



Newsletter

January - February 2013

INTERNATIONAL REGULATORY DEVELOPMENTS

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EUROPE

Conference on the Health Effects of Air Pollution

A two-day conference on “Understanding the Health Effects of Air Pollution: Recent Advances to Inform EU Policies” was organised in Brussels on 30-31 January 2013 by the European Commission, the World Health Organization (WHO) Regional Office for Europe, and the Health Effects Institute (HEI).

Currently, the Commission, in partnership with the WHO Regional Office for Europe, is reviewing the latest health science on major air pollutants as a key step in evaluating whether to update Europe’s Air Quality Limit Values.

Presentations were made by the WHO, the Health Effects Institute, the European Commission’s Directorates-General for Research and for Environment, the US Environmental Protection Agency (EPA), Environment Canada, RIVM (the Dutch National Institute for Public Health and the Environment), and several academic institutions from both Europe and the US.

DG-Environment summarised the on-going process of the revision of the Thematic Strategy for Air Pollution and EPA described the US process for establishment and review of National Ambient Air Quality Standards. WHO summarised the REVIHAAP study (Review of Evidence on Health Aspects of Air Pollution) that is about to be concluded for DG-Environment and the Health Effects Institute discussed the recent HEI review report on Emissions, Exposure and the Health Effects of ultrafine PM. (*further details of both these reports are given under the ‘Research’ heading*).

European Environmental Bureau launch Event for the European ‘Year of Air’

On 8 January 2013, the European Environmental Bureau (EEB) held a high-level conference on the future of EU air quality policies to mark the start of the European ‘Year of Air’.

EEB says that current EU standards for ambient air quality are weaker than those recommended by the World Health Organization (WHO). For PM_{2.5}, the maximum concentration allowed is 2½ times higher than the WHO recommendation, and will only enter into force in 2015. The EEB Secretary General said that the EU must propose ambitious legislation to address emissions at source if it is to tackle the grave public health consequences of air pollution.

The conference featured a keynote speech by EU Environment Commissioner Janez Potočnik, as well as contributions from the EU Commissioner for Climate Action Connie Hedegaard, Swedish

Environment Minister Lena Ek, Irish Environment Minister Phil Hogan, the chair of the Environment Committee in the European Parliament Matthias Grootte MEP, and Jacqueline McGlade, Executive Director of the European Environment Agency (EEA).

In his speech, Mr. Potočnik said that the European Commission’s forthcoming review of air quality policy will put strong emphasis on EU action to reduce pollution at source. New innovative controls could be envisaged, for example the creation of an EU version of the US benchmark for Super Ultra-Low Emitting Vehicles (SULEV). NOx emissions from diesel also require particular attention, Mr Potočnik said. So far, existing laws have failed to lower these emissions. Sorting out the discrepancy between emissions in test and real-world situations is seen as crucial. Mr Potočnik emphasised that the economic opportunities created by clean air technologies would be an effective means of persuading policymakers of the urgent need to revise air quality laws and suggested that the ‘progressive’ part of the industrial sector should be more vocal.

Public Consultation on the Revision of the NRMM Directive

On 15 January 2013, the European Commission launched a public consultation on the revision of Directive 97/68/EC on emissions from Non-Road Mobile Machinery (NRMM) engines.

Setting the scene, the document says that one of the problems is that not all categories of NRMM engines are currently covered by the scope of the Directive and that there has been no new emissions stage since the Directive was last amended in 2004, which has led to emissions requirements for certain engine categories becoming outdated when compared to state-of-the-art of technology and developments in the on-road sector. Considering the health effects of particulate matter, experts have concluded that even the current most ambitious level defined with Stage IV does not guarantee adequate protection from such pollutants. In line with the developments in the on-road sector, the introduction of a new emission stage (Stage V) targeting particle number limits rather than particulate mass limits needs to be considered.

Stakeholders are invited to provide their views on various policy options for the revision of the NRMM Directive. These include extension of the scope of the Directive to Compression Ignition (CI) engines below 19 kW, CI engines above 560 kW, stationary engines, large Spark Ignition (SI) engines above 19 kW, and snowmobile engines. New emissions stages are suggested for constant speed engines, inland waterway vessels, and railcars, and finally a stage V for CI engines. In this context, the consultation

document notes that information gathered on current market trends for Stage IV engines shows a decreasing trend of “closed filters” being used, allowing engines to meet the Stage IV particulate mass limit, but without a control on the number of particles emitted. Due to the urgency of the health considerations, the document says that it will be necessary to establish the exact particle number limit directly through the planned revision of the Directive and the approach may need to be closely aligned to that for the Euro VI Heavy-duty emissions limits.

The Commission also seeks input on in-service conformity, the continuation of flexibility schemes and end-of-series provisions, and increased referencing to relevant UNECE measures. Eventually, it is asked whether a new Regulation would be more appropriate than another amendment to the Directive. This would also offer the opportunity to consolidate the amendments to the Directive adopted since 1997 into a single integrated text. (A Regulation is directly applicable in all EU Member States; a Directive has to be transposed into national legislation).

The consultation is open until 8 April 2013 and is at http://ec.europa.eu/enterprise/sectors/automotive/documents/consultations/2012-emissions-nrmm/index_en.htm.

Two New Regulations add Detail to Light Commercial Vehicle CO₂ Procedures

Two new Regulations have been issued in the EU's Official Journal adding detail to the procedures regulating CO₂ emissions from Light Commercial Vehicles (LCVs).

Regulation (EU) No 114/2013 defines rules for small-volume manufacturers (<22 000 LCVs per year) to apply for a derogation from the specific CO₂ emissions targets. The applicant has to propose a specific CO₂ emissions target to be met at the expiry of the derogation period or a yearly specific emissions target. Both have to be accompanied by a programme for the reduction of specific CO₂ emissions for the new fleet and a timetable for the introduction of CO₂-reduction technologies.

The second Regulation, (EU) No 143/2013, concerns the test mass for the determination of CO₂ emissions from LCVs submitted to multi-stage type-approval (e.g. chassis-cab vehicles later fitted with specialist bodies). The base vehicle is to be tested with an estimated mass value, where the component corresponding to the bodywork is calculated by applying a polynomial formula dependent on the reference mass of the base vehicle. The Commission says that this presents the best balance between accuracy, costs, and ease of implementation.

Commission issues Guidelines on Financial Incentives

On 28 February 2013, the European Commission issued a working document on 'Guidelines on financial incentives for clean and energy efficient vehicles'.

The scope of the guidelines covers light- and heavy-duty vehicles, and all L-category vehicles (two- and three-wheelers and quadricycles). In case of light-duty vehicles, tailpipe CO₂ emissions would be the preferred criterion for calculating financial support, with a suggestion that incentives should support vehicles which outperform the target values presented in the CO₂ regulations on emissions of passenger cars and vans. The document says that for heavy-duty and L-category vehicles, the guidelines will apply to vehicles with low-emissions technologies and could be further specified once CO₂ standards are adopted.

Incentives should be technology-neutral, must be non-discriminatory with regard to the origin of the product concerned and must not impose requirements which are not obligatory in type-approval legislation. In regard to the latter point, the document specifies that a requirement on NO₂ emissions would not be considered in line with the Guidelines as NO₂ is not measured during the type-approval process. In addition, incentives must be based on common performance criteria - schemes based on a driving cycle other than the NEDC, for instance, would be considered not to be compliant with the Guidelines.

The working document on financial incentives is at http://europa.eu/rapid/press-release_IP-13-174_en.htm.

EU launches Clean Fuel Strategy

On 24 January 2013, Transport Commissioner Siim Kallas launched the EU's proposals for a European alternative fuels strategy, providing a package of measures to ensure the build-up of alternative fuel stations across Europe with common standards for their design and use. The Clean Power for Transport Package comprises a Communication on a European alternative fuels strategy, a Directive on infrastructure and standards and an accompanying document describing an action plan for the development of Liquefied Natural Gas (LNG) in shipping.

