

N AECC Newsletter

Association for Emissions Control by Catalyst

Av. de Tervueren 100, B-1040 Brussels

Affiliated to CEFIC

September – October 2001

INTERNATIONAL REGULATORY DEVELOPMENTS

Table of Contents

EUROPE	1
1. Particulate Filter for Diesel Passenger Cars passes Durability Test.....	1
2. Rapporteur proposes earlier introduction of near Zero Sulphur Fuel	1
3. UK proposes revisions to Air Quality Strategy	1
4. Report says Transport Pressure on Environment rising.....	2
5. EU approves Duty cut on ULSD by Ireland.....	3
NORTH AMERICA	3
6. US rule making process to be tightened	3
7. Los Angeles set to become smoggiest US city again	3
8. US EPA proposes Emission Standards for Non-road Engines.....	3
9. Oil Industry sues US EPA.....	4
10. CARB passes new Diesel Engine Standards.....	4
11. EPA releases latest Air Quality Trends Report	5
12. US Fuel Economy decline continues	5
ASIA-PACIFIC	6
13. Motor Vehicle Pollution Control in Singapore.....	6
GENERAL	7
14. Fuel Cell Buses to hit the road in Six Polluted Cities	7
FORTHCOMING CONFERENCES	8

For further information contact:

ASSOCIATION FOR EMISSIONS CONTROL BY CATALYST

Avenue de Tervueren 100, B-1040 Brussels

Tel.: ++ 32 2 743.24.90, Fax.: ++ 32 2 743.24.99

Email: info@aecc.be, Web: <http://www.aecc.be>

EUROPE

1. Particulate Filter for Diesel Passenger Cars passes Durability Test

The Allgemeine Deutsche Automobilclub (ADAC - the German Automobile Club) and the Umweltbundesamt (UBA – the German Federal Environment Agency) have reported the results of a durability test with a Peugeot 607 HDi, the first car equipped with a particulate filter as standard equipment. After the equivalent of 80,000 km on a test stand, more than 99.9% of the fine soot particles were filtered out. The Peugeot 607 HDi tested emits on average 10,000 times less particles than a comparable vehicle without particulate filter. PSA brought the Peugeot model to the German market in early 2000. In the meantime the company has brought out further models equipped as standard with this filter system.

Even when equipped with a particulate filter according to UBA, diesel engines, when compared to petrol engines, still emit eight to ten times more NOx. UBA say that the Federal Government is putting pressure on the European Union to ensure that diesel engines are subject to the same NOx limits as petrol engines in future Euro 5 emissions directives.

2. Rapporteur proposes earlier introduction of near Zero Sulphur Fuel

Ms Heidi Hautala, rapporteur to the European Parliament Environment Committee, has proposed several amendments to the Commission proposal (COM(2001) 241) for a Directive to amend Directive 98/70/EC on the quality of petrol and diesel fuels. The main items are:

- Advancement to 2008 of the 2011 date to ban sales of >10 ppm sulphur fuels with the review date advanced from 2006 to 2005
- Extension of the Directive to cover fuel used in non-road mobile machinery from 2008 (also at <10 ppm sulphur) with the date to be confirmed, along with road diesel, in the review in 2005
- Deletion of the provision in Directive 98/70/EC to allow member states to seek a delay of 2 years until 1 January 2007 on the establishment of a maximum sulphur specification of 50 ppm.

The proposal was discussed in the Industry Committee and has been endorsed with the addition of an amendment introduced by MEP Bernd Lange to bring forward the date by which the fuels must be introduced from 2005 to 2003.

The full Environment Committee voted on the proposal and a total of 78 amendments on 6 November. Most of the key amendments proposed by Ms Hautala in her report, or in similar amendments from other MEPs, were supported. The review by the Commission of the diesel fuel sulphur level is deleted. The full Parliament will debate and vote on the proposals at the end of November.

3. UK proposes revisions to Air Quality Strategy

The UK Government published the Air Quality Strategy for England, Scotland, Wales and Northern Ireland in January 2000 setting standards and objectives to be achieved for eight key air pollutants between

2003 and 2008¹. For most of these pollutants, including particles, carbon monoxide and benzene, local authorities are charged with the task of working towards their achievement in a cost effective way.

