



Newsletter

November - December 2014

INTERNATIONAL REGULATORY DEVELOPMENTS

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EUROPE

Parliamentarian Question on WLTP Introduction in EU Legislation

Before leaving the Commission at the end of October 2014, former Commissioner for Climate Action Connie Hedegaard answered a written question from MEP David Martin (S&D, UK) on the Commission's plan to introduce the new Worldwide harmonized Light vehicles Test Procedure (WLTP).

She confirmed that the European Commission is undertaking intense work with a view to finalizing the technical details of the implementation during 2014, so that the test procedure together with a methodology for correlating the CO₂ emissions values for the purpose of the CO₂ emission standards can be adopted during the first half of 2015. She also said that the aim is that the WLTP should apply to new types of M1 vehicles from 1 September 2017 and subsequently be phased-in to cover all light-duty vehicles (new and existing types) from 1 September 2019.

Commission 2015 Work Programme

On 16 December 2014 the new European Commission adopted its work programme for 2015, setting out the actions it intends to take over the next 12 months.

Presenting the work programme to the European Parliament, EC President Jean-Claude Juncker said it will make a real difference for jobs, growth and investment and bring concrete benefits for citizens.

The 2015 work programme includes 23 new initiatives and proposes to withdraw or amend for political or technical reasons 80 existing proposals. Amongst the latter, the Commission will modify the proposal to tighten the National Emission Ceilings (NEC) Directive, linking this work with legislative proposals on the 2030 Climate and Energy package. According to Commission Vice-President Mr Timmermans, this would help to bridge the gap emerging between Member States and Parliament positions. The NEC Directive proposal was the main plank of the Clean Air package tabled one year ago. The Commission will nevertheless not reopen the related Medium Combustion Plant Directive proposal as there is a good chance of a co-decision agreement soon.

The Commission will withdraw its proposal for a Council decision on a common position to be taken in the Baltic Marine Environment Protection Commission (HELCOM) and the International Maritime Organization (IMO) concerning the designation of the Baltic Sea as a NO_x Emissions Control Area (NECA) because no agreement can be foreseen.

The 2015 work programme drew a mixed response from MEPs in the plenary debate with Commission's President and Vice-president. The Parliament will give

its verdict on the Commission's 2015 work programme in a resolution to be voted in January 2015.

At the occasion of the Environment Council on 17 December 2014 Member States' Environment Ministers underlined the need to keep working on all the elements of the clean air package.

The Commission Work Programme for 2015 is at http://ec.europa.eu/priorities/work-programme/index_en.htm.

Parliament and Member States' Support for Air Quality Policy Review

On 11 November 2014 a group of MEPs sent a letter to the new Commission's President Juncker to emphasize how important the Air Quality policy review is. This letter came in response to Juncker's proposal to members of the Commission to reassess draft legislation, including that on Air Quality.

Environment Committee Chair Giovanni La Via (EPP) and seven representatives of the S&D, ALDE and Green groups including Matthias Groote, Pieter Liese, Bas Eickhout, Karl-Heinz Florenz, and Sirpa Pietikäinen said that the on-going work of the Parliament on the proposal for an Air Quality policy review will bring crucial health benefits for European citizens. Therefore they expect that the Commission will continue to support the Air Quality policy review.

The MEPs letter was followed by another one from 11 EU Member States on 1 December 2014, urging the Commission to stand by the Air Quality and Circular Economy policy packages tabled by its predecessor.

Environment Ministers from Germany, France, Spain, Italy, Sweden, Belgium, Greece, Portugal, Slovenia, Cyprus and Luxembourg asked Commissioners to "keep viewing the circular economy and the clean air policy as high priorities for the coming years". Five other Member States were said to be "supportive of the substance" of the letter but were unable to sign it for procedural and time reasons.

The Ministers emphasised the economic benefits of the two sets of proposals, which the Juncker Commission proposed to withdraw. "Air pollution remains a major economic and social burden to European citizens" and cutting air pollution can be "a source of major savings, namely by avoiding increased health care costs and loss in productivity... European legislation is crucial for the effectiveness of air policy – being a transboundary issue – but it also constitutes a necessity to safeguard a European level playing field," the Ministers said.

Committee of the Regions' Opinion on the Clean Air Package

On 20 November 2014 the Committee of the Regions (CoR) published its opinion on the Commission Clean Air policy package.

The CoR broadly supported the Commission's proposals for a new policy package for cleaner air in Europe and welcomed their approach to tackling sources of pollution, including improving implementation of the test cycle for Euro 6 passenger vehicles, national reduction commitments for 2020 and 2030, regulating emissions from medium combustion plants, etc. Type-approval of Heavy-duty vehicles should also include some real-driving emissions test with upper limits that cannot be exceeded under any circumstances, they said.

According to the CoR, the proposals involve practical measures to tackle pollution at source, but the proposed deadlines mean that we will have to wait far too long to see the positive impact of that source-based policy. The proposed policy will not help Member States or sub-national authorities to meet the standards in the Ambient Air Quality Directive by the deadline. The CoR therefore concluded that there is still a considerable mismatch between European emissions and immissions policies which needs to be resolved.

Also, in the revision of the National Emission Ceilings Directive, the CoR suggests that interim targets for 2025 should be as binding as those for 2020 and 2030. This will help to ensure that Member States actually meet the national emission reduction commitments for 2030 by that year.

The opinion of the CoR is at http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOC_2014_415_R_0006&from=EN.

Eurocities call for Member States' Action on Air Pollution

On 1 December 2014 Ms Lot van Hooijdonk, Chair of the environment forum of Eurocities, a network of major European cities, urged EU Member States to step up their air quality measures to support cities' actions.

Ms van Hooijdonk, also deputy mayor for transport and mobility, energy and environment in the city of Utrecht, Netherlands said that the Commission has been developing its Air Quality package for almost three years, with input from Member States and a wide range of stakeholders. Withdrawing it now would not only undo all that work, but would be a disaster for Europe's air quality.

The National Emission Ceiling (NEC) Directive is the centrepiece of the package. It sets upper limits for the emissions of major pollutants over a year in each country. Member States then have the flexibility to decide how to comply with these. And they have many tools at their disposal to do so, like designing tax policies to incentivise cleaner fuels and technologies for road vehicles and heating installations, she added.

"Cities will continue to do their bit, investing heavily in infrastructure for sustainable transport, cleaner

vehicles, and encouraging citizens to opt for 'greener' ways to travel, like walking, cycling or public transport. If we are serious about cleaner air in our cities and the health of our citizens, we must act now to strengthen the proposed NEC Directive", Ms van Hooijdonk concluded.

Parliament Hearing on Air Quality Policy

On 4 December 2014 the Environment Committee of the European Parliament organized a public hearing on EU Air Quality policy.

The hearing was primarily dedicated to the Clean Air package and more particularly to the National Emission Ceiling (NEC) Directive review. A session however addressed sectoral emissions legislations and included a presentation on Real-Driving Emissions (RDE) by the motor industry.

The ACEA representative acknowledged the discrepancy between real-world driving emissions of Diesel vehicles and lab performance. He noted that car manufacturers support the finalization of the RDE requirements and procedure as soon as possible. He also said that real driving NOx emissions of new types of Diesel vehicles are expected to decrease from a Conformity Factor (ratio between RDE and Euro 6 limit) of 7.5 in 2014 down to 2.75 in 2017 and then 1.5 in 2020.

The EP hearing's presentations are available at www.europarl.europa.eu/meetdocs/2014_2019/organes/envi/envi_20141203_0900.htm.

European Commission suspects Trucks Cartel

On 20 November 2014 the European Commission announced it suspects a number of heavy- and medium-duty truck producers of having participated in a cartel in breach of EU antitrust rules.

Investigations began with raids on a number of companies' headquarters in January 2011. The Commission has now sent a statement of objections to a number of truck manufacturers, a formal step in the Commission's investigations into suspected violations of EU antitrust rules.

The addressees can examine the documents in the investigation file, reply in writing and request an oral hearing to present their comments on the case before representatives of the Commission and national competition authorities. If, after the parties have exercised their rights of defence, the Commission concludes that there is sufficient evidence of an infringement, it can issue a decision prohibiting the conduct and impose a fine of up to 10% of a company's annual worldwide turnover.

Commission updates on the alleged cartel case are at http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_39824.

Legislators discuss Draft Directive on Medium Combustion Plants' Emissions

On 3 December 2014 the Environment Committee of the European Parliament discussed the draft Medium Combustion Plants (MCP) Directive.

The new Directive is intended to cover, for the first time, medium-sized combustion plants with a rated thermal input of between 1 and 50 MW. It aims at closing the regulatory gap between the provisions of the Directive on industrial emissions and the ecodesign Directive.

