families is randomly

selected from the remaining families is recommended beyond Euro 5.

Finally, the study recommends to provide some lead time (2024/25 – new/all types) for the introduction of PM limits for L6e-B (diesel mini-cars) to allow new powertrain concepts development, in line with the lead time recommended to be given for the gaseous pollutants. PM limits should be introduced for 2-stroke vehicles despite these may be infrequent or not at all able to make it to the Euro 5 step. Impacts of PN emissions of new emissions control concepts of Euro 5 applications (e.g. impact of lube oil specifications on PN emissions) should be better understood before introducing specific PN limits.

Based on these conclusions, the Commission is expected to come forward with its own report on the Euro 5 step for L-category vehicles in the coming months. The Commission may then come forward with a legislative proposal on Euro 5 for L-category vehicles.

The report is at

<https://publications.europa.eu/en/publication-detail/-/publication/f3f268fc-943f-11e7-b92d-01aa75ed71a1/language-en/format-PDF/source-37959409>.

European Parliament Debate on 'Dieselgate'

On 13 September 2017, the European Parliament held a debate on 'Dieselgate' during its plenary session in Strasbourg.

The Greens opened the debate and called for retrofit (both hardware and software) of existing diesel cars. Software updates can help reducing NOx emissions up to 30% so this is insufficient when considering how on-road emissions compared to the regulatory limit. They also requested more infringement procedures against Member States (MS).

The other political groups focused on requests for coherent actions by different MS (under EU supervision), stronger actions (i.e. infringement procedures) by the European Commission, and promoted electrified powertrains for the future.

Industry Commissioner Elżbieta Bieńkowska replied that, although diesel will still be in the market for several years, forward looking actions should shift to Electric Vehicles to restore the trust in the EU industry. The Commission will follow-up on infringement cases. The Type-Approval framework revision needs to be adopted quickly. Conformity Factors will be reduced, she said.

She told MEPs that she was open to considering an EU-level agency to oversee car type-approvals, reversing her earlier position. "As you also know, I was opposing the idea but I have to admit ... maybe we should be more open on this because the most dangerous, and the biggest problem now, are on-the-road cars," she said. "I have to admit I might have been wrong with this."

EU Authorities urge Volkswagen to finalise Software Updates

On 7 September 2017, the EU consumer authorities and the European Commission sent a joint letter to the CEO of VW urging the group to swiftly repair all cars affected by the "dieselgate" scandal.

This is part of a coordinated action by EU consumer authorities to make sure that the OEM respects consumer law in the aftermath of the scandal and is proactive towards the consumers concerned.

The consumer protection authorities expect feedback from Volkswagen on the following points, among others:

- Transparency and communication – VW should individually inform consumers about the repair as soon as possible. VW should provide consumers with enough information to allow them to make a well-informed decision.
- Inform second-hand car owners and consumers outside VW dealerships.
- Trust building measures including assurance that the cars' overall performance will be retained post-repair.
- Support for car dealers in the repair process.
- Extension of the repair process.

EU consumer authorities ask VW to reply within one month to their request and engage in a dialogue at the European level. It will be up to each Member State to decide the next course of action if VW does not react to this common position or an agreement cannot be reached. Authorities may take action appropriate to their local circumstances including enforcement action where necessary.

Commission fines Scania for participating in Truck Emissions Cartel

On 27 September 2017, the European Commission announced it would be fining Scania €880 million for participating in the truck emissions cartel.

In July 2016, the Commission had reached a settlement decision concerning the trucks cartel with MAN, DAF, Daimler, Iveco and Volvo/Renault. Scania decided not to settle this cartel case with the Commission, unlike the other five manufacturers. As a result, the Commission's investigation against Scania was carried out under the standard cartel procedure.

The Commission's investigation revealed that Scania, as a producer of heavy trucks, had engaged in a cartel relating to coordinating prices at "gross list" level for medium and heavy trucks in the European Economic Area (EEA); to the timing for the introduction of emission technologies for medium and heavy trucks to comply with the increasingly strict European emissions standards (from Euro III through to Euro VI); and the passing on to customers of the costs for the emissions technologies required to comply with the increasingly strict European emissions standards (from Euro III through to Euro VI).

The infringement lasted 14 years, from 1997 until 2011, when the Commission carried out unannounced inspections of the firms. Between 1997 and 2004, meetings were held at senior manager level, sometimes at the margins of trade fairs or other events, the Commission revealed. This was complemented by phone conversations. From 2004 onwards, the cartel was organised via the truck producers' German subsidiaries, with participants generally exchanging information electronically, according to the Commission.

On 27 September 2017, Scania contested all the findings and allegations made by the European Commission and will appeal against the decision in its entirety.

EU Industrial Policy Strategy

On 18 September 2017, European Commission Vice-President for Jobs, Growth, Investment and Competitiveness Jyrki Katainen and Commissioner for Internal Market, Industry, Entrepreneurship and SMEs Elżbieta Bieńkowska, detailed the main new elements of the EU Industrial Policy Strategy that was underlined by President Jean-Claude Juncker on 13 September 2017, during his annual State of the Union address to the Parliament.



New elements of the EU Industrial Policy Strategy include:

- New proposals for clean, competitive and connected mobility, including tightened CO₂ emissions standards for cars and vans, an Alternative Fuels Infrastructure Action Plan to support the deployment of charging infrastructure, and actions to foster autonomous driving (due in autumn 2017).
- A revised list of critical raw materials where the Commission will continue to help ensure the secure, sustainable and affordable supply for the EU manufacturing industry.
- A new series of actions on Circular Economy, including a strategy on plastics and measures to improve the production of renewable biological resources and their conversion into bio-based products and bio-energy.
- A set of initiatives to modernise the Intellectual Property Framework.

- An initiative to improve the functioning of public procurement in the EU, including a voluntary mechanism to provide clarity and guidance to authorities planning large infrastructure projects.
- Extension of the Skills Agenda to new key industry sectors, such as construction, steel, paper, green technologies and renewable energies, manufacturing and maritime shipping.

Commissioner Bieńkowska said that “the way the car industry handles the crisis, the way it treats its consumers, the way it works on clean cars, all of this will define its future competitiveness. The Europe Commission wants to see a very quick transition to low emissions models and in that context will present a mobility package in the autumn.”

The press conference can be watched at

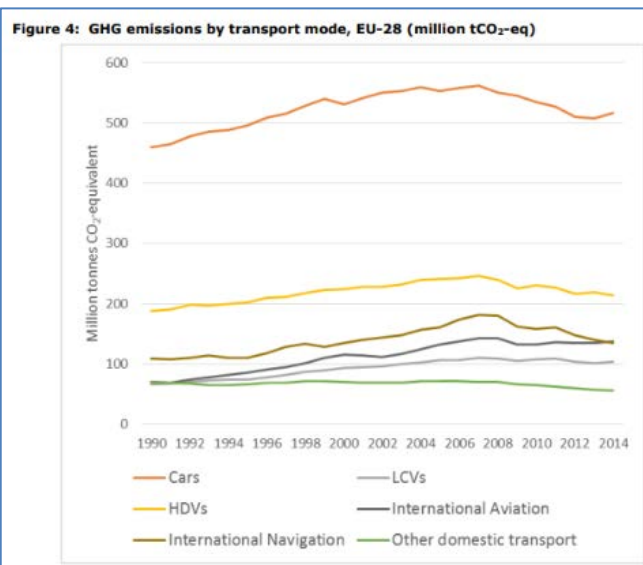
<http://ec.europa.eu/avservices/video/player.cfm?ref=1143596>.

