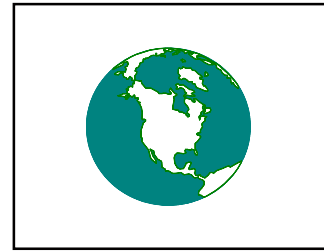


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CAR LINES

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Ultra Low Sulfur Diesel Fuel Is Spreading

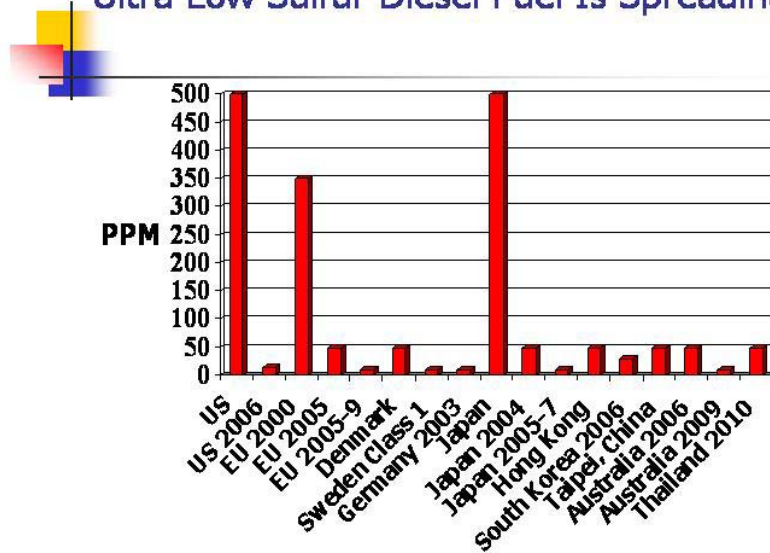


Table of Contents

1. Euro-Elections Result in Slight Green Losses; Lange Out ----- 4

2. Greek Lawyer Selected To Replace Wallström in New EU Commission ----- 4

 A. Others To Watch In The New European Commission ----- 5

 B. Next Steps ----- 6

3. New- EU Parliament Environment Committee Named ----- 6

4. Mercedes-Benz Offers 20 Models With Particle Filters ----- 7

5. German Car Makers Agree To Fit Particle Filters ----- 7

6. Fall-Out Over German Diesel Filter Plan ----- 8

7. Netherlands Issues Incentives For Cleaner Vehicles and Fuels ----- 8

8. France Announces Clean Car Tax Incentives ----- 9

9. Dutch EU Presidency's Environmental Priorities ----- 10

10. EU Environment Agency Report Lists Recommendations ----- 10

11. Foreign Pollution Hurting EU Air Quality ----- 11

12. EU Ministers Act to Cut Ships' Air Pollution; Discuss Euro 5 ----- 11

13. WHO Conference Calls For Plans to Cut Health Threats to Children ----- 12

14. Pollution Blamed for 100,000 Child Deaths In Europe ----- 12

15. European Commission to Propose Revised Road, Fuel Taxes ----- 13

16. New Danish Minister Pledges Hard-Line Approach ----- 13

17. Momentum Building for Italian Program To Subsidize 'Green Vehicles' ----- 14

18. Air Pollution Tops Environmental Concerns in Italy ----- 15

19. IEA Report Credits Netherlands, Urges More on Transport ----- 15

20. Schwarzenegger Announces Diesel Clean Up Funds ----- 15

21. ARB Releases Final Report on Greenhouse Gases Emission Proposal ----- 16

22. EPA and ARB Reach Agreement Regarding Retrofits ----- 17

23. California To Tighten Ozone Standard ----- 17

24. Nearly 100 Million Breathing High Particulates ----- 18

25. Environmental Damage in Mexico Exceeds Ten Percent of GDP ----- 18

26. WRI, EPA, and Mexican Partners Launch Diesel Retrofit Project ----- 19

27. Faced with Court Order, EPA Reconsiders Plant Rules ----- 20

28. MMT Use In Canada Cut Back ----- 20

29. U.S. Energy-Related Carbon Dioxide Emissions Rise ----- 21

30. British Columbia to Offer Tax Break To Promote Use of Alternative Fuels ----- 22

31. Panel Delays Scientific PM Report As Industry Urges More Changes ----- 22

32. DOE Completes Fuel Economy Testing Of Hybrid Vehicles ----- 23

33. Caterpillar Diesel Engines Meet New EPA Off Road Standards ----- 24

34. Ex-Worker Charges AEP Violated Pollution Laws ----- 24

35. EPA Staff Mulls Lawsuits Vs 22 Utilities ----- 25

36. Venezuela's Urban Air Quality Improves; Moving Toward Unleaded Fuel ----- 25

37. Argentine Bill Would Use Tax Cuts To Promote Use of Cleaner 'Biofuels' ----- 26

38. Australia Assesses Need for Diesahol Standard ----- 27

39. China's Geely to Step Up Car Exports, Eyes US ----- 27

40. Public Transport To Be Key Focus For China Over Next 5 Years ----- 28

41. Eco-Friendly Cars to Qualify for Thai Tax Breaks ----- 29

42. CSE Criticizes Delhi On Diesel Tax; Gets Positive Response ----- 29

43. South Korea Issues Detailed Emissions Rules ----- 30

44. South Korea to Consider Bill To Encourage Environment-Friendly Vehicles ----- 31

45. Indonesian House of Representatives Approves Ratification of Kyoto Protocol ----- 32

46. India Submits Low Emissions Data To U.N. Body ----- 32

47. Australia Facing Serious Emissions Issues ----- 33

 A. Study Says Australia Worst Per Capita Greenhouse Gas Emitter ----- 33

 B. Fund For Low Emissions Technology Grants ----- 34

 C. Movement To Drive Cleaner Cars ----- 35

D. Low Sulfur Fuel Agreed To -----35

48. New South Wales Sets Gasoline Rules, Raises Pollution Fees -----36

49. China Introduces 'Euro II' Standards Nationwide-----37

50. China Oil Giants Increasingly Profitable -----38

51. China Publicizes Its Most Polluted Cities-----39

52. Japan Considers Stricter Car Fuel Efficiency Rules -----39

53. Japanese Environment Ministry Pushing Gasoline Tax -----40

54. Sinopec Plans \$1.2 Billion Refinery In Hainan -----41

55. Yamato Delivery Service Adds Hybrid Vehicles to Further Reduce CO2 -----42

56. WRI, ADB Announce Sustainable Urban Transport Partnership in Asia -----42

57. Another Study Finds Link Between Traffic and Respiratory Effects in Children -----43

58. ARB's 10-Year Children's Health Study Complete-----43

59. Marpol Air Pollution Ship Rules To Enter Into Force In 2005-----44

60. Businesses Map Road To Sustainable Transport-----45

61. Carbon Dioxide Emissions May Harm Ocean Life -----46

62. Acute Effects of Ozone on Mortality from the APHEA2 Project-----47

63. IEA Issues Book: Biofuels for Transport: An International Perspective -----48

64. World Bank Plans to Continue Funding Oil, Mining Projects -----49

65. List of Occupational Carcinogens Developed -----50

EUROPE

1. Euro-Elections Result in Slight Green Losses; Lange Out

