

AECC Newsletter

Association for Emissions Control by Catalyst

Av. de Tervueren 100, B-1040 Brussels

Affiliated to CEFIC

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INTERNATIONAL REGULATORY DEVELOPMENTS

Table of Contents

EUROPE.....	2
1. Commission launches Strategy to reduce Air Pollution from Ships	2
2. EU reports Member States who fail Air Quality Rules.....	2
3. Apheis shows Air Pollution continues to threaten Public Health in Europe.....	2
4. Greece has Highest Particulate Levels in European Union	3
5. 2002 Summer Ozone Levels increased by 15% from 2001	3
6. EU Conciliation Agreement reached on Fuel Quality	4
7. Prospects improve for EU Kyoto Compliance	5
NORTH AMERICA.....	6
8. CNG School Bus Emissions exceed Low-Emitting Diesels in New Study	6
9. Canada signs Kyoto Protocol.....	7
10. Green Groups sue US EPA over Global Warming	7
11. Survey finds Honda “Least-Polluting Automaker” in US.....	7
ASIA-PACIFIC	7
12. Japan’s Carmakers exempted in Pollution Case	7
13. Developments in China	7
14. China’s Vehicle Market showed rapid growth in 2002	8
15. South Korea upholds tough Diesel Car Standards.....	8
16. India to make decision on Auto Fuel Policy by end January.....	8
17. Japan to grant Subsidies for Diesel Filters	8
18. UAE switch to Unleaded Petrol	8
GENERAL	8
19. 2002 Second Hottest as Global Warming speeds, says WMO.....	8
FORTHCOMING CONFERENCES	9

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EUROPE**1. Commission launches Strategy to reduce Air Pollution from Ships**

The European Commission has adopted a new European Union strategy to reduce atmospheric emissions from seagoing ships. A new report on the magnitude and impact of ship emissions in the EU sets out a number of actions to reduce the contribution of shipping to acidification, ground-level ozone, eutrophication, health, climate change and ozone depletion.

Commissioner Margot Wallström said, “The Commission’s new strategy to reduce ship emissions gives the maritime industry a timely opportunity to improve its green credentials... (and will) create a clean new future for marine transport in the EU.”

An important part of the strategy is a proposal for a Directive on the sulphur content of marine fuels used in EU sea areas. Provisions in the Commission proposal include:

- 1.5% sulphur fuel limit in the North Sea, Baltic Sea and English Channel and for regular passenger services to or from EU ports
- 0.2% sulphur limit for all marine fuels used at berth in EU ports and on inland waterways.

Expected reductions in emissions from ships include a 8000 tonne reduction in PM emissions in port areas close to where people live and a reduction in sulphur dioxide emissions in the EU by over 500,000 tons every year. Emissions reductions from this strategy should mean over 2000 fewer life years lost

through respiratory problems caused by long-term exposure to air pollution. Other measures in the strategy include a push for tougher global engine standards at the IMO, the development of market mechanisms to promote low-emission shipping in the EU and the creation of a new Clean Marine Award Scheme.

2. EU reports Member States who fail Air Quality Rules

According to the new report on implementation of the ambient air quality Directives (1997-1999), 4 Member States reported levels in excess of the limit value set by the Directive for SO₂ and 5 Member States reported excess levels of NO₂ in 1997, 3 in 1998 and 4 in 1999. These figures concern the old air quality Directives. More recent legislation establishing new air quality thresholds will enter into force in 2005 and 2006 and the updated limit values for SO₂ and NO₂ entered into force in 2001.

3. Apheis shows Air Pollution continues to threaten Public Health in Europe

The Apheis (Air Pollution and Health: A European Information System) programme, funded by the Directorate General for Health and Consumer Protection, has released the findings of a health impact assessment of particulate air pollution it conducted in 26 cities in 12 European countries during 2001. The study revealed that air pollution continues to pose a significant threat to public health in urban environments in Europe despite tighter emission standards, closer monitoring of air pollution and decreasing levels of certain types of air pollutants.

The Apheis report is the first health impact assessment conducted simultaneously on both local and European levels using the same standardised methodology. It is a collaborative undertaking of the Joint Research Centre in Ispra, the WHO European Centre for Environment and Health in Bonn and the environment and public health organisations that participate in the 26-city programme.