Parliamentary Study on Decarbonisation of EU Transport

On 5 September 2017, the European Parliament published a study on Decarbonisation of the EU Transport sector commissioned by the Transport Committee and prepared by CE Delft.

The study shows that very significant greenhouse gas (GHG) reductions are still necessary in the transport sector to meet EU medium and long-term climate targets and notes the need for urgent policy action has increased with the Paris Climate Agreement.

Although the GHG reduction target for 2020 of 20% compared to 1990 levels looks likely to be met, further policy action is needed to meet the proposed 2030 target of 40% compared to 1990 levels. Without further policy action, transport GHG emissions are actually expected to be 15% above 1990 levels by 2050. Limiting warming to the proposed 1.5°C requires net zero emissions globally at some point between 2040 and 2060.



A wide range of measures is available, and the greatest potential comes from technological options to improve the energy efficiency of vehicles, ships and planes. The second largest potential comes from renewable fuels and low-carbon energy carriers for the various transport modes. A more limited impact may be expected from measures that improve the efficiency of the transport system itself.

To decarbonise the transport sector further, the report recommends to continue and strengthen the existing range of policies, targeting the efficiency of vehicles, the decarbonisation of fuels and the efficiency of the transport system as a whole.

In designing a strategy and policies for the decarbonisation of transport, it is important not to focus solely on the 2050 emission target, but also on the cumulative GHG emissions over time.

Further improvement of the energy efficiency of all transport modes is key for decarbonisation. It is recommended to continue and strengthen vehicle CO₂ regulations over time, to introduce regulations for heavy-duty vehicles (HDVs), and to ensure that the effectiveness of the regulations are improved by reducing the gap between real-world and test cycle emissions. Swift policy action on vehicle regulations is recommended, since new legislation takes time to adopt and applies only to new vehicles, which means it takes roughly ten to fifteen years for the full effects to kick in.

In the long-term, climate targets can only be met if light-duty vehicles become nearly zero emission. A mandate for ultra-low or zero-emission vehicles has the potential to ensure a sufficiently fast uptake of electric and fuel-cell vehicles, the report notes.

To speed up the use of renewable energy sources in transport (RES-T), implementing stable and effective sustainability criteria for the period after 2020 is key, combined with equally stable targets thereafter, such as blending obligations, RES-T or CO₂ targets. To set these targets at an optimum level, a longer-term outlook is needed on the future transport energy mix with which the climate targets can be met.

Policies and strategies for RES-T should not be assessed and developed in isolation, but be considered together with the other sectors working on decarbonisation of their energy supply, notably the power sector, industry and the built environment. Power-to-gas and power-to-liquid should be developed in order to ensure the transport sector can also benefit from the full potential of decarbonisation from renewable fuels produced from wind and solar power.

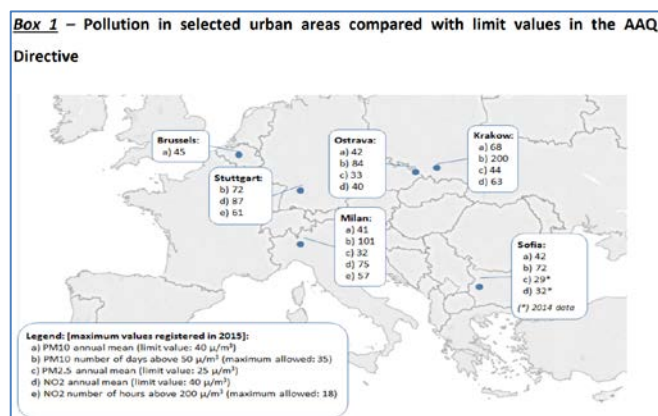
The parliamentary study is at [www.europarl.europa.eu/RegData/etudes/STUD/2017/601989/IPOL_STU\(2017\)601989_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2017/601989/IPOL_STU(2017)601989_EN.pdf).

EU Audit Brief on Air Quality in Europe

On 21 September 2017, the European Court of Auditors (ECA) published an Audit Brief on EU action to reduce air pollution.

Audit Briefs are a new type of publication from the EU auditors which provides background information on preparatory work undertaken before the start of an audit task.

The audit on EU air quality will consider whether EU policy has been effective in reducing the health risks from air pollution. The auditors have set the audit scope and approach, and identified the areas of risk to sound financial management: policy design, implementation and enforcement; data reporting by Member States; and the effectiveness of EU-funded projects. To test this, they are conducting detailed examinations of urban areas most affected by air pollution in six Member States: Brussels (Belgium), Sofia (Bulgaria), Ostrava (Czech Republic), Stuttgart (Germany), Milan (Italy), and Krakow (Poland).



Publication of the ECA report is planned for mid-2018. The ECA audit results will also serve as a basis for a contribution to a wider European report on air quality currently ongoing within the framework of the European Organisation of Supreme Audit Institutions (EUROSAI) and also planned for mid-2018.

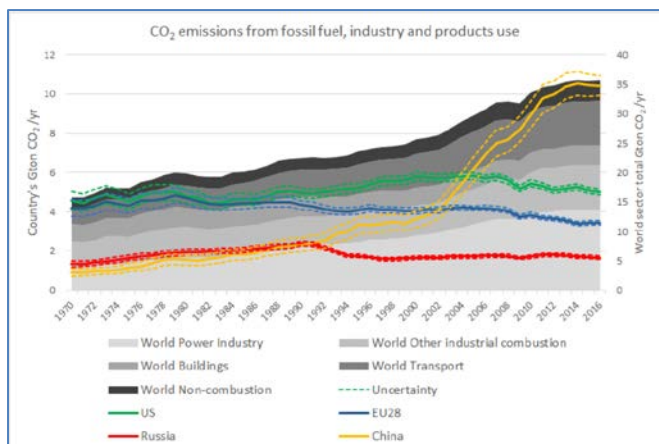
The Audit Brief is at www.eca.europa.eu/Lists/ECADocuments/AB_AIR_QUALITY/AB_AI_R_QUALITY_EN.pdf.

JRC Report on Global Atmospheric Greenhouse Gas Emissions

On 28 September 2017, the Joint Research Centre (JRC) of the European Commission published a report on the Emissions Database for Global Atmospheric Research (EDGAR) which estimates greenhouse gases (CO₂, CH₄ and N₂O) for all world countries.

Global CO₂ emissions are stalled for the third year in a row, plateauing with no further increase to a total of 35.8 Gton CO₂ in 2016. The 0.3% increase in 2016 compared to 2015 is due to the extra day in the leap year of 2016. CO₂ emissions in the US (with 14% share of global total) fell by

2%. There was a status quo in emissions with -0.3% and +0.2% change in 2016 compared to 2015 in China (29.2% share of global total) and Europe (9.6% share of global total), respectively. The largest decrease is seen for UK (1.0% share) with -6.4%, Brazil (1.3% share) with -6.1% and Bulgaria (0.1% share) with -6.0% while increases are observed for India (7.1% share of global total) with +4.7%, Indonesia (1.5% share) with +6.4%, Ukraine (0.7% share) with 8.0% and Malaysia (0.7% share) with 6.5%.



EU28 emissions have decreased over the past two decades, such that emissions in 2016 are 20.8% less than in 1990 and 17.9% less than in 2005. Since 2015 the EU share of the global total has remained constant at 9.6%.