The European parliament elections have produced an assembly in which pro-environment parties have lost ground. The vote has increased the dominance of the centre-right EPP as the assembly's largest party. Analysis by environmental groups before the election showed that in the outgoing parliament EPP deputies were particularly reluctant to vote for environmental measures.

The same analysis showed the Socialists - second biggest party in the parliament, the Liberal ELDR, the Greens/EFA coalition, and the Left-wing EUL/NGL coalition all had strong records of voting for environmental measures. Of these groups, only the ELDR has improved its share of seats. The Greens/EFA and EUL/NGL coalitions have both fallen back significantly. Overall, these pro-environment parties now have fewer than 48% of seats, compared with 51% before the elections.

New Party positions after the 2004 European elections

	Share of seats January 04	Seats	After elections Share
Centre-right (EPP)	37%	276	38%
Socialists	28%	201	27%
Liberals (ELDR)	8%	66	9%
Greens (Greens/EFA)	7%	42	6%
Left (UEL/NGL)	8%	39	5%
Nationalists (UEN)	4%	27	4%
Nationalists (EDD)	3%	15	2%
Non-aligned	5%	66	9%
Total		732	

Most significantly, Bernd Lange, who has championed stringent environmental legislation during his tenure as Rapporteur for several vehicles and fuels Directives, will no longer be a Member of Parliament, a significant loss.

2. Greek Lawyer Selected To Replace Wallström in New EU Commission

European employment commissioner Stavros Dimas is to take over the EU's environment portfolio in the new European Commission set to focus on competitiveness and economic growth. The Greek lawyer will take the helm from current environment commissioner Margot Wallström when her mandate runs out on 1 November.

Announcing his new Commission line-up two weeks ahead of schedule, president-designate Jose Manuel Barroso said the 25-strong executive's policy decisions over the next five years would work towards completing the EU's Lisbon agenda of economic renewal. Its "key priorities", he said, would be "revitalizing the European economy and growth, improving communication, and guaranteeing Europe the place it deserves in the

global order". Mr. Barroso made only fleeting mention of the role of environmental sustainability as the third pillar of the Lisbon process, but insisted his drive for competitiveness will not squeeze out less industry-orientated portfolios.

Mr. Dimas's task will be to construct the environmental foundation of Mr. Barroso's vision. A member of Greece's centre-right New Democracy party, he will find himself straight in the thick of the action with co-responsibility for the Reach chemical substance policy reform.

Another key move is the appointment of current enlargement commissioner Gunter Verheugen as overseer of the Commission's enterprise and industry policies and counterweight to Mr. Dimas on Reach. Other changes include the separation of both the transport/energy and agriculture/fisheries portfolios into separate units.

Meanwhile Ms Wallström will become Mr. Barroso's deputy, responsible for communication strategy and relations with MEPs, national parliaments and other official bodies.

On the surface Mr. Dimas seems an almost polar opposite to the Swedish social democrat - he is a southern European conservative whose political background is in industrial and economic policy. But EU insiders say Mr. Dimas - a member of the centre-right New Democracy party - is at the progressive end of his stretch of the political spectrum. The current and future commissioners are similar in that neither had ministerial experience of environment policy before their nomination to the post. In fact Mr. Dimas last tasted ministerial office over a decade ago, with a short stint in charge of Greek industry, energy and technology policy ending in 1991.

After that Mr. Dimas occupied various party administrative positions; before entering politics in 1977 he worked as a lawyer for the World Bank and as deputy governor of a Greek industrial development bank, following an education at Greek and American universities. He was also part of the committee that negotiated Greece's entry into the EU in 1981.

A. Others To Watch In The New European Commission

Among the other new European commissioners most likely to exert an influence on environment policy over the next five years, current enlargement commissioner GUNTER VERHEUGEN tops the list. The German social democrat takes over from Erkki Liikanen in an expanded role with responsibility for ENTERPRISE AND INDUSTRY. Explaining the new post last week, Jose Manuel Barroso said it was "a little bit strange that we had a commissioner for agriculture and not a commissioner for industry". Mr. Verheugen will team up with Stavros Dimas to push through the complex and politically sensitive Reach plan to reform EU chemicals policy. Crucially, he will also have lead responsibility for coordinating Commission positions at meetings of the European competitiveness council - the multifaceted ministerial formation that will ultimately decide governments' position on Reach. Mr. Verheugen also takes over some INTERNAL MARKET responsibilities, though the bulk of this area will lie with former Irish finance minister CHARLIE MCCREEVY.

