

NAECCewsletter

Association for Emissions Control by Catalyst

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Affiliated to CEFIC

March – April 2003

INTERNATIONAL REGULATORY DEVELOPMENTS

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EUROPE**1. EU Energy Tax Framework finally agreed**

EU finance ministers have finally reached political agreement on a proposed common framework for energy taxation. The framework is seen as a key element in the EU climate change policies. Harmonised minimum tax rates should reduce distortions of competition between EU states and between energy products. The environmental policy significance of the proposal is that it provides a basis for the EU states to collectively raise energy prices over time, thus increasing incentives for more efficient usage.

The ministerial deal must be scrutinised by the European parliament before it can be formally adopted. However, MEPs have only consultative powers on the directive, as with all tax measures, so the agreement is therefore virtually final.

2. UK urges EU towards 60% CO₂ Emissions cut

The UK has unveiled a climate change manifesto, committing to cut carbon dioxide emissions by 60% by 2050 and - with the support of Sweden - urging all other EU countries to do likewise. The UK 60% emission reduction target is by far the most ambitious adopted by any industrialised country and could have a significant impact on debate over future emissions targets under the UN Kyoto protocol.

Building on an EU action plan on environmental technologies due soon from the Commission (see next item) the UK and Swedish two prime ministers urge a series of new measures. They include further national targets for boosting renewable energy,

continued EU-wide work to increase energy efficiency, development of a strategy for establishing an EU-wide infrastructure for alternative road fuels, and development of a Europe-wide system for environmental classification of cars and trucks by 2005 plus targets for increasing their use by 2010.

3. Environmental Technology Action Plan

In March the Commission issued a Communication on “Developing an action plan for environmental technology” to present the process they have set up for consultation of stakeholders as well as the first findings of the work. The Commission intends to put forward an action plan on environmental technology by the end of this year, which will include a more comprehensive identification of promising technologies, barriers and action points. A web site has been set up as a tool to consult stakeholders and to involve them in the preparation of the action plan.

4. Report says French Air Pollution declining, but Motor Vehicle Emissions are still a problem

Air pollution continued its downward trend across France in 2002, with emissions of all key pollutants registering important declines, according to a new report released on 27 February by the Ministry of Ecology and Sustainable Development. However, the report, entitled “The Evolution of Air Quality in France”, said more must be done to reduce vehicle-based emissions and pollution in some large industrial zones.

The report cited important declines in nitrogen oxides, with nitrogen dioxide (NO₂) concentrations down by about 20% in the majority of French cities over the past

six years. However highways and other high-traffic areas in large cities such as Paris, Lyons, and Marseilles are the only exception to the NO₂ reductions, the report said, noting that these cities have failed to meet national and EU targets.

The report said that the elimination of lead from standard vehicle fuels on 1 January 2000, has contributed to a 3-fold decrease in lead concentrations in air.

The report provides further insight into ongoing efforts to improve monitoring and then reduce emissions of fine particulates and benzene, described as two of the government's other priority objectives.

The government said the results of the air monitoring survey indicate the success of ongoing work, but it also pointed out the need to continue efforts to reduce air pollution, whether from industry, municipal waste incinerators, urban heating facilities or vehicles.

Among the benchmarks France has set for itself is compliance with a European Union requirement to reduce emissions from new vehicles by half, from 2005, and to meet international treaty obligations set under amendments to the 1979 Convention on Long-Range Transboundary Air Pollution to reduce a series of pollutant emissions by 40% over the 2001-2010 period.

5. Franco-German Summit pushes for new EU Rules

France and Germany have pledged a united campaign to get EU agreement on a host of environmental protection initiatives at a summit in Potsdam between German environment minister Jürgen Trittin and his French counterpart Roselyne Bachelot.

They include more stringent emissions rules for diesel engines and the two ministers said they would push for legislation on tighter

emissions standards to come into force by 2010 at the latest. Under Euro IV standards, diesel cars may emit up to 0.25 grams of nitrogen dioxide and 0.025 grams of particles per kilometre. The German-French initiative aims at an even tougher Euro V standard to go into effect after that, although Minister Trittin did not specify how much stricter the two nations want to make the next generation of emissions standards.