Small reductions in air pollution levels can have a large impact on public health. Most European cities daily measure particulate air pollution by PM10 (particles less than 10 micrometers in size) or black smoke (black particles less than roughly 4 micrometers in size). Levels of air pollution are reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), a unit that defines the amount of particles in a given volume of air.

Levels of particulate air pollution, including PM10 and black smoke, vary widely across Europe. The annual average levels in Apheis cities range from 14 to $73 \mu\text{g}/\text{m}^3$ for PM10 and from 8 to $66 \mu\text{g}/\text{m}^3$ for black smoke. The Apheis report demonstrates that reducing these levels, even by a small amount, could produce significant benefits to public health.

2653 premature deaths (or 9 premature deaths per 100 000 inhabitants) could be prevented annually if long-term exposure to annual mean values of PM10 were reduced to $40 \mu\text{g}/\text{m}^3$ (2005 limit value set by the European Commission) in the 19 cities that measured PM10. If the 2010 limit value of $20 \mu\text{g}/\text{m}^3$ is achieved in the same cities, 11855 premature deaths could be

prevented annually.

In 15 cities, with a total population of 25 million, Apheis determined that nearly 577 premature deaths could be prevented annually if short-term exposure to outdoor concentrations of black smoke were reduced by $5 \mu\text{g}/\text{m}^3$.

4. Greece has Highest Particulate Levels in European Union

A survey of 19 European cities carried out by the “European Aerosol Research Lidar Network to Establish an Aerosol Climatology” (EARLINET) found Athens and the Greek northern port city of Thessaloniki to have the highest concentrations of airborne particles.

The Greek government said it plans to implement by 2005 a series of measures for curbing industrial and transport emissions via stricter emissions limits and financial incentives for upgrading home heating units and introducing lower-polluting automobile engines.

5. 2002 Summer Ozone Levels increased by 15% from 2001

The number of summer days in Europe during which ozone concentrations exceeded unhealthy levels, as defined by the European Union, increased 15% in 2002 compared with 2001, a European Environment Agency study reported. In its annual report of summer ozone levels, the EEA reported that exceedances occurred on about 75% of days between 1 April and 31 August. The EEA reported such exceedances occurred on about 65% of days during the same period in 2001.

Under a European Union directive, governments must inform the public

whenever monitoring stations detect ozone concentrations above a critical threshold, set at 180 µg/m³ averaged over one hour. Over the April-August 2002 period this threshold was exceeded in 11 of the 15 EU Member States and in six out of 12 other European countries that supplied data.

The public information threshold was breached in France, Greece, Italy and Spain over all five months monitored. Total exceedances were highest in southern France, Italy's Po Valley and central Italy. Austria, Germany and Switzerland saw exceedances in four consecutive months while the Netherlands and the Czech Republic recorded exceedances in three consecutive months.

Greece reported the highest number of 68 exceedances followed by France (56), Italy (52) and Spain (48).

Public authorities are also required to issue public health warnings if ozone concentrations rise above a level of 360 µg/m³, averaged over one hour. In June 2002 this level was exceeded at three monitoring stations in Spain and at one in France and in Italy.

6. EU Conciliation Agreement reached on Fuel Quality

Immediately following the Environment Council meeting on 9 December the Conciliation Committee met on 10 December under the co-decision procedure to approve the European Parliament and Council agreement on the draft Directive dealing with the quality of petrol and diesel fuels.

The new Directive is designed to improve the environmental

specifications (particularly sulphur content) applying to petrol and diesel fuels, in line with Article 9 of Directive 98/70/EC. The 2005 specifications were left incomplete but on 26 September, the European Parliament tabled several amendments in its second reading of the Council common position (see AECC Newsletter September - October 2002). One of the key issues for discussion during the conciliation procedure was the cut-off date for achieving the objective: the European Commission originally suggested 2011, whilst the Parliament's first-reading recommendation was 2008. The conciliation procedure agreed a compromise as it states that sulphur-free (<10 ppm) petrol and diesel will be phased in over the period from 2005 to 1 January 2009.

A reduction in CO₂ emissions from new cars should be attainable thanks to engines whose energy efficiency is improved by incorporating lean-NOx catalysts, sensitive to sulphur contained in fuels, and vehicle pollution should also be cut by more efficient catalytic converters, according to the agreement.

