



Newsletter

March - April 2015

INTERNATIONAL REGULATORY DEVELOPMENTS

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EUROPE

EEA 2015 Report on State of the Environment and Outlook

On 3 March 2015 the European Environment Agency (EEA) released the European Environment - State and Outlook 2015 report (SOER 2015), a report published every five years.

According to the report, in 2015 Europe stands roughly halfway between the initiation of EU environmental policy in the early 1970s and the EU's 2050 vision set out in the EU's 7th Environment Action Programme.

Despite the environmental improvements of recent decades, the challenges that Europe faces today are considerable, EEA says. European natural capital is being degraded by socio-economic activities such as agriculture, fisheries, transport, industry, tourism and urban sprawl. Global pressures on the environment have grown at an unprecedented rate since the 1990s, driven not least by economic and population growth, and changing consumption patterns. EEA notes nevertheless that environmental policies are also creating economic opportunities and thereby contributing to the Europe 2020 Strategy, aimed at making the EU into a smart, sustainable and inclusive economy by 2020. For example, the environment industry sector, which produces goods and services that reduce environmental degradation and maintain natural resources, grew by more than 50% in size between 2000 and 2011. It has been one of the few economic sectors to have flourished in terms of revenues, trade and jobs since the 2008 crisis.

The Clean Air policy package adopted in 2013 by the Commission is anticipated – if agreed and implemented as foreseen – to deliver a range of benefits by 2030. Beyond 2030 the time frame of 2050 has been suggested as the time by which Europe should meet its long-term objectives of achieving levels of air pollution that do not lead to unacceptable harm to human health and the environment. This will require integration of air, climate and biodiversity policies. In addition, the transboundary effects of air pollution remain challenging and emission reductions in the EU may not be enough to achieve the long-term objectives.

European measures to reduce transport emissions have tended to focus on improving efficiency. These measures have included fuel-quality standards; exhaust emission limits for air pollutants and CO₂; and inclusion of the transport sector within national emission limits for air pollutants. These measures have achieved some success. The introduction of technologies such as catalytic converters, cited as an example by EEA, has greatly reduced road transport pollution. Nevertheless, efficiency improvements alone will not address all environmental concerns, partly

because efficiency gains are often offset by a growing transport demand. Alongside increasing traffic volumes, the promotion of Diesel vehicles is contributing to air quality problems, EEA stresses, citing real-world NO_x emissions higher than the Euro standard limits. Developing alternative fuel vehicles could certainly reduce the burden placed on the environment by transport. However, it will require very large investments in infrastructure (in both the transport and energy sectors) and the displacement of entrenched fossil fuel-based systems.

The EEA report is at www.eea.europa.eu/soer.

Draft Positions on Non-Road Mobile Machinery Stage V Proposal

A draft position of the EU Member States' Council on the European Commission's proposal for a Stage V Regulation for emissions of Non-Road Mobile Machinery (NRMM) was published on 5 March 2015.

The Council working party on technical harmonization (motor vehicles) is requesting that manufacturers should be able to sell replacement engines meeting previous emissions stages for up to 10 years after the end of that stage. Replacement engines would have to comply at least with the emissions stage that the engine to be replaced met when originally placed on the market. Member States also call for derogation for engines used in explosive atmospheres.

In the European Parliament, MEP Pospíšil published on 3 March 2015 his draft opinion for the Internal Market and Consumer Protection (IMCO) committee.

The IMCO Rapporteur welcomes the Commission's proposal and supports its aims. However, he recommends to rebalance the proposal and to provide enough flexibility to ensure that manufacturers can comply with the environmental requirements without hampering the EU's competitiveness. He proposes to extend by six months the transition period foreseen by the Commission, and by twelve months in the case of mobile cranes. Further exceptions are foreseen for small volume manufacturers that are mainly Small and Medium Enterprises. MEP Pospíšil also supports that the use of replacement engines should be allowed.

Once adopted, the IMCO opinion will be submitted to the lead committee, the Environment Committee.

Draft Parliamentary Report on "Pot-Pourri" Proposal

On 31 March 2015 MEP Rapporteur Albert Dess (EPP, Germany) released his draft report on the European Commission's proposal to amend the light-duty Euro 5/6 and heavy-duty Euro VI Regulations, the so-called "Pot-pourri" proposal.

The Commission has proposed setting NO₂ emission limits, restricting the ammonia limit for Heavy-duty to Diesel engines, modifying the -7°C emissions limits inherited from previous Euro stages, but also the exclusion of methane from Total Hydrocarbon emissions to facilitate the introduction of natural gas vehicles and the addition of methane as a greenhouse gas equivalent to the total CO₂ emissions, and the possibility to extend from 2840 kg to 5000 kg the range of vehicles which can fall under the emissions rules for light commercial vehicles.

MEP Dess said that methane's inclusion in HC emissions would be a burden on the nascent market for natural gas vehicles, so he "would prefer not to penalize from the start this small category of vehicles which contribute to lowering greenhouse gas emissions". If methane emissions become a problem, the Commission should be empowered to propose new legislation. In the meantime, the Rapporteur proposes to delete the recital calling on the Commission to include methane in the calculation of CO₂ emissions.

The draft position would also extend the coverage of the light-duty Euro 5/6 Regulation to vehicles weighing up to 7500 kg to avoid still more double approval procedures and other avoidable administrative steps.

The Rapporteur supports the Commission's proposal to remove the current NH₃ limit value for positive ignition engines, fuelled with natural gas, while the existing 10 ppm limit for Diesel engines would be kept.

As regards the alignment to the Lisbon Treaty, the proposal aims to adapt old comitology procedures to the delegated and implementing acts set in the Lisbon Treaty. This would empower the Commission to adopt such acts in respect of a wide range of rules, procedures and limit values related to the application of Euro 5/6 and Euro VI standards. For Mr Dess, the power to adopt delegated acts should be conferred on the Commission until 30 June 2019, which corresponds to the end of the current legislative term, as opposed to the suggested indeterminate period of time.

The draft report is at

www.europarl.europa.eu/sides/getDoc.do?type=COMPARL&mode=XML&language=EN&reference=PE546.598.

Parliamentarian Opinion on National Emission Ceilings Directive Review

On 24 March 2015 the European Parliament Committee on Industry, Research and Energy (ITRE) adopted its opinion on the European Commission proposal to revise the National Emission Ceilings (NEC) Directive. This proposal was part of the 2013 Air Quality package.

According to the Committee opinion, Member States should not be required to meet binding methane

emission limits but mercury should be added to the list of air pollutants for which a cap is introduced under the NEC Directive.

The MEPs' proposal to scrap the emission limits for methane reflected concerns in the agriculture committee on the burden they might place on farmers. The European Commission's proposal would have cut methane emissions by 33%.

Binding limits on mercury emissions will help the EU to meet its targets under the 2013 Minamata Convention on Mercury, the Committee said, but they could not agree on the levels at which these limits should be set.

ITRE also want to introduce intermediate emission limits for 2025 in addition to the 2020 and 2030 targets proposed by the European Commission.

MEPs rejected flexibility provisions that would allow Member States to offset cuts to NO_x, SO₂ and PM_{2.5} levels achieved in the shipping sector against emissions of the same pollutants from other sources in the same year. But they agreed that countries could "depart from their NEC commitments" for 2030 if changes in technical and economic factors require the targets to be redefined.

The ITRE committee's opinion will feed into the work of the Environment Committee, which is in charge of drafting the Parliament's position.

Draft Parliamentarian Report on National Emission Ceilings Directive

On 23 March 2015 MEP Julie Girling (UK, ECR) published her draft report on the Commission's proposal for the revision of the National Emission Ceilings (NEC) Directive.

As the Rapporteur in the Environment Committee, she supports the Commission's proposal to replace the existing NEC Directive and set new ceilings on emissions for SO₂, NO_x, ammonia, and Non-Methane Volatile Organic Compounds (NMVOC) for 2020 and 2030 for each EU Member State. The proposal also extends the NEC Directive to cover particulate matter (PM_{2.5}) from 2020 and methane from 2030 in order to introduce an important synergy with climate legislation.

Ms Girling notes however that a further tightening of air quality standards will be redundant unless a clear reduction in pollution from the main sources is seen. As a result, she proposes a new article calling on the Commission "to immediately present a proposal for the Euro 6 requirements on Real Driving Emissions (RDE) as a type-approval test method to ensure the effective limitation of NO_x and PM_{2.5} under real driving conditions." According to the Rapporteur, it is vital that the Commission brings forward its long-delayed Euro 6c emission Regulation to implement RDE; punitive action for non-compliance with NO_x limits is

extremely difficult to justify when testing standards do not deliver. She also proposes in-use market surveillance testing and public reporting of emissions from light-duty vehicles in order to verify that vehicles are Euro 6-compliant throughout their full useful life, using the existing US EPA system as the basis.

To ensure progress towards the 2030 limits, MEP Girling has added fully binding 2025 targets for all pollutants, with the exception of ammonia as she believes the Commission's ammonia target for 2030 will be difficult to achieve in some Member States, particularly those with large agricultural sectors. For this reason, and the fact that there is no flexibility for this pollutant in the Commission proposal, she is proposing only a 2030 limit on ammonia.