The Commission's energy and transport portfolios will be separated when Spanish commissioner Loyola de Palacio steps down in November. Hungarian socialist LASZLO

KOVACS takes on the mantle of ENERGY supremo; among his jobs will be to continue the promotion of renewables and to guide the passage of controversial proposals on energy services and nuclear safety.

French lawyer and employment minister JACQUES BARROT takes on the TRANSPORT brief. The ally of French president Jacques Chirac inherits plans to increase the penetration of biofuels in transport and will come under pressure to further tackle the greenhouse effects of the sector, whose climate-changing emissions are growing faster than any other.

Other important appointments include:

- Cypriot ex-finance minister MARKOS KYPRIANOU will take over from David Byrne as commissioner for HEALTH AND CONSUMER AFFAIRS, sharing responsibility for GM issues with the environment directorate.
- Former Danish farm minister MARIANN FISCHER BOEL gets the task of overseeing European AGRICULTURE, with pressure to tackle the trade-distorting common agricultural policy likely to come from the UK's reform-minded TRADE commissioner PETER MANDELSON.
- FISHERIES policy has been linked to the new dossier of MARITIME AFFAIRS and placed in the hands of Maltese commissioner JOE BORG.
- Latvian green party member and TAXATION commissioner INGRIDA UDRE will oversee the probable introduction of CO2 emission charges for cars.

B. Next Steps

All Mr. Barroso's appointments must now be approved by the European parliament following hearings to be held from 27 September. This step is generally considered a ritual formality.

3. New- EU Parliament Environment Committee Named

The new European parliament environment committee will continue to be chaired by the centre right. German MEP Karl Heinz Florenz is taking over the reins from fellow EPP member Caroline Jackson. The switch follows June's elections in which the EPP was confirmed as the assembly's largest political grouping. Like Ms Jackson, Mr. Florenz has been an MEP since the 1980s and served on the parliament's environment committee during both the last parliamentary terms. He has a particular interest in waste legislation and drafted the assembly's positions on major directives on end-of-life vehicles and electronic products.

He has also committed himself to continuing Ms Jackson's emphasis on the importance of improving national implementation of existing environmental rules.

Environment is now the largest legislative committee in parliament, with 63 members, up from 60 before the elections. But its ability to process draft legislation will suffer from the EU's new challenge of translating documents into 20 languages, rather than 11 before the bloc's enlargement in April.

Early casualties will be draft EU laws on sulphur in marine fuels and bathing water standards, according to sources. Ministers completed the first reading process on both in June. Yet the committee is not expected to recommend parliament's second reading positions until the new year.

A high priority this autumn is expected for discussions on the EU's major new chemicals law Reach. Other key dossiers will be new EU groundwater rules, for which the rapporteur is set to be another EPP member, probably German. Swift agreement is expected in the autumn on a Commission proposal to give the new member states extra time to bring them into line with EU packaging laws.

The committee will also hold hearings for new European commissioners appointed in November. It has already started meeting some of the new faces. Olli Rehn, Finland's new commissioner and temporarily in charge of EU enterprise policy, discussed Europe's sustainable development challenge with members on 27 July.

The committee's competence has changed slightly, with the loss of consumer affairs. This is unlikely however to make much difference to the annual workload, as over 95% of proposals examined under the last parliament concerned environment, food safety and public health legislation - areas kept by the new committee.

4. Mercedes-Benz Offers 20 Models With Particle Filters

With a total of 20 models Mercedes-Benz believes that it has the broadest range of offerings of all German manufacturers of diesel passenger cars with particle filters. It is now available for the A-, C-, and E-for the CDI diesel models and S class. Besides, all these models fulfill the Euro 4 norm.

Customer acceptance is very high. In the C class the particle filter share of the diesel-new cars is now at about 83 percent, in the E class 85 percent and in that S class 86 percent.

The situation is quite different in other large European diesel markets such as Italy and France, where only 0.4 percent (Italy) or 0.2 percent (France) of the DaimlerChrysler customers selects a Diesel model with a particle filter.

Since introduction of the first diesel models with particle filters meeting Euro 4 norms in the autumn of 2003, Mercedes-Benz has already delivered 50,000 passenger cars with the maintenance-free without additives working filter system. The actual program reaches from the new A 160 CDI with 60 kW / 82 HP up to 6-cylinders-limousine p. 320 CDI with 150 kW / 204 HP. The prices of these diesel passenger cars with particle filter begin with 20,416 euros for the A 160 CDI five-door model (the three-door models for 19,546 euros will be available from the end of 2004). At the uppermost end of the price range ranks the S 320 CDI, which costs with particle filter 62,234 euros. All together Mercedes-Benz offers in the A class three diesel passenger cars with particle filters, in the C class two, in the E class four and in the S class one.

5. German Car Makers Agree To Fit Particle Filters

Germany's car makers have agreed to equip diesel cars sold in Germany with filters to dramatically reduce emissions of fine particles. Sector group VDA announced the agreement following a meeting with Chancellor Gerhard Schröder. For its part, the government will go ahead with a plan to provide tax incentives of €600 from 2005 for diesel cars with filters.

Germany, as well as some other EU countries, is pressing the European Commission to bring forward plans for future Euro-5 EU emission requirements that would make filters mandatory.

VDA said that, with the tax break, it expected one-quarter of all new diesel cars sold in Germany to be fitted with filters by the end of 2006. The proportion should reach 75% by the end of 2007 and 100% by the end of 2008, it added.