UK air quality is getting better, the number of days of moderate or higher air pollution in urban areas in 2000 was the lowest since 1993, and pollution will probably continue to fall. Vehicle emissions will reduce further as new vehicles and fuels become cleaner, and more polluting older vehicles fall out of the vehicle parc. But more needs to be done if the UK is to reduce the impact that air pollution has on public health and to meet its national objectives and limits set under European legislation. This is particularly so for particles, which the latest health evidence shows, are likely to have significant long-term effects on health; probably many times more severe than the short-term effects on which policy has previously concentrated. No new national measures are proposed in a new consultation document, although where they can be shown to be cost effective, the Government and the devolved administrations may bring them forward for consultation at a later date.

The consultation document sets out proposals to strengthen substantially the Air Quality Strategy objectives for particles with new provisional objectives:

- for all parts of the UK, except London and Scotland, a 24-hour mean of $50\mu\text{g}/\text{m}^3$ not to be exceeded more than 7 times per year and an annual mean of $20\mu\text{g}/\text{m}^3$, both to be achieved by the end of 2010

- for London, a 24-hour mean of $50\mu\text{g}/\text{m}^3$ not to be exceeded more than 10-14 times per year and an annual mean of $23\text{-}25\mu\text{g}/\text{m}^3$, both to be achieved by the end of 2010
- for Scotland, a 24-hour mean of $50\mu\text{g}/\text{m}^3$ not to be exceeded more than 7 times per year and an annual mean of $18\mu\text{g}/\text{m}^3$, both to be achieved by the end of 2010.

The document also sets out proposals for setting an objective for the first time for polycyclic aromatic hydrocarbons (PAH). It is proposed to set a provisional objective of achieving an air quality standard for benzo[a]pyrene (B[a]P) of $0.25\text{ng}/\text{m}^3$ as an annual average by the end of 2010.

4. Report says Transport Pressure on Environment rising

A new report published by the European Environment Agency has concluded that the pressure of transport on the environment has continued to increase, particularly as a result of the rapid growth in road and air use. The report is “2001 TERM - Indicators for pursuing the integration of transport and the environment in the European Union”.

Most of the key analytical indicators used, signal unfavourable trends or show that there is still a long way to go to achieve greener transport. The report cited the bad air quality in most European cities.

However, the report highlights positive trends resulting from technological progress, including fuels that make new road vehicles less polluting, resulting in a significant improvement in the quality of air in towns and cities.

¹ The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. “Working Together for Clean Air”. January 2000.

The findings and projections of TERM 2001 include:

- Between 1990 and 1998, transport sector emissions of acidifying gases fell by 20% and emissions of pollutants that cause "smog" (NO_x and VOCs) by 25%. However, extra efforts are needed to reach EU targets for reducing these emissions
- Energy consumption by the transport sector has increased by 47% since 1985, compared with 4.2% for the other economic sectors
- Transport is responsible for 24% of the EU's total man-made emissions of CO₂ with transport by road accounting for 84% of this. CO₂ emissions from transport increased by 15% between 1990 and 1998.

5. EU approves Duty cut on ULSD by Ireland

The European Union has approved a request from Ireland to cut duty on ultra low sulphur diesel sales to help boost demand for the cleaner fuel. The European Council allowed Ireland to cut tax on diesel with less than 50 ppm sulphur from €0.325/litre to €0.249/litre from 1 October. The discount will run until 31 December 2004 when all petrol and diesel sold in Europe must contain less than 50 ppm sulphur.

NORTH AMERICA

6. US rule making process to be tightened

The White House Office of Management and Budget has advised federal agencies that it will emphasise use of "science-based" procedures, including cost-benefit analyses,

in evaluating proposed regulations.

The policy is a significant departure from that of the Clinton administration, which emphasized agency expertise in rule making.

Environmental and consumer watchdog groups say that the new procedures focus on costs to industry, while ignoring benefits to public health and the environment.