Finally, the Rapporteur has removed the flexibility allowing offsets from reductions in emissions of NO_x, SO₂ and PM_{2.5} from international shipping as she stressed that a provision to reduce maritime emissions instead of terrestrial emissions would be extremely difficult to apply and monitor in practice.

The draft Report is at

www.europarl.europa.eu/sides/getDoc.do?type=COMPARL&mode=XML&language=EN&reference=PE551.932.

Public Consultation on Mid-term Review of 2011 White Paper on Transport

On 10 March 2015 the European Commission Directorate General for mobility and transport (DG-MOVE) launched a public consultation on the mid-term review of the 2011 White Paper on Transport.

The general objective of the 2011 White Paper "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system" was to define a long-term strategy that would help the EU transport system achieve the overall goal of the Common Transport Policy, i.e. to provide current and future generations with access to safe, secure, reliable and affordable mobility resources to meet their own needs and aspirations, while minimising undesirable impacts such as congestion, accidents, air and noise pollution, and climate change effects.

The Commission would like now to take stock of the progress and to assess the validity of the analysis of the situation in the transport sector as well as trends, priorities and targets that were identified in 2011. This is necessary in the light of various new developments since 2011 such as the emergence of new technological opportunities, currently lower oil prices, the continued economic crisis and the adoption of the 2030 climate and energy framework.

The consultation is open until 2 June 2015 at

<https://ec.europa.eu/eusurvey/runner/white-paper-2011-midterm-review>.

European Commission's Report on Petrol and Diesel Fuel Quality

On 25 February 2015 the European Commission published its annual report on the quality of petrol and Diesel fuel used for road transport in the EU for 2013.

The report consolidates the twelfth year of EU Member States' submissions under the Fuel Quality Directive 98/70/EC.

248 of the 10 095 samples tested for petrol in 2013 were found to be out of specification for one or more parameters, which represents a non-compliance rate of 2.5%. 161 of the 14 764 Diesel samples were found to be non-compliant in 2013, representing a 1.1% non-compliance rate. A rate of non-compliances weighted according to sales volume and sample numbers shows downward trends for Diesel, following a peak in 2011, while petrol non-compliances have fluctuated more.

As cases of non-compliance are relatively rare and Member States generally take action to remove non-compliant fuel from sale, the Commission is not aware of any negative repercussions on vehicle emissions or engine functioning due to these exceedances.

The report is at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0070>.

New Weight and Dimensions Rules for Lorries adopted

On 10 March 2015 the European Parliament approved rules that allow manufacturers to increase the length of lorry cabs if this improves road safety and environmental performance. The rules were then approved by the Council of the EU on 20 April 2015.

Approved changes to the 1996 Weights and Dimensions Directive will allow more rounded lorry cabs to increase the driver's field of vision, making it easier to see vulnerable road users and reduce drag. Also a deflective shape would reduce the impact of collision; an additional weight allowance (up to 1 tonne) for alternative fuel powertrains/engines will encourage take-up of greener technologies; and aerodynamic flaps added at the rear of the lorry would help cut fuel consumption and emissions.

Other improvements include more efficient freight transport with an additional length allowance (15 cm) for the intermodal transport of 45-foot standard containers that would ease goods deliveries using several modes of transport. Regarding stricter enforcement of weight limits and better information for the driver, Member States will have to take specific measures to identify vehicles that are likely to exceed the relevant weight limits and data in on-board weight sensors should be made available to the driver.

These rules will be published in the Official Journal.

Commission's Study on Liquefied Natural Gas as a Shipping Fuel

On 3 March 2015 the European Commission Directorate General for Mobility and Transport (DG-MOVE) presented the preliminary results of a study on the perception of the risks and opportunities of Liquefied Natural Gas (LNG) as a shipping fuel.

The study takes into account the overall EU policy aiming at reductions of emissions from shipping and looking for alternative energy sources. It also summarises recent legislation: firstly, the Directive on sulfur content in marine fuels (2012/33/EU) which allows the use of LNG as an alternative fuel to comply with more stringent emissions standards. Secondly, the Directive on deployment of alternative fuels infrastructure (2014/94/EU) which aims at ensuring minimum coverage of LNG refuelling points in main maritime and inland ports across Europe by 2025 and 2030 respectively, with common standards for their design and use.

The study indicates that on the one hand, the major motivation for stakeholders to engage in LNG as a shipping fuel is to be compliant with Emission Control Area (ECA) requirements and the related positive environmental effects. On the other hand, the most critical issues for further deployment are the financing of LNG as a fuel and the pricing of LNG itself. For many companies, and especially shipping companies, LNG does not offer a profitable business model yet: the higher equipment costs for engines and tanks are not offset by savings in fuel or operating expenses. Also, the lack of existing bunkering infrastructure for LNG is another important barrier.

Final results of the study will become available in June-July 2015.

EEA Provisional 2014 EU Car CO₂ Data

On 15 April 2015 the European Environment Agency (EEA) released the CO₂ provisional data of new cars sold in the EU in 2014.

The average CO₂ emissions of new cars was 123.4 g/km in 2014, significantly below the 2015 target of 130 g/km, EEA reported. Europe had already reached its 2015 target by 2013, two years ahead of schedule but manufacturers will, nevertheless, have to further reduce CO₂ emissions to meet the target of 95 g/km by 2021.

In 2014 a total of 12.5 million new cars were registered in the EU, the first overall increase since 2007. Registrations increased in all EU Member States compared to 2013, except for Austria, Belgium and the Netherlands. Average CO₂ emissions levels in 2014 were below 130 g/km in 17 of the 28 Member States.

Significantly more fuel-efficient models were bought in the pre-2004 EU Member States compared to the newer ones. The most efficient cars were bought in the Netherlands (107 g/km), Greece (108 g/km) and Portugal (109 g/km), while the least efficient cars were bought in Estonia (141 g/km), followed by Latvia (140 g/km) and Bulgaria (136 g/km).

Diesel vehicles remained the most sold vehicles in Europe, constituting 53% of sales in 2014. Countries with high proportions of Diesel sales include Ireland (74%), Luxembourg (72%), Portugal (71%), Spain (66%), France and Greece (64%), Croatia (63%) and Belgium (62%).

Despite minor fluctuations in the past, the fuel efficiency of petrol cars has been catching up with that of Diesel cars in recent years. The average emissions gap between petrol and Diesel is currently below 3g/km of CO₂, around one seventh of the gap in 2000.

Around 38 000 electric vehicles were registered in 2014 throughout the EU, up by 57% compared to 2013. Nevertheless, electric vehicles continue to constitute only a very small fraction of new registrations (0.3 %).

While the average target for the EU fleet has been met, it has not yet been confirmed whether different manufacturers have met their own annual targets, based on the average mass of the cars they sell. The EEA will publish the final data on manufacturers' individual performances in autumn 2015.

The EEA provisional data is at

www.eea.europa.eu/highlights/new-cars2014-co2-emissions-well.

EEA Report on Partnership with Eastern Neighbours

On 24 April 2015 the European Environment Agency (EEA) published the synthesis report 'Building a shared environmental information system with the eastern neighbourhood: outcome of cooperation, 2010-2014'.

The report was developed together with representatives of Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine. Since 2010, EEA has been engaging the countries of the Eastern Partnership in regional cooperation in order to improve national capacities for managing and sharing environmental data and information.

The report provides a comprehensive overview of advancements made in all countries in building a Shared Environmental Information System (SEIS). It demonstrates significant improvements in putting in place national coordination structures, mobilizing capacities to produce environmental indicators and upgrading the information systems for better reporting and easier sharing of environmental data. Indicators of the work include, amongst others, emissions of

pollutants into the air, ambient air quality in urban areas, and greenhouse gas emissions.

Eastern countries are urged to strengthen the capacity of national administrations to produce regular, policy-relevant and indicator-based state of the environment reports, in line with internationally agreed guidelines and methodologies.

The EEA report is at www.eea.europa.eu/publications/enpi-seis-east-region-synthesis-report.

German Real-Driving Emissions Campaign

On 13 April 2015 LUBW, the Baden-Württemberg State Institute for Environment, Measurements and Nature Conservation released a report prepared by TÜV Nord for them and the Bavarian State Office for the Environment on a Real-Driving Emissions (RDE) test campaign conducted in Stuttgart and Munich.

TÜV Nord and ADAC tested on-road exhaust emissions of three medium-size Euro 6 Diesel cars with a Portable Emissions Measurement System (PEMS). The three cars used different technology to control NOx emissions: a VW Passat CC equipped with urea-based Selective Catalytic Reduction (SCR), a BMW 320d using a NOx storage catalyst, and a Mazda 6 SKYACTIV-D relying on engine control measures only.

The three Diesel vehicles were tested on main roads in Stuttgart and Munich, as well as on extra-urban route, and highways. In Stuttgart, the cars were driven at the speed limit of 50 km/h but also at lower speeds which have been considered for future urban regulation, namely 30 and 40 km/h. In Munich, they followed the prescribed route in flowing traffic with a maximum speed of 60 and 50 km/h. The driving style was moderate and extreme accelerations were avoided.

There was a considerable variation of the measured NOx emissions depending on NOx control technology and driving situation. NOx emission peaks occurred primarily when accelerating. The higher the driving dynamics, the higher emissions broke through. The highest NOx emissions were therefore measured in stop-and-go traffic.