The Commission proposes a package of binding targets on Member States for a minimum level of infrastructure for clean fuels such as electricity, hydrogen and natural gas, as well as common EU-wide standards for the equipment needed. The proposal for a Directive will now be considered by the Parliament and Council in the co-decision process.

The Commission Communication and related documents are available at http://ec.europa.eu/transport/themes/urban/cpt/index_en.htm.

EEA Reports on Summer Ozone in 2012 and on Health Costs of Trucks

A new report from the European Environment Agency (EEA) says that ozone pollution still exceeded target levels in Europe during the summer of 2012, but the number of exceedances of the alert threshold was lower than in any year since monitoring started in 1997. Exceedances occurred in only seven EU Member States (Belgium, France, Germany, Greece, Italy, Portugal and Spain). However, all EU Member States except Estonia failed to keep levels of the pollutant within the long-term objectives (maximum 8-hour mean of $120 \mu\text{g}/\text{m}^3$) set to protect human health.

The lower ozone levels seen during summer 2012 were in part due to weather conditions, but the report also notes that in the period 1990–2009 “Emission reductions have been achieved from the road transport sector for all three [ozone-forming] pollutants, primarily through legislative measures requiring abatement of vehicle tailpipe emissions”.

Air pollution by ozone across Europe during summer 2012: Overview of exceedances of EC ozone threshold values for April–September 2012; EEA Technical Report No. 3/2013, 31 January 2013, [doi: 10.2800/70933](https://doi.org/10.2800/70933).

The second EEA report says that road charges for Heavy Goods Vehicles (HGVs) should reflect the varied health effects of traffic pollution in different European countries, meaning that charges should be much higher in some countries compared to others - the 2011 Eurovignette Directive prescribes how EU Member States can incorporate the health costs from air pollution into charging structures for large roads.

The report includes the average costs of pollution for 66 classes of vehicles, with the cost of each estimated on three different types of road (suburban, interurban and highways) in 30 countries and 108 cities.

The average cost of pollution from a 12-14 tonne Euro III lorry is highest in Switzerland, at almost €0.12/km. Costs are also high in Luxemburg, Germany, Romania, Italy and Austria, at around €0.08/km. This is because the pollutants cause more harm where there are high population densities, or in landlocked regions and mountainous areas where pollution cannot disperse easily. In some regions the cost is much higher than others. Zurich (Switzerland), Bucharest (Romania), Milan (Italy), the Ruhr Valley in Germany and Barcelona in Spain had some of the highest regional health costs. Estimates of cost per kilometre, depending on the vehicle and its surroundings, range from virtually nothing to over €0.30/km for a Euro 0 truck. EEA's calculations show that Euro IV or V lorries would cause 40-60% less external costs on the same transport corridors.

Source: Road user charges for heavy goods vehicles (HGV); EEA Technical report No. 1/2013, [doi:10.2800/70164](https://doi.org/10.2800/70164).

European Commission Actions on Air Quality in Member States

The European Commission has begun to confront Member States that fail to adopt air quality action plans, instead of waiting for them to breach air quality standards before launching infringement action. Previously, legal action for breaches of EU standards was based on article 13 of the air quality Directive, which says limit values on pollutants such as PM_{10} and SO_2 must not be exceeded. The commission will now also invoke article 23, which says Member States should adopt air quality plans to meet these standards. This means that action against Member States will be taken much earlier than in the past.

In recent judgements on Member States requests for time extensions to meet the EU's Air Quality targets, the Commission turned down Luxembourg's request for a five-year extension to the 2010 deadline for compliance with NO_2 air quality standards on the basis that measures in the plan are unlikely to be implemented in time for compliance in 2015. A second decision granted Spain a 5-year postponement for one zone but limited the extension for two others – one of them being the southern part of the capital, Madrid – to the end of this year. The third and largest decision rejected NO_2 delays for 33 of the 57 zones requested by Germany. For 30 of the zones, including the capital Berlin, the Commission found that the German authorities had not demonstrated that compliance could be achieved by 2015. In 7 cases the Commission agreed the extensions provided that draft improvement plans are adopted. In a fourth review, the Commission dismissed applications from France to delay by 5 years the deadline for meeting the 2010 NO_2 limit of $40 \mu\text{g}/\text{m}^3$ in 21 areas. France also wanted more time to comply with the annual and hourly limits in Marseille, Lyon and Paris. But in its decision the Commission states that the country did not provide enough evidence to prove it would comply by 2015.

In a related action, 'green' NGO ClientEarth has initiated a legal action against the UK government in the country's Supreme Court. The action focuses on roadside measurements of NO_2 in 16 British cities and regions in 2010. These were up to four times the EU Air Quality limit in some cases.

Attitudes of Europeans towards Air Quality

According to a new Eurobarometer survey, a majority (56%) of Europeans believe that air quality has deteriorated in the last 10 years. In some countries, notably Italy, Cyprus, France, Greece, Hungary, Romania and Spain as many as 70 to 80% hold this view. The research also shows strong support for further action at EU level. The findings will now feed

into the on-going review on EU air policy by the Commission, due for release in the 2nd half of 2013.

When asked about the most effective way to tackle air pollution, 43% suggest stricter emission controls on industry and energy production. Emissions from vehicles (96%), industry (92%) and international transport (86%) were considered to have the biggest influence on air pollution. Electric and hybrid cars were considered the most beneficial to air quality. 7 out of 10 believe that renewable energy should be prioritised as the main energy option in future. 85% of Europeans agreed with the "polluter pays" principle.

The full Eurobarometer results are at http://ec.europa.eu/public_opinion/flash/fl_360_en.pdf.

EU Member States' Activities on Low Emission Zones

The government of the Czech Republic approved, on 6 February 2013, rules for the introduction of Low Emission Zones that will allow municipalities to ban high-emission vehicles from entry within a year. Environment Minister Tomáš Chalupa said that the rules give municipalities the power to define the size of the zones and how strict the entry conditions will be, meaning what emissions category the vehicles entering the zone must fulfil. The government decree introduces four emissions categories for vehicles with diesel engines, two for cars with petrol engines, and three for motorcycles. Electric vehicles and fuel-cell cars are automatically ranked in the highest category. The scheme is based on the German model.

The Mayor of London, UK, has outlined a proposal for an 'Ultra-Low Emission Zone' to improve air quality. If the plan proceeds, only zero- and 'low-emission' vehicles would be allowed in the central London zone during working hours by 2020. However, the Mayor also announced that Phase 5 of the current London-wide Low Emission Zone will now only apply to Transport for London buses. Phase 5 was to have required all lorries, buses and coaches to meet Euro IV NOx levels from 2015, in addition to the Phase 4 requirement to meet Euro IV PM levels.

On 8 January 2013, the Environment Department of Rome, Italy implemented rules to restrict vehicle access because the levels of air pollution, measured by the regional environment agency ARPA, had in recent days exceeded the limits for both PM₁₀ and NO₂. On 9 January 2013, vehicles carrying registration plates with odd numbers were not allowed into the city's 'green zone'. On 10 January, the even numbers were similarly prohibited. The measure affected all motor vehicles, motorcycles and mopeds but several classes of vehicle (including Euro 5, electric, and hybrid vehicles) are exempt. Police and rescue services, taxis and buses are also exempted.

EU Member States' Activities on Green Vehicle Taxation and Incentives

Romania's Environment Ministry is proposing a new formula to compute the country's car pollution tax for M1 vehicles. The new formula will take into account the full CO₂ emissions, rather than 30% as is the case currently. Engine capacity is also included in the current calculation. The one-time tax, paid on first registration or sale in Romania, will remain unchanged for Euro 5 cars. Owners of Euro 6 and hybrid electric vehicles will pay no tax. The proposed formula will, though, increase the amount to be paid for Euro 3 and 4 cars by about 10%, but lower by 60-90% that to be paid by older cars. The old car pollution tax will continue to apply to motor vehicles designed to transport cargo and to passenger vehicles with more than nine seats.