7. Los Angeles set to become smoggiest US city again

The Los Angeles metropolitan region is once again projected to be the smoggiest region in the US, replacing Houston as the area with the most days of unhealthy ozone levels. This year 35 days with unhealthy ozone levels were recorded in Los Angeles, as opposed to 26 days in Houston. The official smog season will not end until early November, so officials believe those numbers may rise.

However both Los Angeles and Houston actually experienced fewer unhealthy ozone days this year compared to last year, reflecting the long-term progress made in reducing emissions.

8. US EPA proposes Emission Standards for Non-road Engines

On 14 September 2001, the U.S. Environmental Protection Agency proposed NO_x, HC and CO emission standards for several types of currently unregulated non-road engines and vehicles. The vehicles and engines covered include:

Large Industrial Spark-Ignition Engines

Spark-ignition (SI) non-road engines rated over 25 horsepower (19kW) used in commercial and industrial applications, including forklift trucks, electric generators, airport ground vehicles, and a variety of

other construction, farm and industrial equipment.

Recreational Off-Road Vehicles

SI non-road engines used in off-road motorcycles, all terrain vehicles (ATVs) and snowmobiles.

Diesel Marine Engines

Diesel engines rated at or above 50 horsepower (37kW) used in recreational boats.

The engines and vehicles covered by the EPA plan account for roughly 13 percent of mobile source hydrocarbon emissions. The new limits would cut the vehicles' carbon monoxide emissions up to 56 percent and nitrogen oxides up to nearly 80 percent according to EPA. Environmental groups claim that one hour on a single snowmobile emits roughly as much hydrocarbon pollution as driving a car for a year and can create more pollution in a weekend than a year's worth of automobile traffic through some National Parks.

The stricter emission limits proposed by the EPA include:

- Snowmobiles will have to cut hydrocarbon and carbon monoxide emissions by 30 percent in 2006 and by 50 percent in 2010
- Heavy non-road machinery engines will adopt a standard in 2004 already set by California several years ago. The standard will be further tightened in 2008
- Recreational boats' diesel engines will adopt the same standards already applied to commercial marine engines, with two years of extra time for manufacturers to adapt emissions control technology

- Off-road motorcycles and all-terrain vehicles will be "encouraged" to switch from two-stroke engines to four-stroke engines in 2006. In addition, all-terrain vehicles would also need to meet a stricter limit beginning in 2009.

EPA also said it planned to issue a proposal to restrict emissions for motorcycles used on highways and petrol-power pleasure boats within the next few months.

EPA estimates the costs of compliance will range from \$50 to \$200 for snowmobiles, less than \$100 for ATVs and about \$600 for marine diesel engines and large SI engines.

9. Oil Industry sues US EPA

In late August, the EPA denied three industry petitions asking EPA to reconsider its diesel rule. Claiming to fear a future shortage in truck fuel supplies, a coalition of petroleum industry trade groups then asked the US Court of Appeals to order EPA to revise the rule.

In their petition the groups said EPA violated federal law by failing to analyse the financial impact of the rule on small gasoline distributors and argued that EPA overstepped its legal authority by expecting refiners to use new pollution control technology that was still in development to produce the low sulphur fuel.

The case is expected to be heard next February.

10. CARB passes new Diesel Engine Standards

California has announced new, tougher exhaust standards for diesel engines powering big-rig trucks, refuse trucks, delivery vans and other large vehicles. The new standards take effect from 2007 model year.

By 2010, CARB staff calculate, the 2007 standards will reduce 50 tons per day (TPD) of smog-forming emissions and 3 TPD of cancer-causing particulate matter (PM) in California. CARB's new standards mirror US Environmental Protection Agency diesel engine standards, also scheduled to go into effect in 2007.

Compared to standards already set for 2004, the standards adopted will reduce nitrogen oxide (NOx) and PM emissions by 90%.

While emissions control technologies first appeared on petrol-powered cars and light truck engines in the mid-1970s and have cut harmful air emissions from by more than 95%, emissions from new large diesel engines have come under increasing scrutiny because they lack these technologies.