NOx emissions from the three vehicles varied between 130 mg/km and 676 mg/km. Speed limit reductions at 30 or 40 km/h did not mean any lower NOx emissions.

The report calls upon the European Commission to timely develop a Real Driving Emissions procedure for the type-approval of new Diesel vehicles.

The full report and a summary (both in German) are at www.lubw.baden-wuerttemberg.de/servlet/is/23231.

German Associations call for Gasoline Particulate Filters

On 27 April 2015 German environmental and mobility associations Deutsche Umwelthilfe (DUH) and Verkehrsclub Deutschland (VCD) and the Institute for Epidemiology at German Research Centre for Environmental Health (Helmholtz Zentrum) in Munich issued a joint press release demanding effective measures to control particles emissions from direct injection petrol engines.

In their call, the organisations refer to recent real-world particles emissions measurements carried out on seven vehicles by Axel Friedrich, former head of department at the German Environmental Agency (UBA). Results showed that all gasoline direct injection vehicles emitted considerably more ultrafine particles than modern diesel vehicles equipped with Diesel Particulate Filters.

After installing a Gasoline Particulate Filter (GPF), emissions could be reduced to almost zero. “The technology is available and cost-efficient. Cost per vehicle is between €20 and 50,” said Axel Friedrich.

DUH and VCD are not only urging for vehicles to be brought up to the technological state of the art soon. In addition, particle emissions need to be monitored in road traffic. “It is vital that measures to reduce particle emissions not only take place in the laboratory as part of the approval process, this also needs to happen on the roads. Additional test procedures in the approval process and regular exhaust gas examinations must also be binding for direct-injection vehicles,” explained Dorothee Saar of DUH.

More information (in German) is at www.duh.de/uploads/media/Hintergrundpapier_GDI-Pressesgesprach.pdf.

France asked to act on Air Pollution

The European Commission asked France in its April Infringement package released on 29 April 2015 to comply with EU PM₁₀ air quality limits.

The latest figures from the French authorities show that the air pollution problem persists, with the maximum daily limits for PM₁₀ being exceeded in ten zones: Paris, Lyon, Grenoble, Marseille, Martinique, the Arve valley, Provence-Alpes-Côte d’Azur, Nice, Toulon, and Douai-Béthune-Valenciennes.

This new reasoned opinion follows a complementary letter of formal notice sent by the Commission in February 2013. If France fails to act within two months, the Commission may take the matter to the EU Court of Justice.

Old Diesel Cars Scrapping Scheme in France

On 31 March 2015 a new Order was published in the French Official Journal that defines a scrapping scheme for old Diesel cars that are replaced by clean vehicles.

As of 1 April 2015 the purchase of a clean passenger car to replace a Diesel car of 14 years or more is entitled to the following subsidy: €10000 for an electric car emitting 20 g/km CO₂ or less; or €6500 for a plug-in hybrid car emitting between 21 and 60 g/km CO₂. In addition, buyers who are not subject to income tax will also be entitled to a €500 subsidy for the purchase of any Euro 6 car emitting between 61 and 110 g/km CO₂ and scrapping of their old Diesel.

UK Supreme Court orders New Air Quality Plans

On 29 April 2015 the UK Supreme Court ordered the UK Government to deliver by the end of 2015 new plans to cut air pollution.

The court upheld a challenge brought by NGO ClientEarth, stating explicitly that the UK breached the NO₂ limits set in the EU's Ambient Air Quality Directive by failing to put in place sufficiently ambitious plans to secure compliance.

Under existing air quality plans, parts of the UK, including London and Birmingham, would not have achieved legal limits on NO₂ until after 2030.

The Supreme Court noted that during the five years in which the UK has been in breach of the law, "the prospects of early compliance have become worse, not better" and it disagreed with the lower courts that enforcement can be left to the European Commission.

ClientEarth is calling for action to clean up the worst polluting diesel vehicles, including through a national network of Low Emission Zones.

UK Emissions Inventory (1990-2013)

On 13 March 2015 the UK Department for Environment, Food & Rural Affairs (Defra) published the 10th Informative Inventory Report from the UK National Atmospheric Emissions Inventory Programme.

The report accompanies the UK's 2015 data submission under the United Nations Economic Commission for Europe (UNECE) Convention on Long-Range Transboundary Air Pollution (CLRTAP) and contains detailed information on annual emissions estimates of air quality pollutants by source in the UK from 1990 to 2013. It reports emissions of nitrogen oxides (NO_x as NO₂), carbon monoxide (CO), ammonia (NH₃), sulfur dioxide (SO₂), non-methane volatile organic compounds (NMVOCs), particulate

matter (PM), heavy metals, and persistent organic pollutants.

Between 1990 and 2013 emission inventories for NO₂, SO₂, ammonia, NMVOCs, CO, PM₁₀ and PM_{2.5} have decreased dramatically in the UK, the report showed.

The report is available at

http://naei.defra.gov.uk/reports/reports?report_id=809.

Government's Response to UK Environmental Audit Committee

On 1 March 2015 the Environmental Audit Committee (EAC) of the UK House of Commons published the response from the UK Government to their recommendations for action on Air Quality.

The Government has rejected a number of recommendations made by the EAC for tackling air pollution, including increasing taxes on Diesel vehicles. It prefers adopting a fuel-neutral approach, supporting cleaner vehicles and sustainable transport.

The Government said however that as recommended by EAC, it would consider establishing a national Low Emission Zone (LEZ) network. It is considering the use of both local LEZs and a national network approach. A national network could be included in the Government's air quality plans, it said.

The Government said it will continue to work with the European Commission and other Member States to ensure the latest Euro standards deliver the expected emissions reductions under real-world conditions. This will take the form of a new test procedure for Euro 6 light-duty vehicles, scheduled to be introduced by the Commission by 2017, to improve type-approval laboratory testing and a further new test to assess vehicles under real-world driving conditions.

The Committee and government also agreed over the need to financially support a range of vehicle fuel technologies, tackling bus fleet pollution, and better communicating air pollution warnings.

The response is at

www.publications.parliament.uk/pa/cm201415/cmselect/cme/naud/1083/1083.pdf.

UK taken to Court over Coal Power Plant NO_x Emissions

On 26 March 2015 the European Commission announced that it is referring the UK to the European Court of Justice due to the absence of a reduction in emissions by the Aberthaw coal-fired power station in Wales.

Emissions for nitrogen oxides at the power station were found to exceed the permissible limits. Under EU legislation on emissions from large combustion plants, Member States had until 1 January 2008 to reduce emissions of a number of pollutants from power plants.

The Aberthaw power plant does not meet the requirement of the Directive, as it currently operates under a permit which sets a NO_x emission limit of 1200 mg/m³, as opposed to the legally applicable 500 mg/m³ limit set in the Directive.

The Commission first raised its concerns in a letter of formal notice in June 2013, followed by a reasoned opinion in October 2014. The Commission acknowledges that the UK has been working constructively on this issue, with the aim of finding a solution. So, in this context, the Commission welcomes more recent indications from the UK authorities that investments will be made to upgrade the plant, but at present the plant continues to operate under a permit which allows it to emit high levels of the toxic gas NO_x.

Funding for UK Low Emission Buses

On 11 March 2015 the UK Government announced a £65 million (€91 million) funding for ultra-low emission cities and green buses. The investment forms the latest part of a £500 million package set aside for Ultra Low Emission Vehicles that was announced in 2014.

Within this funding £35 million will go to twelve cities or authorities identified in the Go Ultra Low city scheme to become centres of excellence for low emission vehicles, namely Greater London, West Yorkshire, the North East, York, West of England, Dundee, Sheffield, Milton Keynes, Northern Ireland, Oxford, Nottingham, and Leicester. These shortlisted cities will be invited to fully develop their proposals over summer and the winners – expected to be 2 to 4 cities – will be announced in autumn 2015.

The remaining £30 million funding will enable local authorities and bus operators to replace existing vehicles with greener, cutting-edge alternatives to help clean up air quality. The UK Department for Transport will assess bids for the bus funding against a detailed range of criteria, including potential air quality improvements and value for money.

The Low Emission Bus (LEB) test is currently being redefined to better reflect the UK bus operating cycle. Under the new testing procedure, in order to qualify as a LEB, a bus will need to produce at least 15% less greenhouse gas emissions than the average conventional Euro V equivalent Diesel bus of the same passenger capacity and will need to meet or exceed Euro VI emissions regulations.

2013 Annual Report for the UK Black Carbon Network

On 26 February 2015 the UK Department for Environment, Food and Rural Affairs published its annual report for the UK Black Carbon Network.

This report covers the operation of the UK Black Carbon Network and the data collected by the Network

in 2013. The aethalometer instrument used on the network makes measurements of Black Carbon and UV components which can be used as an indicator of wood and solid fuel emissions.

In 2013, the rural background Black Carbon (measured at Harwell) averaged 0.5 µg/m³ (same as 2012) whilst the urban annual mean for Marylebone Road, London (the highest urban figure) was down from 8.9 µg/m³ in 2012 to 6.9 µg/m³ in 2013. The urban increment for Black Carbon was similar for all locations while the roadside increment was roughly proportional to road traffic volumes, especially buses and taxis. Daily averages of the measurements show that the highest concentrations of Black Carbon are found on weekdays, with the weekends generally having lower values. The hourly averages of Black Carbon broadly show a commuter traffic-based signature, with some exception in Northern Ireland which relates to local residential heating. The only site with a significant trend in Black Carbon concentrations was Marylebone Road. Here, Black Carbon concentrations have dropped over the last 2 years.