Meanwhile on 8 February 2013, Spain approved a €38m fund to promote the replacement of old light commercial vehicles (LCVs) with newer and less-polluting models. Under the scheme, owners of LCVs over 7 years old can claim compensation towards the purchase of a new or reconditioned vehicle with an energy efficiency label of D or better. €2000 will be available for vehicles of 2.5 to 3.5 tonnes, €1000 for vehicles under 2.5 tonnes. A week earlier, Spain extended its existing scrappage scheme for cars, providing a €150 million budget to replace cars more than ten years old.

On 3 January 2013, Italy notified the European Commission of a new decree on monetary contributions to the purchase or leasing of low-CO₂ vehicles. Low emission vehicles are defined as electric, hybrid, LPG, methane, biomethane, biofuel and hydrogen powered, and which produce not more than 120 g/km CO₂. The subsidies are, in most cases, dependent on the scrapping of an equivalent vehicle that is at least 10 years old.

Air Quality in European Countries

On 26 February 2013 the Environmental Protection Agency of Ireland released figures for key air pollutants showing that NOx pollution breached the EU emissions ceiling in 2011. The Irish EPA says that the road transport sector is the largest source of NOx emissions, accounting for 55% of the total in 2011. Advances in emission controls have largely been offset by increases in vehicle numbers and fuel use during a time of significant economic growth over the period 1990 to 2008. While some reductions in NOx levels from the transport sector have been delivered since 1990 through technological improvements, these have not been as substantial as originally anticipated.

In Sweden, Stockholm's busiest roads have for the first time met the EU air quality standards for particulate matter. The improvement was reported to be largely as a result of a ban on studded tyres, favourable weather conditions, and dust control measures. However, NO₂ levels were exceeded almost seven times more than permitted during the year. The high levels of NO₂ are considered to be a result of the rising popularity of diesel cars.

A new paper investigating the impact of the economic crisis on air quality over Greece, shows that NO₂ over Athens has reduced by 30-40%. The strong correlations between pollutant concentrations and economic indicators show that the economic recession has resulted in proportionally lower levels of pollutants in large parts of Greece. The reductions are attributed to fewer people using cars and reductions in industrial activity.

Economic crisis detected from space: Air quality observations over Athens/Greece, M. Vrekoussis, A. Richter, A. Hilboll, J. P. Burrows, E. Gerasopoulos, J. Lelieveld, L. Barrie, C. Zerefos, N. Mihalopoulos; *Geophysical Research Letters* 40 (2) (28 January 2013) pp.458–463 , [doi: 10.1002/grl.50118](https://doi.org/10.1002/grl.50118).

French Publication on the Health Effects of Urban Air Pollution

On 8 January 2013, the French Institute for Health Surveillance (Institut de Veille Sanitaire or InVS) published a special issue of their weekly epidemiologic bulletin, addressing "epidemiology and urban air pollution: observation in support of action".

In the editorial, Michal Krzyzanowski of the European Environment and Health Centre of the World Health Organization (WHO) notes that evidence of health effects of the air pollution have accumulated and calls for a more radical and global policy approach. According to the WHO expert, such policies should aim at not only controlling current levels of air pollution below regulatory binding levels but should also further reduce population exposure, even when standards are met. The 2013 revision of the European Union legislation on air quality should be a good opportunity to elaborate efficient policies building up on facts and aiming at protecting health in Europe, he adds.

The bulletin special issue then gathers scientific articles on the air pollution issue, from different angles - technical, epidemiologic and socio-economic.

The bulletin is at www.invs.sante.fr/Publications-et-outils/BEH-Bulletin-epidemiologique-hebdomadaire/Derniers-numeros-et-archives/Archives/2013/BEH-n-1-2-2013.

Spain implements Industrial Emissions Directive

On 25 January 2013, the Spanish Cabinet approved the submission to Parliament of a draft law amending Law 16/2002 on the Prevention and Control of

Pollution. The main changes result from the new EU framework on industrial emissions and strengthen the application of the Best Available Techniques.

The new regulation will affect the activity of about 6100 industrial facilities, requiring them to obtain a permit from the Integrated Environmental Authorisation (AAI). The proposal has already been subject to public consultation and has been approved by the State Council.

Bulgaria given two Months to comply with Large Combustion Plants Directive

In a range of actions on environmental matters taken by the European Commission in January 2013, Bulgaria has been given two months to comply with emission limit values for SO₂, NO_x and dust set under the Large Combustion Plants Directive. Under the country's EU accession agreement, these limits had to be met from 2008 but so far Bulgaria has failed to do so. And forecasts for 2012 show it will again exceed limits for NO_x and dust.

Russia moves to Euro 3 Fuels

From 1 January 2013, fuels used in Russia must meet the Euro 3 standard. For petrol this requires a maximum of 150 ppm sulfur, and 1% benzene. For diesel, the maximum sulfur content is 350 ppm and the minimum cetane number is 51 (previously 48 at Euro 2). The introduction of Euro 3 in place of Euro 2 fuel requirements had been postponed several times but the sale of Euro 2 fuel is now prohibited.

Russia will use the Euro 3 standard until 31 December 2014, when the Euro 4 (50 ppm sulfur) standard will be introduced. Some companies will continue production of Euro 2 petrol for delivery to Central Asia, Mongolia and other countries.

Air Quality has improved in Belarus

The Belarus National Centre for Radiation Control and Environmental Monitoring has reported that there was a drop in air pollution in the country in 2012. The number of areas with too high air pollution levels dropped from 17 in 2007 to 10 in 2012. NO₂ exceedances levels were reported in Mahilyow and Polatsk during summer months. In Minsk, the highest level of air pollution is in the area around the Minsk Tractor Works factory, the Centre said.

NORTH AMERICA

US-EPA finalises Revisions to Clean Air Standards for Stationary Engines

On 15 January 2013, the US Environmental Protection Agency (EPA) announced finalised revisions to standards to reduce air pollution from stationary engines that generate electricity and power

equipment at industrial, agricultural, oil and gas production, power generation and other facilities.

The final amendments include alternative testing options for certain large spark ignition (SI) stationary reciprocating internal combustion engines (generally natural gas-fuelled), management practices for a subset of existing SI stationary reciprocating internal combustion engines in sparsely populated areas, and alternative monitoring and compliance options for the same engines in populated areas. EPA is also establishing management practices for existing compression ignition engines on offshore vessels. The amendments also specify how the standards apply to engines used for emergency demand response.

The final amendments to the 2010 National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE) reflect new technical information submitted by stakeholders after the 2010 standards were issued. EPA estimates the annual health benefits to be worth \$830 million to \$2.1 billion (€620 to €1570 million).

Details are available at www.epa.gov/ttnatw01/rice/ricepg.html.

California ARB Report on SCR-equipped Heavy-duty Engines in Use

The California Air Resources Board (CARB) has issued a report on new investigations into NOx control strategies of Heavy-duty Diesel engines with and without SCR.

CARB evaluated four SCR-equipped Heavy-duty Diesel (HDD) vehicles and demonstrated that the warnings and inducement strategies were consistent with CARB 2010 model-year guidance and largely consistent with the 2011+ model-year guidelines. They concluded that the technology of today's HDD engines does not lend itself to being tampered with and the advancement of SCR engines has shown that the engine management system will create intolerable engine inducement consequences when the DEF (automotive-grade urea solution; AdBlue® in Europe) tank is empty or the SCR system is tampered with.

CARB's emissions testing demonstrated that the SCR-equipped engines when operating on correct quality DEF met the NOx NTE (Not-To-Exceed) in-use emissions requirements. The non-SCR engine tested also met its NTE in-use emissions standards; but its NOx emissions were significantly higher than the SCR-equipped engines because it used emissions credits to certify to a laxer standard.