The JRC report is at http://edgar.jrc.ec.europa.eu/booklet2017/CO2_and_GHG_emissions_of_all_world_countries_booklet_online.pdf.

EEA Signals 2017 Report on the Future of Energy in Europe

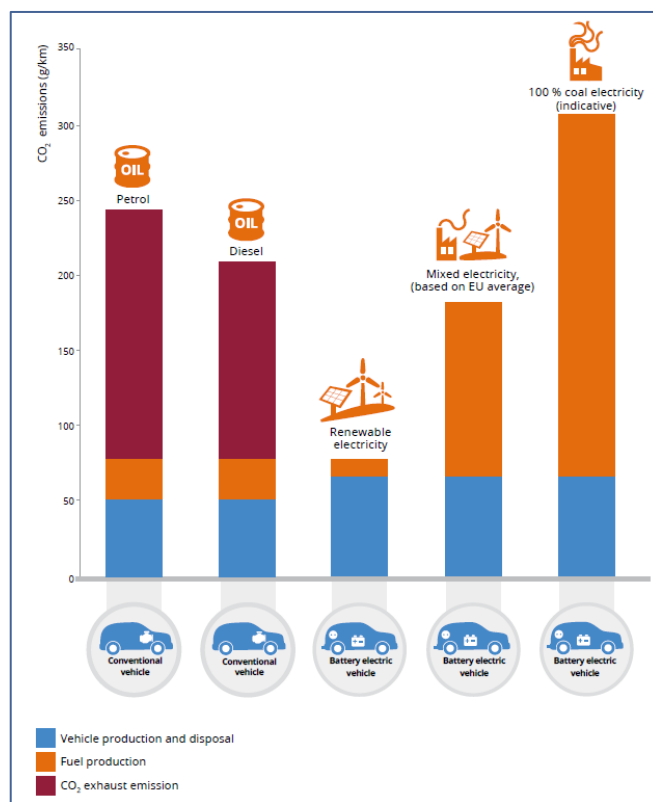
On 31 August 2017, the European Environment Agency (EEA) released its Signals 2017 report which looks into Europe's energy system and its transition towards clean, smart and renewable energy.



European countries consume less energy compared with 10 years ago, mainly due to energy efficiency gains. Europe also relies less on fossil fuels due to energy savings and the faster-than-expected uptake of renewable energy.

The Signals 2017 report includes articles looking at how Europe is making the shift to renewables and the benefits of improving energy efficiency. It also profiles the impact of climate change on our energy system, the future of the electric cars and its impact on the grid and an interview on biofuel production. Securing an affordable energy supply locally

amid the ever changing global energy markets is also explored.



The EEA Signals 2017 report is at www.eea.europa.eu/publications/signals-2017.

Landscape Review of EU Action on Energy and Climate Change

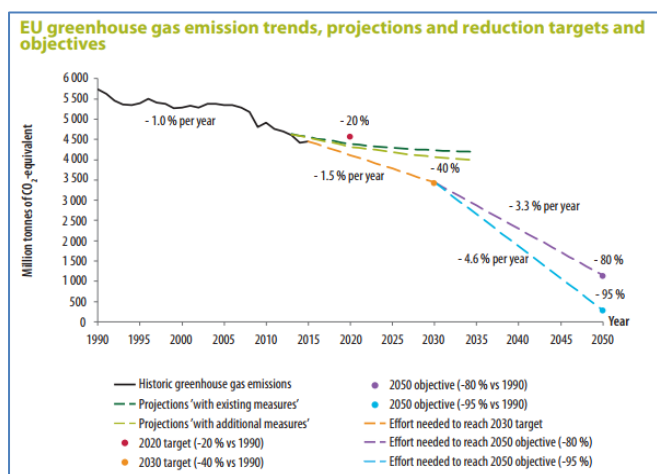
On 19 September 2017, the European Court of Auditors released their landscape review of EU action on energy and climate change.

The report provides an overview of EU action; summarises key audit work by the European Court of Auditors and EU national audit institutions; and identifies the main challenges, in order to inform both the legislative debate and future audit work.

The EU needs to cut greenhouse gas (GHG) emissions and also adapt to the changing climate. Current projections show that more progress is needed to reach the 2030 targets and the 2050 objectives in cutting GHG emissions. It will also be a great challenge for the EU and Member States to correctly anticipate and plan adaptation, reducing the need to act late, in response to events, which would cost more.

On climate change, most EU actions are focused on reducing GHG emissions. The EU has set targets to reduce GHG emissions by 20% and 40% respectively for 2020 and 2030. By 2050, the EU intends to reduce EU GHG emissions by between 80% and 95% compared to 1990. The EU's 2030 and 2050 emissions reduction targets and objectives will not be achieved without significant

additional efforts, say the auditors, and all economic sectors will need to contribute. To achieve the 2030 targets, annual emission reduction efforts will need to increase by half in the next decade. The most significant change, though, will be required beyond 2030, when the emission reduction rate will need to outpace historic levels by three to four times in order to achieve the 2050 objective.



The report identifies seven main challenges: energy and climate change governance; evidence-based policy; the energy transition; using research and innovation effectively; planning for and tackling adaptation; financing; and involving EU citizens.

The landscape review is at www.eca.europa.eu/Lists/ECADocuments/LR17_01/LR_ENERGY_A_ND_CLIMATE_EN.pdf.

France updates Passenger Car Scrapping Scheme in 2018

On 19 September 2017, the French Ministry for Environment and Transport announced some upcoming changes in the passenger car scrapping premium.

The objective is to accelerate fleet renewal and incentives scrapping of the older diesel and gasoline cars. From 2018, a scrapping premium of €1000 will be offered for the purchase of a vehicle that emits less than 130 g CO₂/km, including second-hand cars.

The premium applies for scrapping a diesel car registered before 2001 or a gasoline car registered before 1997 and purchasing a new or used vehicle of Crit'Air categories 0 (electric), 1 (Euro 6 gasoline), or 2 (Euro 5 gasoline and Euro 6 diesel).

For low-income families, the premium is increased to €2000 and applies to a larger range of vehicles, including diesel cars registered before 2006. The premium for purchasing an electric vehicle is maintained to €6000.

More information (in French) is at www.ecologie-solidaire.gouv.fr/sites/default/files/DP_MTES_PLF2018_PaquetSolidaireClimatique.pdf.

National Convention on Mobility launched in France

On 19 September 2017, the French Ministry for Environment and Transport launched a 3-month long convention on mobility.

The convention aims to identify the priority needs and expectations of all citizens around mobility, paying particular attention to every-day life transport, rural and suburban areas. Users, communities, operators, economic actors and NGOs across France are invited to participate and to bring out new solutions. This convention will lead to the mobility policy guidelines to be presented in the first quarter of 2018.

Until December 2017, the national convention on mobility will include local workshops with citizens, thematic workshops with stakeholders including elected representatives, enterprises and NGOs, and public authorities' innovation workshops.

The six themes for the convention are:

- clean mobility: how to reduce our environmental footprint;
- connected mobility: accelerate innovation and digital revolution;
- united mobility: reducing social and territorial gaps;
- inter-modal mobility: better articulate the various transport modes;
- safer mobility: reduce accidents and risks; and
- sustainable mobility: revise economic models and governance.

In parallel, an on-line public consultation is open at www.assisesdelamobilite.gouv.fr.

Research Project Call on Cities and Air Quality in France

The French Ministry of Ecological Transition and the French Environment and Energy Management Agency (ADEME) are calling for research projects on 'cities and air quality' under the better air quality (PRIMEQUAL) programme.