Comparisons between particulate mass concentrations and Black Carbon concentrations showed that Black Carbon makes up a significant proportion of the particulate mass concentration at roadside sites. At Marylebone Road the Black Carbon concentration comprises 24% of the PM₁₀ and 34% of the PM_{2.5}, while at Birmingham Tyburn roadside Black Carbon forms 16% and 19% of PM₁₀ and PM_{2.5} respectively.

The report is at http://uk-air.defra.gov.uk/assets/documents/reports/cat13/1502261716_2013_BC_Network_Annual_Report.pdf.

London Mayor confirms Ultra low Emission Zone in September 2020

On 26 March 2015 Boris Johnson, the Mayor of London, confirmed the introduction of the world's first Ultra Low Emission Zone (ULEZ).

Following a positive consultation process, the ULEZ will be launched in central London on 7 September 2020, significantly improving air quality and helping to protect the health of Londoners, the Mayor said. It will require vehicles travelling in the Congestion Charge Zone of central London to meet new emissions standards or pay a daily charge. The ULEZ will require:

- Cars and small vans: Euro 6 for diesel engines (registered from 1 September 2015 so five years old or less in 2020) and Euro 4 for petrol engines (registered from 1 January 2006 so fourteen years old or less in 2020).
- Large vans and minibuses: Euro 6 for diesel engines (registered from 1 September 2016 so four years old or less in 2020) and Euro 4 for petrol

- engines (registered from 1 January 2007 so thirteen years old or less in 2020).
- Heavy goods vehicles, buses and coaches: Euro VI (registered from 1 January 2014 so six years old or less in 2020 except TfL (Transport for London) buses which are required to meet a higher standard).
 - Motorcycles and similar vehicles: Euro 3 (registered from 1 July 2007 so 13 years old or less in 2020).

Non-compliant vehicles could still drive in the zone but will be required to pay a daily charge of £12.50 (€17) for light vehicles or £100 (€136) for heavy-duty vehicles.

By 2020, in addition to the ULEZ, Transport for London is committed to ensuring all 300 single decker buses operating in central London are zero emission (e.g. electric), and all 3000 double deck buses will be hybrid including 800 of the Mayor's New Routemaster.

The full ULEZ package is expected to halve emissions of NO_x from vehicles in central London. The number of people living in areas of poor air quality (where NO₂ levels exceed legal limits) would reduce by 74% in central London, 51% in inner London, and 43% in outer London by 2020.

Dispute over Clean Air Advertisement in London

The UK Advertising Standards Authority (ASA) ruled on 8 April 2015 that claims by the Mayor of London and Transport for London (TfL) that a new air pollution plan for London would dramatically reduce emissions were "misleading".

The dispute related to an advertisement in the Evening Standard newspaper on 13 November 2014 inviting the public to take part in the consultation on the introduction of an Ultra Low Emission Zone (ULEZ) in London. It said the plan would "reduce vehicle pollution by half", a claim disputed by Clean Air in London campaigners.

The dispute centred around the specific impact the potential ULEZ would have on London's air quality. Clean Air in London said the claim that vehicle pollution would be reduced by half was at odds with the consultation document. This stated that only NO₂ and NO_x emissions would be reduced by 50%. CO₂ emissions, the consultation document said, would only be reduced by 15% in the congestion charging zone and 1% London-wide. Total emissions reduction for coarse particulate matter (PM₁₀) would only be 9% in the congestion zone and 0.7% London-wide.

TfL denies this was an exaggeration, saying it "wanted to avoid technical jargon" and offer a simplified account of the pollution impact. It also claimed that it was

justified in its account because NO₂ and NO_x "are the most harmful pollutants".

The ASA has told TfL "to ensure that they made clear in future that claims about reductions in vehicle pollution referred to specific types of pollution rather than vehicle pollution as a whole".

Czech Republic asked by Commission to act on PM₁₀ Air Pollution

In its monthly package of infringement decisions published on 26 March 2015, the European Commission asked the Czech Republic to comply with EU legislation requiring Member States to limit citizens' exposure to fine dust particles (PM₁₀) by defining specific limit values to be observed.

The latest air quality figures from the Czech Republic show that the maximum daily limits for PM₁₀ is being exceeded in Praha, Střední Čechy, Severozápad, Severovýchod, Brno, Střední Morava, Moravskoslezsko and Ostrava/Karviná/Frýdek-Místek, with yearly limits also being exceeded in Moravskoslezsko and Ostrava/Karviná/Frýdek-Místek.

As a result, the European Commission is asking the country to take forward-looking, speedy and effective action to keep the period of non-compliance as short as possible. The reasoned opinion follows an additional letter of formal notice sent on 22 February 2013. If the Czech Republic fails to act, the Commission may take the matter to the EU Court of Justice.

Old Vehicles Scrapping Scheme in Finland

The Finnish Ministry of Employment and the Economy notified the European Commission on 27 March 2015 that it has published guidelines for importers to implement a vehicle scrapping premium.

The premium will be paid for scrapped vehicles which are more than 10 years old and replaced with a vehicle whose CO₂ emissions do not exceed 120 g/km. The premium amounts to €1000 and will be deducted from the cost of the new car.

Ship Emissions in Gothenburg Harbour and Compliance with New Sulfur Rule

Researchers at Chalmers University of Technology released on 6 March 2015 results of their emissions measurements on ships passing the entrance of the Gothenburg Harbour in Sweden.

For four years, emissions have been measured based on a combination of several established techniques such as optical remote sensing, chemical analysis using a "sniffer" and monitoring of ships by AIS (automatic identification system) at a station in the

fortress of Nya Älvsborg, next to the channel leading into Gothenburg Harbour on the Swedish west coast.

The maximum permitted level of sulfur in fuel for vessels sailing in the Emissions Control Area of northern European waters was reduced on 1 January 2015, from 1 to 0.1% but not all shipping lines appear to be complying with the new requirements. During the first two weeks of 2015 nearly 200 ship passes were analysed, and nearly half of these complied with the new limit value of 0.1%.

"Emissions just above the limit were observed for many ships, so given that there is some uncertainty in the measuring method at least 80% of ships can be considered to be approved," Johan Mellqvist, professor of optical remote sensing at Chalmers, explained. This can be compared with the previous four years, when emissions on average were at a level equivalent to a fuel sulfur content of 0.6 to 0.7%.

Swiss Report on Air Pollution and Health

On 23 February 2015 the Swiss Federal Office for the Environment (FOEN) released a report on air pollution effects on health.

FOEN says that even though air quality has improved in the last 30 years, the air is still far from being clean. Air quality limits for ozone, PM₁₀, and nitrogen dioxide are exceeded not only in urban environments, but also in suburban areas and countryside.

Health effects on respiratory system but also cardiovascular diseases, lung cancers, and impact on foetus are detailed in the report, which also provides with recommendations to the public on how to protect themselves and contribute to a cleaner air. FOEN promotes less polluting vehicles that meet the most recent emissions standards for example.

The report is available (in German, French and Italian) at www.bafu.admin.ch/publikationen/publikation/01798/index.html.

Soot-free Cities Ranking

On 31 March 2015 Friends of the Earth Germany (BUND) released their 2015 ranking of soot-free cities, a European city ranking on best practices on air pollution reduction from transport.

23 European cities have been evaluated in nine categories of measures based on their potential to reduce PM₁₀ and NO₂. The categories have also been selected based on their potential to reduce soot emissions from traffic and non-road pollution sources. The purpose of the ranking is not to measure the reduction potential of the different measures but to highlight best practices and assess which of the 23 selected cities have made most use of them. Several measures address the main emitters at source, for instance by introducing Low Emission Zones and cleaning up public vehicles fleets or construction

machines. Other strategies such as economic incentives, traffic management, and promotion of cycling and walking may reduce car use and thus improve air quality. The reported reduction of local PM₁₀ and NO₂ emissions between 2008 and 2012 were also looked at, as well as the level of public information and citizens' participation in decision making.

The winner of this round is the Swiss city of Zurich. It is followed by Copenhagen (Denmark), Vienna (Austria) and Stockholm (Sweden). Berlin, the winner of the last ranking in 2011 finished only fifth. The last two places in the ranking were Lisbon (Portugal) and Luxembourg.

More info is at www.sootfreecities.eu.

NORTH AMERICA

ARB Draft Assessment on Heavy-Duty Technology and Fuels

On 3 April 2015 the California Air Resources Board (ARB) released a draft Heavy-Duty Technology and Fuels Assessment report that outlines the agency's strategy to reduce criteria pollutant and greenhouse gas (GHG) emissions from heavy-duty vehicles.

The technology assessment focuses not only on zero and near-zero emission technologies that will ultimately be necessary to meet long-term Californian air quality and climate goals, but also on improvements to conventional technologies that could provide substantial near-term emissions reductions.

Criteria pollutant emissions from existing and future heavy-duty engines can be reduced through improved durability, warranty, and certification requirements, as well as enhanced inspection programs and improved maintenance practices, the report says. ARB analysis shows that not all on-road heavy-duty engine components are as durable as once thought. Warranty compliance reporting data show that for the past ten years heavy-duty diesel and natural gas engines have experienced a high frequency of warranty claims that represent engine component malfunctions.