In Germany, an alliance, "No Diesel without Filter," consisting of environmental groups, an alternative motor club and the Federal Environment Agency (Umweltbundesamt), has been pushing since November for diesel particulate (soot) filters on diesel cars. French car manufacturers have been the leader in soot filter technology, according to the alliance. Peugeot and Citroën are already offering a number of diesel models with soot filters. At the recent Geneva Motor Show, Renault announced that they would introduce, during the 2nd quarter of 2003, passenger cars in Europe equipped with a new diesel particulate filter system. Minister Trittin said existing technological solutions could reduce current emissions of soot particles and nitrogen dioxide by 99% and about 270,000 diesel cars on German roads are equipped with soot filters and already meet stricter emissions standards. He said that it was imperative that the tougher standards now be officially agreed upon in the EU as an official Euro V standard to enable Germany to start granting tax breaks for early implementation.

6. Urban Pollution still putting Swedes at risk

Despite rapid progress in cutting emissions since the mid-eighties, the air quality in Sweden's cities and other built-up areas is still so poor as to pose a hazard to public health, the Swedish environmental

protection agency has announced. As a result, “thousands of people have breathing problems, others’ illnesses are aggravated and an unknown number die each year”, the agency said in a statement. In “well over half” of 46 municipalities surveyed last winter, measurements of particulates and benzene exceeded acceptable levels. Nitrogen oxides were also a cause for concern in the larger cities.

The agency concludes that the rate of improvement, which accelerated during the 1980s thanks to measures such as the fitting of catalytic converters, has now “flattened out”, while the volume of road traffic has continued to rise.

7. Environmental Scientist to lead European Environment Agency

The European Environment Agency has appointed Jacqueline McGlade to be the agency’s new executive director. She has been appointed for a 5-year term and is expected to assume her responsibilities by 1 June.

McGlade, an environmental scientist, is currently a professorial fellow in environmental information at University College, London.

8. EU Parliament and Council reach Agreement on Recreational Craft

The Council and the European Parliament, in the framework of the co-decision procedure, reached agreement in mid-March on a draft Directive concerning recreational craft. The agreement must be endorsed by the Parliament (majority of votes cast) and the Council (qualified majority voting procedure) for the Directive to be adopted.

The proposed Directive includes design and construction requirements for personal watercraft and regulates noise and exhaust emissions produced by propulsion engines for recreational craft and personal watercraft that were not covered by the previous Directive (94/25/EC). Moreover, it fixes limit values for exhaust emissions of carbon monoxide (CO), hydrocarbons (HC), nitrogen oxide (NOx) and particulate pollutants.

Council adopted its common position on 22 April 2002.

The main issues settled in conciliation included:

- Exemptions for craft built for own use and original historical craft and individual replicas based on a pre-1950 design.
- The Commission is asked to submit by 31 December 2006 a report on the possibilities of further improving the environmental characteristics of engines and possible benefits of a system for in-use compliance similar to that of the annual technical monitoring of cars.
- A regulatory committee will assist the Commission, in the light of the evolution of technical knowledge and new scientific evidence, with issues relating to the reference fuels and the standards to be used for exhaust and noise emissions testing.
- An exemption to the scope of the Directive with regard to design and construction was granted to steam powered craft.
- The transposition to national law is due to take place by 30 June 2004 and its measures are due to be applied by Member States as from 1 January 2005.

9. Fuels Directive Published

The new European directive 2003/17/EC on the quality of petrol and diesel fuels (amending directive 98/70/EC) was published at the end of March. This introduces “zero” sulphur fuels to the European market from 1 January 2005 with complete market availability from 1 January 2009. A Commission review process (including a review of the date for requiring diesel fuel with >10 ppm sulphur to be banned, other fuel parameters, requirements for biofuels, the influence of metallic additives on emission controls and non-road diesel fuel quality) is to be conducted by the end of 2005 and will complete this legislation.