Rapporteur MEP Andrzej Grzyb (EPP, Poland) said that while the proposal from the Commission was a "step in the right direction", its provisions need to be made more specific. "The range of MCPs falling under the proposal is too large. There should be separate provisions for MCPs of 1-5 MW, 5-20 MW and the largest ones above 20 MW", he said. The Rapporteur's opinion was largely backed by MEP Massimo Paolucci (S&D, Italy) who said the range of installations falling under the proposed Directive should be "better clarified." MEPs' views nevertheless diverged on the proposal that more stringent emissions limits should be set for MCPs installed in more polluted areas. The report from the Environment Committee is expected to be adopted mid-April 2015.

In parallel, on 17 December 2014 Member States' Environment Ministers reached agreement on a general approach on the draft Directive.

Compared to the Commission proposal, the text agreed by Ministers introduces differentiated regimes based on plant size, with the aim of reducing costs and administrative burdens for the smallest plants (1-5 MW). It also extends compliance deadlines for remote or isolated areas, end-of-life plants and district heating systems.

The general approach will provide a basis on which the incoming Latvian Presidency of the Council will start negotiations with the European Parliament in 2015.

EEA Report on Air Quality in Europe

On 19 November 2014 the European Environment Agency (EEA) published its annual Air Quality report covering the period from 2003 to 2012.

It shows that almost all city dwellers are exposed to pollutants at levels deemed unsafe by the World Health Organization (WHO). For PM₁₀ and ozone in particular, more than 90 % of the urban population is exposed to unsafe levels.

Long-term exposure to Particulate Matter was responsible for the vast majority of air pollution-caused

premature deaths in Europe in 2011, the report shows, while high levels of ground-level ozone over short episodes also caused a significant number of deaths.

Most air pollutants have declined slightly over the last decade, including PM and ozone. Nitrogen dioxide (NO₂) has not fallen as fast as expected. This is partly because vehicles are an important source of NO₂, and vehicle emission standards have not always led to the anticipated reductions, EEA said.

An increasing body of scientific research shows that air pollutants may be more harmful than previously thought. Air pollution's effect on respiratory illnesses and heart disease is well known, but new studies have shown that it can also affect health in other ways, from foetal development to illnesses late in life. While most harm comes from long-term exposure, short-term episodes can also be very dangerous.

Alongside health, pollutants also have a significant effect on plant life and ecosystems. These problems, including eutrophication, acidification and plant damage, have decreased in recent years. However, they are still widespread – for example the long-term objective for limiting ozone was exceeded across 87% of Europe's agricultural area in 2012, the report shows.

EEA Report No 5/2014 is at:

www.eea.europa.eu/publications/air-quality-in-europe-2014.

EEA Report on Transport and Emissions

On 8 December 2014 the European Environment Agency (EEA) released its 2014 issue of the Transport and Environment Reporting Mechanism (TERM) providing transport indicators tracking progress towards environmental targets in Europe.

This new edition of the TERM report has a particular focus on long-distance travel. While the vast majority of journeys within the EU are short distance, long distance freight and passenger transport together account for up to three-quarters of greenhouse gas (GHG) transport emissions and a large proportion of air pollutants.

The report indicates that Europeans collectively travelled 6.4 trillion kilometres in 2012. While car transport made up more than 70% of this distance, it has continued to decline since 2009. In contrast, air transport has increased very fast over recent decades.

Overall passenger transport demand fell 1.4% in 2012, mainly due to the drop in car passenger travel. Freight transport volumes also fell in 2012, by 2.1%. Transport's total energy demand has also fallen, continuing its year-on-year decline since demand peaked in 2007. Because these trends may be partly caused by the recession, it is unclear whether this will rebound in coming years.

GHG emissions from transport fell 3.3% in 2012, although they must continue to fall drastically to meet

targets over coming decades. Air pollutant emissions from most transport modes also decreased, apart from air pollution emitted by planes which increased for some pollutants.

The EEA indicates that levels of NO₂ and PM in cities have been exacerbated by increasing proportions of Diesel cars, partly resulting from fuel tax policies.

The number of alternative fuel car registrations in 2013 increased slightly, compared to 2012. Taken together, battery electric and plug-in hybrid vehicles account for 0.5% of total new registrations in the EU.

EEA Report No 7/2014 is at:

www.eea.europa.eu/publications/term-report-2014.

EEA Assessment of EU Industrial Air Pollution Costs

On 25 November 2014 the European Environment Agency (EEA) published an updated assessment of costs of air pollution from European industrial facilities.

EEA evaluated a number of harmful impacts caused by air pollution including premature death, hospital costs, lost work days, health problems, damage to buildings and reduced agricultural yields.

The estimates show that costs are highest for the main air pollutants – SO₂, NO_x, PM₁₀, NH₃ and Non Methane Volatile Organic Compounds (NMVOC) – and CO₂. Air pollution and Greenhouse Gases (GHG) from industry cost Europe between €59 and €189 billion in 2012, the report shows. Half of these damage costs were caused by just 1% of the industrial plants. Over the period 2008-2012 the estimated cost was at least €329 billion and possibly up to €1053 billion. Germany incurred the highest costs at up to €124.6 billion over the 5-year period, followed by Poland, the UK and Romania.

Industrial facilities causing the highest damage costs to health and the environment are listed by EEA at www.eea.europa.eu/data-and-maps/daviz/industrial-facilities-causing-the-highest-damage. Of the 30 individual facilities identified as causing the highest damage, 26 are power-generating facilities, mainly fuelled by coal and lignite and located predominantly in Germany and Eastern Europe.

The EEA report is at www.eea.europa.eu/publications/costs-of-air-pollution-2008-2012.

JRC Report on Trends in Global CO₂ Emissions

The Joint Research Centre (JRC) of the European Commission and PBL, the Netherlands Environmental Assessment Agency, released on 16 December 2014 a report on “Trends in Global CO₂ Emissions”.

The report is based on recent results from the joint JRC-PBL programme Emissions Database for Global

Atmospheric Research (EDGAR), the latest statistics on energy use and various other activities.

Global CO₂ emissions from fossil fuel use and cement production increased in 2013 to the new record of 35.3 billion tonnes (Gt) CO₂, which is 0.7 Gt higher than the 2012 record. This moderate increase of 2% is a continuation of the 2012 trend and of the slowdown in annual emissions growth. This slowdown signals a further decoupling of global emissions and economic growth, which reflects mainly the lower emissions growth rate of China.

China, the USA and the EU remain the top 3 emitters of CO₂, accounting for 29%, 15% and 11% of the world's total respectively. The much lower emissions increase in China of 4.2% in 2013 and 3.4% in 2012 was primarily due to a decline in electricity and fuel demand from the basic materials industry, and aided by an increase in renewable energy and by energy efficiency improvements. In the US, after years of a steady decline, CO₂ emissions grew by 2.5% in 2013 mainly due to a shift in power production from gas back to coal together with an increase in gas consumption due to a higher demand for space heating. In the EU emissions continued to decrease, by 1.4% in 2013, as a result of decreases in primary energy consumption from coal, oil and gas and the emissions from the sectors under the EU Emissions Trading System, which saw a 3% decline.

The report is at www.pbl.nl/en/publications/trends-in-global-co2-emissions-2014-report.

Germany, Austria, and Slovakia urged to act promptly on PM₁₀ Air Pollution

On 26 November 2014 the European Commission sent reasoned opinions to Germany, Austria, and Slovakia, urging them to act on air pollution.

According to the November infringement package of the Commission, the three Member States are failing to protect citizens from fine dust (PM₁₀) pollution. EU law requires the Member States to limit citizens' exposure to these particles by defining specific limit values to be observed in each air quality zone. The latest Member State reports demonstrate that some zones in these countries continue to be in exceedance of a daily limit value for PM₁₀.

In Germany the PM₁₀ levels are too high in Stuttgart and Leipzig, and in Austria, in Graz. In Slovakia, six zones are in exceedance of the daily limit value for PM₁₀: Bratislava, Banskobystrický kraj, Košice, Žilinský kraj, and Košický kraj. The Commission believes that the countries in question have failed to take necessary measures that should have been in place since 2005 to protect citizens' health, and is asking them to take forward-looking, speedy and effective action to keep the period of non-compliance as short as possible. The

reasoned opinions follow letters of formal notice sent to Slovakia on 22 February 2013 and to Germany and Austria on 26 April 2013. If the Member States fail to act, the Commission may take the matter to the EU Court of Justice.