These engine component malfunctions appear to be having a secondary impact on Diesel Particulate Filter (DPF) performance. Recent studies conducted by ARB suggest that around 8% of DPFs may be cracked and releasing excess emissions. These studies suggest that more than 70% of all emissions from DPF-equipped trucks are generated by this small subset of damaged filters. Repairing these filters would provide substantial benefits.

Regarding NO_x emissions, on-road diesel engines appear to be generating higher than expected in-use NO_x emissions during low temperature, low load operations that characterize local delivery trucks, buses, and work trucks operation. Emissions testing performed by ARB, SCAQMD and others suggests

that, under these conditions, the SCR does not function effectively and does not achieve high NO_x control efficiencies. Improved thermal management and NO_x controls are needed to achieve further in-use emissions reductions, especially in low temperature, low load vocational driving cycles. ARB has initiated research to better understand the issue.

Finally, natural gas engines which emit low levels of PM utilize three way catalyst (TWC) technologies. Unlike similarly certified Diesel engines, these current technology natural gas engines with properly operating TWC do not appear to generate higher in-use NO_x. More research is nevertheless needed to evaluate real-world emissions of natural gas and Diesel engines.

The draft report is open for comment and is at www.arb.ca.gov/msprog/tech/techreport/ta_overview_v_4_3_2015_final.pdf.

US Study on Traffic Pollutants Exposure and Pediatric Asthma

On 6 April 2015 the California Air Resources Board (ARB) released a new study conducted by the University of California Irvine, which examined the effect of chronic exposure in asthmatic children living in homes near traffic pollution.

The study looked at possible relationships between worsening asthma – specifically increased asthma-related emergency room visits and hospital admissions – and exposure to PM_{2.5}, including primary (combustion emissions) and secondary (photochemically produced) components of PM_{2.5}, traffic pollution, and ambient pollutant gases in asthmatic children in Orange County. Key findings from the study include that associations of asthma with ambient pollution, including CO, NO_x and PM_{2.5}, were stronger among children exposed to high traffic-related air pollution at their homes, suggesting this is a vulnerable population. Hospital encounters for asthma were linked to PM_{2.5} and ozone in warm months, and with PM_{2.5}, CO, NO₂ and NO_x in the cool season.

The study is at www.arb.ca.gov/research/single-project.php?row_id=65031.

US takes Actions to reduce Health Impacts of Climate Change

On 7 April 2015 US President Obama's Administration announced a series of executive actions to better understand, communicate, and reduce the health impacts of climate change on communities.

Amongst the many measures announced, the White House will host a climate change and health summit later in spring 2015. Also, a draft Climate and Health Assessment report synthesizing the best available

scientific literature on this topic was released for public comment and concurrent peer review.

The Centers for Disease Control (CDC) and Prevention and American Public Health Association (APHA) released a report titled "Adaptation in Action" which highlights how seven cities and state are successfully using the CDC's Building Resilience Against Climate Effects (BRACE) framework to identify climate-related public health threats and develop strategies to adapt to these threats. Finally, guidance on how to integrate climate considerations into the Department of Interior's health and safety policies were released.

US EPA 2013 Annual Report on Light-duty Greenhouse Gas Performance

On 26 March 2015 the US Environmental Protection Agency (EPA) released its second annual Manufacturers' Performance Report providing detailed information about how individual firms are complying with Greenhouse Gas (GHG) emissions standards for cars and light trucks in Model Year 2013.

The report indicates that for the second consecutive model year, the automotive industry outperformed the national GHG emissions standards by a wide margin. Overall industry compliance in model year 2013 was 12 g/mile – or 1.4 miles per gallon – better than required by the 2013 GHG standard.

All large manufacturers are in compliance with the 2012 and 2013 GHG standards.

The report is at www.epa.gov/oms/climate/ghg-report.htm.

EPA Settlements in alleged Clean Air Act Violation Cases

On 24 March 2015 the US Environmental Protection Agency (EPA) and the Department of Justice announced a settlement with MTU to resolve alleged Clean Air Act violations.

The complaint alleges that MTU, a subsidiary of Rolls-Royce Power Systems, violated the Clean Air Act by selling 895 non-road, heavy-duty Diesel engines without valid certificates of conformity. The engines have been used in mining, marine and power generation vehicles and equipment.

EPA discovered that MTU had obtained certificates of conformity without conducting valid testing. EPA learned that MTU had performed maintenance during durability testing but had not reported this to EPA. Under the settlement, MTU will pay a \$1.2 million (€1.1 million) penalty and will perform annual audits of its engine emissions testing and certification activities for three years.

On 7 April 2015 EPA announced the settlement of a Clean Air Act violation case with four interrelated Dallas, Texas-based recreational vehicle importers

Geason Enterprises, GE Ventures, Hammerhead Off-Road, and TJ Power Sports, and their Chinese manufacturer Shanghai Howhit Machinery Manufacture.

Parties agreed to pay a civil penalty of \$560 000 (€520 000) for the illegal importation and sale between 2007 and 2011 of 4076 vehicles that were not covered by an EPA certificate of conformity (COC), primarily because they had no COC, had a catalyst that did not conform, lacked the emissions control system specified in their COC application, were imported with adjustable parameters not identified in the COC applications, were imported with commercial model names not listed in the COC applications, or were manufactured by a manufacturer different than that listed in the COC applications.

CENTRAL & SOUTH AMERICA

Brazil raises Ethanol Blend in Gasoline

On 4 March 2015 the Brazilian Ministry of Mines and Energy announced that the anhydrous ethanol blend in gasoline would be increased from 25 to 27% on 16 March 2015.

This decision stems from the successful evaluation carried out by Petrobras, at the request of the Ministry in 2014, of the impact of increased ethanol blend in gasoline. The tests did not show any technical problems arising from the use of 27.5% ethanol content in gasoline blend. Regarding ethanol market supply, no prejudice to the supply conditions of the internal market has been identified.

According to the Ministry, the National Association of Vehicle Manufacturers (Anfavea) and the Union of Sugar Cane Industry (UNICA) have issued a statement expressing agreement with the change to 27% ethanol content in regular gasoline sold in Brazil as long as the premium gasoline (high octane) remains at a level of 25% ethanol. The other associations of motorcycle manufacturers and major associations involved also expressed agreement with the adoption of the measure.

ASIA PACIFIC

Earlier Nationwide Implementation of China V Fuels Standard

On 28 April 2015 the State Council of China announced that it will cap the sulfur content in gasoline and Diesel fuels at 10 parts per million (ppm) nationwide starting in January 2017, one year earlier than planned.

These China V fuels will be made available first in 11 eastern provinces starting January 2016. This is an expansion from the previous planned area of Beijing, Tianjin, Hebei province, the Yangtze River Delta and the Pearl River Delta.

To reach the goals, the State Council noted that oil refinery enterprises will spend about 68 billion yuan (€10 billion) on technology upgrades.

Guangdong Province implements China V Emissions Standard

On 1 March 2015 the Chinese Guangdong province upgraded their emissions standards for light vehicles to the China V level, a standard based on Euro 5/V light-duty/heavy-duty emission limits.

The new standard applies in the capital city Guangzhou and in eight other cities in the province. China V requires sulfur content in fuel to be no more than 10 ppm, one fifth of the China IV's 50 ppm.

Guangdong province follows Beijing where the China V standard was implemented in September 2013, and Shanghai in April 2014.

China to toughen Inspection on Air Quality Data

Chinese state news agency Xinhua reported on 2 April 2015 that China's Vice-Minister for environmental protection, Wu Xiaoqing, had announced a two-year inspection campaign to root out fake air quality data.

According to Wu, some local governments make monitoring stations fabricate or tamper with air quality data. Such acts severely compromise the credibility of the government and environmental protection agencies and harm environmental monitoring efforts.

Under China's newly amended environmental law, criminal penalties will be imposed on those found guilty of trying to evade pollution monitoring systems.

Beijing to ban Vehicles that fail to meet China II Standard

On 8 April 2015 Chinese media Xinhua reported that the Beijing municipal Environmental Protection Bureau (EPB) has decided to ban from the road, from 1 January 2016 onwards, gasoline-powered vehicles that fail to meet the National Emission Standard II (so called China II).

Beijing currently imposes the China V standard for vehicles, similar to the Euro V standard in Europe. The city imposed the China I standard in 1999 and the China II standard in 2004. Pre-China II vehicles will be banned from entering the city's Sixth Ring Road.

To cut pollution, Beijing scrapped 1.44 million old vehicles between 2011 and 2014. Beijing for example eliminated "Huangbiaoche," or "yellow-label cars," which failed to meet the China I standard by the end of 2014, according to the Beijing EPB.

Beijing currently has 5.57 million vehicles, accounting for 31% of local air pollution.

Indian Air Quality Index launched

On 6 April 2015, during a two-day Environment and Forest Minister's conference, Indian Prime Minister Narendra Modi launched the National Air Quality Index (AQI) for monitoring real-time air quality in major urban centres across India.