Having repeatedly urged German car makers to install filters, environment minister Jürgen Trittin welcomed their agreement.

6. Fall-Out Over German Diesel Filter Plan

German finance minister Hans Eichel has blasted his own government's plan to provide tax incentives for diesel cars equipped with filters from 2005, calling the measure unnecessary and tantamount to a subsidy for the French car industry. In an unusually frank interview with the Financial Times Deutschland, Mr. Eichel argued that, as Germans were already buying diesel cars equipped with filters, there was no need to offer a tax break. He also said the measure was, in effect, a subsidy for French car makers, because they, unlike German ones, sold diesel cars with filters as standard equipment.

Mr. Eichel further doubted that environment minister Jürgen Trittin, the architect of the tax break, would get German state governments to agree to finance it. As a result, the federal treasury would likely have to foot the bill, he complained.

Mr. Eichel's intensely negative opinion of the tax break took the environment ministry by surprise. A spokesperson said that as the measure had already received government approval, the ministry did not understand Mr. Eichel's motive. The spokesperson expressed confidence that the tax break would go into effect as planned.

7. Netherlands Issues Incentives For Cleaner Vehicles and Fuels

The Netherlands has issued a *Memorandum on Traffic Emissions* that offers financial incentives for the installation of filters on diesel-powered cars, for the purchase of environment-friendly vehicles, and for the use of biofuels. The document was issued in a bid to cut air pollution and greenhouse gas emissions from vehicles. The policy is also meant to help the Netherlands meet by 2010 European Union requirements under Parliament and Council Directive 2001/81 on National Emission Ceilings for Certain Atmospheric Pollutants as well as several other air quality directives. The Dutch emission ceilings under the NEC Directive for 2010 are: 50 kilotons for sulfur dioxide, 266 kilotons for nitrogen oxides, 128 kilotons for ammonia, and 191 kilotons for volatile organic compounds.

Under the plan, in 2005 the government will reduce the sales tax on diesel-powered cars with filters installed. The move is intended to make vehicles with filters cost the same as those without filters.

Emissions of particulate matter and nitrogen oxides are growing problems in the Netherlands, where more new cars are being powered by diesel engines. According to the Dutch National Institute of Public Health and the Environment (RIVM), 14 percent of all cars in the Netherlands are diesel powered and over 20 percent of all new cars are diesel-powered.

Also in 2005, financial incentives will come into place for certain types of cleaner trucks and buses under existing Environment Investment Deduction (MIA) rules, which offer tax reductions for investments in environment-friendly equipment.

Also, from 2006, the government wants to make the purchase tax on passenger cars partly dependent on their energy efficiency.

Starting in 2005, taxes incentives will be put in place for sulfur-free diesel fuel.

An incentive regulation for biofuels must be in place by 2006, according to EU Parliament and Council Directive 2003/30 on the Promotion of the Use of Biofuels or Other Renewable Fuels for Transport. Biofuels are produced from agricultural products and waste, and can be mixed with gasoline or diesel.

Exact details of the "green" fiscal incentives will be made public in the Tax Plan 2005, which is expected in September.

Dutch State Secretary for Housing, Planning, and the Environment Pieter van Geel said that these measures will bring the Netherlands into compliance with certain EU requirements including the NEC Directive by 2010. However, air quality standards for nitrogen oxides and particulate matter will not be met, and the Netherlands will ask the European Union for postponement of the nitrogen oxides targets to 2015, he said.

8. France Announces Clean Car Tax Incentives

Tax incentives to encourage sales of less polluting and more energy efficient cars and to encourage the fitting of fine particle filters to trucks were announced by the French government. The scheme, which is due to start in January, forms part of a four-year, €85m national environmental health plan.

According to French press reports, environment minister Serge Lepeltier suggested a €3,000 charge could be imposed on inefficient, four-wheel drive vehicles. A fuel efficient vehicle equipped with a fine particle filter could receive an €800 credit. Exact amounts have not been finalized, the government said officially.

The government is aiming to cut diesel engine particle emissions by 30% from current levels by 2010.

9. Dutch EU Presidency's Environmental Priorities

The incoming Dutch presidency has set a busy environmental work program to the end of the year for the council of ministers. Environment ministers should reach political agreements on up to eight new green laws.

Sustainable mobility will be a high priority. The government is pushing the European Commission to propose stricter, Euro 5, vehicle emission norms, if not this year then early in 2005. It is asking the Commission to produce a communication facilitating national incentives for fitting of particle filters to diesel cars as soon as possible.

The presidency will hold talks on how the EU can meet its target of average new car CO₂ emissions no higher than 120g/km by 2012, in the face of carmakers' belief that this is impractical. The government also wants to extend the existing EU voluntary agreement on new car CO₂ emissions to light vans. It thinks all new cars in the EU should be fitted with fuel-saving in-car devices such as onboard computers to indicate fuel consumption.

Within its sustainable mobility agenda, the presidency will also highlight the need for more action to address transport noise, including from vehicles, tires and road surfaces.

Climate change is the last of the presidency's top four environmental priorities. Environment minister Pieter Van Geel sounded an ambitious symbolic note by calling for global agreement to cut greenhouse gases 30% by 2020 from a 1990 baseline. In practice, the statement is a marker for debates due to start next year both within the EU and at the international level. The key priority for the Dutch presidency will be to formulate the EU's position for the tenth meeting of parties to the UN climate change convention.

10. EU Environment Agency Report Lists Recommendations

European countries must integrate environmental concerns more fully into their agricultural, transport, and energy plans to bring about meaningful environmental improvements, according to a report released by the European Environment Agency June 1. The report, *EEA Signals 2004*, calls for greater use of market-based instruments such as taxes and subsidies to better manage demand for environmentally harmful agricultural practices and to promote innovation. If such practices are implemented, the "spin-off benefits for the environment and human health will be multi-dimensional across issues such as climate change, air pollution, biodiversity, and water quality," the report states. The report is the agency's latest annual review assessing the state of the environment in its 31 member states.