Transposition of Directive on Sulfur Content of Marine Fuels

In the infringements package published on 26 November 2014, the European Commission asked Belgium, Spain, Hungary, and Cyprus to send details about how EU legislation on the sulfur content of marine fuels is being enacted in their domestic law.

As specified in Directive 2012/33/EU, from 1 January 2015 ships will only be allowed to burn fuel with a 0.1% maximum sulfur limit, down from the current 1% sulfur cap, within Emission Control Areas. The Commission has been finalizing new binding measures for inspecting and monitoring sulfur content in fuel burned by ships in a bid to ensure uniform compliance with the new 0.1% sulfur cap.

After missing the original deadline of 18 June 2014, the four Member States in question were sent letters of formal notice in July 2014. The Commission is now sending reasoned opinions, and if the Member States fail to act within two months, the cases may be referred to the EU Court of Justice.

EU Court rules UK must act on Air Pollution

On 19 November 2014 the European Court of Justice (ECJ) ruled that the UK government must act urgently to comply with the Air Quality Directive.

In the UK the limit values for nitrogen dioxide (NO₂) were exceeded in 2010 in 40 of the 43 Air Quality Directive zones. In September 2011, the UK submitted to the Commission requests for the postponement of the deadline for 24 of the 40 zones, those for which the UK predicted that the limit values would be met by 1 January 2015. However, for the 16 zones (including London) where air quality plans projected compliance with the limit values only between 2015 and 2025, the UK did not request a time extension.

ClientEarth, an environmental NGO, asked the British courts to require the UK government to revise its plans and show how the NO₂ limit values would be respected as soon as possible, and by 1 January 2015 at the latest. The UK Supreme Court then asked the ECJ to clarify national courts' obligations when air pollution limits are exceeded.

The ECJ ruled that, where the limit values for NO₂ are exceeded after the 2010 deadline and no application for postponement had been submitted, Member States (MS) are equally required to establish an Air Quality plan that sets out appropriate measures so that the

period during which the limit values are exceeded can be kept as short as possible. The ECJ also ruled that where a MS has not complied with the limit values and has not applied for a postponement of the deadline, it is for the competent national court, should a case be brought before it, to take any necessary measure.

The case will now be referred back to the UK for a final ruling, expected in 2015.

The Commission welcomed the ruling, which it said "appears to confirm the duty of all EU Member States to protect European citizens and deliver on air quality standards within a reasonable time".

UK Parliament urges Government to take Action on Air Quality

On 8 December 2014 the Environmental Audit Committee of the UK Parliament published a Report called "Action on Air Quality".

The report notes that the UK Government has been found guilty of failing to meet EU air quality targets in UK cities, some of which will not meet the required limits until 2030. However, meeting EU standards should be the minimum requirement. Regardless of EU rulings the Committee finds it unacceptable that UK citizens could have their health seriously impaired over decades before this public health problem is brought under control.

Members of Parliament therefore urged the UK Government to update the 2007 Air Quality Strategy; meet EU NO₂ targets as soon as possible; engage with local authorities to establish best practice in tackling air pollution across the UK; introduce a national framework for Low Emission Zones; adjust planning guidance to protect air quality in local planning and development; build in air quality obligations to transport infrastructure; examine fiscal measures to gradually encourage a move away from Diesel vehicles towards low emission options; close legal loopholes to end the practice of removing DPF from existing vehicles; apply pressure at European level to ensure effective EU legislation and emissions standards backed up by a robust testing regime; and institute a national public awareness campaign to increase understanding, publicising the UK-AIR forecast website and encourage measures to reduce air pollution.

The report is available at

www.publications.parliament.uk/pa/cm201415/cmselect/cmenvaud/212/212.pdf.

UK Air Pollutants Inventory Report for 1990-2012

On 20 October 2014 the UK Department for Environment, Food, and Rural Affairs (Defra) released the report "air quality pollutant inventories for England,

Scotland, Wales and Northern Ireland: 1990-2012”, compiled by Ricardo-AEA and Aether.

The report presents emissions inventories for ammonia (NH₃), carbon monoxide (CO), nitrogen oxides (NO_x as NO₂), non-methane volatile organic compounds (NMVOCs), Particulate Matter (PM₁₀), sulfur dioxide (SO₂), and lead (Pb).

Overall air quality in the UK is currently estimated to be better than at any time since the industrial revolution. However air pollution is still estimated to reduce the life expectancy of every person in the UK. The burden of anthropogenic PM air pollution in 2008 in the UK was estimated as a loss of life expectancy of approximately six months. The burden was also calculated as an effect on mortality in 2008 equivalent to nearly 29 000 deaths in the UK at typical ages and an associated loss of total population life of 340 000 life-years.

Regarding NO_x emissions, the report notes that the three main sources are transport, power generation, and industrial combustion. Since 1990 there has been a steady decline in transport NO_x emissions due to the introduction of catalytic converters on cars and stricter regulations on truck emissions. Since 2008 there has been a general reduction in the emissions from passenger cars which was mainly driven by improvement in catalyst repair rates. This was due to the introduction of the Regulations controlling sale and installation of replacement catalytic converters and DPFs for Euro 3 (or above) LDVs after June 2009. The report also notes that recent evidence has shown that Euro 5 Diesel cars exceed their type-approval limit for NO_x in real-world operation so this has been reflected in the emission factors provided in the 2013 EMEP/EEA Emission Inventory Guidebook (which has been incorporated into the UK 2012 inventory).

For PM, the main source of road transport emissions is exhaust gases from Diesel engines. Emissions from Diesel vehicles have been growing due to the growth in Heavy-duty vehicle traffic and the move towards more Diesel cars, the report indicates. Since around 1992, however, emissions from Diesel vehicles have been decreasing due to the penetration of new vehicles meeting tighter particulate emission regulations. Non-exhaust emissions from tyre and brake wear and road abrasion are increasingly more important.

The report is available at http://uk-air.defra.gov.uk/reports/cat07/1410200846_DA_AQPI_1990-2012_Report_Issue2.pdf.

Air Quality in France in 2013

On 3 November 2014 the French Ministry for Ecology, Sustainable Development and Energy published its annual report on air quality for 2013.

The air quality in France generally improved in 2013. Mean annual concentrations of sulfur dioxide (SO₂),

nitrogen dioxide (NO₂), and fine particles (PM₁₀) decreased between 2000 and 2013. Ozone (O₃) concentrations remained stable.

However, the situation varies a lot geographically and also along the year, depending on pollution sources and weather conditions. Regulatory limits were therefore not met everywhere in France and several pollution peaks occurred (O₃, NO₂, and PM₁₀).

In 2013 9% of air quality monitoring stations failed to meet the annual NO₂ limit and 1% failed the hourly NO₂ limit. PM₁₀ annual and hourly limits were not met at 5% and 1% of monitoring stations respectively.

The share of cities of more than 100 000 inhabitants where more than one monitoring station failed the annual NO₂ concentration limit was 32% in 2013, compared with 34% in 2012.

The report (in French) is at www.developpement-durable.gouv.fr/IMG/pdf/Ref_-_Bilan_de_la_qualite_de_l_air_en_France_en_2013.pdf.

Paris Mayor wants to ban Diesels

On 7 December 2014 Paris Mayor Anne Hidalgo told the French newspaper JDD that she wants Diesel vehicles to be banned from Paris by 2020.

She said the more polluting vehicles should be tackled, including tourist coaches, to mitigate persisting air pollution problems. She suggested banning Diesels from Paris and its suburbs by 2020 but exemptions are under consideration (e.g. for poorer people, during week-ends ...). The work plan for Paris municipality is to be further developed until 8 February 2015.

This announcement followed one from Prime Minister of France Manuel Valls at the closing ceremony of the French Environment Conference on 28 November 2014 where he said that the Government will set up a vehicle identification system in 2015, based on their criteria pollutant emissions in order to help local authorities creating Low Emission Zones and urban access restriction. Mr Valls also said that Diesel engines have long been favoured in France and this was an error. In the 2015 French budget, the fuel taxation difference between Diesel and gasoline will be reduced. He also supported a scrappage scheme for old polluting Diesel vehicles. The current scheme foresees, in zones with air quality problems, a bonus up to €3700 for the purchase of an electric, hybrid, or Euro 6 vehicle replacing a Diesel car that is 13 years old or more.

Ms Hidalgo's interview was widely commented in international media and the Brussels Minister of Mobility Pascal Smet announced the creation of a Low Emission Zone in Brussels, Belgium, banning the more polluting vehicles on pollution peak days. A general Diesel ban in Brussels is nevertheless not envisaged.

Paris and Ile-de-France Air Pollution Maps including Traffic

On 18 December 2014 Airparif, the Paris Ile-de-France region air quality monitoring agency, released new on-line “Hor’AIR” pollution maps which include real-time traffic impact.