10. Roadworthiness testing directives published

Two new directives (2003/26/EC and 2003/27/EC) on the Roadworthiness Testing of motor vehicles were published in April in the Official Journal.

Directive 2003/27/EC sets new limit values for the tests specified in Directive 96/96/EC that are carried out in periodic inspections of petrol and diesel driven vehicles to ensure that emissions are still within acceptable limits. The new directive specifies the engine idle and high idle emission tests and the checks to be carried out to ensure good lambda control and OBD operation, where appropriate.

Directive 2003/26/EC adds these same requirements to Directive 2000/30/EC, which introduces “unexpected” roadside inspections for commercial vehicles carrying passengers or freight.

11. High Levels of NO₂, Benzene in Paris Region

Airparif, the French air quality monitoring agency, has reported that 60% percent of residents in the Greater Paris region are breathing air of “non-satisfactory” quality. They said the authorities must take immediate steps to reduce nitrogen dioxide and benzene pollution by 50-80%, if the government hopes to see air quality conform to existing health norms across the region.

The new Airparif data were collected over the past three years as part of the Life Resolution project to measure and better understand urban air quality in high-pollution zones including Dublin, Madrid, Paris and Rome. The project is a collaborative research effort jointly funded by the European Commission and the governments of France, Ireland, Italy, and Spain, under the European Union’s Directive 96/62 on Ambient Air Quality Assessment and Management, which calls on EU member states to measure air pollution.

Nitrogen dioxide pollution average annual levels were found to exceed French and World Health Organisation norms of 40 micrograms per cubic meter of air in residential and commercial zones covering 40% of the total population, according to Airparif.

Benzene pollution average annual levels were found to exceed the French norm of 2 micrograms per cubic meter of air in residential and commercial zones covering an additional 20% of the population.

Airparif said vehicle use is responsible for more than half of all NO₂ and a significant fraction of benzene emissions.

12. Italy expands Incentives Programme to encourage sales of Cleaner Vehicles

The Italian government said on 4 April that it would restart and expand a highly successful set of incentives for car buyers to purchase environmentally friendly vehicles, beginning on 15 April. The incentives were originally set to expire at the end of 2002 but were extended until the end of March. The incentives have been successful, resulting in a 19% increase in new car sales last year compared to 2001 and a 40% increase in the sales of “green” vehicles over the same period. A statement from the Ministry of Industry said the incentives would be “more generous” than the earlier scheme.

Cars are eligible for the tax breaks and rebates if they have smaller or more efficient engines or use some kind of hybrid technology.

13. DG Environment outlines 2003 priorities

The European Commission’s Directorate-General Environment is putting an increasing emphasis on ensuring full implementation of existing European environment laws, according to its 2003 management plan. The plan sets out the main priorities within the framework of the strategic objectives of the EU 6th environmental action programme, which runs to 2012. It promises the production of 28 policy initiatives in 2003. Most of these were already included in the European Commission’s full work programme for 2003, released last autumn. Also included is a list of 6 reports due this year evaluating the implementation of existing EU environmental policies or directives.

Among the motor vehicle related activities are:

Communication on Environmental Targets for Transport

An appraisal of progress against objectives on the effects of transport on the environment.

Communication on Future Technologies for Clean Vehicles

A response to the Council Resolution that followed the report on “Auto-Oil II”. The Resolution calls upon the Commission to come forward with a description of future vehicle technologies, to facilitate priority setting.

Proposal for a Transport & Environment Reporting Mechanism (TERM)

To improve statistics, enhance TERM’s role in policy-making and institutionalise the financing.

Other proposals in preparation for 2003 include Communications on CO₂ emission reductions from light commercial vehicles and a strategy to reduce CO₂ emissions from cars and the 2nd Stage Progress Report on the EC Climate Change Programme.

In addition European Environment Commissioner, Margot Wallström announced on World Health Day on 7 April, that the Commission would soon present a specific Community Strategy for Environment and Health. In 2004 this is to be adopted by European health ministers as a children’s environment and health action plan for Europe (CEHAPE) at the Fourth WHO Ministerial Conference on Environment and Health in Budapest. According to WHO, between the 1970s and 1990s, the prevalence of asthma symptoms in children has increased by 200%.