11. EPA releases latest Air Quality Trends Report

Air quality in the United States continued to show steady improvement through 2000, according to EPA's recently released annual summary of air quality trends. The report "Latest Findings on National Air Quality: 2000 Status and Trends" shows the following air quality trends from 1991-2000 for the six major air pollutants regulated by EPA under the Clean Air Act:

- Lead concentrations decreased 50%
- Carbon monoxide decreased 41%
- Sulphur dioxide decreased 37%
- Particulate matter (PM) decreased 19%
- Nitrogen oxides (NOx) decreased 11%
- Smog (one-hour concentrations) decreased 10%.

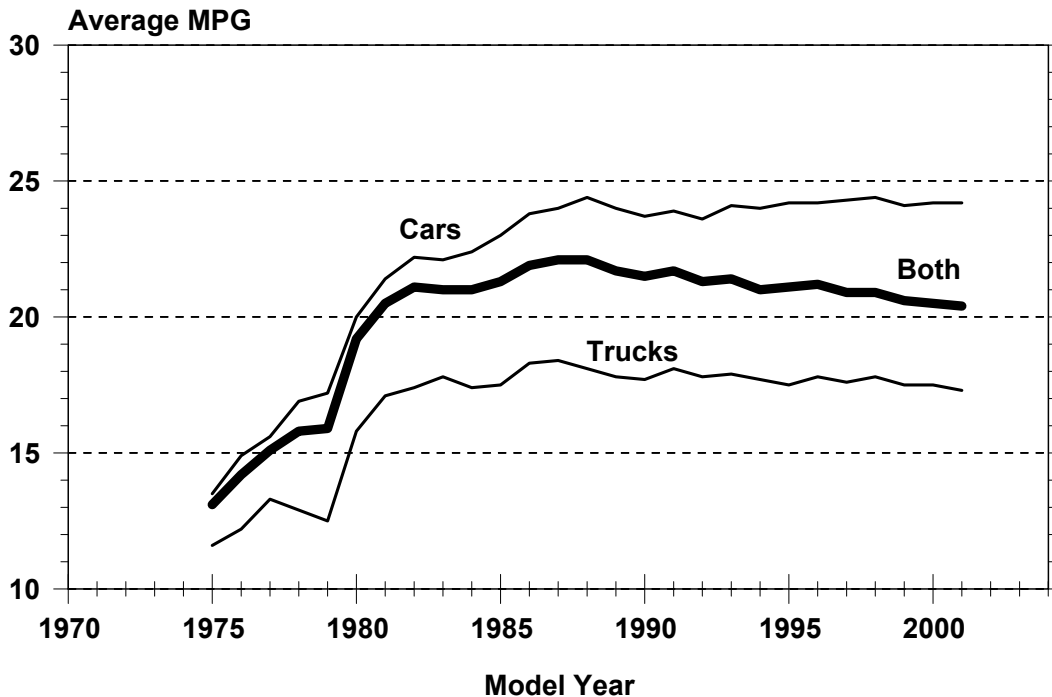
Other highlights of the report are:

- Since 1970, emissions of the six principal pollutants have been cut by 29%. During that same time period, US Gross Domestic Product increased 158%, energy consumption increased 45% and vehicle miles travelled increased 143%
- Despite this progress, over 160 million tons of pollution are emitted into the air each year in the United States, and approximately 121 million people live in areas where monitored air was unhealthy because of high levels of the six principal air pollutants
- EPA is increasingly focusing its efforts on tracking and controlling two of these pollutants: ground-level ozone and fine particles. Of the six tracked pollutants, progress has been slowest for ground level ozone, due to increased emissions of nitrogen oxides (NOx). Between 1970 and 2000, NOx emissions in the United States have increased almost 20%. The majority of this increase is attributed to growth in emissions from non-road engines (construction and recreation equipment), diesel vehicles and power plants.

12. US Fuel Economy decline continues

EPA has issued a report summarising the key fuel economy trends related to model year 1975 to 2001 cars or light-duty trucks (sport utility vehicles, vans and pickup trucks with less than 8,500 pounds gross vehicle weight ratings) sold in the United States.