The California ARB's report is available from www.arb.ca.gov/msprog/cihd/resources/reports/scrreportfinal.pdf.

US sets Electric Vehicles Blueprint

The US Department of Energy (DOE) has launched a new 'EV Everywhere Grand Challenge Blueprint' providing an outline for the Department's technical and deployment goals for electric vehicles to 2022.

The technical targets in the Blueprint fall into four areas: battery R&D; electric drive system R&D; vehicle 'light-weighting'; and advanced climate control technologies. Some specific goals for 2022 include cutting battery costs from their current \$500/kWh to \$125/kWh, eliminating almost 30% of vehicle weight, and reducing the cost of electric drive systems from \$30/kW to \$8/kW.

US EPA finalises Solid Waste Incineration Standards

The US Environmental Protection Agency (EPA) has finalised adjustments to the clean air standards for certain solid waste incinerators and for boilers such as those that provide heat for manufacturing and industrial processes.

The new standards regulate emissions of mercury and other toxic pollutants from industrial boilers, incinerators, and cement kilns. They include setting new PM emissions limits for each sub-category of 'major source' biomass boiler, new CO limits, and replacing dioxin emissions limits with work practice standards. Existing 'major source' boilers that are subject to numerical emissions limits will have until early 2016 to comply with the standards. Existing 'area source' boilers will have until 21 March 2014 to comply. Both may also request an additional year. Existing commercial and industrial solid waste incinerators have to comply no later than early 2018. New incinerators will need to meet the standards 180 days following publication in the Federal Register.

Details of the finalised standards are at www.epa.gov/airquality/combustion/actions.html#dec12.

US-EPA and California Actions on Renewable Fuels

The US Environmental Protection Agency (EPA) has proposed the 2013 percentage standards for four fuel categories that are part of the agency's Renewable Fuel Standard programme (RFS2). EPA will consider stakeholders' feedback before finalising the proposal.

The target is to reach an overall volume of 36 billion gallons (136.3 billion litres) of renewable fuels in 2022. To achieve these volumes, EPA calculates a percentage-based standard to be achieved each year. Refiners and importers use this to calculate the amount of each class of fuel they need to incorporate during the year. The proposed 2013 volumes and standards are:

- Biomass-based diesel (1.28 billion gallons; 1.12%)
- Advanced biofuels (2.75 billion gallons; 1.60%)
- Cellulosic biofuels (14 million gallons; 0.008%)
- Total renewable fuels (16.55 billion gallons; 9.63%)

In California, the Air Resources Board (CARB) has issued a White Paper on regulatory concepts for certifying specific Alternative Diesel Fuels (ADF) such as biodiesel, gas-to-liquid (GTL) diesel and other synthetic diesels. CARB intends to conduct public workshops to discuss the proposed regulation and aims to present a regulatory proposal to the ARB Board in autumn 2013.

The White Paper proposes that any alternative diesel fuel intended for sale in the state must be NOx neutral, relative to CARB diesel in terms of emissions and must be evaluated for any adverse effects associated with its use on certified engines.

www.arb.ca.gov/fuels/diesel/altdiesel/document/20130212A_DFRReqConcept.pdf

US-EPA issues Report on Children's Health and the Environment

On 25 January 2013 the US Environmental Protection Agency (EPA) released a compilation of information on children's health and the environment.

The report "*America's Children and the Environment, Third Edition*" shows trends for contaminants in air, water, food, and soil that may affect children; concentrations of contaminants in the bodies of children and women of child-bearing age; and childhood illnesses and health conditions.

In the case of asthma, researchers do not fully understand why children develop the condition. However, substantial evidence shows that exposure to certain air pollutants, including particulate matter and ozone, can trigger symptoms in children who already have asthma. Although the report found that the percentage of children reported to currently have asthma increased from 8.7% in 2001 to 9.4% in 2010 and that minority populations are particularly affected by asthma, the severity of children's asthma and respiratory symptoms has declined.

"America's Children and the Environment, Third Edition" is at www.epa.gov/ace.

US-EPA launches 'PM Advance' Program

The US Environmental Protection Agency (EPA) has announced a new voluntary clean air programme, 'PM Advance,' to help communities continue to meet soot pollution standards, improve air quality and protect public health. (EPA updated the National Air Quality Standard for PM_{2.5} in December 2012).

'PM Advance' focuses on working with communities to develop strategies for reducing harmful fine particle

emissions. EPA says through the programme, participants will commit to taking specific steps to reduce fine particle pollution, such as putting in place a school bus retrofit program or an air quality action day program, while EPA will supply technical advice, outreach information, and other support.

More information is at <http://epa.gov/ozonemadadvance>.

US Company fined for selling DPF Removal Kit

In a court settlement with the US Environmental Protection Agency (EPA), automotive electronics manufacturer Edge Products has agreed to pay a \$500 000 civil penalty for manufacturing electronic devices that allowed owners of certain diesel pick-up trucks to remove diesel particulate filters from their vehicles. The company sold over 9000 of these devices between the start of 2009 and April 2011.

In addition to the fine, the consent decree requires Edge to offer to buy back the devices from anyone who possesses one. In order to sell the device back to Edge, the truck from which the device came must be returned to its original factory programming. Edge is also required to spend at least \$157 600 (approx. €117 000) to implement an emissions mitigation project to offset the excess PM emissions that it caused. Edge will use the additional funds to offer rebates to individuals who own old wood-burning stoves and wish to replace them with newer appliances.

Consultation on Mexican Fuel Economy Standard

On 14 February 2013, Semarnat, Mexico's Environmental Secretariat announced that the country's proposed fuel economy standard for new cars and light-duty trucks will be subject to a 60-day public comment period. The proposed regulation is designed to emulate the US CAFE (corporate average fuel economy) standards and aims for average fuel economy of 14.9 km/litre (35 mi/US gallon) by 2016.

Compared to the original proposals made in 2012, the modified version gives carmakers flexibility similar to that allowed in the US. For example, a company can apply credits from a year in which it more than meets efficiency requirements to a year in which it misses the targets.

Canada aligns Heavy-duty Greenhouse Gas and OBD Measures with the US

On 25 February 2013, Canada's Environment Minister announced final regulations to improve fuel efficiency and reduce greenhouse gas (GHG) emissions from new on-road heavy-duty vehicles and engines. The final regulations include changes to an earlier draft

that are intended to respond to requests from US manufacturers to better align the Canadian measures with US standards.

The Regulations will establish progressively more stringent standards for emissions of CO₂, nitrous oxide, and methane for 2014 to 2018 model-year heavy-duty vehicles such as full-size pick-ups, semi-trucks, garbage trucks and buses. The Regulations will remain in full effect for all subsequent model-year vehicles, which will be required to adhere to the 2018 standard. The new regulation is expected to reduce GHG emissions from 2018 model-year heavy-duty vehicles by up to 23%.

Details are at www.ec.gc.ca/Content/3/F/C/3FC39747-ABF2-470A-A99E-48CA2B881E97/Regulations_e.pdf.

Environment Canada also published final regulations to maintain the alignment of heavy-duty OBD requirements with the February 2009 regulations. The Canadian regulation takes effect on 1 January 2014 and applies to engines for heavy-duty, on-road vehicles with a gross vehicle weight rating (GVWR) of more than 6350 kg.

Details are at www.gazette.gc.ca/rp-pr/p2/2013/2013-02-13/pdf/g2-14704.pdf#page=5.

ASIA PACIFIC

Beijing V Emissions Standard starts and Scrapage Scheme improves

To reduce vehicle emissions, Beijing's Environmental Protection Bureau (EPB) said on 23 January 2013 that the city would adopt a new standard for vehicle emissions starting 1 February 2013 for diesel cars and 1 March 2013 for petrol cars. New cars in Beijing will then be subject to the new Beijing Standard V, which will be equivalent to the Euro 5 standard, said a spokesman for the Bureau.