These maps, updated every hour, allow visualization of air pollution exposure in Paris and surrounding region. They integrate data on background pollution, Airparif monitoring stations, weather conditions, regional pollutant emissions sources, and real-time traffic. Pollutant concentration maps are available for nitrogen dioxide (NO₂), ozone, and particulates (PM₁₀ and PM_{2.5}). Maps of pollution index, calculated according to the European Citeair index method, are also available for every hour.

Airparif is also developing daily forecast maps that include traffic. In the long run, maps of cyclist and pedestrian pollution exposure will be made available.

Maps are available at www.airparif.asso.fr/indices/horair.

German UBA calls for Extension of Low Emission Zones

On 13 November 2014 the German Federal Environment Agency (UBA) called for further development of Low Emission Zones (LEZ).

LEZs have proven to be efficient in many cities where air quality has improved significantly in recent years – but it is still not good enough, UBA said. In 2013, the yearly average NO₂ limit set for the protection of human health was exceeded in 66% of traffic-oriented monitoring stations in Germany. Therefore a new “sticker” is needed, to account for nitrogen dioxide emissions in addition to particulate matter.

The UBA also supported the extension of LEZ requirements to construction equipment, Diesel locomotives and inland waterway vessels. Finally UBA insisted that it is crucial that Euro 6 vehicles soon demonstrate lower emissions in real-world and not only in the test cell.

German Funding for Retrofit

On 29 December 2014 the German Government notified the European Commission of a national law to promote the retrofitting of particulate reduction systems on passenger vehicles and light commercial vehicles with Diesel engines.

In 2015 €260 million will be awarded to vehicle owners for the retrofitting of particulate filter systems in passenger vehicles and light commercial vehicles. Particulate reduction levels to be achieved on passenger cars must be PM01 or PM0 to PM4 according to the Road Traffic Licensing Regulation (Straßenverkehrs-Zulassungs-Ordnung - StVZO). For light commercial

vehicles particulate reduction classes PMK 01 or PMK 0 to PMK 4 according to the StVZO must be achieved.

Funding is available for passenger vehicles with Diesel engines which were initially registered up to 31 December 2006 and light commercial vehicles initially registered up to 16 December 2009.

“Blue Angel” cooperating with Eco-Labels in China and Japan

On 11 November 2014 a cooperation agreement was signed in Berlin between the German “Blue Angel” and Chinese and Japanese eco-labels holders, the German Federal Environment Ministry announced.

The goal of the agreement is to achieve broad harmonisation of award criteria for the respective national labels and to support manufacturers in making applications. A key aspect of this cooperation is mutual recognition by certification bodies. This will make it easier for product manufacturers to apply for the eco-label in the respective partner country. Japanese and Chinese companies will have an incentive to apply for the German “Blue Angel” label for their products and vice versa. If a German company wishes to sell its products on the Chinese market and use the Chinese label, in future it will be able to submit its application for the Chinese label to RAL gGmbH, Germany’s certification body for the Blue Angel.

The “Blue Angel” label is currently awarded for 12 000 products in 120 product categories.

EU Funding for LNG Ferry in Germany

On 4 November 2014 the European Commission announced having secured over €4 million to co-finance the construction of an innovative propulsion system with Liquefied Natural Gas (LNG) for a combined passenger and freight ferry in Germany.

European Regulations on Emissions Control Areas require the reduction of marine sulfur emissions in the North Sea as of January 2015, for which the main option is to reduce fuel sulfur content to 0.1% max. One of the ways for the shipping sector to reach this goal is to use alternative fuels, such as LNG.

The ferry aims for a faster passenger and freight transport connection between Helgoland Island and the mainland than the current ferries using conventional fuel. The development covers the innovative concept and design, implementation and installation of the LNG-propulsion system and its required components, as well as a pilot study on implementation resulting in recommendations on best practice.

Rotterdam Plan to tackle Air Pollution

On 28 November 2014 Dutch media reported on a €12 million package of measures planned by the Rotterdam Council to improve the city’s air quality.

The city Council is considering a scrappage incentive scheme for polluting cars. Its own fleet of vehicles will be overhauled to reduce its pollution rate by 25%. In addition the Council suggests that no more parking permits will be given for Diesel vehicles built before 2005 and petrol cars predating 1992.

The Council also wants to ban lorries from 's-Gravendijkwal, currently the city's most polluted road and a major highway that leads to the Maas tunnel.

Rotterdam is following the cities of Utrecht and Amsterdam which have already taken steps to reduce the number of polluting cars in their city centres.

Bulgaria urged to reduce SO₂ Air Pollution

On 26 November 2014 the European Commission urged Bulgaria to reduce ambient levels of SO₂.

Citizens in two zones, one in the south-west and the other in the south-east of the country, have been exposed to excessive levels of sulfur dioxide since at least 2007. While the measures taken in the south-west zone were efficient enough to achieve compliance with EU legislation in 2013, excessive levels of SO₂ persist in the south-east zone, causing continued damage to human health.

The reasoned opinion from the Commission is asking Bulgaria to take forward-looking, speedy and effective action to keep the period of non-compliance as short as possible. If Bulgaria fails to act within two months, the case may be referred to the EU Court of Justice.

New Website on Urban Access Restrictions in European Cities

On 9 December 2014 the CLARS (Charging, Low emission zones, other Access Regulation Schemes) platform announced the launch of a new website supporting motorists driving into European cities.

As part of air quality and mobility strategies, many cities in the EU have urban access regulation schemes as part of measures to reduce congestion and air pollution. These are congestion charges, Low Emission Zones (LEZ), or traffic restrictions. The website gives passenger car, light- and heavy-duty vehicle drivers information on urban access regulations.

The website provides details of the 268 LEZ in Europe and the 14 urban road charging schemes. It also gives information on 42 major access regulation schemes, and will provide details of more schemes in the coming months. Also, details of 8000 cities with access, weight, height, width or length restrictions, are now available on fully interactive GIS maps.

The website is at www.urbanaccessregulations.eu.

NORTH AMERICA

US EPA proposes Lower Air Quality Ozone Standards

On 25 November 2014 the US Environment Protection Agency (EPA) proposed to strengthen air quality ground-level ozone – or smog – standards to within a range of 65 to 70 parts per billion (ppb).

The Clean Air Act requires EPA to review the standards every five years. EPA last updated these standards in 2008, setting them at 75 ppb. EPA examined scientific studies, including more than 1000 new studies published since the last update. Studies indicate that exposure to ozone at levels below 75 ppb can pose serious threats to public health, harm the respiratory system, cause or aggravate asthma and other lung diseases, and is linked to premature death from respiratory and cardiovascular causes.

Ground-level ozone forms in the atmosphere when emissions of NO_x and volatile organic compounds from sources like cars, trucks, buses, industries, power plants and certain fumes from fuels, solvents and paints “cook” in the sun. People most at risk from breathing air containing ozone include people with asthma, children, older adults, and those who are active or work outside. According to EPA's analysis, strengthening the standard to a range of 65 to 70 ppb will provide significantly better protection for children, preventing from 320 000 to 960 000 asthma attacks and from 330 000 to 1 million missed school days. Strengthening the standard to a range of 65 to 70 ppb would better protect both children and adults by preventing more than 750 to 4300 premature deaths; 1400 to 4300 asthma-related emergency room visits; and 65 000 to 180 000 missed workdays.

EPA estimates that the benefits of meeting the proposed standards will significantly outweigh the costs. If the standards are finalized, every dollar invested will return up to three dollars in health benefits.

The agency is also proposing to strengthen the “secondary” ozone standard to a level within 65 to 70 ppb to protect plants, trees and ecosystems from damaging levels of ground-level ozone.

The EPA proposal is at www.epa.gov/glo/actions.html#nov2014.

US EPA fines Companies selling Uncertified Motorcycles and ATVs

On 18 December 2014 the US Environmental Protection Agency (EPA) announced that two Texas-based companies and four manufacturers in China violated the Clean Air Act by importing and selling more than 11 000 motorcycles and all-terrain vehicles (ATVs) that did not conform to the specifications that the

companies had certified to EPA or lacked EPA certification.

The motorcycles and ATVs were not covered by certificates of conformity because they had undersized catalysts, adjustable carburetors not described in the corresponding application for certification, were manufactured by an entity different from the one specified, or were manufactured after the applicable certificate expired. ATVs lacking proper warranties and labels were also imported.