Fuel Economy by Model Year



Average new light-vehicle fuel economy continues to decline. Since peaking at 22.1 mpg in 1987 and 1988, average light-vehicle fuel economy has declined nearly 8% to 20.4 mpg and for 2001 is lower than it has been at any time since 1980. The primary reasons for this decline are the increasing market share of less efficient light trucks, increased vehicle weight, and increased vehicle performance.

The Corporate Average Fuel Economy (CAFE) standards were instituted in 1975 and require passenger cars to get an average of 27.5 mpg and light trucks to get 20.7 mpg. At that time, light trucks were allowed to get lower mileage because mostly farmers and small businesses used them. Now sport utility vehicles and other light trucks account for half of all US vehicle sales.

In conjunction with the fuel economy report,

EPA also released 2002 model year emission data on its “Green Vehicle Guide” web site giving information about the environmental performance of cars and light trucks. The guide rates vehicles according to their environmental performance and includes both emission and fuel economy information.

ASIA-PACIFIC

13. Motor Vehicle Pollution Control in Singapore

A wide range of measures has been adopted in Singapore to control air pollution from motor vehicles. These include:

- Adoption of stringent engine emission standards
- Adoption of fuel quality standards
- Periodic mandatory inspection of vehicle

emissions by vehicle inspection centres

- Enforcement against smoky vehicles by the Pollution Control Department

With effect from 1 Jan 2001, all petrol and diesel driven vehicles must comply with the exhaust emission limit values in European Directive 96/69/EC for light duty vehicles with maximum laden weight (MLW) of 3,500 kg or less and Directive 91/542/EEC Stage II for heavy vehicles with MLW of more than 3,500 kg before these vehicles can be registered for use in Singapore.

For motorcycles and scooters, the current emission standard adopted is the US 40 CFR 86.410-80 Emission Standard.

With effect from 1 Aug 2000, all off-road diesel engines have been required to comply with Japan, US or EU off-road diesel exhaust emission standards.

GENERAL

14. Fuel Cell Buses to hit the road in Six Polluted Cities

Six of the world's smoggiest cities are to benefit from the introduction of fuel cell powered buses. The five-year, \$60 million program announced by the Global Environment Facility will provide 46 buses powered by fuel cells for Mexico City, Sao Paulo, Cairo, New Delhi, Shanghai, and Beijing.

The GEF program will help the fuel-cell bus industry to gain experience in developing countries where it hopes to reach commercial viability by 2010. According to the GEF, an additional \$80 million for the project will come from recipient governments and the private sector.

The programme targets the world's largest markets for urban transit buses. Developing

countries account for 70% of the global demand for buses, according to some estimates.

FORTHCOMING CONFERENCES

“Spark Ignition Engine, Transmissions, Hybrid Applications: New Developments?”

13-14 November 2001, Paris

Details from SIA on: www.sia.fr

Covers emission topics.

3rd International Conference on “Health Effects of Vehicle Emissions”

26-28 November 2001, Hilton Birmingham
Metropole, NEC Birmingham, UK

Information from Frances Webb, PennWell
Global Energy Group, Tel: + 44(0) 1628
810562, Fax: + 44(0) 1628 810762, Email:
francesw@pennwell.com

“Spark Ignition Engine Emissions”

26-30 November 2001, University of Leeds,
UK

The annual Leeds short course on emissions.

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

“Particulate Control in Internal Combustion Engines”

12 December 2001, IMechE, London

*Covers all types of internal combustion
engines for car, truck, bus, power
generation and marine applications.*

Offers of papers to

k_sotnick@imeche.org.uk

23rd Vienna Engine Symposium

25-26 April 2002, Vienna

Details from:

<http://ivkwww.tuwien.ac.at/oevk.html>

“FISITA 2002” – World Automotive Congress

2-7 June 2002, Helsinki

Details from FISITA on:

www.fisita2002.com

*Congress themes include The Environment,
New Generation of Vehicles and Policy &
Regulation.*

11th International Conference “Verkehr und Umwelt”

19-21 June 2002, Graz, Austria

Call for papers.

Details on: <http://fkma.tu-graz.ac.at>