14. Attitudes of Europeans towards the Environment

Commissioner Wallström has presented the results of a Eurobarometer Survey entitled “The attitudes of Europeans towards the environment.” The results, from a poll of 16 000 EU citizens, show that while environmental issues remain top of their list of priority issues, opinions have evolved with regard to the main causes of pollution and what action should be taken.

While man-made disasters top the list, more traditionally perceived problems, like air pollution, natural disasters, water pollution and the elimination of tropical rainforests, still preoccupy many Europeans and were quoted by between 41% and 44% of respondents. When it comes to what course of action should be taken, 48% expressed a preference for stricter regulations and tougher enforcement and 33% of Europeans now see the EU as the best level for taking decisions about protecting the environment.

NORTH AMERICA

15. CARB proposes Diesel PM Control Measures for Fleets

Draft regulations for mandatory diesel particulate control measures were published by CARB in late February covering publicly owned and operated fleets. These draft regulations represent the third set of fleet rules considered by CARB as part of their broad diesel risk reduction programme. CARB previously adopted regulations covering diesel PM control measures for urban transit buses in October 2002 and is scheduled to finalise regulations covering diesel PM control measures for refuse truck fleets in May 2003. The proposal on PM control measures for publicly owned and operated fleets covers all 1960 to 2006 model year heavy-duty diesel engines

owned, operated, or contracted for operation by municipalities in vehicles over 14,000 lb. gross vehicle weight rating. The draft regulations covering these municipal fleets are modelled on the proposed regulations covering refuse truck fleets in that owners must choose between three different Best Available Control Technology (BACT) options:

- Replace or repower with a diesel engine certified at 0.01 g/bhp-hr PM,
- Replace or repower with an alternative fuel engine certified to the lowest optional PM standard, or
- Install the highest-level verified diesel emission control strategy available for that engine.

Fleet owners would be required to use ultra-low sulphur diesel fuel in these vehicles starting 1 January 2005.

16. EPA Issues Non-road Tier 4 Proposal

EPA has issued its long awaited proposal to control non-road diesel engines and fuels. Since these vehicles, engines and fuels have had only very limited controls to date, and since EPA is attempting to impose controls similar to those previously adopted for on road vehicles, this rule is expected to have greater overall benefits than any previous mobile sources rule.

The proposal will phase in different standards for both particulate matter (PM) and oxides of nitrogen (NOx) for different horsepower categories of engines over the period from 2008 to 2014. The proposal calls for a more than 90% reduction in both diesel particulate matter (PM) emissions and oxides of nitrogen (NOx) emissions over current levels from most kinds of construction, agriculture, and industrial

vehicles and equipment. Other categories of non-road diesel engines will need to reduce PM emissions initially by up to 50%, followed later by further additional reductions. The proposal also would require that diesel fuel sold for use by non-road engines be reduced in sulphur content from current levels, which can be as high as 3000 ppm, to 500 ppm starting in 2007 and to 15 ppm in 2010.

These standards are expected to result in the widespread use of diesel oxidation catalysts, diesel particulate filters and NOx adsorbers as summarised below.

- 2008 - transitional PM standards based on diesel oxidation catalysts (DOCs) for engines less than 76 hp
- 2011-2013 PM standards based on filters for engines greater than 25hp
- 2011-2014 NOx standards based on NOx adsorbers phased-in as for highway engines for engines above 75 hp
- Technology review in 2007 will consider PM traps for <25 hp engines and NOx adsorbers for <75 hp engines
- EPA commitment to Provisional Rule Making for locomotives and marine engines by Spring 2004, Federal Rule Making by 2007
- ABT programme based on existing non-road Tier 2/3 and HD 2007 rules
- Flexibility programme for equipment manufacturers based on existing non-road Tier 2/3 rule

17. Canada proposes New Rules to govern Small Engine emissions

Proposed regulations to restrict emissions from small petrol-powered engines in equipment such as lawn mowers, chain saws, and snow blowers will address

emissions of greenhouse gases and other pollutants from off-road engines, Environment Canada said on 29 March. The Off-Road Small Spark-Ignition Engine Emission Regulations will be harmonised with the U.S. Environmental Protection Agency's standards for small spark-ignition engines and would take effect for engines in the 2005 and later model years.