The project call is covering two research axes:

- governance and new interactions in favour of urban air quality (local policies for air quality, coordination of policies at different levels, evaluation tools, and representations of air quality by citizens).
- integrated approaches to urban dynamics and air quality (levers for urban projects in favour of air quality, "smart city" and opportunities to act on behaviours, vegetation in the city of tomorrow and interactions with air quality).

The call for research projects is open until 20 October 2017 and is at <https://appelsaprojets.ademe.fr/aap/PRIMEQUAL2017-54>.

Airparif launches Emissions Calculator comparing Transport Modes in Paris

On 13 September 2017, the public transport day, Airparif, the air quality monitoring agency in Paris and in the capital

city region, launched an interactive tool that makes citizen aware of the amount of pollutants they emit during a trip.

This calculator compares 6 transport modes: cars, buses, railways, powered-two wheelers, cycling and walking. For passenger cars, the calculation is based on the number of passengers, the car emissions sticker that relates to the Euro class of the vehicle, and the engine (petrol, diesel, electric or hybrid).

For a given trip, NO_x and PM₁₀ emissions are compared for the six modes of transport.

The Airparif calculator is at www.airparif.fr/calculateur-emissions.

Germany toughens Emissions Check at Periodic Technical Inspection

On 22 September 2017, the German Federal Council approved more stringent regulations for the emissions check at vehicle periodic technical inspection.

Until now, a two-stage procedure was used; if no fault was detected when reading the On-Board Diagnostics (OBD), the vehicle was exempted from any tailpipe emissions measurement. From 1 January 2018 onwards, tailpipe emissions measurement will become mandatory for all vehicles undergoing the periodic technical inspection.

Federal Minister for Transport Alexander Dobrindt said that “with tailpipe emissions measurements we will be able to detect more safely if the emissions control system does not work properly in a car. This relates to defects but also to deliberate manipulations.”

Brussels Low Emission Zone

On 29 September 2017, the Low Emission Zone (LEZ) in Brussels, Belgium was launched.

From January 2018, diesel cars first registered before 1997 will be banned throughout Brussels, when a low-emission zone covering the entire capital region will come into force. The ban will apply to Belgian and foreign-registered vehicles and will be extended to apply to more vehicles each year until 2025.

By 2019, the only diesel cars allowed on the road will be those that meet the Euro 4 emission standard of 2006. Pre-2001 petrol vehicles will also be banned from 2019.

DIESEL	2018	2019	2020	2021	2022	2023	2024	2025
EURO 6 / VI	Access	Access	Access	Access	Access	Access	Access	Access
EURO 5 / V	Access	Access	Access	Access	Access	Access	Access	Access with paid-for pass*
EURO 4 / IV	Access	Access	Access	Access	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*
EURO 3 / III	Access	Access	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*
EURO 2 / II	Access	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*
EURO 1 / I	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*
No EURO standard	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*

*maximum 8 days access a year

PETROL/LPG/CNG	2018	2019	2020	2021	2022	2023	2024	2025
EURO 6 / VI	Access	Access	Access	Access	Access	Access	Access	Access
EURO 5 / V	Access	Access	Access	Access	Access	Access	Access	Access
EURO 4 / IV	Access	Access	Access	Access	Access	Access	Access	Access
EURO 3 / III	Access	Access	Access	Access	Access	Access	Access	Access
EURO 2 / II	Access	Access	Access	Access	Access	Access	Access	Access with paid-for pass*
EURO 1 / I	Access	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*
No EURO standard	Access	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*	Access with paid-for pass*

*maximum 8 days access a year

Drivers will be allowed to use a banned vehicle for up to eight days a year, on payment of a tax of €35-a-day. Priority vehicles, including those providing transport for the elderly or disabled, will be exempted.

More information is at www.lez.brussels.

Finland adopts 2030 Climate Plan

On 14 September 2017, the Government of Finland adopted the mid-term climate change plan for 2030.

The plan ‘Towards Climate-Smart Day-to-Day Living’ sets out the necessary means to reduce greenhouse gas (GHG) emissions by 2030 in the non-emissions trading sector, i.e. transport, agriculture, heating and waste management.

In the non-emissions trading sector, the greatest potential for reducing emissions is in the transport sector, which now causes about a fifth of Finland’s GHG emissions. The aim by 2030 is to halve the emissions from transport compared to the 2005 levels.

The emissions are to be reduced by replacing fossil fuels with new low-emission alternatives and by improving the energy-efficiency of vehicles and transport systems. Changes in consumer patterns, digitalisation and sharing economy stress the role of consumption and consumers in climate change policy. Consumers are encouraged to halving their carbon footprint by 2030.

€3 million are reserved in the 2018 government budget for promoting the infrastructure for electric vehicles and use of biogas in transportation and €1.5 million for promoting the infrastructure for electric vehicles in residence houses.

Low emission modes of transport, such as electric or gas-powered cars as well as the conversion of old cars into vehicles powered by ethanol or gas, will be promoted. €6 million is reserved for that purpose in the 2018 budget.

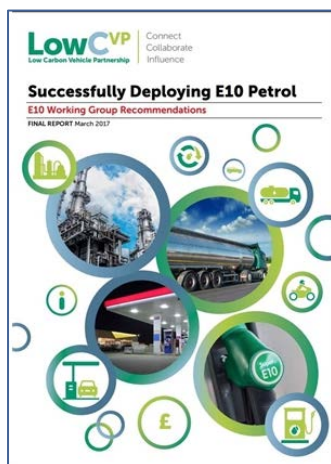
In addition, €8 million is also reserved in the 2018 budget for car scrapping incentives.

The Finnish plan is at www.ym.fi/download/noname/%7BCBE707DB-93B0-4A4C-BAB2-E42C89E00B44%7D/130621.

UK LowCVP Report on E10 Fuel Deployment

On 14 September 2017, the UK Low Carbon Vehicle Partnership (LowCVP) released a report titled ‘Successfully

Deploying E10 Petrol' supporting the UK government's decision to increase the renewable transport fuel obligation.



The report concludes that the introduction of petrol with a 10% bioethanol content (E10) would be one of the most cost-effective means of rapidly reducing carbon emissions from road transport currently available to the UK. It would also make an important contribution to the UK's efforts to reduce CO₂ from road transport by displacing 10% of fossil petrol with renewable bioethanol in transport by

2020. However, its introduction needs to be thoroughly and carefully planned to ensure effective market transition.

Bioethanol in the UK is produced through the fermentation of wheat or sugar beet. The UK has two of Europe's biggest bioethanol plants: Ensus on Teesside and Vivergo Fuels in Hull. Both distil locally grown wheat to produce bioethanol, with protein-rich animal feed as a by-product.

While over 93% of petrol vehicles in the UK are suitable to use E10 petrol, a minority of older vehicles are not. Therefore, E10 petrol must be introduced and labelled as a completely new fuel grade.

The UK fuel supply chain is efficient and optimised to provide two petrol grades, which already contain up to 5% bioethanol. 'Regular' 95 E5 and 'Super' 97 E5. Converting the "regular" volume grade to 95 E10 would be the most cost effective and rapid way to introduce the new lower carbon fuel.

Bioethanol has a lower energy content than petrol and, consequently, the volumetric fuel consumption using E10 petrol is expected to be slightly (1.5%) more than E5 petrol.

The current volumetric basis for fuel duty may discourage lower carbon and future fuels with different energy characteristics.