The report, noting the EU's prediction of a 6.3 degree Celsius increase in the Earth's temperature by 2100 unless mitigating actions are taken, makes the point that negative effects of climate change are already taking place. During the 1990s, the number of disastrous weather and climate-related events in Europe more than doubled when compared with the number of similar events in the 1980s, while non-climatic events such as earthquakes remained constant, according to the report.

One positive effect of an increasingly warm planet is a growing season extended by about 10 days during the period 1980-2003, the report states. At the same time, however, all European glacial regions except Norway are in retreat, and Arctic Sea ice has been decreasing by about 0.3 percent per annum since 1980, the report states.

The report also predicts fossil fuels will be Europe's chief energy source until at least 2030. Renewable energy use "is not expected to raise its share significantly while the contribution of nuclear power is projected to decline," the report states. About 80 percent of energy in EEA member countries is produced by burning fossil fuels, the report states.

11. Foreign Pollution Hurting EU Air Quality

The EU will fail to achieve its clean air objectives unless it engages Asian and North American governments in efforts to cut emissions, the European academies' science advisory council (Easac) warned in a new report. According to Easac, despite domestic actions to drive down emissions, improvements in European air quality are slowing due to imports of pollution from other northern hemisphere regions and from international shipping. It called on EU environment ministers and the UN economic commission for Europe (UN/ECE) to address the issue.

The steady growth of background ozone concentrations is a major cause for concern. Sulphur dioxide (SO₂) and nitrogen oxides (NO_x) emissions from international shipping are also targeted. According to Easac, they are severely damaging efforts to reduce acidification and eutrophication in some areas of Europe.

12. EU Ministers Act to Cut Ships' Air Pollution; Discuss Euro 5

European Union environment ministers have given the go-ahead for a bill aimed at cutting air pollution caused by ships. The proposal, which must be approved by the European Parliament before being formally endorsed by environment ministers, would force ships to cut emissions of sulfur dioxide (SO₂) by using fuel with lower sulfur content. Ship emissions are blamed for contributing to acid rain, smog, and air pollution.

"The Environment Council has agreed to reduce ships' SO₂ emissions in the EU by over 500,000 tons every year from 2007, to the benefit of human health and the environment," the European Commission said in a statement.

Marine fuel has a maximum sulfur content of five percent or 50,000 parts per million (ppm), the Commission said, compared to a far lower level in petrol for cars, which will be at 10 ppm from 2007. Aimed at lowering sulfur levels in marine fuel used in the EU, the proposal stipulates a 1.5 percent sulfur limit for all sea-going vessels in the North Sea, the Channel and the Baltic - areas where SO₂ contributes to acid rain which damages forests and lakes in the Nordic region. The same limit would apply to passenger ships traveling between ports within the EU from May 2006. The deadline for the Baltic is also 2006, while the deadline for the North Sea and the Channel is later in 2007.

The ministers agreed a stricter 0.1 percent sulfur limit to be imposed on ships while at berth in EU ports from January 2010 in order to reduce SO₂ and harmful particles in

populated areas where the emissions can contribute to serious respiratory illness.

Germany presented its demand for the Commission to propose this year stricter Euro 5 car emission limits designed especially to slash particulate pollution. Denmark, France, Sweden, Italy and Austria came out in support.

13. WHO Conference Calls For Plans to Cut Health Threats to Children

On June 25th, European health and environment ministers agreed to a set of policy recommendations intended to reduce environmental threats to public health, particularly the health of children, and called on the 52 countries within the World Health Organization European Region to develop national plans in line with the proposed policies by 2007. Ministers and delegates from 50 of the 52 countries agreed to both a "Conference Declaration" and a "Children's Environment and Health Action Plan for Europe" at the conclusion of the organization's Fourth Ministerial Conference on Environment and Health.

The agreements outlined a common set of measures to reduce threats to health arising from air and water pollution and from chemicals, but also acknowledged "that marked differences across the region and across age groups indicate the need for targeted action in specific countries, regions or populations," according to a statement.

The Children's Environment and Health Action Plan for Europe, or CEHAPE, sets four "Regional Priority Goals." The goals include reducing mortality from gastrointestinal disorders by improving access to safe water and sanitation; preventing health consequences from accidents; reducing respiratory disease from outdoor and indoor air pollution; and reducing the risk of disease and disability from hazardous chemicals, physical and biological agents, and hazardous working environments.

Though nonbinding, CEHAPE calls on European countries to develop and begin implementing national "children's environment and health action plans" by 2007. Measures called for in the CEHAPE include:

- Limiting the access of motor vehicles, especially those using diesel fuels, to school zones;
- Using regulations and incentives to get manufacturers to equip new diesel engines with filters to reduce emissions;
- Establishing monitoring and smog alert systems in cities;
- Banning smoking in public places, especially schools and health facilities;
- Ensuring disposal of wastewater away from schools and recreational areas, including public beaches;
- Monitoring the chemical contaminants of water and soil most hazardous to children; and
- Enacting and enforcing legislation on the lead content of petrol and building materials and on exposure to hazardous chemicals in toys.

14. Pollution Blamed for 100,000 Child Deaths In Europe

One third of all child deaths in Europe, or 100,000 deaths each year of people younger

than 19, are attributable to environmental causes, according to a report released by the World Health Organization (WHO) on the eve of the Fourth Ministerial Conference on Environment and Health. The report, *Burden of Disease Attributable to Selected Environmental Factors and Injuries Among Europe's Children and Adolescents*, billed itself as the first overall assessment of its kind in the WHO's European Region.