EPA's Environmental Appeals Board ruled that the companies are responsible for a \$1 258 582 (€1 million) civil penalty for these violations. EPA also denied applications from Zhejiang Jonway Motorcycle, Shenke and a third Company not part of the case, Huibang, for certificates of conformity for model year 2015 highway motorcycles and recreational vehicles manufactured by Zhejiang Jonway Motorcycle. Without these certificates Jonway and Shenke may not lawfully sell their model year 2015 vehicles in the US.

US-China Announcement on Climate Change and Clean Energy Cooperation

The United States and China jointly announced on 12 November 2014 Greenhouse Gas (GHG) reduction targets. Together, the US and China account for more than one third of global GHG emissions.

US President Barack Obama said the US will cut net GHG emissions in the US by 26-28% below 2005 levels by 2025. At the same time, President Xi Jinping of China announced targets to peak CO₂ emissions around 2030, with the intention to try to peak early, and to increase the non-fossil fuel share of all energy to around 20% by 2030. This marks the first time China has agreed to peak its CO₂ emissions.

The new US goal will double the pace of GHG reduction from 1.2% per year on average during the 2005-2020 period to 2.3-2.8% per year on average between 2020 and 2025.

2015 US EPA Fuel Economy Guide

On 6 November 2014 the US Environmental Protection Agency (EPA) and the Department of Energy (DOE) released the 2015 Fuel Economy Guide, providing fuel-efficiency and Greenhouse Gas emissions data on new light-duty vehicles for sale in the US.

According to EPA, the 2015 models include a greater number of fuel efficient and low-emission vehicles in a broader variety of classes and sizes in comparison to previous years. The EPA guide provides "best-in-class" lists to help consumers find the most fuel-efficient advanced-technology vehicles as well as the most efficient gasoline- and diesel-powered vehicles.

The EPA guide is at www.fueleconomy.gov.

US Settlement on Excess Greenhouse Gas Emissions

On 3 November 2014 the US Environmental Protection Agency (EPA) and the US Department of Justice announced a settlement with the automakers Hyundai and Kia resolving alleged Clean Air Act violations.

The complaint alleges that the car companies sold close to 1.2 million cars and SUVs from model years 2012 and 2013 whose design specifications did not conform to the specifications the companies certified to EPA, which led to understatements of Greenhouse Gas (GHG) emissions. The allegations concern the Hyundai Accent, Elantra, Veloster and Santa Fe vehicles and the Kia Rio and Soul vehicles.

Hyundai and Kia understated the emissions of greenhouse gases by their fleets by approximately 4.75 million metric tons over the estimated lifetime of the vehicles. In addition they gave consumers inaccurate information about the real-world fuel economy performance of many of these vehicles. They overstated the fuel economy by one to six miles per gallon, depending on the vehicle.

The two automakers will pay a \$100 million (€ 84 million) civil penalty, the largest in Clean Air Act history and spend approximately \$50 million on measures to prevent any future violations. Hyundai and Kia will also lose 4.75 million GHG emission credits which are estimated to be worth over \$200 million.

California Draft Regulation on Alternative Diesel Fuels

On 21 November 2014 the California Air Resources Board (CARB) released at a public meeting a draft of its Alternative Diesel Fuel (ADF) regulation, which it intends to adopt in February 2015.

The aim of the ADF is to incentivize the use of biodiesel while also keeping pollutants such as nitrogen oxide low. This can be a challenge because 5% and 10% biodiesel blends (B5 and B10, respectively) from soybean oil can cause higher NO_x emissions output when used in Heavy-duty engines. As a result the proposed regulations include a NO_x mitigation strategy to address this problem. The strategy entails having a "safe harbour" level of NO_x emissions, past which fuel producers would be required to mitigate their NO_x output from B5 and B10 on a per-gallon basis. It may also entail blending additives such as di-tert-butyl peroxide (DTBP).

The regulation's reporting provisions would go into effect on 1 January 2016, with NO_x mitigation requirements taking effect from 1 January 2017 on.

The draft ADF regulation is at www.arb.ca.gov/fuels/diesel/aldiesel/biodiesel.htm.

Mexico proposes Heavy-Duty US 2010/Euro VI Emission Standards

On 17 December 2014 an update of the Mexican emissions requirement for Heavy-duty diesel engines and vehicles, including trucks, buses and large pickups and vans, was published in the Diario Oficial de la Federación.

The new standards would require new Heavy-duty diesel vehicles sold after 1 January 2018 to meet emissions standards equivalent to US EPA 2010 or Euro VI. Mexico currently requires either US 2004 or Euro IV emission standards.

Publication opened a 60-day public comment period, after which another vote will be required in Mexico's Secretariat of Environment and Natural Resources (COMARNAT) to finalize the standard.

The draft standard (in Spanish) is at http://dof.gob.mx/nota_detalle.php?codigo=5376263&fecha=17/12/2014.

ASIA PACIFIC

Singapore to adopt Euro 6 Standards in 2017-2018

In December 2014 the Singapore National Environment Agency (NEA) announced that Euro 6 emission standards will come into force for petrol vehicles on 1 September 2017 and for new diesel vehicles on 1 January 2018.

This move is in line with the NEA's efforts to further improve air quality by regulating vehicular emissions, the agency said. Singapore will upgrade from the current Euro 4 to Euro 6.

NEA said it has been in consultation with the automotive industry on the enhancement of vehicular emission standards, in order to develop vehicles that meet the new emission requirements. NEA expects that by September 2017 - January 2018, there will be an adequate supply and range of Euro 6 petrol and diesel vehicle models.

Additionally, NEA will accept diesel vehicles that meet Japanese emission standards (JPN 2009 and Post-Post New Long-Term (PPNLT) emission regulations for Light- and Heavy-duty diesel vehicles respectively) as meeting the Euro 6 standard, provided their Particulate Number (PN) emission can meet the Euro VI limit. Also, petrol vehicles using Port Fuel Injection technology that achieved Japanese emission standards (JPN 2009) will also be accepted.

Early Implementation of China V in Guangdong

The Chinese State Council approved Guangdong's application for early implementation of China V.

The province can implement the China V standards for gasoline vehicles on 1 December 2014, and for all Diesel vehicles on 1 July 2015.

Guangdong's Environment Protection Bureau has also proposed "investigating the feasibility of early implementation of China VI" in its preliminary 13th Five Year Plan.

Report on Options to reduce Road Transport Pollution in India

A new report by The Energy and Resources Institute (TERI), University of California, San Diego (UCSD) and the California Air Resources Board (CARB) was released on 11 November 2014.

The report, entitled 'Options to reduce road transport pollution in India', establishes the scientific basis for reducing emissions, the technologies available, and the governance issues that need to be addressed to improve air quality in Indian cities.

The report indicates that if current trends of vehicle population, fuel and emission standards persist, PM_{2.5} emissions will increase by a factor of three, and those of NO_x will increase by a factor of five by 2030.

The report makes 12 specific recommendations for immediate action: building and monitoring information, upgrading fuel quality, tightening vehicle emission standards, upgrading in-use testing (inspection and enforcement), fostering new engine management technology, encouraging fleet modernization, shifting transportation to other modes, promoting non-motorized means of transport, increasing distribution of electric and hybrid vehicles, using micro-grids for electric and hybrid vehicles, improving integrated land-use planning, and increasing cooperation between CARB and the Union and State Governments in India.

Court orders New Delhi to scrap Older Vehicles

On 26 November 2014, the India's National Green Tribunal (NGT) ordered Delhi local, state and federal agencies to implement measures to reduce the levels of pollution in New Delhi.

Under the order, all vehicles older than 15 years are to be taken off New Delhi roads. Amongst the 8.1 million vehicles registered in New Delhi, 1 million are more than 15 years old, the Delhi government's transport department estimated, and would have to be de-registered if the NGT order is implemented.

Private vehicles that are over 15 years old are currently allowed to drive in Delhi, subject to a fitness test by the transport department. Since 1998 commercial vehicles older than 15 years have been banned from Delhi already.

Korea to tighten Fuel Economy Standards for Cars

On 13 November 2014, three offices within the Korean government, led by the Ministry of Land, Infrastructure and Transport, said that the government would tighten its regulations on fuel economy testing to ensure that the ratings on vehicles' stickers more closely match their actual performance.

Previously, the government had been only using one car to test a model's fuel efficiency. Under the new rules, three vehicles will be used. If the discrepancy between the stated and actual fuel efficiencies is greater than 5%, another three vehicles must be tested.

The government also decided to diversify the testing institutions running the tests. The Transport Ministry-affiliated Korea Automobile Testing and Research Institute will conduct the first test (it had previously been the sole testing authority). The Korea Automotive Technology Institute and Korea Petroleum Quality & Distribution Authority will conduct the second test.