There was considerable opposition to extending the same specifications and dates to non-road fuels, Heidi Hautala MEP (Greens/Finland), the rapporteur, was keen that non-road mobile engines (such as bulldozers and agricultural and forestry tractors) were included and pointed out that "even if these vehicles only represent 8.5% of total diesel consumption in the Union, they have a major impact on public health and the environment". The compromise was that those countries that allow the use of gas (or heating) oil in non-road engines

“shall ensure that gas oils intended for use by non-road mobile machinery and agricultural and forestry tractors marketed within their territory contain less than 2000 mg/kg of sulphur. By 1 January 2008 at the latest the maximum permissible sulphur content of gas oils intended for use by non-road mobile machinery and agricultural and forestry tractors shall be 1000 mg/kg. However, Member States may require a lower limit or the same sulphur content for diesel fuels stipulated in this Directive”.

The Commission is required, in considering its proposal for the next stage of emission standards in non-road applications, to establish the required fuel quality. Taking into account environmental and health benefits, fuel distribution, costs and benefits they are expected to then align fuel quality for non-road applications with the on-road sector by 1 January 2009. This is to be confirmed or amended by the Commission in a 2005 review.

“This agreement is good news for both the environment and health prospects in Europe,” said EU environment commissioner Margot Wallström, “It paves the way for the introduction of clean fuels that will help to reduce air pollution as well as green house gas emissions.”

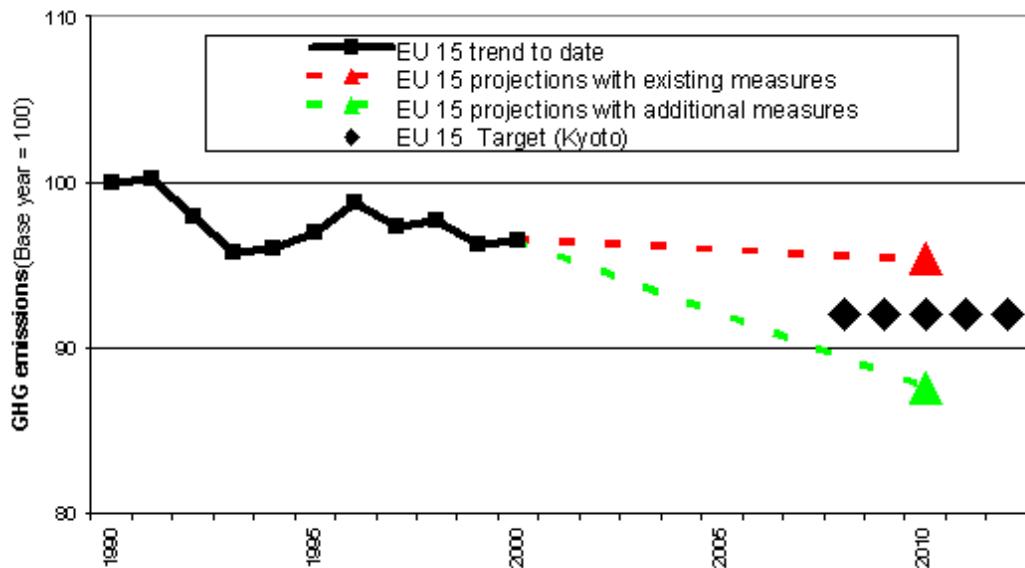
This conciliation agreement will be voted on in the plenary session of the European Parliament on 29 January 2003 and also by Council.

7. Prospects improve for EU Kyoto Compliance

New projections of greenhouse gas emissions to 2010 suggest the EU is more likely than previously thought to approach or exceed its UN Kyoto protocol commitment to cut emissions. But the study also underlines potentially destabilising national and sectoral variations in emission trends. Under the Kyoto protocol the EU is required to cut greenhouse gas emissions by 8% between 1990 and the average of 2008-12. A study issued by the European environment agency (EEA) suggests that with existing domestic policies and measures EU will achieve 4.7%. If additional measures are introduced the cut could be 12.4%.

The EEA's key message was that the EU must take further actions to reach its Kyoto target.