Consumers must be empowered to make informed decisions, based on robust data, following the introduction of E10 petrol.

The report recommends that 95 octane E10 is introduced and deployed rapidly to achieve a high market share (85%) due to the nature of the UK fuel supply chain and for the UK to benefit environmentally and economically.

The LowCVP report is at www.lowcvc.org.uk/resource-library/reports-and-studies.htm#.

ASIA PACIFIC

China to move to E10 Fuel

On 13 September 2017, state media reported that China was planning to roll out the use of ethanol in gasoline nationally by 2020, citing a government document.

It is the first time the Government has set a targeted timeline for pushing E10 biofuel, gasoline containing 10% ethanol, although it has yet to announce a formal policy.

Mandates requiring that a minimum amount of biofuel must be blended into fuel are currently set at a provincial level. The news comes after the Government said late last year it would aim to double ethanol output by 2020 amid growing pressure to cut maize stocks in State warehouses.

China sets New Targets for New Energy Vehicles

On 28 September 2017, China unveiled a new regulation requiring most automakers to sell a minimum number of New Energy Vehicles (NEV) annually from 2019, as part of the country's effort to curb CO₂ emissions by reducing the use of fossil-fuel powered vehicles.

The new policy from the Ministry of Industry and Information Technology requires that sales of NEVs, such as electric vehicles and plug-in hybrids, should reach a threshold equivalent to 10% of their total sales in 2019 and 12% in 2020.

The regulation applies to car makers that produce or import more than 30 000 conventional vehicles annually. If car companies fail to achieve such quotas, they will either have to buy credits from other automakers or face a fine, the Ministry said, adding that the measures will be effective from 1 April 2018.

AFRICA

Zimbabwe announces Timeline for 50 ppm Sulfur Diesel Cap

On 28 September 2017, Zimbabwe's Ministry of Energy and Power Development announced a timeline for phasing out diesel fuel containing 500 parts per million (ppm) sulfur from the market.

Currently, diesel fuel with 50 ppm sulfur content is sold alongside 500 ppm diesel fuel. The 50 ppm market in Zimbabwe currently stands at 5.3%. Fuel importers will be given a grace period of four months to allow them to use up their current inventory of higher sulfur diesel fuel.

Starting 1 November 2017, all fuel importers in Zimbabwe will be required to import diesel fuel with a maximum sulfur content of 50 ppm only. "We expect that with effect from 1 March 2018, all diesel sold in Zimbabwe's retail sites shall be 50 ppm diesel and selling of any other will become an offence from that day onwards," Minister of Energy Samuel Undenge said.

The adoption of 50 ppm maximum sulfur content in diesel fuel is in line with the country's National Energy Policy to reduce vehicle emissions and improve air quality.

UNITED NATIONS

Revised 1958 Agreement to facilitate Global Access to UN Regulations

On 14 September 2017, Revision 3 to the 1958 UNECE Agreement, developed by the World Forum for Harmonization of Vehicle Regulations (WP.29), entered into force.

The revised Agreement will facilitate the use of UN vehicle regulations globally by allowing countries to apply former versions of UN Regulations, taking into account their specific needs, context and capacities.

This will enable countries from emerging economies to benefit from the introduction of minimum technical requirements for safety, environmental performance, noise and CO₂ emissions, energy efficiency and anti-theft requirements of vehicles. This will make it easier to adjust gradually to more recent UN vehicle Regulations.

The latest revision to the 1958 Agreement will also improve the efficiency and reliability of the approval process for vehicle models thanks to more stringent provisions on quality assurance, certification procedures and conformity of production.

Among other changes in Revision 3 of the 1958 Agreement are new provisions for an International Whole Vehicle Type-Approval (IWVTA) system and tougher voting conditions for the adoption and amendment of UN Regulations, with a larger majority of votes now required (four-fifths, up from two-thirds).

To date, 54 countries from Europe, Africa, Asia and the Pacific, have become Contracting Parties to the 1958 Agreement and apply most of its 143 UN Regulations currently in force.

Global Industry Partnership on Soot-Free Clean Bus Fleets

On 27 September 2017, the United Nations Environment (UNEP) announced that under the umbrella of the Global Industry Partnership on Soot-Free Clean Bus Fleets, four major bus and engine manufacturers have committed to make it easier for cities to purchase buses equipped with low emissions technologies, in order to tackle climate change and toxic air pollution.

The Global Industry Partnership on Soot-Free Clean Bus Fleets is an initiative led by C40 Cities, the Climate and Clean Air Coalition (CCAC), the International Council on Clean Transportation (ICCT), Centro Mario Molina Chile and UNEP.

BYD, Cummins, Scania and Volvo Buses will ensure 'soot-free' engine technology is available for purchase in 20 megacities beginning in 2018. 'Soot-free' is defined as

including any engine that meets Euro VI US EPA 2010 standards, and any diesel engine with a DPF, gas-powered engine, or a dedicated electric drive engine.

The manufacturers will each release through their websites a full product portfolio available in each city and will begin publicly reporting the number of 'soot-free' buses sold in each year.

The 20 cities involved in the scheme are Abidjan, Accra, Addis Ababa, Bangkok, Bogotá, Buenos Aires, Casablanca, Dar es Salaam, Dhaka, Istanbul, Jakarta, Johannesburg, Lagos, Lima, Manila, Mexico City, Nairobi, Santiago, Sao Paulo and Sydney.

GENERAL

Less Diesel and more Gasoline Car Sales raises Concerns with OEMs CO₂ Target

On 28 September 2017, the European Automobile manufacturers' Association (ACEA) issued a statement on the decline in diesel car sales in the EU, offset by increased demand for gasoline cars which raises concerns with CO₂ target.

According to ACEA, Diesel's market share in the EU-15 fell from 50.2% to 46.3% of new car registrations in the first half of 2017. For the first time since 2009, gasoline vehicles have overtaken diesel to become the most sold car type in the EU-15. Gasoline vehicles now account for 48.5% of new passenger car sales, up from 45.8% a year ago. Electrically-chargeable vehicles accounted for 1.3% of total car sales (a market share which remains stable), hybrids for 2.6%, and cars powered by propane or natural gas for 1.3%.

As diesel cars emit significantly less CO₂ than equivalent gasoline-powered vehicles, they will have to be part of the gradual transition to low-carbon vehicles, acting as a 'bridge' technology, ACEA said. A sudden shift from diesel technology to gasoline will lead to an increase in CO₂ emissions, given that the market penetration of alternative powertrains remains low.

More info is at www.acea.be/press-releases/article/decline-in-diesel-car-sales-offset-by-more-demand-for-petrol-implications-f.

Report on Real-World Fuel Consumption Protocol of PSA and T&E

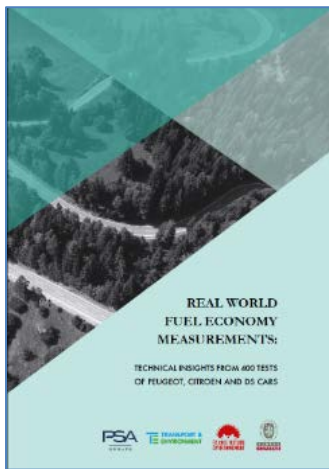
On 6 September 2017, PSA and Transport & Environment (T&E) published a report on the development of their real-world fuel consumption test protocol.

The report synthesizes more than 400 on-road tests carried over 18 months with 60 different vehicles. These tests were carried out within the framework of a test protocol specifically created by PSA and T&E.