The regulations would reduce or control emissions of hydrocarbons, nitrogen oxides, carbon monoxide and a range of toxic substances, including volatile organic compounds.

Although no regulations are currently in place, memoranda of understanding have been in place since 1999-2000 between Environment Canada, 19 manufacturers of hand-held machines and engines. Under these the companies have voluntarily supplied small spark-ignition engines designed to meet the US EPA Phase 1 emissions standards.

The proposed regulations apply to manufacturers, distributors or importers of a range of small spark-ignition engines and machines and cover lawn and garden machines such as hedge trimmers, brush cutters, lawn mowers, garden tractors, and snow blowers; light-duty industrial machines such as generator sets, welders, and pressure washers; and light-duty logging machines such as chain saws, log splitters, and shredders.

The impact analysis statement cites projections of significant reductions in emissions from small engines by 2025 as a result of implementing the proposed regulations:

Hydrocarbons	46.9%
NOx	20.1%
CO	0.7%

Carbon dioxide	8.9%
Acetaldehyde	48.6%
Acrolein	48.5%
Benzene	44.7%
1, 3-butadiene	45.8%
Formaldehyde	48.2%
PM10	3.3%

ASIA-PACIFIC

18. Shanghai goes to Euro 2 Vehicle Emission Standards

Shanghai began using a new system of auto emission standards on 1 March modelled on the Euro II motor vehicle standards. The rules will apply to light-duty vehicles operating within the city. New cars will have to pass emissions tests and those that fail to meet the stricter standards will not be allowed to operate, according to the Shanghai Environmental Protection Bureau.

Euro II standards, set in EU Directive 94/12/EEC limit car emissions of carbon monoxide to 2.2 grams/km and hydrocarbons plus oxides of nitrogen to 0.5 grams/km. By 2004, all of China is expected to adopt the new emissions standards.

Beijing switched to Euro II auto emission rules on 1 January, as part of its efforts to reduce air pollution ahead of the 2008 Olympics. Shanghai, which recently won the right to host the 2010 World Expo, is following suit.

The new standards will apply to smaller passenger types of automobiles first, and then later be expanded to heavy-duty vehicles, city officials said. No target date has been set for applying the standards to heavy-duty vehicles.

19. Japan plans to introduce Environmental Taxes in 2005

Japan's Ministry of the Environment has

announced plans to introduce environmental taxes in 2005 and to start talks with other ministries and the ruling Liberal Democratic Party this summer.

The ministry later asked an *ad hoc* study group formed within its key advisory body, the Central Environment Council, to start deliberations on details of an environmental tax. The panel will work until July on such issues as tax rates and the use of revenues followed by public hearings.

20. Australian Car Sector sets target to cut fuel use

Australia's car industry has unveiled plans to reduce fuel consumption of new passenger cars by about 18% by 2010 to help cut emissions of carbon dioxide. The Federal Chamber of Automotive Industries said a voluntary code of practice set a target to cut the amount of fuel used by new cars to 6.8 litres per 100 km by 2010 from the 2001 level of 8.28 litres per 100 km.

21. South Korean Ministry to lift ban on diesel-powered Cars in 2005

The Ministry of Environment has backed down on its stance against allowing diesel-fuelled cars to be sold in South Korea. According to the Ministry of Environment, the emission standards for diesel cars will be adjusted to European standards in 2005 and 2006, clearing the way for automakers to sell diesel-powered cars in South Korea. The current South Korean standards, put in place in October 2000, are set at such a high level to make them impossible to meet with existing diesel fuel and engine technologies; an effective ban on cars running on diesel fuel.