AQI has been at present launched for 10 cities: Delhi, Agra, Kanpur, Lucknow, Varanasi, Faridabad, Ahmedabad, Chennai, Bangalore and Hyderabad but Air Quality measurements have been proposed to be extended to 22 State Capitals and 44 other cities with a population exceeding one million. Each of these cities will have 6-7 continuous monitoring stations with AQI display boards.

The AQI has been developed by the Central Pollution Control Board in consultation with IIT-Kanpur and an expert group comprising medical, air quality professionals and other stakeholders.

The index considers eight pollutants: PM₁₀, PM_{2.5}, NO₂, SO₂, CO, O₃, NH₃ and Pb. There are six AQI categories, namely: Good, Satisfactory, Moderately polluted, Poor, Very poor and Severe. The likely health implications of the six categories would also be provided with a colour code.

Older Diesel Vehicles banned from Delhi

On 7 April 2015 India's National Green Tribunal (NGT) ordered the Delhi regional government to ban the operation and registration of all Diesel vehicles of 10 years or older in order to reduce air pollution. The order was however suspended by the Supreme Court for two weeks on 13 April 2015 after the Delhi government sought more time to implement it.

The NGT Order follows warnings in November and December 2014 ordering government agencies to take steps to crack down on excessive air pollution in the capital. It would affect more than 118 000 private cars and nearly 35 000 commercial vehicles registered in Delhi, as well as at least 50 000 other diesel vehicles that enter Delhi every day, mainly trucks and buses.

The NGT also asked the Delhi government to come up with suggestions for incentives to scrap old polluting Diesel vehicles. NGT also suggested fixing a cap on the number of vehicles on the Capital's roads.

Following the NGT ban, the Indian government is now advocating the implementation of Bharat Stage (BS) V and VI emissions norms a year ahead of what was proposed earlier, in 2019 and 2023 respectively. However BS IV norms, which were first introduced in 2010, are yet to be implemented across the country. For now, only 38 cities in India follow them.

Philippines introduces Euro 4 Fuels and Emissions Standard

The Department of Environment and Natural Resources (DENR) of the Philippines issued on 26 March 2015 Administrative Order No. 2015-14 requiring the use of cleaner fuel and imposing stricter emissions standards for all vehicles to be used or introduced in the market effective 1 July 2015.

The current fuel standard that has been in effect since 2008 is Euro 2, which has a maximum sulfur content of 500 ppm (vs. 50 ppm for Euro 4) both for gasoline and Diesel fuels. Benzene in Euro 4 gasoline is 1% by volume compared to 5% for Euro 2 fuel. For aromatics, Euro 4 fuel contains only 35% by volume compared to Euro 2 fuel, which prescribes no limit. Philippines will skip the intermediate Euro 3 standard.

More stringent emissions standards for CO, hydrocarbons, NO_x, and PM will have to be complied with by new passenger, light- and heavy-duty vehicles. The Order sets an average CO emissions limit of 2 g/km for gasoline passenger and light-duty vehicles instead of 2.2 g/km, and 0.9 g/km for those using diesel instead of 1 g/km. It also requires that all new vehicles to be used or introduced into the Philippines market by January 2016 to be Euro 4-compliant.

Vietnam to lower Sulfur Content in Diesel Fuel

On 23 March 2015 Vietnam's Government announced that the country will switch to Diesel fuel containing 500 ppm sulfur maximum as of 1 January 2016.

Diesel fuel containing up to 2500 ppm sulfur (i.e. 0.25%), mainly used in water transport, will be banned.

Several countries in Asia, including Bangladesh and Sri Lanka have recently switched to 500 ppm sulfur Diesel fuel, which leaves only Pakistan and Indonesia with sulfur content above 500 ppm.

New Draft 2022 Fuel Economy Standards for Light Commercial Vehicles in Japan

On 28 April 2015 the International Council on Clean Transportation (ICCT) released a policy update stating that Japan has finalized new proposed fuel economy standards for light- and medium-duty commercial vehicles.

The new standards, prepared by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and the Ministry of Economy, Trade, and Industry (METI), will require that the fuel economy of model year 2022 light and medium commercial vehicles sold in Japan average 17.9 km/l (i.e. 5.6 l/100 km) in 2022, compared to 14.2 km/l (i.e. 7 l/100 km) in 2012. This represents a 26% increase in fuel economy from 2012 values, and a 23% increase from the 2015 standard of 14.5 km/l.

Targets for individual models will be assigned as a function of body and fuel type, transmission, and kerb mass. The fuel economy of individual models will be measured on the JC08 test cycle, with a 25% and 75% weighting for cold- and hot-start fuel economy, respectively.

MLIT and METI will use the proposal as a basis for revisions to relevant laws and regulations, with a target for completion in spring of 2015.

The ICCT paper is at

www.theicct.org/sites/default/files/publications/ICCTupdate_Japan2022LCV_20150428.pdf.

Indonesia to increase Biodiesel Content to 15%

Indonesia will increase the minimum biodiesel content in automotive Diesel fuel, Mr Sofyan Djilil, coordinating Minister for Economic Affairs, told Bloomberg news agency on 17 March 2015.

The blending rate will be raised from 10 to 15% this year and subsequently to 20%. Indonesia is promoting biofuel use in an attempt to help utilise increasing supplies of palm oil and reduce carbon emissions.

Once implemented, the new blending rule will be effective immediately.

Indonesia missed 2014 biodiesel targets, largely due to logistical and infrastructure problems, but the government wants to give its biofuels industry a boost.

MIDDLE-EAST

Clean Diesel Workshop in Iran

A two-day workshop was organized in Tehran on 15-16 April 2015 by the Iran's Air Quality Control Company (AQCC), the Iran Department of Environment (DOE) and the VERT Association to support implementation of new clean Diesel regulations in Iran.

The Iranian government has actually published two emission reduction decisions. From 2015 all new Diesel vehicles, manufactured in Iran or imported, must be equipped with a Diesel Particulate Filter (DPF); and within 24 months, public transit buses of 8 cities with population above 1 million must be retrofitted with a DPF. A DPF retrofit project has therefore started in Tehran for the public transit bus fleet where 10 buses have already been retrofitted with sulfur-tolerant, fuel-borne catalyst DPF systems. The project targets the retrofit of 1200 buses by the end of 2015.

GENERAL

AECC Technical Seminar on Real-Driving Emissions

On 29 April 2015 AECC organized in Brussels a Technical Seminar on Real-Driving Emissions.

Experts from the European Commission, Member States and Type-Approval Authorities, technical consultancies, industry, and NGOs discussed key aspects of the RDE legislation, European and national air quality needs, on-board emissions measurement, and emissions control technology performance on the road. AECC presented recent results of an RDE test programme demonstrating the feasibility of low Diesel NOx emissions not only in the lab but also in real-world driving conditions.

Presentations are available at

www.aecc.eu/en/Publications/RDE_Technical_Seminar.html.

WHO Report on Economic Cost of Health Impact of Air Pollution in Europe

On 28 April 2015 the World Health Organization (WHO) released a new study on the economic cost of the health impact of air pollution in Europe.

It is the first assessment of the economic burden of deaths and diseases resulting from outdoor and indoor air pollution in the 53 countries of the WHO Region.

The economic cost of the approximate 600 000 premature deaths alone accounted for over US\$ 1.4 trillion (€ 1.3 trillion) in 2010. Adding another 10% to this, as the cost of diseases from air pollution, results in a total of almost US\$ 1.6 trillion. The amount is nearly equivalent to one tenth of the gross domestic product (GDP) of the entire European Union in 2013.

The economic value of deaths and diseases due to air pollution corresponds to the amount societies are willing to pay to avoid these deaths and diseases with necessary interventions. In these calculations, a value is attached to each death and disease, independent of the age of the person and which varies according to the national economic context.

The WHO report is at

www.euro.who.int/_data/assets/pdf_file/0004/276772/Economic-cost-health-impact-air-pollution-en.pdf.

SMMT launches Communication Campaign on Diesel in UK

On 11 March 2015 the UK Society of Motor Manufacturers and Traders (SMMT) launched a nationwide campaign to challenge the 'demonization' of Diesel.

Mike Hawes, SMMT Chief Executive, said "Today's Diesel engines are the cleanest ever, and the culmination of billions of pounds of investment by manufacturers to improve air quality. Bans and parking taxes on Diesel vehicles therefore make no sense from an environmental point of view. We need to avoid penalising one vehicle technology over another and instead encourage the uptake of the latest low emission vehicles by consumers. The allegations against Diesel

cars made in recent months threaten to misguide policy making and undermine public confidence in Diesel.”

SMMT is calling for policy makers to adopt a consistent technology-neutral approach towards vehicle incentives and penalties to encourage the uptake of the latest technologies and maximise the benefits for air quality. The automotive industry wants to encourage consumers to continue to choose the cars that fit their lifestyles and is committed to help the UK reach its air quality targets by encouraging the uptake of the latest vehicles, be they petrol, Diesel, electric or any of the multitude of technologies available on the market.

The SMMT campaign is at www.dieselfacts.co.uk.

Brussels-based Non-Governmental Organization Transport & Environment (T&E) reacted to this announcement with a briefing on “six facts about Diesel the car industry would rather not tell you”.

This briefing largely focuses on the gap between the Euro 6 NOx emissions limit and real-world performance of Euro 6 Diesel cars. It however fails to make the point about the good performance and environmental benefits of Diesel Particulate Filters.