According to the protocol, a pairwise comparison of a 1.2 Puretech 130 gasoline engine and a 1.6 Blue-Hdi 120 diesel engine on the same vehicles showed that:

- diesel engines have a 1.5 l/100 km lower fuel consumption (1.65 l/100 km in urban conditions and 1.15 l/100 km in non-urban conditions).
- in urban conditions, the gap between the certification and real life is equal for diesel and gasoline when expressed in l/100km (2.4 and 2.5 l/100km respectively), but it is higher for diesel compared to gasoline when expressed as a percentage (53 vs. 42% respectively).
- diesel engine efficiency tends to be less sensitive to driving styles than gasoline models.

Also, a comparison of the same vehicles with the same engines shows a fuel consumption 0.4 l/100 km lower for manual gearboxes compared to automatic transmissions. For diesel cars in urban areas this difference increases to about 0.7 l/100 km. However, automatic transmissions produce more consistent fuel efficiency results than manual equivalents.



A comparison between the same vehicle engine with and without stop & start shows a reduction of 0.3 l/100 km in urban driving – less than the benefit of the technology in an NEDC test, which is of 0.5 l/100 km.

Overall, the results show that on-road tests provide a robust, representative and sufficiently repeatable basis for measuring the real-world fuel economy and CO₂ emissions of vehicles. However, the Portable Emissions Measurement System (PEMS) does need to improve its reliability (8% of the tests failed due to PEMS failure), especially the accuracy of the exhaust mass flow measurement for gasoline engines, particularly in challenging low mass flow conditions such as in urban environment.

The report is at www.groupe-psa.com/en/document/rapport-technique-mesures-consommation-usage-reel.

ACEA Position on Post-2021 CO₂ Target for Cars

On 13 September 2017, the European Automobile Manufacturers' Association (ACEA) laid out their pathway to future CO₂ reduction at the Frankfurt Motor Show.

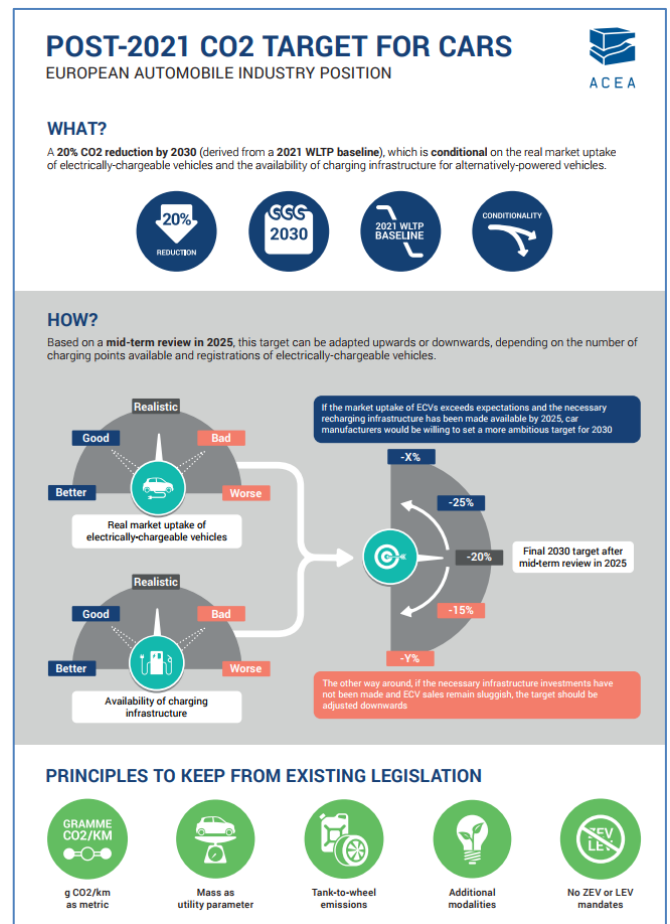
Regarding the timeframe and ambition level for the new targets, ACEA proposes a 20% CO₂ reduction for passenger cars by 2030, compared to 2021. This target should be conditional on the real market uptake of electrically-chargeable vehicles and the availability of charging infrastructure for alternatively-powered vehicles – which are crucial to achieve any significant CO₂ reductions beyond 2020 levels. Concretely this means that, based on

a mid-term review in 2025, this target could be adapted either upwards or downwards.

The latest ACEA data show that in the first half of 2017 electrically-chargeable vehicles made up 1.2% of total new car sales. Alternative powertrains will undoubtedly play an increasing role in the transport mix, and all ACEA's members are investing heavily in them. However, equally important is that all EU Member States start delivering on their commitments to step up investments in the necessary recharging and refuelling infrastructure.

In the interim, modern diesel technology will continue to play an important role in the gradual transition to low-carbon vehicles. "Our industry is committed to being part of the solution when it comes to decarbonising road transport, while at the same time reducing pollutant emissions," said the ACEA President, Dieter Zetsche. Indeed, modern diesel vehicles now also deliver very low pollutant emissions on the road under the new real driving emissions (RDE) test that came into effect earlier this month.

ACEA also calls on the European Commission to consider the most cost-effective solutions and to take into account the social implications of the transition to low-carbon vehicles.



POST-2021 CO₂ TARGET FOR CARS
EUROPEAN AUTOMOBILE INDUSTRY POSITION

WHAT?
A 20% CO₂ reduction by 2030 (derived from a 2021 WLTP baseline), which is conditional on the real market uptake of electrically-chargeable vehicles and the availability of charging infrastructure for alternatively-powered vehicles.

HOW?
Based on a mid-term review in 2025, this target can be adapted upwards or downwards, depending on the number of charging points available and registrations of electrically-chargeable vehicles.

PRINCIPLES TO KEEP FROM EXISTING LEGISLATION

- GRAMME CO₂/KM as metric
- Mass as utility parameter
- Tank-to-wheel emissions
- Additional modalities
- No ZEV or LEV mandates

The ACEA position paper is at www.acea.be/uploads/publications/PC_CO2_ACEA.pdf.

CLEPA Statement on Future Powertrains at IAA Motor Show

On 13 September 2017, the European industry's trade association CLEPA issued a statement underscoring its commitment to ever safer, cleaner and smarter mobility in the context of the IAA motor show in Frankfurt.

Referring to the upcoming proposal for new CO₂ reduction limits for light-duty vehicles, CLEPA emphasised that multiple technologies are needed to ensure that the Paris climate change targets are met, ranging from electrification to advanced internal combustion solutions to renewable alternative fuels.

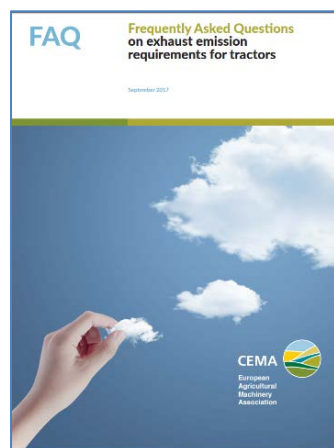
There is no one-fits-all solution to achieve the energy-efficiency and CO₂ emissions reduction targets: cars and vehicles serve different mobility purposes and customers must have the choice to pick the power unit that first their needs best. New CO₂ legislation should adopt technology neutrality as the core principle to promote innovation and competition for the best technologies and achieve the policy objectives for 2030. Also, a mid-term review in 2025 should make sure that reality comes into play and allow adjustment to market uptake, customer choice, energy mix, infrastructure and technical developments.