The EPB has also announced that it will offer payments ranging from 2 500 to 14 500 yuan (approx. €290 to €1700) for owners who scrap cars made before 1995. This latest incentive will see the average pay-out increasing from 4 500 yuan to 6 500 yuan. Combining the scrapage with a new purchase may also make buyers eligible for a further 10 000 yuan in subsidies, according to the China Daily.

Meanwhile, the Beijing municipal Environmental Protection Bureau has reported that the capital's air quality has continued to improve for the 14th successive year. Speaking at a news conference, Fang Li, spokesman of the Bureau, said that yearly average concentration of the major pollutants PM₁₀, NO₂ and SO₂ had reduced by 4% in 2012. Measures taken by the Bureau to improve air quality included closure of 122 heavily polluting enterprises and replacement of coal with natural gas.

China develops National V Emissions Limits and sets Cleaner Fuel Timetable

The Chinese Ministry of Environmental Protection is reported to have completed the second draft of the National V emissions standard for light passenger vehicles. The report states that, compared to the existing National IV emissions standard, the second draft of the National V standard tightens the emissions limits and adds a particle number requirement. NOx emissions would be reduced by 25% to 28% and particles by 82%, according to the draft standard. The date for implementation has not been scheduled.

The Chinese national Xinhua news agency also reports that on 6 February 2013, China's cabinet issued a timetable for oil companies to deliver fuel equivalent to Euro 5 standards nationwide. A new standard will be issued for automotive petrol that caps sulfur content to 10 ppm before the end of the year, with a 'grace period' extending to the end of 2017, the agency reported. A new standard for automobile diesel that would limit sulfur content to 10 ppm will come before June this year but will also have the same four-year grace period, Xinhua said.

Hong Kong (China) Activities on Vehicles and on Marine Fuels

The Hong Kong (China) Environmental Protection Department has released a listing of the private car and commercial vehicle models available in Hong Kong that will meet the enhanced qualifying standards for environment-friendly vehicles which take effect on 1 April 2013 and that will be eligible for First Registration Tax concessions. The department recently reviewed the qualifying standards for such vehicles to be eligible for the tax concession.

The new qualifying standards for petrol-driven cars specify a reduction of 75% in emissions as compared with the prevailing statutory emission limits. When the new standards come into place in April 2013, only 26 out of 139 car models that are now qualified as environment-friendly vehicles will retain their eligibility for tax incentives. For commercial vehicles, Euro V has now become the statutory emission requirement.

At present, environment-friendly petrol-driven private cars are eligible for a tax reduction of up to 45%, subject to a cap of HK\$75 000 (approx. €7200) per car. The class-specific rates of tax reduction for different environment-friendly commercial vehicles range from 30% to 100%.

In a policy speech to the legislative council on 16 January 2013, the Hong Kong Chief Executive Mr. C. Y. Leung said that his government will set a service life limit of 15 years for newly registered diesel commercial vehicles and accelerate the scrapping of

highly polluting old diesel commercial vehicles. The scrapping scheme would provide HK\$10 billion (€950 million) in subsidies to owners of over 80 000 pre-Euro and Euro I to Euro III diesel commercial vehicles to phase out the vehicles.

The government is also considering mandating the use of low-sulfur marine diesel oil for all ships at berth in the Port of Hong Kong and, in cooperation with the provincial government of Guangdong, to try to extend its use throughout the Pearl River Delta.

China starts Daily Reports on Air Quality

On 1 January 2013, China started to issue daily reports on air quality in 74 major cities by adopting more extensive monitoring standards, including the level of PM_{2.5}. Five other pollutants, including ozone and CO, were also placed under the new monitoring standard issued by the Ministry of Environmental Protection. The data, on the website of the China National Environmental Monitoring Center, are updated hourly. People can also check the information for these pollutants monitored in the previous 24 hours at various monitoring stations in the 74 cities.

China and South Korea suffer Severe Air Pollution Episode

From mid-January 2013, many parts of China experienced serious PM_{2.5} air pollution levels. Heavy pollution was reported to cover 1.3 million square kilometres, with the municipalities of Beijing and Tianjin, plus the provinces of Hebei, Shandong, and Henan being the worst hit. However, levels rose elsewhere too, including cities such as Shanghai.

Beijing reported reaching PM_{2.5} levels of up to 490 µg/m³. The episode continued through January. As a result Beijing for the first time activated its plan restricting construction and industrial activity, curbing vehicle use by government officials and ordering schools to limit outside activity. 103 heavily polluting factories were temporarily shut down and 30% of government vehicles were taken off roads.

The pollution was also blown across Korea on a north-westerly wind and affected Seoul, Daegu, Jeonju and other parts of the country.

India launches National Electric Mobility Mission Plan

Indian Prime Minister Dr. Manmohan Singh launched his country's National Electric Mobility Mission Plan (NEMMP 2020) at an event in New Delhi on 9 January 2013. Mr. Singh said it was important to reduce the transport sector's dependence on oil by, among other things, faster adoption of the full range of electric vehicle technologies, including hybrid vehicles.

NEMMP 2020 provides the joint Government-industry vision for electric and hybrid vehicle technologies by 2020. 6-7 million units of new vehicle sales of the full range of electric vehicles are projected. It is estimated that the Government will need to provide support of 1300 to 1400 billion rupees (€18-19.5 billion) over the next 5-6 years. The industry will also need to match this with a much larger investment for product and manufacturing development.

Singapore studies Proposal for Replacement of Old Commercial Vehicles

The Singapore government is reported to be studying a proposal to give a cash grant to encourage owners of old commercial vehicles to switch to new, more environmentally-friendly ones. The plan was put forward by the country's Motor Traders Association (MTA). It calls for a one-off incentive payment of at least S\$10 000 (approx. €6 000) for replacement of a pre-Euro IV vehicle with a model that meets Euro IV or higher standards. A range of disincentives was also proposed, including tighter enforcement of emissions rules.

According to Land Transport Authority data, 45% of goods vehicles are over nine years old, more than twice the percentage in 2005. In a White Paper submitted to the Ministry of the Environment and Water Resources (MEWR) the MTA said that based on the current replacement rate of old commercial vehicles, MEWR's target to improve air quality substantially by 2020 is unlikely to be met because about 70% of Singapore's 178 000 goods vehicles and buses do not even meet the Euro IV emissions standard implemented in Singapore in 2006. About half of that number do not even meet the Euro II standard. The MTA said that the plan to introduce the Euro V standard in 2014 and cleaner diesel fuel by July this year would not help much.

Australia amends Design Rule for Heavy-Duty Vehicles

On 9 January 2013 the Australian government issued the latest version of the ADR 80/03 emissions standard for Heavy-duty vehicles.

Since ADR 80/03 was originally issued, more stringent emissions standards have been implemented in the EU, United States and Japan. The latest amendment removes technical barriers that would prevent engines that meet Euro VI, EPA-2010 and Japanese Post New Long Term emissions standards from being installed in heavy vehicles in Australia. The amendments also allow extensions of approvals from ADR 79/03 and ADR 79/04 to eligible variants (over 3.5 tonnes) of light vehicles (under 3.5 tonnes) certified to these standards.

The amendments allow engines complying with the US EPA standards to use a reagent (such as AdBlue[®]) to meet emissions requirements, if the engine is equipped with an on-board diagnostic system with an inducement strategy approved by the US EPA for the 2012 or later model-years and allow engines complying with Japanese standards to use an OBD system that complies with the latest Japanese technical guideline for engines using a reagent to control emissions.

The changes do not increase the stringency of ADR 80/03. The ADR 80/03 standard is available at www.comlaw.gov.au/Details/F2013C00048.

Pakistan to move to Euro 2 Petrol but delays Euro 2 Diesel

The government of Pakistan decided on 15 February 2013 to move to the Euro 2 standard for petrol with effect from 1 March 2013, but postponed implementation of similar standards for diesel for two years until December 2014.