According to the report, outdoor air pollution, primarily from particulate matter, and indoor air pollution, primarily from burning solid fuels, account for more than a fifth of the estimated 100,000 child deaths. It said the majority of these deaths could be prevented by reducing pollution to European Union guideline levels.

15. European Commission to Propose Revised Road, Fuel Taxes

The European Commission will propose new legislation in the coming months that will call for the abolition of car registration taxes imposed by European Union member states and the replacement of these with road and fuel taxes. The Commission said Aug. 6 the proposal is one way to reduce emissions of carbon dioxide and other air pollutants. The Commission said the proposal is also the only way to eliminate the current distortion in the EU single market in the retail sale of cars caused by disparate registration taxes in member states.

"The legislation is borne out of the tax problems encountered when passenger cars are moved from one member state to another," said Commission spokesman Tilman Lueder. "Consumers often face double taxation and therefore the Commission believes this is an unacceptable situation for EU consumers and the EU automobile manufacturing industry."

In the interest of promoting reductions in greenhouse gas emissions and air pollution, the Commission wants registration taxes to be replaced by environmentally based levies. On this point, the Commission said it is considering two options:

- the gradual phasing out of registration taxes, with a refund system to apply in the meantime, and the introduction of a new tax structure linked to carbon dioxide emissions; and
- a limit on registration taxes to 10 percent of the pre-tax price of the car and levies imposed based on environmental performance of the car.

The Commission said that to date the motor industry and consumer associations' support scrapping of the registration taxes in favor of the environmental levies.

The Commission is currently holding a consultation period in advance of the new car registration tax proposal. The consultation period will end Sept. 10.

16. New Danish Minister Pledges Hard-Line Approach

In her first official move since her surprise appointment earlier this month, Denmark's new environment minister, Connie Hedegaard, has warned of "bone-hard consequences" for transgressors of environmental laws. Her terse 94-word statement

has been interpreted by the Danish media as "a radical shift in environmental policy" and is reported to have met with "jubilation" among opposition politicians. Ms Hedegaard has explained in a series of interviews that she is less than keen on several policies of her predecessor, Hans Christian Schmidt, in particular his pursuit of "more environment for the money".

17. Momentum Building for Italian Program To Subsidize 'Green Vehicles'

Three Italian city governments have signed up for a Ministry of Environment program that will reimburse them for up to 65 percent of the cost of adding environmentally friendly vehicles to each city's fleet, part of a wider effort by the Italian government to focus on vehicle emissions as a way to reduce its overall greenhouse gas emissions. As of June 10, another 74 cities are reported to be studying the plan, which has a budget of [Euros] 58 million (\$70 million) this year, and a total of [Euros] 90 million (\$108 million) over the next three years, the Ministry of Environment said.

According to the Agency for Environmental Protection (APAT), the technical wing of the Ministry of Environment, the transportation sector is one area where domestic Italian greenhouse gas emissions can be reduced relatively cheaply.

In the past, Italy has subsidized research projects aimed at developing vehicles with a lower environmental impact, initiatives that had the dual purpose of helping struggling Italian carmaker Fiat, which has several fuel-efficient car projects in the pipeline. But the latest plan, which went into effect May 24, is the first aimed directly at encouraging city and regional governments and major companies to actually buy such vehicles.

Rome is the only major city to have signed on to the program so far, with the other two participating governments from mid-sized towns on the island of Sardinia. The environment ministry said 74 other cities are applying to participate in the plan, including Milan, Italy's second largest city after Rome; Turin, where Fiat is based; Florence; and Venice.

Despite the interest in the initiative, the total number of vehicles involved so far is still less than 100, according to the Ministry of Environment. That includes 15 environmentally friendly cars bought for use by the ministry itself.

According to program rules, vehicles eligible for subsidies include any that consume less than two-thirds of the fuel and produce less than 50 percent of the emissions of an equivalent vehicle using traditional technology. But the incentives are higher for electric and hybrid vehicles that are significantly under those limits.

The vehicles bought for use by the ministry use electric motors. No official information is available yet on the types of vehicles to be used by the governments that have signed on to the plan, though local media have reported that the city of Rome has applied for subsidies to purchase electric buses to be used in the city center.

Other initiatives aimed at curbing emissions from the transportation sector include tax breaks and preferential parking for carpoolers, and reductions in the cost of annual passes that give holders access to public transport.

18. Air Pollution Tops Environmental Concerns in Italy

Air pollution is the biggest environmental concern to Italians, according to the annual poll looking into public opinion about environmental matters released June 25 by the Italian Agency for Environmental Protection and Technical Services (APAT). According to the poll results, 44 percent of Italians said air quality was their biggest environmental concern. That category included a number of problems related to the atmosphere, ranging from smog to global warming. Concern for "air pollution" far outpaced the second largest concern, waste disposal, which was the top environmental worry of 18 percent of Italians. Protection of land and water was next, selected by 12 percent. No other issue totaled more than 7 percent of those polled.

19. IEA Report Credits Netherlands, Urges More on Transport

The Netherlands has made progress toward meeting its international commitments to fight climate change but must do more to curb greenhouse gas emissions in its transportation sector, according to a report on the country's energy sector released June 28 by the International Energy Agency. The Paris-based IEA gives the Netherlands high marks for ongoing efforts to meet its Kyoto Protocol target to reduce greenhouse gas emissions by 6 percent from 1990 levels by the period 2008-2012.

"While the country is apparently on track to meet the Kyoto target, with greenhouse gas emissions having almost stabilized, some work still lies ahead," the report said.