With regard to city access restriction policies, CLEPA urged that a European approach should be found in the interest of the internal market as well as the citizens of Europe.

The CLEPA press release is at <https://clepa.eu/mediaroom/clepa-shares-latest-trends-regulations-affecting-automotive-supply-industry/>.

CEMA Guidance Document on EU Tractors' Emissions Regulation

On 6 September 2017, the European Agricultural Machinery Industry's Association (CEMA) published a 'Frequently Asked Questions (FAQ)' guidance document that explains in detail how the new Stage V requirements will apply to tractors.



the requirements applicable to agricultural and forestry tractors.

The new emissions requirements were initially introduced for off-road machines in Regulation 2016/1628, yet will also apply to agricultural and forestry tractors and their engines. The FAQ document is intended to provide tractor manufacturers with a clear timeline on the initial entry into service of the new provisions and explains CEMA's interpretation of

The document focuses in particular on the differences between the provisions for tractors and Non-Road Mobile Machines (NRMM). It thus goes beyond the general Guidance Document on Regulation 2016/1628 which was published by seven NRMM industry associations including the European Association of Internal Combustion Engine Manufacturers (Euromot), the Committee for European Construction Equipment (CECE), and CEMA.

For instance, the Guidance Document features a dedicated chapter which clarifies the special provisions for narrow-track tractors (NTT). Due to delays given in the past, a different emissions timeline will apply for these tractors.

	2016	2017	2018	2019	2020	2021	2022	2023
Production of NTT	Stage IIIB		Stage IV		Stage V			
	Sell-off		Sell-off					
	Flexibility		Flexibility		Transition period			
Initial entry into service of NTT	Stage IIIB		Stage IV		Stage V			
	Sell-off		Sell-off					
	Flexibility		Flexibility		Transition period			

Exhaust emissions timeline for narrow tractors and high-clearance tractors between 56 and 130 kW

The document is based on Regulation 2016/1628 and the latest draft for the Stage V REPPR Delegated Act that was presented in the European Commission's Working Group on Agricultural Tractors (WGAT) in June 2017. The publication of the REPPR Delegated Act is expected for early 2018.

The CEMA FAQ is at <http://cema-agri.org/sites/default/files/CEMA%20PC2%20-%202017%2009%2005%20-%20Stage%20V%20Tractor%20FAQ%20FINAL%20%28002%29.pdf>.

ICCT Policy Update on Remote-Sensing Emissions Measuring in China

On 21 September 2017, the International Council on Clean Transportation (ICCT) published a policy update on remote-sensing regulation for measuring exhaust pollutants from in-use diesel vehicles in China.

The document summarizes the implementation in July 2017 of a national regulation for measuring exhaust pollutants from in-use diesel vehicles using remote-sensing equipment. China is the first country in the world to implement such a regulation at a national level.

The regulation took effect immediately and replaces all local standards related to monitoring diesel vehicle exhaust emissions with remote sensing. It does not mandate remote-sensing programmes at local level, but defines a uniform protocol for local agencies to follow if they have or decide to implement a remote-sensing programme. The goal of the regulation is to eliminate the top 5% of high emitting vehicles, and it applies to both light- and heavy-duty diesel vehicles.

The testing methods for stationary and mobile remote-sensing are defined in the regulation, as well as location and environmental requirements. Mobile remote-sensing equipment must include a global positioning system to

collect location information. For stationary testing, the testing location is required to be on a long, uphill road with a smoothly paved surface, and test data are valid only if collected under very mild weather circumstances.

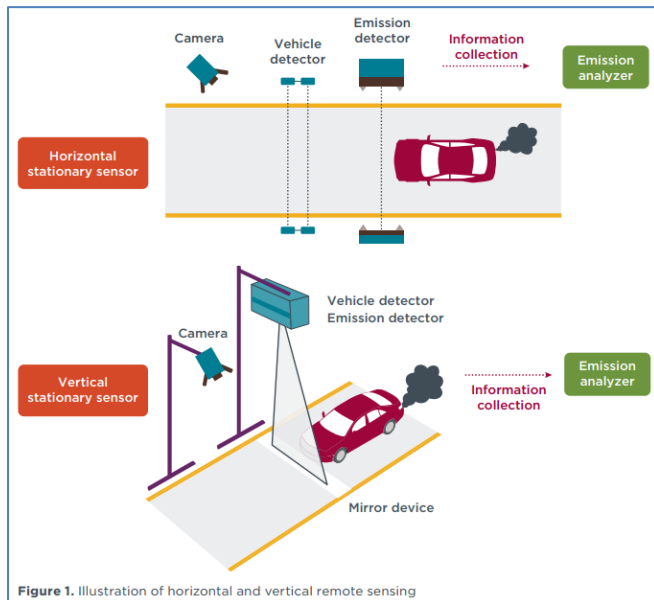


Figure 1. Illustration of horizontal and vertical remote sensing

A vehicle is determined to be non-compliant if it exceeds the remote-sensing emission limits in the table below in two or more consecutive remote-sensing tests in 6 months.

Pollutant	Limits
Opacity	30%
Ringelmann blackness ^a	Level I (20%)
NO ^b	1,500 x 10 ⁻⁶

The ICCT report is available at www.theicct.org/sites/default/files/publications/China-diesel-remote-sensing_ICCT-policy-update_19092017_vF.pdf.

ICCT Report on promoting Investment in Advanced Alternative Fuels

On 21 September 2017, the International Council on Clean Transportation (ICCT) published an analysis of advanced biofuel policies and recommendations for improving the effectiveness of policy support for emerging low carbon fuel technologies.

Low-carbon fuels produced from non-food feedstocks have the potential to deliver deep greenhouse gas (GHG) reductions in transport fuels, but their commercialization has been slow despite a decade of policy support across the EU and US. This study seeks to understand why the past decade of alternative fuel policies has not led to commercialization of advanced alternative fuel (AAF) and how we can apply lessons learned to developing proposals for fuel policy over the coming decade. In this study, advanced alternative fuel technologies considered include cellulosic ethanol, biomass gasification, and pyrolysis.

Table 1. Principles for effective AAF support in various policy frameworks

Policy design principle	Renewable energy Mandate	GHG reduction Target	Price guarantee	Fuel tax reduction/production tax credit	Investment tax credit	Grants and loan guarantees
Long-term support	Binding mandate for at least 10 years		Contracts for at least 10 years	Duration of at least 10 years	Duration of at least 5 years	N/A
Avoid competition with first-generation biofuels	Separate target for AAF			Dedicated fund for AAF		
Deal with sustainability up front	Accounting for indirect emissions and other environmental concerns in policy design			Eligibility restriction to sustainable fuels		
Support offtake	Requirement for fuel suppliers to supply/blend fuel			Government offtake contracts		
Cost containment	Credit price ceiling and potentially floor		Maximum reimbursement	Tax credit phase out after certain volume achieved		Set amount of funding available

The ICCT report on advanced alternative fuels is at www.theicct.org/sites/default/files/publications/Advanced-alternative-fuels_ICCT-white-paper_21092017_vF.pdf.

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FORTHCOMING CONFERENCES

2017 Aachen Colloquium Automobile and Engine Technology

9-11 October 2017, Aachen, Germany

www.aachener-kolloquium.de

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

7th Integer Emissions Summit & AdBlue® Forum India 2017

11-12 October 2017, New Delhi, India

www.integer-research.com/conferences/ies-india-2017

The conference will examine the progress made towards Bharat VI a year on from the government's announcement regarding plans to implement the stringent emissions standards by 2020.