The T&E briefing is at www.transportenvironment.org/publications/6-facts-about-diesel-car-industry-would-rather-not-tell-you.

ICCT Report on Real-World Heavy-duty NOx Emissions from Euro IV to Euro VI

On 2 March 2015 the International Council on Clean Transportation (ICCT) released a report comparing real-world NOx emissions control in Euro IV, V, and VI heavy-duty vehicles.

The ICCT quotes tests conducted recently at VTT Technical Research Centre of Finland, where the Euro IV emissions ranged from just under 2.8 to 11.3 g NOx/kWh, with an average of 6.5 g/kWh, and the Euro V emissions ranged from 0.9 to 9.7 g NOx/kWh, with an average of 4.4 g/kWh. The Euro VI vehicles showed nevertheless a much smaller range, from 0.01 to 0.50 g NOx/kWh, with an average of 0.13 g/kWh.

The ICCT concludes that Heavy-duty Vehicles (HDV) conforming to Euro IV and V standards frequently show poor real-world NOx emissions performance but evidence indicates that new certification protocols in Euro VI resolve this problem, and Euro VI-compliant HDV NOx emissions meet expectations, even in the most difficult operating conditions. As a result, Euro VI standards may achieve a much greater reduction in NOx emissions from Euro IV/V levels than the 88% reduction in certification level would indicate. In practice, the reduction is likely closer to 98%, and could be even higher due to the fact that real-world Euro IV/V

emissions are much higher than the regulatory limits would indicate.

Although some countries, like China for example, have adopted supplemental or improved test procedures for Euro IV/V vehicles, the ICCT recommends to implement Euro VI instead.

The ICCT report is at http://theicct.org/sites/default/files/publications/ICCT_Briefing_EuroIV-V-VI-NOx_Mar2015.pdf.

ICCT Briefing on Accelerating Progress from Euro 4/IV to Euro 6/VI

On 5 March 2015 the International Council on Clean Transportation (ICCT) released a briefing on technical details and benefits of leapfrogging to Euro 6 light-duty and Euro VI heavy-duty emissions standards rather than progressing from Euro IV/4 to Euro 5/V.

After the adoption of Euro 5/V standards in the EU, the ICCT said certain shortcomings in the regulation became apparent. For heavy-duty vehicles, Euro V standards have not achieved hoped-for reductions for NOx emissions. And while Euro 5 standards have resulted in dramatic reductions in PM emissions from light-duty diesels, real-world diesel NOx emissions have continued to exceed certification limits.

Given the availability of ultra-low sulfur fuel (<10 ppm), greater air quality benefits can be gained from a leap from Euro 4/IV to Euro 6/VI than a path that includes the intermediate Euro 5/V stage.

For countries that are at prior standards for heavy-duty vehicles, accelerating the adoption of Euro VI standards has twofold benefits for air quality: the use of Diesel Particulate Filters (DPF) to comply with new PM and PN limits leads to a 90% or greater reduction of PM_{2.5} emissions, and the new test cycle and in-service conformity requirements provide real-world reductions in NOx emissions of 95% or more, providing emission control even in urban driving conditions that remained a problem in Euro V.

The ICCT briefing is at http://theicct.org/sites/default/files/publications/ICCT_EuroVI_briefing_20150304.pdf.

ICCT Report on Vehicle Replacement Programs

On 2 March 2015 the International Council on Clean Transportation (ICCT) released a report on best practices in reducing emissions through vehicle replacement programmes.

The report evaluates eight vehicle replacement programs in the US, Germany, China, Mexico, and Chile and identifies five best practices in the areas of programme design and implementation, as well as

fiscal incentives and policies, to serve as guidelines for policymakers.

The five best practices identified in this report are:

- For maximum environmental benefits, replacement vehicles should be as clean as possible.
- Programme implementation, management, and enforcement should ensure expected benefits are actually achieved.
- Fiscal incentives should be carefully tailored to maximize both environmental benefits and cost-effectiveness.
- Program design should carefully consider and balance the different roles of national, regional, and local-level policymakers.
- Complement fiscal policies with additional incentives such as low emission zones and regulatory backstops.

The ICCT report is at

http://theicct.org/sites/default/files/publications/ICCT_HDVreplacemnt_bestprac_20150302.pdf.

ICCT Report on “Green Freight” Programs and Technology Verification

On 3 April 2015 the International Council on Clean Transportation (ICCT) released a report on technology verification in the context of established and emerging “green freight” programs around the world.

Voluntary “green freight” programs have been established in a number of countries and regions, with the goal of increasing the fuel efficiency (and reducing greenhouse gas emissions) of trucking fleets and supply chains. These programs are in various stages of development, and vary considerably in their design and objectives. However, all seek to share information on technologies and strategies for improving efficiency and environmental sustainability.

A key to meeting that information-sharing goal most effectively is technology testing and verification. The independent testing and verification of technology performance is beneficial to manufacturers who want to market their technologies; to fleets that are seeking a credible assessment of the expected benefits of a given technology; and to green freight programme administrators who want some level of assurance that the technologies provide real, quantifiable benefits.

At present, the following organizations conducting (and/or funding) verification testing for technologies in the Heavy-duty trucking sector are the US EPA SmartWay Program, the California Air Resources Board, the Performance Innovation Transport, the VTT Technical Research Centre of Finland, and the Verification of Emissions Reduction Technologies (VERT) association.

Future work for the ICCT will include assessing the viability of an International Technology Verification Center (ITVC). The ICCT would ideally want the ITVC verification results to be accepted and used in all of the major vehicle markets world-wide, including the US, Europe, China, India, and Brazil.

The ICCT report is available at

http://theicct.org/sites/default/files/publications/ICCT_GrnFrgh_tech-verification_20150403.pdf.

Study on Shipping NOx Emissions Control Area in Europe

On 8 April 2015, the Netherlands Environmental Assessment Agency (PBL) released a new study conducted with the Finnish Meteorological Institute (FMI) on the potential contribution of a Nitrogen Emission Control Area to national targets under a revised EU National Emission Ceiling (NEC) Directive.

Taking into account the December 2013 NEC Directive review proposal, the report provides an estimate of the contribution in 2030 of a Nitrogen Emission Control Area (NECA) in the North Sea and Baltic Sea to the national emission reduction targets for bordering countries. NECAs were assumed to be effective for new-build ships from 2016 onwards.

The most substantial contribution was found for Denmark. Further substantial contributions to the achievement of emission reduction targets were found for the Netherlands and the United Kingdom. Smaller contributions were found for France, Belgium, Germany, Poland and Latvia.

In addition, the researchers said postponing the introduction of the NECA until 2021, which looks likely given the current state of the negotiations, could cut by half its contribution to the achievement of national targets by 2030.

The European Commission’s proposal for a revised NEC Directive offers Member States the possibility to offset up to 20% of cuts to NO_x, SO_x and PM_{2.5} levels achieved in the shipping sector against emissions of the same pollutants from land-based sources.

According to the study, the countries with the highest potential for offsetting generally had a relatively small target for NO_x emission reductions under the NEC proposal, while a NECA is expected to yield a relatively large reduction in their exclusive economic zone.

The study is at

www.pbl.nl/sites/default/files/cms/publicaties/pbl-2015-potential-contribution-of-a-neca-to-national-targets-under-revised-eu-nec-directive_01699.pdf.

CE Delft Assessment of SOx Scrubbers

On 13 March 2015 German environmentalist Non-Governmental Organization NABU published an assessment of ship scrubbers prepared by CE Delft.

The recent tightening of the fuel sulfur limits for fuel used in Sulfur Emission Control Areas (SECAs) has required, since 1 January 2015, the use of marine fuels with a maximum sulfur content of 0.1% in these regions, or a technology that can reduce shipping SOx emissions to an equivalent level. The researchers analysed ecological and economic impacts caused by scrubbers in the North and Baltic Seas.

The report indicates that scrubbers reduce emissions of sulfur to the atmosphere by more than 90%. Also PM emissions are reduced significantly in terms of their mass (not in number), by 60-90%. NOx emissions are reduced by 10% or less. Due to the additional power needed to drive pumps and caustic soda consumption, the estimated additional greenhouse gas (GHG) emissions range between 1.5 and 3.5%. The report notes, however, that the use of low sulfur marine gasoil in the SECA also increases GHG refinery emissions by roughly 6.5%.

Despite criteria defined by the International Maritime Organization (IMO) for wash water, scrubbers may have an impact on acidification and accumulation of hazardous substances like heavy metals and PAHs. Increased use of scrubbers may lead to a deterioration of the water quality, CE Delft concludes. The long-term impacts of the use of open loop scrubbers should be further investigated systematically by measuring and modelling in order to prevent negative cumulative environmental impacts of waste water discharge.

On economic aspects, it is difficult to draw firm conclusions on the profitability of using scrubbers, as it depends on the operational profile of ships, the price difference between heavy fuel oil and marine gasoil, and the time ships sail in SECAs.

The report is at www.nabu.de/downloads/150312-Scrubbers.pdf.

ICCT Report on Black Carbon Emissions from Maritime Shipping

On 24 March 2015 the International Council on Clean Transportation (ICCT) published a working paper on the needs and opportunities to reduce black carbon (BC) emissions from maritime shipping.