Curbing the rapid growth of energy demand in the transport sector is the most prominent area where the Netherlands has yet to devise sufficient greenhouse gas reduction strategies, the IEA said. Reducing transport sector emissions will require "strong new policies and measures," according to the report, which suggested that improvements to public transportation and vehicle fuel consumption may offer potential solutions.

The IEA is optimistic that the Netherlands can meet its objectives, noting that Dutch policy makers should be "credited" for the cost-effectiveness of measures taken to reduce greenhouse gas emissions. These include use of Kyoto Protocol "flexible mechanisms," the reduction of emissions of greenhouse gases other than carbon dioxide, and the streamlining of subsidies for renewable energies and for combined heat and power installations, according to the report.

NORTH AMERICA

20. Schwarzenegger Announces Diesel Clean Up Funds

Governor Arnold Schwarzenegger has announced a strategy that will dedicate \$67.8 million annually to improve air quality while lowering overall consumer costs for smog check requirements. The proposal is part of the Governor's proposed budget plan currently making its way through the Legislature.

The proposal restructures funding from California's Smog Check Program to dedicate

\$61 million annually to the Carl Moyer Memorial Air Quality Standards Attainment Program. The Moyer program uses grants to help owners of old, high-polluting diesel engines upgrade to those powered by compressed natural gas, electricity or clean-running diesel. Older diesel trucks continue to be a major source of air pollution as are emissions from heavy-duty diesel vehicles and equipment. Funding for the Carl Moyer Program would come through an adjustment to the smog abatement fee, raising it from \$6 to \$12 per year.

To more than offset the proposed fee adjustments, owners of new cars would be exempt from getting their vehicles smog checked for up to six years, instead of the present four. In addition, proof of a smog check would no longer be required for the sale of vehicles four years old or newer. With today's automobile manufacturing standards, new cars up to six years old rarely fail smog checks. By extending the smog check exemption for two additional years for new cars and no longer requiring proof of a smog check for the sale of vehicles four years old or newer, consumers will experience net savings of approximately \$48.5 million annually.

In addition to securing permanent financing for the Carl Moyer program, the Governor's plan to cut air pollution will include an additional \$6.8 million per year to support the Bureau of Automotive Repair's effort to retire gross-polluting vehicles and provide assistance for low income families to help with smog-related vehicle repairs.

Since its inception in 1998, funds from the Moyer program have been used to convert nearly 5000 engines statewide. Between 1998 and 2002, the program is credited with cutting 4650 tons per year of nitrogen oxide emissions from California's air. The proposed changes to the Moyer Program will cut nitrogen oxide emissions by an additional six tons per day.

21. ARB Releases Final Report on Greenhouse Gases Emission Proposal

The California Air Resources Board (ARB) staff has released its final report proposing a regulation that limits greenhouse gas emissions from passenger cars and light trucks beginning in 2009. ARB staff released the report in preparation of a public hearing set for September 23 in Los Angeles. The report contains a series of technology packages that, when used together, can result in reduced emissions greenhouse gases and more efficient vehicle operation. ARB staff expects the technology packages to result in emission reductions of about 25 percent for cars and light trucks and about 18 percent for larger trucks and SUVs during the initial phase of the regulation set for 2009 through 2012. ARB staff expects the regulation's mid-term phase to result in emission cuts of up to 34 percent for cars and light trucks and 25 percent for larger vehicles when the rule is fully implemented after 2016.

The new regulation will add about \$292 to the costs of cars and small trucks and about \$308 to the cost of large pickups and SUVs during the regulation's initial phase (2009-2012). The regulation is expected to add an average of \$626 for cars and \$955 for large pickups and SUVs during its mid-term phase (2013-2016). The report notes that buyers of new cars after 2009 will regain those added costs through lower operating costs over the vehicle's lifetime.

The final report contains changes from the initial draft proposal released on June 14. Of

these changes, the most notable include a slight increase in stringency for passenger cars and smaller trucks and a slight decrease in stringency for heavier pickups and large SUVs. Overall, the change will result in a slightly higher amount of pollution controlled than was forecast in the June 14 draft proposal.

The second major change extends the regulation's two phase-in periods from three years each to four years each starting in 2009. This change was made to better fit the planning and development time needed by automakers.

The third major change from the June 14 draft is an increase in the expected cost of mid-term implementation phase to automakers of about \$100 per vehicle compared to the earlier estimate. This change is a reflection of updates to the staff cost estimates and other adjustments made to the proposed regulation.

The ARB proposal is a result of a 2002 law that requires the ARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of motor vehicle emissions of greenhouse gases. The law also requires the ARB to adopt a regulation by 2005 and allows the Legislature one year to review the regulation prior to implementation in 2009. The law forbids the ARB from prohibiting any type of vehicle or from requiring weight reductions of current vehicle models.

22. EPA and ARB Reach Agreement Regarding Retrofits

The Air Resources Board (ARB) has announced a Memorandum of Agreement (MOA) with the Environmental Protection Agency's (EPA's) Voluntary Diesel Retrofit Program for the Coordination of Diesel Retrofit Verification. This MOA establishes reciprocity in verifications of hardware or device-based retrofits. It further establishes ARB's and EPA's commitment to cooperate on the evaluation of other retrofit technologies, including fuel-based strategies. The agreement commits ARB and EPA to work toward accepting particulate matter (PM) and oxides of nitrogen (NOx) verification levels assigned by the other's verification programs. Additionally, as retrofit manufacturers initiate and conduct in-use testing, ARB and EPA agree to coordinate this testing so data generated may satisfy the requirements of each program. This MOA is intended to expedite the verification and introduction of innovative emission reduction technologies.

Additionally, this MOA should reduce the effort needed for retrofit technology manufacturers to complete verification. In the near future ARB and EPA will provide further guidance on how this agreement will be implemented.