The standards will reduce the sulfur content of petrol from 0.1% to 0.05% (500 ppm) whilst the benzene content would also be reduced by a half. A government advisor said that the introduction of Euro 2 diesel would not be possible until December 2014 because of the need for additional investment in refineries. Most diesel in the country contains 0.5% sulfur.

Under an earlier deadline Euro 2 standards for both petrol and diesel were to come into effect from January 2012 but were extended to December 2012 to enable domestic refineries to upgrade their installations with desulfurisation plants.

Thailand launches Air Quality Application for Phones and Tablets

Thailand's Pollution Control Department has introduced a new "Air4Thai" application for tablet and smart phone users. The application retrieves data from the nearest weather data centre, enabling users to receive current weather reports, as well as recalling weather experienced in the past week. Colours of blue, green, yellow, orange and red track the amount of pollution in the air. There is the ability to review pollution levels at over 64 different stations nationwide, allowing users to view and track the amounts of dust particles, ozone levels, and CO, NO₂ and SO₂ levels.

MIDDLE EAST

Iranian Refiners to be obliged to make Euro 4 Gasoline Available

The Iranian Standards Organization has stated that Iranian refiners will be obliged to supply gasoline meeting Euro 4 standards from 21 March 2013 (the start of the new Iranian year).

Currently-produced gasoline meets the Euro 2 standard, but newly established refineries are able to produce gasoline which meets both the Euro 4 and Euro 5 requirements. The Iranian environmental protection department was quoted as saying that some 50 million litres of gasoline and diesel, meeting Euro 4 and Euro 5 standards, will be produced in Iran by the end of the current Iranian calendar year.

Iranian Motor Industry Warning on Gasoline with 35% Methanol

Iran's Automakers Association has issued a warning about health dangers of a newly produced gasoline with 35% methanol, saying this toxic material can make people blind and damage their lungs, as well as cause technical damage to vehicles.

Iranian refineries are reportedly using lead and Methyl Tertiary-Butyl Ether (MTBE) to improve the octane levels, but Iranian officials have recently said that the country is preparing to use alcohol such as ethanol and methanol instead of MTBE in the production of gasoline. The Iranian oil minister announced on 14 November 2012 that the production line of new gasoline with 35% methanol has been commissioned and is planned to produce up to seven million litres of Euro 5 gasoline per day.

Israeli Action on Alternative Fuels

The Israeli Government has approved a scheme drafted by the Alternative Fuels Administration to reduce oil consumption in public transport by 30% by 2020 and 60% by 2025. A new inter-ministerial team headed by the national planning director for fuel alternatives at the Prime Minister's Office will formulate a comprehensive plan for encouraging the introduction of non-petroleum-based fuels into cities.

Within 180 days the Transportation Ministry will have to characterise the safety requirements for compressed natural gas (CNG) buses and will need to formulate regulations for vehicles powered by alternative energy sources, such as those operating with multiple fuel options (Flex-Fuel Vehicles), as well as those running on biofuels, methanol, ethanol and various other systems, the proposal said.

The Transportation and Energy and Water ministries, together with the standards commissioner of the Industry, Trade and Labour Ministry, will also need to

examine the regulatory processes that allow for mixtures of traditional gasoline and methanol such as M15, M30 and M85 (15%, 30% and 85% methanol).

GENERAL

Arctic Countries agree to Monitor Black Carbon

At a meeting of their Environment Ministers, the eight Arctic countries (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the US) have agreed to monitor emissions of short-lived climate forcers (SLCFs) such as Black Carbon (BC).

The ministers also asked the Arctic Council of Foreign Ministers to begin discussions on an instrument for cutting BC emissions. This could include benchmarks or targets or national action plans, according to the meeting's conclusions.

Cutting SLCFs worldwide before 2030 could reduce global temperature rise by 0.5°C and reduce warming in the Arctic by about two thirds, according to UNEP. One study has suggested almost 60% of black carbon in the region come from the EU.

Worldwide Fuel Charter New Edition

Motor Industry associations ACEA, Alliance, EMA and JAMA have released their proposal for a new 5th edition of the Worldwide Fuel Charter. The Charter provides fuel quality recommendations to legislators, fuel users and producers.

The proposal introduces a new Category 5 of fuels for markets with highly advanced requirements for emissions control and fuel efficiency. This category raises the minimum gasoline research octane number (RON) to 95. For diesel fuel, it establishes a high quality hydrocarbon-only specification that takes advantage of the characteristics of certain advanced biofuels, including hydrotreated vegetable oil (HVO) and Biomass-to-Liquids (BTL), provided all other specifications are respected and the resulting blend meets defined legislated limits. Other changes from the previous edition include a new test method for trace metals, an updated gasoline volatility table and updated information relating to biofuels, including ethanol, biodiesel and other alternatives to petroleum-based fuels.

Category 4, as revised, will allow biodiesel in diesel fuel at levels up to 5% by volume. The Charter also now references the E100 and B100 Guidelines published by the WWFC Committee in 2009.

The document can be downloaded from [www.acea.be/images/uploads/files/Worldwide Fuel Charter 2012.pdf](http://www.acea.be/images/uploads/files/Worldwide_Fuel_Charter_2012.pdf).

RESEARCH SUMMARY

Health Effects Institute Report on Ultrafine Particles

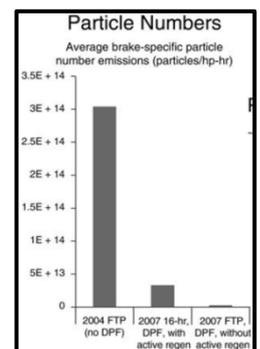
The US-based Health Effects Institute has issued a new report on UltraFine airborne Particles (UFPs) and health. The report is based on an expert panel review of over 300 laboratory and field studies.

The report says that toxicological studies in animals, controlled human exposure studies, and epidemiological studies to date have not provided consistent findings on the effects of exposure to ambient levels of UFPs. The current database does not, therefore, support strong and consistent conclusions about the independent effects of UFPs on human health, but that does not mean that such effects, as one part of the broader effects attributable to PM_{2.5}, can be entirely ruled out.

The report concludes that:

- motor vehicles, especially diesel engines, have been important sources of emissions and exposures to UFPs but emissions are likely to change substantially in the years ahead. In this regard the report notes the decrease in particle mass and number resulting from emissions controls, but also the potential for increased UFP emissions from some types of gasoline direct injection engines.
- UFPs clearly differ from larger particles in their lung deposition, lung clearance, and potential for translocation to other parts of the body.
- Experimental and epidemiologic studies provide suggestive, but not consistent evidence of adverse effects of short-term exposures to ambient UFP.
- Currently, we do not have strong evidence that effects of short-term exposures to UFP are dramatically different from those of larger PM; information on long-term exposure is not available.

The report does, though, raise two issues with regard to DPFs. One is the presence of nucleation mode particles with high sulfur content (note that sulfur content of fuels can be significantly higher in the US than in the EU) and emissions of UFPs during DPF regeneration. Despite raising these issues the report states that the use of modern aftertreatment technologies represents a very important advance in reducing diesel emissions and is expected to improve air quality. "Based on a comparison of two series of tests reported in Coordinating Research Council 2007 and 2009, the number of particles



emitted by the new-technology (2007 model-year) vs. the old-technology (2004) engines is lower by more than 100-fold; during regeneration events, when most of the PM is emitted, the particle numbers are still 10-fold lower as compared to the 2004 engine tests.”

Other issues mentioned are high UFP emissions from 2-stroke moped engines and the lack of control on PM emissions from small equipment such as lawn mowers etc. Particle number emissions from CNG-fuelled buses are stated to be typically one order of magnitude lower than those of diesel buses without DPFs at low loads, but can reach diesel-like concentrations during acceleration and at high load.

Copies of the report can be downloaded from <http://pubs.healtheffects.org/view.php?id=394>.