Transport is the fastest-growing source of EU greenhouse gas emissions, largely because of rapid increases in road transport of both passengers and freight. While most sectors in the EU cut their emissions between 1990 and 2000, those from transport rose by nearly 20%. Based on existing measures, this increase is projected to reach 28% by 2010.



NORTH AMERICA

8. CNG School Bus Emissions exceed Low-Emitting Diesels in New Study

Exhaust emissions from natural gas school buses contain higher levels of air pollutants and toxic air contaminants than those in school buses powered by advanced-technology, low-emitting diesel engines. That is the chief finding of research by Southwest Research Institute (SwRI), presented to a recent Society of Automotive Engineers' conference. The research compares emissions from a popular model natural gas bus with emissions from diesel school buses.

International Truck and Engine Corporation, which has begun selling a low-emitting diesel engine certified to U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) 2007 particulate and hydrocarbon emission standards, sponsored the research along with ConocoPhillips, a producer of the

ultra-low-sulphur fuel that enables the use of the new diesel technology.

In the three tested bus configurations, the natural gas bus had the highest emissions of nitrogen oxides (NOx), nitric oxide (NO), total hydrocarbons, non-methane hydrocarbons, methane and carbon monoxide (CO), according to the SwRI research report.

The low-emitting diesel bus was found to be higher than both natural gas and conventional diesel in two other emissions - nitrogen dioxide and carbon dioxide - but the low-emitting diesel had the lowest emissions of the four engine exhaust "criteria pollutants" regulated by EPA and the ARB: NOx, CO, particulate matter, and hydrocarbons.

Using ultra-low-sulphur fuel, the low-emitting diesel bus engine, with a low-NOx engine calibration and a catalysed particulate filter, was certified by EPA and CARB as reducing particulates and hydrocarbons to the 2007 levels.

9. Canada signs Kyoto Protocol

Canada has ratified the Kyoto global warming agreement, despite the US decision to opt out of it.

Canada is the 99th signatory of the protocol, which requires reductions in greenhouse gases blamed for global warming, that would not take effect until Russia ratifies it.

10. Green Groups sue US EPA over Global Warming

Three environmental groups sued the US Environmental Protection Agency in a bid to force it to combat global warming by limiting air pollution from US automobiles. The groups - the International Center for Technology Assessment, Sierra Club and Greenpeace - said they filed the suit in a US district court because EPA was slow in using the Clean Air Act against greenhouse gas emissions from cars. They asked a judge to order EPA to respond to the petition within 60 days.

11. Survey finds Honda “Least-Polluting Automaker” in US

Honda produces the least-polluting vehicle fleet in the US market according to a survey from the Union of Concerned Scientists. The UCS survey analysed the environmental performance of the six largest automakers in the US market.

In its survey, UCS looked at the two main environmental problems related to vehicles - smog-forming pollution and carbon dioxide emissions that are linked to global warming.

ASIA-PACIFIC**12. Japan’s Carmakers exempted in Pollution Case**

The Tokyo District Court has ruled that the seven automobile manufacturers among the

defendants in a lawsuit over pollution caused by vehicle emissions should not be held responsible for health problems suffered by residents close to arterial roads in the capital. However, the court held the other defendants in the suit (central government, the Tokyo metropolitan government and Metropolitan Expressway Public Corporation) liable for the pollution-caused health problems of some of the plaintiffs.

The judge has ordered the central and Tokyo governments and the public corporation to pay a combined 79.2 million yen to seven of the 99 plaintiffs in compensation for their bronchial asthma and other health problems caused by air pollution.

The court ruled that emissions from diesel-powered vehicles and other motor vehicles should be considered connected to outbreaks of asthma and other health problems among residents close to arterial roads where large motor vehicles account for “significantly high percentages” of traffic.

13. Developments in China

Over 19 manufacturers with about 300 models have been approved for a tax reduction because they comply with Euro II standards. Many cars actually comply with Euro III standards (in the laboratory using low sulphur fuel).

SEPA is also planning to tighten standards for heavy duty gasoline fuelled trucks and motorcycles and mopeds.

The major focus in the future will be on initiating Conformity of Production testing and introducing Euro III or Euro IV standards (Beijing wants to do so in 2005 and nationally SEPA is looking at 2008).

14. China's Vehicle Market showed rapid growth in 2002

Production and sales of motor vehicles in China are expected to reach over 3 million units and those of passenger cars over 1 million units during 2002. Another 3 million units of farm trucks and 12 million motorcycles are also expected to be produced.