Seoul's air pollution is the worst among countries in the Organisation for Economic Cooperation and Development (OECD) according to the Environment Ministry, who

said that particulate matter (PM) was measured at 71 micrograms per cubic meter at the end of 2001. Nitrogen dioxide pollution in Seoul was 0.037 ppm, ranking third after Moscow with 0.058 ppm and Bratislava with 0.047 ppm.

FORTHCOMING CONFERENCES

Symposium ‘Keramik im Fahrzeugbau’

6-7 May 2003, Mercedes Forum Stuttgart

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Eine Veranstaltung des Fachausschusses Werkstoffanwendung der Deutschen Keramischen Gesellschaft e.V.

24th International Vienna Motor Symposium

15-16 May 2003, Conference Center Hofburg, Vienna, Austria

Details from: <http://www.oevk.at>

The symposium will cover Latest Results in Worldwide Engine Development, Future Legislation, New Engines and Fuels, Components, Electronics, Drive Train.

Hart World’s Fuel Conference - Europe

19-21 May 2003, Brussels

Details from Tim Lloyd Wright at +46 31 971448, tim@timlloydwright.com

European refining and automotive issues.

Joint JSAE/SAE International Fuels and Lubricants Symposium

19-22 May 2003, Yokohama, Japan

Details from: <http://jsae.or.jp/intconf/>

With the participation of European industry. Programme includes Combustion, Emissions, Lubricants and Fuels

Engine Expo 2003

3-5 June 2003, Messe Stuttgart, Germany

Details from: <http://www.engine-expo.com/>

Exhibition covers engine design, testing, components and manufacturing.

9th International Inhalation Symposium Effects of Air Contaminants on the respiratory Tract – Interpretations from Molecules to Meta Analysis

11-14 June 2003, Hanover, Germany

Sponsored by Fraunhofer Institute and US EPA, National Health and Environmental Effects Research Laboratory

Details from +49 511 5350120, sekretariat@ita.fhg.de

The symposium is to foster a multidisciplinary approach to solving problems in inhalation toxicology and will focus on particles themselves and on particles as components of complex mixtures of air pollutants.

“Transport and Air Pollution” and “Environment & Transport” – International Scientific Symposia

16-18 & 19-20 June 2003, Avignon, France

Details from:

www.inrets.fr/services/services.e.html

Engine Emissions Measurement

23-27 June 2003, The University of Leeds, UK

A short course to explain the function of on-line gas analysis and emission measurements from gas turbine, diesel and spark ignition engines.

More info from:

www.leeds.ac.uk/fuel/shortc/sc.htm

Clean Air 2003 – Seventh International Conference on Energy for a Clean Environment

7-10 July 2003, Lisbon, Portugal

Details from: <http://navier.ist.utl.pt/cleanair>

The conference will deal with the reduction of local and global environment degrading emissions and aims at a better integration of supply and demanding side, while covering all the end users sectors with emphasis on industry and transport.

European Congress on Advanced Materials and Processes - Euromat 2003

1-5 September 2003, Lausanne, Switzerland

Organised by Deutsche Gesellschaft für Materialkunde e.V. The full call for papers is available on the conference website: <http://www.euromat2003.fems.org>

6th International Congress on Catalysis and Automotive Pollution Control (CAPoC6)

22-24 October 2003, Brussels

Details from Prof. N Kruse at ULB (nkruse@ulb.ac.be) or from CAPoC6 web site:

<http://www.ulb.ac.be/sciences/cpmct/capoc6/index.html>

Covers applications and requirements of catalysis in automotive (including cars, light and heavy duty vehicles) emission control, including catalyst technologies, fuel cell catalysis, materials for catalysts, washcoat and fuel-borne catalysts, particulate emission control, lean NOx emission control, unregulated pollutants, integrated emission control systems and alternative fuel technologies.

World Automotive Congress FISITA 2004

23-27 May 2004, Barcelona, Spain

Call for papers, deadline for abstracts is 31 May 2003, more on www.fisita2004.com

FISITA is a global conference on automotive technology with a session on 'vehicles and the environment' dealing with, amongst other topics, emissions.