Additionally, carmakers are no longer able to choose which set of tires to use for the test; if there is an option, they have to pick the least fuel-efficient set of tires.

Vehicles developed in 2016 will be subject to the new guidelines.

Malaysia to introduce B7

On 1 November 2014 B7, a blend of 7% palm biodiesel with 93% petroleum Diesel was introduced throughout Malaysia, replacing the former B5 blend.

B7 is mandatory in the subsidized sector, said Datuk Amar Douglas Uggah Embas, Plantation Industries and Commodities Minister. According to him, the B7 programme will reduce Diesel use by 667.6 million litres and increase biodiesel use from 300 000 to 575 000 metric tons annually.

MIDDLE EAST

Light Vehicles' Fuel Economy Standards to be developed in Saudi Arabia

On 13 November 2013 Memorandums of Understanding were signed between 78 light vehicle manufacturers and the Saudi Standards, Metrology and Quality Organization. The purpose of the MoU is to commit light vehicles manufacturers to the Saudi Corporate Average Fuel Economy Standard (Saudi CAFE).

The country's vehicle fleet is expected to grow from the current 12 million to 26 million cars by 2030. Specialists in the programme will work to develop an ambitious goal to improve fuel economy in Saudi Arabia by more than 50% of total fuel consumption in the road transport

sector by the year 2025, bringing the Kingdom on a par with the developed countries with similar standards.

AFRICA

Rwanda introduces Vehicle Emissions Tests

On 22 December 2014 the Government of Rwanda announced mandatory vehicle emissions testing at technical control to improve air quality.

The testing is mandated by Prime Minister's Instructions n°005/03 of 27 December 2013 preventing air pollution caused by vehicular emissions and machines using petroleum products. From January 2015 on, all vehicles undergoing technical control at a Motor Vehicle Inspection Centre will also undergo an emissions test. Vehicles that do not meet applicable emissions standards will not be awarded the technical control certificate and will not be permitted to operate in Rwanda.

The Rwanda Environment Management Authority (REMA) also asked vehicle importers to take into consideration applicable standards for vehicles imported into Rwanda and ensure that the future importation complies with the emissions standards of the countries of origin. Importers and retailers of petroleum products were also reminded of the new East African Community standards which stipulate that only low sulfur fuels (less than 50 ppm) will be allowed on the regional market from January 2015.

African Roadmap to reduce Greenhouse Gases from Transport

Over 42 African countries, represented by Ministers of Transport, Environment and other senior officials, participated in the Africa Sustainable Transport Forum (ASTF) on 30 October 2014 in Nairobi, Kenya.

The meeting, organized by the UN Environment Programme (UNEP), the World Bank and UN-Habitat, aimed at integrating sustainable transport into the region's development and planning processes and increase the amount of funding going to sustainable transport programmes in Africa – to improve access to transport, reduce air pollution and climate emissions, and improve road safety and health.

Ministers adopted a roadmap seeking to reduce Greenhouse Gas emissions from transport in Africa by adopting a comprehensive approach that aims to promote the use of low-emission non-motorized transport, encourage the development of quality public transport and increase investment in clean technologies. This new historic framework will set in motion Africa's sustainable transport transition, benefiting health, the environment and overall sustainable development across the continent.

GENERAL

ICCT Pocketbook on European Vehicle Market Statistics 2014

On 12 November 2014 the International Council on Clean Transportation (ICCT) published their annual statistical portrait of technologies, fuel consumption, and Greenhouse Gas (GHG) and pollutant emissions in Europe's passenger car, light commercial, and for the first time also Heavy-duty fleets.

The pocketbook indicates that, after declining for several years, new passenger car registrations in the EU remained steady at about 12 million in 2012 and 2013. That number is about 20% below where it was before the economic crisis, when there were about 15.6 million cars sold annually in the EU.

Diesel cars accounted for 53% of all new registrations in 2013, slightly less than in 2012 but still much higher than in other major car markets, all of which (with the important exception of India) are dominated by gasoline-powered cars.

The market share of hybrid-electric vehicles (HEVs) in the EU continued to increase, and reached a level of 1.4% of all new car sales in 2013 – still relatively low, but more than twice as high as in 2011. Their share of the market was significantly higher in the Netherlands (5.7%) and France (2.6%).

The Euro 6 emission standard only took effect in September 2014 but in 2013, about 4% of all new car sales were already Euro 6 vehicles. Variation among manufacturers was wide though: from some manufacturers as much as one quarter of sales were already Euro 6 compliant vehicles, while others have had no significant Euro 6 fleet yet.

The ICCT pocketbook and interactive charts are available at <http://eupocketbook.theicct.org>.

Ricardo tests Real-World Emissions of Retrofitted Euro III Bus

On 27 November 2014 Ricardo released further results of their study of the Brighton & Hove Bus and Coach company fleet in the UK.

As part of a research project examining the real-world emissions of buses operating through a known pollution hot spot in Brighton city centre, Ricardo published results in July 2014 demonstrating the important role that improving traffic flow can have upon reducing NOx emissions. The study focused on a range of buses including Euro IV, Euro V conventional and Euro V hybrid powered vehicles.

As a follow-up to this work, Ricardo has since carried out measurements on an older Euro III bus recently retrofitted with a Selective Catalytic Reduction and continuously regenerating particulate trap system.

Testing of the retrofitted vehicle was carried out on the same route as used as the basis of the previous study.

Emissions results of the Euro III retrofitted bus were substantially below those of all of the other buses tested, including the Euro V hybrid vehicle. Data also indicated that of the nitrogen oxides remaining in the exhaust, the NO₂ fraction was substantially lowered to below 10% of total NO_x, Ricardo said.

Significantly from an operational standpoint, however, the retrofitted aftertreatment system required a longer period of warm-up before its full emissions control functionality could be achieved (typically 5-10 minutes from cold start).

IIASA Study on Short-Lived Climate Forcers Mitigation

On 3 November 2014 the International Institute for Applied Systems Analysis (IIASA) released a study of the potential of air pollution and CO₂ mitigation in climate stabilization scenarios.

IIASA said that reducing emissions of non-CO₂ gases and air pollutants with climate effects would bring health benefits and near-term climate co-benefits but the impact on long-term climate change might be lower than previously estimated.

Limiting emissions of so-called short-lived climate forcers (SLCF) such as methane and soot has been expected to help protecting human health, vegetation and limiting temperature increase. However, IIASA says that neglecting linkages between the sources of these SLCFs and CO₂ has led to an overestimation of the long-term climate benefits of controlling these pollutants in climate stabilization scenarios.

Previous studies, including IIASA research, had shown that immediate action to limit SLCFs such as methane and black carbon could significantly reduce premature mortality from air pollution, increase agricultural yields, and help minimize short-term climate warming. In the new study, the researchers extended the scope of their research to include both the short (decadal) and long term (centennial) perspective and assessed the impacts of air pollutants, methane, hydrofluorocarbons, and CO₂ control measures in an integrated framework. Short-lived pollutants are often emitted by the same sources as CO₂, such as Diesel cars and coal stoves, the authors said. CO₂ cuts will therefore already remove a lot of these pollution sources from use, while air pollutants such as soot and sulfur dioxide can be reduced without limiting CO₂ emissions.

According to IIASA, the new study highlights the critical importance of integrated approaches to problems such as climate change, air pollution, and energy policy.

Source: **Disentangling the effects of CO₂ and short-lived climate forcer mitigation**, Joeri Rogelj, Michiel Schaeffer, Malte

Meinshausen, Drew T. Shindell, et al.; *PNAS* (November 2014), [doi: 10.1073/pnas.1415631111](https://doi.org/10.1073/pnas.1415631111).

Report on Shipping Emissions in Ports

On 5 December 2014 the International Transport Forum (ITF) at the OECD (Organisation for Economic Co-operation and Development) published a discussion paper on “shipping emissions in ports”.

ITF indicates that shipping emissions in ports are substantial, accounting for 18 million tonnes of CO₂ emissions, 400 000 tonnes of NO_x, 200 000 of SO_x and 30 000 of PM₁₀ in 2011.

Most of CO₂ emissions in ports from shipping are in Asia and Europe (58%), but this share is low compared to their share of port calls (70%). European ports have much less emissions of SO_x (5%) and PM (7%) than their share of port calls (22%), which can be explained by the EU Regulation to use low sulfur fuels at berth in Sulfur Emissions Control Areas (SECA).

According to ITF, most shipping emissions in ports (CH₄, CO, CO₂ and NO_x) will grow fourfold up to 2050. This would bring CO₂ emissions from ships in ports to approximately 70 million tonnes in 2050 and NO_x emissions up to 1.3 million tonnes. Asia and Africa will see the sharpest increases in emissions, due to strong port traffic growth and limited mitigation measures.