GreenPort Congress 2017

11-13 October 2017, Amsterdam, Netherlands

www.greenport.com/congress

The Congress aims to highlight innovations in equipment and technology to allow port users to adhere to policy, whilst illustrating practical solutions through case studies from the global logistics chain.

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Fuel consumption dynamics in Europe: Tax reform implications for air pollution and carbon emissions, Anne Zimmer and Nicolas Koch; *Transportation Research Part A: Policy and Practice* (December 2017), Vol. 106, pp. 22-50, doi: [10.1016/j.tra.2017.08.006](https://doi.org/10.1016/j.tra.2017.08.006).

The transition to zero-emission buses in public transport – The need for institutional innovation, Sjoerd Bakker and Rob Konings; *Transportation Research Part D: Transport and Environment* (in press), doi: [10.1016/j.trd.2017.08.023](https://doi.org/10.1016/j.trd.2017.08.023).

5th International Conference Real-Driving Emissions

16-18 October 2017, Berlin, Germany

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

The IQPC RDE conference will discuss the latest state of affairs around the implementation of RDE procedures in Europe, with a special focus on its consequences for engine and exhaust technology and further developments on local and global markets.

AECC will give a presentation on latest results from a Real-Driving Emission testing campaign

SAE 2017 International Powertrains, Fuels and Lubricants Meeting

16-19 October 2017, Beijing, China

www.sae.org/events/pfl

G.STIC 2017 – Global Science, Technology & Innovation Conference

23-25 October 2017, Brussels, Belgium

www.gstic.org

The objective of this conference is to underpin the technological discussions in the UN and other international forums as they relate to the Sustainable Development Goals, the climate goals and Means of Implementation.

Routes to Clean Air 2017

24-25 October 2017, Birmingham, UK

<http://iaqm.co.uk/event/routes-to-clean-air-2017>

The conference organized by the Institute of Air Quality Management (IAQM) will discuss air quality, public health, and experiences in improving traffic emissions.

3rd Annual Automotive Exhaust Systems Summit

26-27 October 2017, Munich, Germany

<http://vonlanthengroup.com/en/events/3rd-annual-automotive-exhaust-systems-summit.html>

Key practical learning points of the summit include insights on the best-practices and latest innovative technologies for exhaust systems; new challenges relating to selective catalytic reduction; control concepts and systems for exhaust gas aftertreatment; the exhaust sensors market's effect on automotive industry trends; the role of tomorrow's exhaust systems, future power trains, and future energy carriers for clean mobility; and emissions legislation and the future requirements.

10th Integer Emissions Summit USA 2017

7-8 November 2017, Pittsburgh, USA

www.integer-research.com/conferences/ies-usa-2017

15th FAD-Conference

8-9 November 2017, Dresden, Germany

www.fad-diesel.de/conference-2017

The FAD conference will focus on drive technologies and environmental impact; Real-Driving Emissions – milestones of implementation; exhaust aftertreatment for on-road applications; contributions of science and research; emission concepts for non-road diesel engines; exhaust aftertreatment for gas engines; special requirement of exhaust aftertreatment for hybrid drives; emission strategies and solutions for large engines; new exhaust aftertreatment concepts; service time and aging of exhaust aftertreatment systems; and future fuels and exhaust aftertreatment.

Annual Aerosol Science Conference

9 November 2017, Birmingham, UK

<https://aerosol-soc.com/events/annual-aerosol-science-conference-2017>

This year's conference theme is "Pushing the limits in aerosol measurements and simulations". A focus of this meeting will be to explore the challenges faced in aerosol characterisation and simulation and how these challenges are being addressed.

Deadline for abstract: 6 October 2017

1st International FEV Conference Zero CO₂ Mobility

9-10 November 2017, Aachen, Germany

www.fev.com/index.php?id=805

The conference on Zero CO₂ Mobility will discuss the potential and performance of various forms of energy storage – from battery technologies to eco- and e-fuels.

7th International Symposium on Development Methodology

14-15 November 2017, Wiesbaden, Germany

www.avl.com/web/de/-/7th-international-symposium-on-development-methodology

Topics of this event include development methodology from theory and practice of vehicle and powertrain development (simulation, approach, calibration, modelling and optimization, data post processing, etc.) and development methodology for current legislative or technology issues, e.g. RDE (Real Driving Emissions).

22nd International Transport and Air Pollution Conference (TAP 2017)

15-16 November 2017, Zurich, Switzerland

<http://tapconference.org>

The conference topics include exhaust and non-exhaust emissions from transport modes (measurements and modelling); urban and suburban air quality; energy demand and greenhouse gas emissions from transport modes; and transport policies and mobility challenges of the future.

Clean Air Forum

16-17 November 2017, Paris, France

www.euconf.eu/clean-air/index.html

The European Clean Air Forum, organized by the European Commission, will provide a basis for structured dialogues, exchange of knowledge and good practices, and to enhance capacity of relevant stakeholders to improve air quality. It aims to reflect on the development of policies, projects and programmes in the context of air pollution and air quality, and facilitate the implementation of European, national and local air policies. It will focus on three themes: air quality in cities; agriculture and air quality and clean air business opportunities.

Heavy-Duty, On- and Off-Highway Engines 2017

28-29 November 2017, Augsburg, Germany

www.atzlive.de/en/events/heavy-duty-on-and-off-highway-engines

Main subject areas of the conference include new diesel, gas, and dual-fuel engines, electrification, and reducing pollution.

Future of Transport 2017. Towards clean, connected and competitive Transport in Europe

6 December 2017, Brussels, Belgium

www.future-transport.eu

The conference will develop the debate around transportation in Europe by focusing on the innovation emerging as a result of technical and digital progress.

10th International AVL Exhaust Gas and Particulate Emissions Forum

20-21 February 2018, Ludwigsburg, Germany

www.avl.com/web/de/-/10th-international-avl-exhaust-gas-and-particulate-emissions-forum

AECC will give a presentation on Real-Driving Emissions from a Gasoline Plug-in Hybrid vehicle with and without a Gasoline Particulate Filter.

11th International Conference on Air Quality – Science and Application

12-16 March 2018, Barcelona, Spain

www.airqualityconference.org

The conference brings together participants from the air quality, climate and health research and other stakeholder communities to discuss the latest research advances, new applications and highlight important implications for policy and users.

Deadline for abstract: 13 October 2017

WCX18: SAE World Congress Experience

10-12 April 2018, Detroit, USA

www.wcx18.org

8th AVL Large Engines TechDays

11-12 April 2018, Graz, Austria

www.avl.com/-/8th-avl-large-engines-techdays

Electrification, New Fuels and Power Sources: Boom or Doom for Large Engines?

39th International Vienna Motor Symposium

27-28 April 2018, Vienna, Austria

<https://wiener-motorensymposium.at>

Outstanding lecturers from all over the world will present the latest findings in engine development and, amongst other topics, will report on new engines, fuel cells, hybrid technology, exhaust gas treatment and real driving emissions (RDE).

7th Freiburg Workshop 'Luftreinhaltung und Modelle'

15-16 May 2018, Freiburg, Germany

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

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.

37th FISITA World Automotive Congress: Disruptive Technologies for Affordable and Sustainable Mobility

2-5 October 2018, Chennai, India

<https://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

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

40th International Vienna Motor Symposium

16-17 May 2019, Vienna, Austria

<https://wiener-motorensymposium.at>