WHO-Europe Report on Health Aspects of Air Pollution

The World Health Organisation has published its first report of a Review of Evidence on the Health Aspects of Air Pollution (REVIHAAP project), which is co-funded by the EU. The document presents answers to 22 questions relevant for the review of European policies on air pollution and addressing health aspects of these policies.

One of the specific questions concerns new health evidence on ultrafines and Black Carbon. The report responds that new evidence links Black Carbon particles with cardiovascular health effects and premature mortality for both short-term (24 hours) and long-term (annual) exposures. There is increasing, though as yet limited, epidemiological evidence on the association between short-term exposures to ultrafine (<0.1 µm) particles and cardiorespiratory health as well as the central nervous system. Clinical and toxicological studies have shown that ultrafine particles in part act through mechanisms not shared with larger particles that dominate mass-based metrics such as PM_{2.5} or PM₁₀.

A further question says that there is evidence of increased health effects linked to proximity to roads and asks what evidence is available that specific air pollutants or mixtures are responsible for such increases. WHO says that elevated health risks with living in close proximity to roads is unlikely to be explained by PM_{2.5} mass since this is only slightly elevated near roads. In contrast, levels of pollutants such as ultrafine particles, CO, NO₂, Black Carbon, PAHs and some metals are also more elevated near roads. Individually or in combination, these are likely to be responsible for the observed health effects. Current available evidence does not allow discernment of the pollutants or pollutant combinations that are related to different health outcomes although association with tailpipe primary

PM is increasingly identified. Toxicological research also indicates increasingly that non-exhaust pollutants could be responsible for some of the observed health effects.

A general question asks what new information has become available that may require a revision of the EU air quality policy and/or WHO air quality guidelines especially for particulate matter, ozone, nitrogen dioxide and sulfur dioxide. For PM, the report says that there is a need to revise the current WHO Air Quality Guidelines (AQG) for PM₁₀ and PM_{2.5}. WHO should consider developing an additional AQG to capture the effects of road vehicle PM emissions that are not well captured by PM_{2.5}, building on the work on BC/EC (Health effects of Black Carbon, WHO 2012) and evidence on other pollutants in vehicle emissions. Although there is considerable evidence that ultrafine particles can contribute to the health effects of particulate matter, for ultrafine particles measured by the number of particles, the data on concentration-effect functions are too scarce to evaluate and recommend an AQG. Current efforts to reduce the numbers of ultrafine particles in engine emissions should continue given potential health effects. The National Emissions Ceiling Directive (NECD) should be revised to include a ceiling for PM_{2.5}. Member States should be required to give priority to reducing emissions from vehicles and from combustion of liquid and solid fuels, including Non-Road Mobile-Machinery and biomass burning, in achieving the ceilings in a revised NECD and also in achieving limits for PM in the Ambient Air Quality Directive. The EU should also consider appropriate actions to reduce non-tailpipe emissions from road traffic, given the increasing relative contribution of non-tailpipe emissions when vehicle exhaust emissions are reduced.

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Black Carbon is a More Potent Global Warmer than Previously thought

Black Carbon is a more potent atmospheric pollutant than previously thought, according to a four-year international study released on 15 January 2013.

The report found black carbon's effect on climate is nearly twice what the United Nations Intergovernmental Panel on Climate Change estimated in its landmark 2007 assessment. Black Carbon is second only to CO₂ as the most powerful climate pollutant, according to the study published in the Journal of Geophysical Research-Atmospheres. But because Black Carbon only lasts in the atmosphere a matter of days, compared to carbon

dioxide's atmospheric endurance of centuries, addressing it could be a prime target for curbing global warming, the report said.

"This new research provides further compelling evidence to act on short-lived climate pollutants, including Black Carbon," Achim Steiner, chief of the United Nations Environment Program, said in a statement. Steiner pointed to efforts under way to cut Black Carbon emissions from Heavy-duty diesel vehicles, brick production and municipal waste disposal as part of the international Climate and Clean Air Coalition.

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FORTHCOMING CONFERENCES

3rd Annual European Raw Materials Conference

19 March 2013, Brussels, Belgium

Details at <http://www.eu-ems.com>

The conference will focus on the role of innovation in efforts to boost production and sustainability across the raw materials value chain. Speakers include Janez Potočnik, the EU Commissioner for Environment.

LNG Fuelled Vehicles

19-20 March 2013, Hamburg, Germany

Details at <http://lng-fuelledvehicles.com>

The conference will include insights into LNG engine developments. The European Commission will explain the current and future regulations that affect LNG vehicles and operators and available incentives.

Carbone suie: au croisement des enjeux climat et qualité de l'air (Carbon soot: at the intersection of climate issues and air quality)

21 March 2013, Paris, France

Details at www.citepa.org/fr/inventaires-etudes-et-formations/538-jouet-2013

Under the aegis of the Ministry of ecology, sustainable development and energy, French and international leading stakeholders from the research world, French and European administration and industry, will develop a complete state of play of this emerging theme on local and global issues.

15th VDA Technical Congress 2013

21-22 March 2013, Munich, Germany

Details at www.vda.de/en/veranstaltungen/kongresse/technik/tk_2013/index.html

The theme of this year's congress is Environment, Energy and Electric mobility, Vehicle Safety and Electronics.

JRC Conference on "Scientific Support to EU Growth and Jobs: Efficient buildings, vehicles and equipment"

26 March 2013, Brussels, Belgium

Details at http://ec.europa.eu/dgs/jrc/index.cfm?id=1410&obj_id=4330&dt_code=EVN

The main aim of this event is to identify where scientific support is needed for DG-JRC's initiative on scientific support to growth and jobs.

Poli-techs: Creating a Standards and Regulatory Roadmap for Gaseous Fuel Vehicles

26-27 March 2013, Brussels, Belgium

Details at www.poli-techs.eu

The workshop provides a unique overview in simple but not simplistic terms of a very complex gaseous

fuel vehicle regulatory environment. As with other Critical Issues Workshops, based upon input from the participants – speakers and the audience – we will create the foundation for a strategic 'Roadmap' that summarizes the issues, discussion and provides recommendations for further action.

BAUMA 2013 (International Construction Equipment Exhibition)

15-21 April 2013, Munich, Germany

Details at www.bauma.de/en

SAE 2013 World Congress

16-18 April 2013, Detroit, Michigan, USA

Details at <http://www.sae.org/congress>

34th International Vienna Motor Symposium

25-26 April 2013, Vienna, Austria

Details at www.oevk.at

The latest innovations in engine development, future legislation, new engines and fuels, components, electronics and drivetrains will be presented.

5th International Conference Selective Catalytic Reduction

13-15 May 2013, Bonn, Germany

Details at www.scr-systems.de

The conference will include news on European regulations, SCR and high sulfur fuels, EGR application strategies, substrates, coating, dosing, and model-based simulation.

Advanced Emission Control Concepts for Gasoline Engines 2013

13-15 May 2013, Bonn, Germany

Details at www.emissioncontrol-gasoline.com

The conference will include an update of legislation on PM for GDI engines, insights into particulate filter technologies, the progress of new PM measurement methods, the potential of in-engine emission control, GPF regeneration and trends in gasoline emissions.

4th EFCA International Symposium on Ultrafine Particles

16-17 May 2013, Brussels, Belgium

Details to be at www.efca.net

The symposium will reflect the most recent scientific progress in the field and aims to contribute to the dialogue with policymakers in Europe.

Diesel Particulates and NOx Emissions (Short Course)

20-24 May 2013, Leeds, UK

Details at www.engineering.leeds.ac.uk/short-courses

This course concentrates on the engine technology for low emissions, fuel requirements and aftertreatment

techniques. It does not cover the details of the particulate but does cover particle size analysis and problems with the US heavy-duty transient test with very low emission diesel engines.