In order to reduce these projected emissions, strong policy responses will be needed, ITF recommends. This could take the form of global regulation such as more stringent rules on sulfur content of ship fuel, or more SECAs than the four that are currently in place. In addition, shipping could be included in global emissions trading schemes and climate finance schemes.

The discussion paper is at www.internationaltransportforum.org/jtrc/DiscussionPapers/DP201420.pdf.

T&E Reports on Cars’ Fuel Consumption and CO₂ Emissions

On 5 November 2014 Brussels-based campaigning organization Transport & Environment (T&E) released a new report pointing at discrepancies between official fuel economy and CO₂ figures for new cars and real-world CO₂ emissions.

T&E says that the gap between test results and real-world performance has become a chasm, increasing from 8% in 2001 to 31% in 2013 for private motorists and without action is likely to continue to grow to over 50% by 2020.

T&E said that using the WLTP test instead of the current NEDC will be a step forward, but it will not resolve everything. The new Commission must ensure that new cars put on the market achieve the same test results on the road as the pre-production models tested

in laboratories at type-approval. It must also act to ensure drivers are given accurate information about fuel economy and update car labelling regulations.

The T&E report on fuel consumption is at www.transportenvironment.org/sites/te/files/publications/2014%20Mind%20the%20Gap_T%26E%20Briefing_FINAL.pdf.

This was followed by another T&E report published on 17 December 2014 on the average new car CO₂ emissions in different Member States of the EU.

The report indicates that in 2013 the top six best performing countries (Netherlands, Greece, Slovenia, France, Finland and Bulgaria) all achieved annual CO₂ emissions reductions of new cars of more than 5%. In contrast the laggards, including Sweden and Poland, achieved less than 2.5% improvement in average CO₂ emissions from 2012.

According to T&E, countries with low average CO₂ emissions typically have initial registration taxes (purchase taxes) and company car taxes that are steeply differentiated by CO₂. Annual circulation taxes are a modest driver of fuel efficiency even if they are graduated according to CO₂ emissions, and high fuel taxes alone have a limited influence on the efficiency of the cars being bought – but do impact on the overall level of car use and fuel consumption. Low levels of diesel tax encourage higher proportions of diesel car sales and more vehicle use.

The T&E report on CO₂ Emissions is at www.transportenvironment.org/publications/co2-emissions-new-cars-europe-country-ranking-2013.

ICCT Report on Test Cycle Conversion Factors for Light-duty CO₂ Emissions

On 3 December 2014 the International Council on Clean Transportation (ICCT) released a new report providing an updated set of conversion factors for translating distance-based CO₂ emissions among different driving cycles.

This paper, updating and refining an earlier analysis completed in 2007, compares the dynamics of the four most important driving cycles and their impacts on fuel consumption and CO₂ emissions. The driving schedules include those specified in the three most relevant national regulations – the US CAFE standards (a composite of FTP75 and HWFET), the New European Driving Cycle (NEDC), and Japan's JC08 – plus the recently developed Worldwide harmonized Light vehicles Test Cycle (WLTC).

CO₂ emissions were simulated over the test cycles for a variety of vehicle and technology packages using a vehicle emission model developed by Ricardo Engineering. Model runs based on the speed courses of the driving cycles were resolved on a second-by-second basis. Current vehicle architectures and

advanced innovative technologies focusing on the 2020-2025 horizon were covered.

The outcome is a set of usable conversion factors to translate distance-based CO₂ emissions among the different driving cycles. These factors were determined on distinct levels of detail, characterized by technology parameters such as share of diesel engines in the fleet, vehicle size, share of hybrid systems, aerodynamic drag, and others.

The ICCT Report is at http://theicct.org/sites/default/files/publications/ICCT_LDV-test-cycle-conversion-factors_sept2014.pdf.

ICCT Evaluation of Fuel Efficiency of Heavy-duty Vehicle Diesel Engines

On 10 December 2014 the International Council on Clean Transportation (ICCT) released a report on US Heavy-duty Diesel engines fuel-efficiency prepared by West Virginia University.

The report provides a complete engine fuelling map characterization of modern diesel engines for US-EPA 2010-compliant Heavy-duty vehicles. The analysis also includes a detailed breakdown of engine energy loads and losses, as well as estimates of technical efficiency potential for future engines. This engine, in turn, is utilized in the ICCT's tractor-trailer simulation modelling.

Areas where there is potential for Heavy-duty Diesel engine efficiency improvements include increased compression ratio and peak in-cylinder pressures, reduced pumping losses through low-pressure drop aftertreatment systems, exhaust gas recirculation improvements, improved turbocharging technology, advanced lubricants to reduce frictional parasitic losses, engine material coatings that lower friction, and variable speed water and oil pumps. The work indicates how, from tested 2011 and 2013 engines, fuel consumption could be reduced by 8-10% to meet 2017 standards, and by 18-20% in advanced engines in the post-2020 timeframe. Finally, the simulation of a waste heat recovery system shows further efficiency improvements.

The ICCT report is at http://theicct.org/sites/default/files/publications/HDV_engine-efficiency-eval_WVU-rpt_oct2014.pdf.

ICCT Assessment of Road Transport in the EU Emissions Trading System

On 4 December 2014 the International Council on Clean Transportation (ICCT) published an impact assessment of technology innovation and deployment if passenger car CO₂ standards in the EU were replaced by including road transport in the Emissions Trading System (ETS).

The introduction of mandatory CO₂ standards for passenger cars in the EU led to a significant decrease in the level of CO₂ emissions for new vehicles, and increased deployment of vehicle efficiency technologies. A general consensus exists that this system of vehicle emission standards has proven effective and should be continued and expanded.

However, recently proposals have been floated to replace or supplement mandatory CO₂ standards with the cap-and-trade ETS system. The European Council in October 2014 even stated that “a Member State can opt to include the transport sector within the framework of the ETS.”

The ICCT paper assesses the effect on technology innovation and deployment of such a change and concludes that, to reach a similar level of technology innovation as is expected for the EU's 2020/21 CO₂ target of 95 g/km, a price of about €370 per ton of CO₂ would be required. However, the current price is €5.

The ICCT report is at http://theicct.org/sites/default/files/publications/ICCT_EU-ETS-perspective_20141204.pdf.

G20 Summit prioritizes Fuel Efficiency

On 16 November 2014, the Group of Twenty (G20) Heads of Government summit in Brisbane prioritized action on vehicle fuel efficiency and encouraged countries to work with the Global Fuel Economy Initiative (GFEI).

World leaders declared that “improving energy efficiency is a cost-effective way to help address the rising demands of sustainable growth and development, as well as energy access and security. It reduces costs for businesses and households. We have agreed an Action Plan for Voluntary Collaboration on Energy Efficiency, including new work on the efficiency and emissions performance of vehicles, particularly heavy-duty vehicles.”

In an accompanying G20 Energy Efficiency Action Plan, governments highlight vehicle fuel efficiency as a key priority. The G20's work stream will focus on heavy-goods vehicles in 2015, with the work being coordinated by the US government, and GFEI providing expert input. The action plan also encourages action on light-duty vehicle and passenger car fuel efficiency, endorses GFEI, and recommends that countries increase their work on fuel economy with GFEI. This collaborative activity is currently supported by the International Energy Agency (IEA), the United Nations Environment Programme (UNEP), the Fédération Internationale de l'Automobile (FIA) Foundation, the International Transport Forum (ITF) and the International Council on Clean Transportation (ICCT).

The G20 energy efficiency action plan is at www.g20.org/sites/default/files/g20_resources/library/g20_energy_efficiency_action_plan.pdf.

IEA World Energy Outlook 2014

On 12 November 2014 the International Energy Agency (IEA) released its annual World Energy Outlook 2014.

According to IEA, global oil demand is expected to increase by 37% by 2040, with a dominant proportion of that coming from developing countries, i.e. China and India. In fact, the IEA says that for every barrel of oil the industrialized world expects to eliminate from demand through efficiency or other ways of reducing demand, developing countries will burn through two additional barrels.

In the central scenario of the report, the world oil supply rises from 90 million barrels per day (mb/d) to 104 mb/d in 2040, but hinges critically on investments in the Middle East. As tight oil output in the US levels off, and non-OPEC supply falls back in the 2020s, the Middle East becomes the major source of supply growth. Growth in world oil demand slows to a near halt by 2040: demand in many of today's largest consumers either already being in long-term decline by 2040 (the US, EU and Japan) or having essentially reached a plateau (China, Russia and Brazil). China overtakes the US as the largest oil consumer around 2030 but, as its demand growth slows, India emerges as a key driver of growth, as do sub-Saharan Africa, the Middle East and Southeast Asia.