15. South Korea upholds tough Diesel Car Standards

The South Korea Ministry of Environment has said that it would not ease its clean air policy to create a domestic market for cars equipped with diesel engines. In a statement the ministry said its plan to improve air quality in cities, particularly in Seoul and its surrounding areas, will not succeed without a ban on diesel cars.

The ministry also is stepping up emissions regulation for diesel trucks, buses, vans, and sport utility vehicles.

The ministry said the high density of motor vehicles in overpopulated cities, cheap diesel fuel relative to petrol, a low level of diesel engine technology, and the unavailability of clean-burning diesel fuel makes its approach to diesel exhaust regulation necessary in South Korea.

16. India to make decision on Auto Fuel Policy by end January

The Indian government is likely to take a view on the Auto Fuel Policy suggested by the Experts Committee by the end of January according to the Federal Petroleum Minister. The Committee has recommended Euro III emission limit values for vehicles by 2005 and Euro IV emission limit values by 2010.

17. Japan to grant Subsidies for Diesel Filters

The Japanese government plans to provide 8 billion yen in subsidies to owners of large diesel trucks and buses who install filters to reduce pollutants over two years from 2003 according to government sources.

Diesel trucks registered since October 1993 and diesel buses registered since October 1990 would be eligible for the subsidies. The move follows the October enforcement of a new law to drastically cut diesel emissions such as particulate matter and nitrogen oxides in eight urban-area prefectures.

18. UAE switch to Unleaded Petrol

The Ministry of Petroleum and Mineral Resources announced in December that the United Arab Emirates is phasing out leaded petrol and replacing it with unleaded petrol from 1 January 2003. After the UAE cabinet decree in 2002, catalytic converters have become standard on all new cars sold in the UAE. The price of unleaded petrol will be brought in conformity to the price of leaded premium presently available at UAE pumps.

GENERAL**19. 2002 Second Hottest as Global Warming speeds, says WMO**

This year has been the second warmest since 1860, extending a quarter-century pattern of accelerated global warming linked to greenhouse gas emissions, United Nations scientists have announced. The World Meteorological Organization (WMO), a United Nations agency, said that 1998 remained the hottest year on record, with 2002 surpassing last year as the next warmest. The 10 warmest years had all occurred since 1987, nine since 1990.

FORTHCOMING CONFERENCES**SIAT 2003**

15-18 January 2003, Pune, India

Details from ARAI website:

<http://www.araiindia.com>

Programme includes exhaust emission control techniques including durability aspect for Euro III and beyond.

SAE 2003 World Congress

3-6 March 2003, Detroit, USA

Details from: www.sae.org/congress**21st Annual World Fuels Conference:
Refining 2003 and Beyond**

25-27 March 2003, Adam's Mark Riverwalk Hotel, San Antonio, TX, USA

Details from: Tel: 1-800-897-HART (U.S. only), +1 301 354 2046, Fax: +1 301 424 7260

VDA Technical Congress 2003

2-3 April 2003, CongressPark Wolfsburg, Germany

Info from:

http://www.vda.de/en/vda/intern/organisation/abteilungen/technischer_kongress/

Topics on Environment and Energy will be dealt with in parallel sessions.

AVL Commercial Powertrain conference

3-4 April 2003, Graz, Austria

Details from: <http://www.avl.com/icpc>

The conference will focus on exploring the similarities and synergies between three different markets: commercial vehicles, agricultural tractors and construction equipment.

24th International Vienna Motor Symposium

15-16 May 2003, Vienna, Austria

Details from: <http://www.oevk.at>, as from mid December 2002.

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

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.

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

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

Details from:

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

Organised by INRETS. Call for papers. Dates for abstracts and papers are listed on the web site.

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>

Abstracts for papers required by 24 January 2003. 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.

Euromat 2003

1-5 September 2003, Lausanne, Switzerland

Organised by Deutsche Gesellschaft
für Materialkunde e.V.

Details from:

<http://www.euromat2003.fems.org>

*Deadline for submitting an abstract to
Euromat 2003 is 31 January 2003.*

**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](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. Submission of extended
abstracts (1-2 typewritten pages) is due by
20 January 2003.*