Workshop "Partikelfilter an Baumaschinen"

22-23 May 2013, Berlin, Germany

Details at www.stadtentwicklung.berlin.de/umwelt/luftqualitaet/de/luftreinhalteplan_projekte/workshop.shtml

The conference on particulate filter retrofit of construction machinery is organised by the Berlin Senate Department for Urban Development and Environment in collaboration with VERT and FAD, and with technical advice from TÜV Hessen. The workshop is aimed at operators and manufacturers of construction machinery and manufacturers of particle filters, public administrations and policy makers.

7th AVL International Commercial Powertrain Conference

22-23 May 2013, Graz, Austria

Details at www.avl.com/icpc

The conference covers commercial vehicles, agricultural tractors and non-road vehicles, and industrial machinery.

2013 JSAE Annual Spring Congress & Exposition

22-24 May 2013, Yokohama, Japan

Details at www.jsae.or.jp/2013haru/index_e.html

The 2013 JSAE Annual Spring Congress brings together world automotive engineers to report their latest research achievements.

5th BIVEC-GIBET Transport Research Day

30-31 May 2013, Walferdange, Luxembourg

Details at www.bivec.eu

This conference is organised by the Benelux Interuniversity Association of Transport researchers (www.bivec.eu and www.gibet.eu).

Automotive Testing Expo 2013: Open Technology Forum

4-6 June 2013, Stuttgart, Germany

Details at www.testing-expo.com/europe

Topics for the forum include engine testing and emissions reduction.

Green Week Conference

4-7 June 2013, Brussels, Belgium

Details at <http://ec.europa.eu/environment/greenweek/>

This year's theme is Air Quality. 2013 will be a year in which the Commission's current air policy is reviewed, with a focus on finding ways to improve the quality of the air we breathe.

CleanER-D Sustainability and Innovation Workshop: Towards greener and cleaner rail diesel vehicles

5 June 2013, Torino, Italy

The International Union of Railways (UIC) and the Association of the European Rail Industry (UNIFE) together with the CleanER-D consortium are jointly organising this public workshop on the recommendations and findings derived from the works of the CleanER-D sub-projects dealing with sustainability and integration, emerging technologies and hybrid technologies.

Natural Gas Vehicles (NGV) 2013

11-13 June 2013, Gothenburg, Sweden

Details at www.ngvaeurope.eu

"LNG-CNG, Bio & Natural gas: The fuel alternative for all transport modes" is the main theme for 2013. The event will cover experiences from fleet owners, show the development of CNG/LNG infrastructure along European Corridors and will give a comprehensive overview of the regulations & incentives the European Commission and local authorities are applying to support bio & natural gas.

17th ETH Conference on Combustion Generated Nanoparticles

23-26 June 2013, Zürich, Switzerland

Details at www.lav.ethz.ch/nanoparticle_conf

The conference provides an interdisciplinary forum for expert discussion in the field of combustion-generated nanoparticles, technical aspects as well as environmental impact, health effects and legislation.

V International Congress on Combustion Engines

24-26 June 2013, Bielsko-Biala, Poland

Details at www.congress.ptnss.pl

The main topics of the congress will include fuel injection systems and mixture formation, combustion processes in SI and CI engines, combustion process control in engines, alternative fuels, emissions measurements and aftertreatment, and global trends in engine technology.

Tropospheric Aerosol - Formation, Transformation, Fate and Impacts

22-24 July 2013, Leeds, UK

Details at www.rsc.org/ConferencesAndEvents/RSCConferences/FD165

This discussion aims to explore (i) the synthesis of emerging knowledge of the atmospheric aerosol systems, (ii) assessment of the validity and usefulness of existing frameworks and (iii) the development of robust aerosol system descriptions on scales ranging from the interpretation of laboratory.

International Conference on Remote Sensing, Environment and Transportation Engineering (RSETE2013)

26-28 July 2013, Nanjing, China

Details at www.rsete2013.org

Abstract deadline 20 March 2013

The main topics are remote sensing; energy, environment and sustainable development; environmental pollution and protection; and transportation engineering.

25th International AVL Conference "Engine & Environment" 2013

5-6 September 2013, Graz, Austria

Details at www.avl.com/engine-environment-2013

MODEGAT III: 3rd International Symposium on Modelling of Exhaust Gas Aftertreatment

8-10 September 2013, Bad Herrenalb/Karlsruhe, Germany

Details at www.modegat.org

The symposium purpose is to support the exchange of state-of-the-art and novel modelling and simulation techniques, fundamental mechanistic studies, experimental model validation and technical applications of modelling and simulation among researchers, scientists, and engineers from industry and academia.

ICE 2013 - 11th International Conference on Engines & Vehicles

15-19 September 2013, Capri, Naples, Italy

Details at www.sae-na.it

The topics of the conference will be fuel injection and combustion processes, powertrain technology, alternative and advanced power systems, exhaust aftertreatment and emissions, fuels and lubricants, and air handling, intake, and exhaust.

22nd Aachen Colloquium

7-9 October 2013, Aachen, Germany

Details at www.aachen-colloquium.com

The congress provides a wide range of technical presentations addressing current challenges of the vehicle and powertrain industry. Programme-related test vehicles, prototypes and aggregates from participating companies and institutions are presented on the ika test track.

19th Small Engine Technology Conference

8-10 October 2013, Taipei, Taiwan

Details at <http://www.setc2013.tw/index.html>

The conference programme will aim to cover new energy sources such as hybrid and electric drives, fuel cells and solar cells as well as components such as

transmissions and drivetrains and fuel supply systems, fuels and lubricants, together with environmental impacts, emissions, aftertreatment and life cycle & recyclability.

2013 ASME Internal Combustion Engine Fall Technical Conference

13-16 October 2013, Dearborn, Michigan, USA

Details at www.asmeconferences.org/ICEF2013

Conference tracks are large bore engines; fuels; advanced combustion; emissions control systems; instrumentation, controls, and hybrids; numerical simulation; and engine design, lubrication, and applications.

Busworld 2013

18-23 October 2013, Kortrijk, Belgium

Details at www.busworld.org

SAE/KSAE 2013 International Powertrains, Fuels & Lubricants Meeting

21-23 October 2013, Seoul, South Korea

Details at www.sae.org/events/pfl

It is intended that papers will cover fuels, combustion management, emissions reduction, advanced powertrains, engine downsizing, advanced fuel delivery, valvetrain optimization and engine control including OBD.

3rd Aachen Colloquium China

5-6 November 2013

Details will be at www.aachen-colloquium.com

Automotive Megatrends Europe 2013

12 November 2013, Brussels, Belgium

Details at <http://ameurope2013.automotiveworld.com>

Topics will be powertrain, safety and connectivity.

Commercial Vehicle Megatrends Europe 2013

13 November 2013, Brussels, Belgium

Details at <http://cvmeurope2013.automotiveworld.com>

Topics will be fuel efficiency, emissions reduction and market outlook.

Internal Combustion Engines: Performance, Fuel Economy and Emissions

27-28 November 2013, London, UK

Details at www.imeche.org/events/C1370

This conference from the Institution of Mechanical Engineers provides a forum for IC engine experts looking closely at developments for personal transport applications, though many of the drivers of change apply to light- and heavy-duty, on and off highway, transport and other sectors.

The Spark Ignition Engine of the Future

4-5 December 2013, Strasbourg, France



NEWSLETTER

January - February 2013

Details at www.sia.fr/evenement_detail_spark_ignition_engine_of_1181.htm

Abstracts are due by 15 April 2013.

This SIA international Conference intends to provide the opportunity to exchange points of view and information on the potential of the future spark ignition engine to respond to the main challenges of mobility, CO₂, emissions and hybridization.

8th International Exhaust Gas and Particulate Emissions Forum

1-2 April 2014, Ludwigsburg, Germany

Details to be at www.abgas-partikel-forum.com/index.html

FISITA 2014 World Automotive Congress

2-6 June 2014, Maastricht, the Netherlands

Details at www.fisita2014.com

Deadline for abstracts: 1 August 2013.

Congress topics will include clean and efficient engine technologies, new energy powertrains, and new mobility and vehicle concepts.