In that scenario, demand for gas is more than 50% higher in 2040, and it is the only fossil fuel still growing significantly at that time. The US remains the largest global gas producer, although production levels off in the late-2030s as shale gas output starts to recede.

The IEA report is at www.worldenergyoutlook.org.

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FORTHCOMING CONFERENCES

13th International CTI Conference: Exhaust Systems

19-21 January 2015, Stuttgart, Germany

http://cti.euroforum.de/en/events/exhaust_systems

This seminar conveys the basics of the currently most important technical concepts of exhaust gas technology using several practical examples.

Ultra Low NOx Gas Turbine Combustion

19-23 January 2015, Leeds, UK

www.engineering.leeds.ac.uk/short-courses/power-process/ultra-low-NOx-gas-turbine-combustion/index.shtml

The course will cover fundamentals of NOx formation, CO emissions, film cooling, flammability, flame propagation, weak extinction and flashback, premixed low NOx combustors and the importance of fuel/air mixing, and practical lean ultra-low NOx combustors.

Engine Optimisation for RDE

20-21 January 2015, Frankfurt Mörfelden, Germany

www.engine-optimisation-rde.com

The conference will focus on engine requirements and engine emissions control concepts specifically in relation to achieving Real-Driving Emissions (RDE) compliance.

10th International Colloquium Fuels - Conventional and Future Energy for Automobiles

20-22 January 2015, Stuttgart/Ostfildern, Germany

www.tae.de/fuels

Main topics of the conference include aspects of fuel production, practical performance of fuels and their evaluation, microbiological aspects, e-mobility and hybrid cars, deposits and their control aspects of fuels, fuel additives, biofuels, fuel cell technology, and quality testing of fuels.

A Practical Guide to Scrubber Systems Seminar

27-28 January 2015, London, UK

www.lloydsmaritimeacademy.com/event/scrubber-systems

This Lloyds' Maritime Academy seminar will provide a complete guide to scrubber selection, design innovations, emissions monitoring and enforcement. It will specifically look at the ROI of scrubbers with insight from shipowners actively adopting this SOx abatement technology.

US EPA Workshop on Ultrafine Particles

11-13 February 2015, Research Triangle Park, NC, USA

www.eventbrite.com/e/us-epa-workshop-on-ultrafine-particles-tickets-13583846651

The workshop will address Ultrafine Particles relevant science, including emissions and control issues, health effects evidence, policy considerations, metrics and

indicators relevant to air quality and health impacts, and instruments and methods.

Seminar: Emissionsgesetzgebung und -analyse in der Automobilindustrie + Praxisteil am Prüfstand

24-25 February 2015, Heimsheim, Germany

22-23 April 2015, Pfungstadt, Germany

www.sv-veranstaltungen.de/site/fachbereiche/seminar-emissionsgesetzgebung-und-analyse-der-automobilindustrie-praxisteil-pruefstand

Topics of the seminar include exhaust gas composition for petrol and diesel engines; EU legislation on exhaust emissions: the NEDC, WLTC, EURO6b and EURO6c; US emissions legislation: CARB ZEV, LEV-III; test bench for vehicle and engine measurement; comparison NEDC/WLTP; and measurement on chassis dynamometer (bag measurement, modal measurement, particle counting).

4th Integer Emissions Summit Russia

24-26 February 2015, Moscow, Russia

<http://www.integer-research.com/conferences/russia-cis-2015>

The conference will investigate the impact of on-road Euro IV and V and non-road Tier III legislation and examine strategies to successfully ensure compliance.

SAE 2015 On-Board Diagnostics Symposium – Europe

2-4 March 2015, Stuttgart, Germany

www.sae.org/events/obd-eu

The symposium will discuss the latest updates regarding technical standards, processes, and techniques necessary to comply with global OBD and emissions regulations.

Kolloquium Luftqualität an Straßen 2015

4-5 March 2015, Bergisch Gladbach, Germany

www.bast.de/DE/Service/Termine/2015/luft-2015.html

Forum on current research activities in the field of air quality along transport routes as well as traffic-related measures in the wake of air pollution control plans.

37th Motorship Propulsion & Emissions Conference

4-5 March 2015, Hamburg, Germany

www.propulsionconference.com

The conference will discuss, debate and share information on current and future topical developments in marine technology, legislation and other key issues.

AVL Workshop Real Driving Emissions

10 March 2015, Pfungstadt, Germany

Info will be at www.avl-veranstaltungen.de

Green Ship Technology Conference

10-13 March 2015, Copenhagen, Denmark

www.informamaritimeevents.com/event/greenshiptechnology

Key topics of discussion include fuel efficiency and energy management, emissions controls, alternative

energy sources, new innovative technologies for sustainable shipping, retrofitting solutions to meet regulatory requirements, and cutting edge ship designs for operational efficiencies.

17th VDA Technical Congress 2015

19-20 March 2015, Filderstadt, Germany

www.vda.de/en/services/events/technical-congress-2015.html

The VDA annual congress will discuss environment, energy and electric mobility, vehicle safety, and electronics.

Characterization of Complex Nanoaerosol Emissions: metrology, health and environmental issues

24-25 March 2015, Rouen, France

<http://fr.amiando.com/P4TA-Workshop.html>

The objective of this P4TA-CERTAM international workshop hosted by Jean-Paul Morin is to highlight the recent progress in the field of nanoaerosol metrology, health, and environmental area.

Deadline for poster abstract: 31 January 2015

5th Integer Emissions Summit India 2015

25-26 March 2015, New Delhi, India

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

The conference will explore the challenges and opportunities, and examine successful diesel emissions control strategies, for the Indian on-road and non-road mobile machinery (NRMM) sectors.

2015 CITA Conference “Enhancing the value of vehicle inspection”

14-16 April 2015, Dubai, United Arab Emirates

<http://www.cita-vehicleinspection.org/Home/CITAConferences/2015InternationalDubaiUAE/tabid/524/Default.aspx>

Topics to be covered by the plenary sessions, workshops and discussion forum include future directions for vehicle inspection, integrating vehicle, driver and infrastructure strategies, PTI scenarios, achieving inspection integrity, ensuring best inspection practice, priorities for new testing procedures, inspection procedures and methods, and regional perspective for PTI in the Middle East.

5th Integer Emissions Summit & ARLA 32 Forum Brazil 2015

14-16 April 2015, Sao Paulo, Brazil

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

The summit will examine diesel emissions regulation compliant strategies of leading on- and non-road vehicle and engine manufacturers and the developments within the ARLA 32 market.

SAE 2015 World Congress

21-23 April 2015, Detroit, USA

www.sae.org/congress

AVL Roadshow Real Driving Emissions

21 April 2015, Pfungstadt, Germany

23 April 2015, Stuttgart, Germany

28 April 2015, Wolfsburg, Germany

www.avl-fahrzeugmesstechnik.de

36th International Vienna Motor Symposium

7-8 May 2015, Vienna, Austria

www.xn--vk-eka.at/index_en.htm

The symposium will address latest results in worldwide engine and powertrain development, future legislation, fuels and components, drive train electrification, hybrid technology, CO₂ reduction, and exhaust emissions control.

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.

8th Integer Emissions Summit 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 technologies, LNG / CNG), agricultural tractors (potential of electrically driven implements, alternative fuels), and construction machinery (modern transmission technologies, hybridisation).

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_123_3.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.

2015 BIVEC-GIBET Transport Research Day

28-29 May 2015, Eindhoven, Netherlands

www.bivec.eu

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.

Deadline for abstract: 15 January 2015

European Automotive Conference

8-10 June 2015, Győr, Hungary

<http://eaec2015.org>

Topics include safety, emissions, environment, energy, design, quality and automotive logistics.

11th Integer Emissions Summit & AdBlue® Forum Europe 2015

9-11 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®.

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.

2nd International Trade Conference: Sensors for Exhaust Gas Purification 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, NO_x sensors, temperature sensors, AdBlue® quality sensors, and exhaust mass flow measurement.

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.

2015 JSAE/SAE Powertrains, Fuels and Lubricants International Meeting

1-4 September 2015, Kyoto, Japan

<http://pfl2015.jp>

24th Aachen Colloquium

5-7 October 2015, Aachen, Germany

<http://www.aachener-kolloquium.de/en>

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.

EUCAR Annual Conference

4-5 November 2015, Brussels, Belgium

Info will be at www.eucar.be

FISITA 2016 World Automotive Congress

26-30 September 2016, Busan, South Korea

Info will be at www.fisita2016.com

Deadline for abstracts: 30 September 2015