Some members of the International Maritime Organization (IMO) have argued that since shipping contributed only 2% to global black carbon emissions in 2000, the IMO should cease development of potential control measures but the ICCT said that this argument underestimates the importance of marine BC emissions. The paper investigates the contribution of

black carbon from shipping to the global Diesel BC inventory, by cross comparing results from a number of studies. While shipping contributed approximately 7 to 9% of global Diesel black carbon in 2000, that contribution rose to between 8 and 13% in 2010 and is expected to maintain that share under current and planned IMO policies.

Available technologies and operational practices, such as fuel switching, scrubbers, and vessel speed reduction can reduce shipping emissions by up to 70%.

The ICCT report is available at

www.theicct.org/sites/default/files/publications/ICCT_black-carbon-maritime-shipping_20150324.pdf.

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FORTHCOMING CONFERENCES

Diesel Particulates and NOx Emissions

18-22 May 2015, Leeds, UK

www.engineering.leeds.ac.uk/short-courses/automotive/diesel-particulates-NOx-emissions-UK/index.shtml

This course concentrates on engine technology for low emissions, fuel requirements and aftertreatment techniques. It covers particle size analysis and problems with the US heavy-duty transient test with very low emission diesel engines.

6th International CTI Conference: Emission Reduction for Off-Highway Applications

19-20 May 2015, Stuttgart, Germany

http://cti.euroforum.de/en/events/emission_reduction_for_off-highway_applications_2015

The conference will focus on industrial/large engines, marine applications, construction machinery, EU Stage IV / US Tier 4 final, catalytic solutions for Stage V, SCR systems, DPF regeneration, partially premixed combustion, enhanced NOx reduction, simulation of CO₂, PM and NOx emissions, advanced modelling, HDD heat recovery, and SCR on filter.

8th Integer Emissions Summit & AdBlue® Forum Asia 2015

19-21 May 2015, Beijing, China

www.integer-research.com/conferences/ies-asia-2015

The conference will examine diesel emissions regulation compliant strategies of leading on- and non-road vehicle and engine manufacturers in Asia.

8th AVL International Commercial Powertrain Conference

20-21 May 2015, Graz, Austria

www.avl.com/icpc

Main topics for the Technical Sessions will be truck and bus (hybrid powertrain, LNG / CNG), agricultural tractors (potential of electrically driven implements, alternative fuels), and construction machinery (modern transmission technologies, hybridization).

SIA Powertrain - The low CO₂ spark ignition engine of the future and its hybridization

27-28 May 2015, Versailles, France

www.sia.fr/evenement_detail_sia_powertrain_versailles_2015_1233.htm

SIA has merged two events: the "Spark Ignition Engine" conference, formerly held in Strasbourg, and the one-day conference dedicated to powertrain electrification, which used to be organized with the support of IFP Energies Nouvelles.

International Transport Forum – 2015 Annual Summit

27-29 May 2015, Leipzig, Germany

www.internationaltransportforum.org/2015

The theme of the 2015 Summit is Transport, Trade and Tourism.

2015 BIVEC-GIBET Transport Research Day

28-29 May 2015, Eindhoven, Netherlands

www.bivec.eu/activities/transport-research-day

The Benelux Interuniversity Association of Transport Researchers (BIVEC-GIBET) biannual conference offers young and established scholars from the three Benelux-Countries an opportunity to present their research findings to an informed audience of transport researchers.

World Gas Conference 2015

2-5 June 2015, Paris, France

www.wgc2015.org

The conference will address natural gas as a core pillar for a sustainable future of the planet and will include a "Natural Gas for Transportation village" where the following topics will be discussed: on-road, off-road, marine, and rail applications; fuelling stations; safety; OEM projects; and CNG, LNG, and RNG dispensing systems including those used for marine bunkering.

27th International AVL Conference "Engine & Environment"

11-12 June 2015, Graz, Austria

www.avl.com/engine-environment-2015

The Conference will tackle the topic of the worldwide increasing electrification of the powertrain, across vehicle segments.

11th Integer Emissions Summit & AdBlue[®] Forum Europe 2015

16-18 June 2015, Brussels, Belgium

www.integer-research.com/conferences/ies-europe-2015

The conference will examine the industry's progress and future challenges in developing regulation-compliant, fuel-efficient emissions reduction strategies. Dedicated streams will examine diesel emissions legislation and emissions reduction technologies for heavy-duty commercial vehicles, non-road mobile machinery, marine vessels, light-duty vehicles and passenger cars, and AdBlue[®].

Engine Emissions Measurement

22-26 June 2015, Leeds, UK

www.engineering.leeds.ac.uk/short-courses/automotive/engine-emissions-measurement

The course covers both existing instrumentation and new developments in emissions measurement techniques and instruments. Applications will be discussed in spark ignition, diesel and gas turbine engines.

2nd International Specialist Conference: Sensors for Exhaust Gas Cleaning and CO₂ Reduction

23-25 June 2015, Nuremberg, Germany

www.sv-veranstaltungen.de/site/fachbereiche/2-internationale-konferenz-sensoren-fuer-abgasreinigung-und-co2-reduktion

Topics of the conference include sensors of CO₂ reduction, sensors of exhaust gas aftertreatment, PEMS, HC sensors, soot sensors, O₂ sensors, NOx sensors, temperature sensors, AdBlue[®] quality sensors, and exhaust mass flow measurement.

LPG Europe Summit

24-25 June 2015, Amsterdam, Netherlands

www.wplgroup.com/aci/conferences/eu-elp1.asp

Key topics of the summit include global LPG industry outlook (supply, demand & trade flows), European LPG markets, LPG transport, infrastructure & logistics (challenges & opportunities), regulatory & policy updates, cutting-edge technical developments for off-grid energy applications, the future of LPG as automotive fuel in Europe, growth of LPG as petrochemical feedstock in Europe, and bio-propane: the future of LPG?

19th ETH Nanoparticles Conference

28 June - 1 July 2015, Zurich, Switzerland

www.nanoparticles.ethz.ch

Forum in the field of combustion-generated nanoparticles, technical aspects as well as environmental impact, health effects and legislation.

Cambridge Particle Meeting 2015

3 July 2015, Cambridge, UK

www.cambridgeparticlemeeting.org/2015

The meeting will address a wide range of aerosol and particle disciplines.

2015 JSAE/SAE Powertrains, Fuels and Lubricants International Meeting

1-4 September 2015, Kyoto, Japan

<http://pfi2015.jp>

12th International Conference on Engines and Vehicles

13-17 September 2015, Capri, Naples, Italy

www.sae-na.it/ice2015.asp

The conference is organized by SAENA (Italian SAE section) with Argonne National Laboratory (USA) and Istituto Motori CNR - Napoli (Italy) and will address engine modelling and diagnostics; engine combustion; hybrid and electric powertrains; new engines, components, actuators & sensors, fuels and lubricants, and exhaust aftertreatment and emissions.

International Conference on Environmental Engineering and Pollution Technology (ICEEPT 2015)

1-3 October 2015, Phuket Island, Thailand

www.iceept.org

The conference is aimed at building an adequate forum for the discussion of the many aspects related to the creation and development of environmental engineering and pollution technology, both from a theoretical perspective and from the practical exemplification of their potential applications.

Deadline for papers: 20 May 2015

24th Aachen Colloquium

5-7 October 2015, Aachen, Germany

www.aachener-kolloquium.de/en

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

SAE 2015 Commercial Vehicle Engineering Congress

6-8 October 2015, Rosemont (IL), USA

www.sae.org/events/cve

10th GreenPort Congress

7-9 October 2015, Copenhagen, Denmark

www.greenport.com/congress/home

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

Asia Diesel Engine Summit 2015

20-21 October 2015, Beijing, China

www.duxes-events.com/DE

The conference will address policies & regulations, market climate, green product trends, fuel economy improvements, and aftermarket.

8th China Off-Highway Vehicle Summit 2015

22-23 October 2015, Beijing, China

www.duxes-events.com/OHV8

The conference will address market climate, policies and regulations, OEM's development strategy, new growth points in the OHV market, technical development trends of core spare parts & product updating, and aftermarket.

8th Integer Emissions Summit & DEF Forum USA 2015

27-29 October 2015, Chicago, USA

www.integer-research.com/conferences/ies-usa-2015

The conference will examine the latest US developments in emissions legislation and advanced emissions reduction technologies for the on- and off-highway sectors, light-duty vehicles and passenger cars, marine vessels and host the DEF Forum.

CAPoC10

28-30 October 2015, Brussels, Belgium

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

Tenth International Congress on Catalysis and Automotive Pollution Control.

Ricardo Motorcycle Conference

16 November 2015, Milan, Italy

www.motorcycleconference.com

Main subject areas of the conference will be future powertrain technologies, future vehicle technologies, and motorcycle market drivers.

31st BAUMA 2016

11-17 April 2016, Munich, Germany

www.bauma.de

31st edition of the world's leading trade fair for construction machinery, building material machines, mining machines, construction vehicles and construction equipment.

6th European Transport Research Conference – Moving Forward: Innovative Solutions for Tomorrow's Mobility

18-21 April 2016, Warsaw, Poland

www.traconference.eu

The conference topics address the main challenges in transport and mobility of people and goods with respect to energy, environment, safety and security as well as socio-economic issues.