23. California To Tighten Ozone Standard

Staffs of the Air Resources Board (ARB) and Office of Environmental Health Hazard Assessment (OEHHA) have recommended tough new state Ambient Air Quality Standards for ozone to protect the health of infants, children, and other at risk populations. The state is proposing to retain its 1-hour standard of 0.09 ppm, not to be exceeded, and to establish a new 8-hour standard of 0.07 ppm, not to be exceeded -- substantially more stringent than the federal 8-hour standard of .08, because of the level of the standard, and the way compliance will be measured.

These recommended standards are based on a finding that scientific studies clearly show adverse health effects at levels of .08 ppm over several hours, and that more stringent standards are needed to protect the health of children and others and to provide a margin of safety.

These standards will set an important precedent for national and international reviews of the ozone standards. The California review demonstrates that the US federal NAAQS for ozone, set in 1997, need to be strengthened in order to protect public health, particularly the health of children.

The findings and recommendations in the draft staff report will be peer-reviewed by the Air Quality Advisory Committee (AQAC), appointed by the Office of the President of the University of California. Written comments are due by August 2, 2004.

24. Nearly 100 Million Breathing High Particulates

Almost 100 million people in 21 U.S. states breathe unhealthy levels of particles emitted by coal-burning power plants, vehicles and factories, the Environmental Protection Agency has announced. EPA Administrator Mike Leavitt notified governors from mostly Eastern states plus California that 243 counties do not comply with an agency proposal to limit emissions of the particles.

The particles are linked to premature death from heart and lung disease, as well as chronic bronchitis and asthma.

Action on particulates, which Leavitt puts at the top of his air quality agenda, is the next regulatory step after the EPA designated them as a pollutant in 1997. The EPA action sets in motion a process where states must submit plans to reduce particulate emissions by early 2008, with compliance required in the 2010-2015 time frame.

Partial attainment of the standards in 2010 could prevent 15,000 premature deaths, according to agency analysis.

In Eastern states, the majority of the pollution comes from coal-burning power plants. In California, which has no coal facilities, most is from cars and trucks.

State governors had asked EPA to designate 141 counties as non-compliant, far short of the 243 EPA named in a preliminary list it will finalize in November.

The EPA found non-compliant counties in the following states plus the District of Columbia: Alabama, California, Connecticut, Delaware, Georgia, Illinois, Indiana, Kentucky, Maryland, Michigan, Missouri, Montana, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

25. Environmental Damage in Mexico Exceeds Ten Percent of GDP

The cost of environmental degradation and depletion of natural resources in Mexico represents more than 10 percent of the country's annual gross domestic product, according to a new study from Mexico's National Statistics Agency (INEGI). The study,

titled *Economic and Ecological Accounts of Mexico* and issued June 4, covers the years 1997 to 2002 and is designed to illustrate the impact of economic activity on natural resources and the environment.

The main elements of environmental damage in Mexico include air pollution, contamination of water and soil, and depletion of petroleum reserves, groundwater, and forests, as well as soil erosion, INEGI said.

In 2002, air pollution from vehicle and industry emissions accounted for 80 percent of environmental damage, while depletion of petroleum reserves and water pollution each accounted for 6 percent. Contamination of soil with municipal solid wastes accounted for 3.9 percent of the total cost of environmental damage in 2002, followed by depletion of forestry resources, soil erosion, and overuse of groundwater, according to INEGI.

Spending to prevent or reduce environmental damage generated by production was only 33 billion pesos (\$2.9 billion), or 5.3 percent of costs, the INEGI said.

26. WRI, EPA, and Mexican Partners Launch Diesel Retrofit Project

EMBARQ, the World Resources Institute's Center for Transport and the Environment, the U.S. Environmental Protection Agency, the Mexico City government, the Mexican Ministry for Environment and Natural Resources (SEMARNAT), and the Center for Sustainable Transport in Mexico City have announced the launch of the Mexico City Diesel Retrofit Project.

This is a pilot project to retrofit a limited number of Mexico City buses with advanced emissions control technology to reduce emissions of particulates and other pollutants from diesel engines. Mobile sources, especially older diesel-powered trucks and buses, are a major cause of air pollution in Mexico City.

The project is designed to demonstrate how the combined use of cleaner fuels and diesel retrofit technologies can perform when applied to diesel engines operating under Mexico City's conditions. The project is similar to diesel retrofit projects now underway in U.S. cities, including Seattle, New York City, and Washington, D.C., where fleet owners and operators have committed to retrofit more than 150,000 diesel powered trucks, buses, and non-road equipment. Retrofit technologies can reduce diesel particulate emissions by 90% or more EPA and EMBARQ are awarding grants totaling \$511,000 to the Center for Sustainable Transport, a Mexico City-based non-governmental organization to implement the project.

The Mexico City Diesel Retrofit Project will draw on the expertise of a variety of partners and technical advisors, representing some of the best air pollution experts in the Western Hemisphere. These include Dr. Mario Molina of the Massachusetts Institute of Technology; the Environmental and Energy Technology Policy Institute (EETPI); Northeast States Center for a Clean Air Future (NESCCAF); the Natural Resources Defense Council (NRDC); International Truck and Engine; Volvo; Daimler-Chrysler; Engine, Fuel and Emissions Engineering Incorporated and Ambientalís,

When completed, the project is expected to demonstrate that significant reductions in harmful emissions from older, heavy-duty diesel engines can be achieved cost

effectively through a combination of tailpipe control technologies and a new generation of clean diesel fuel. The fuel used in this project is ultra-low sulfur diesel, which is increasingly used in many U.S. and European cities.

27. Faced with Court Order, EPA Reconsiders Plant Rules

The Environmental Protection Agency will reconsider part of a controversial change to the Clean Air Act that would allow U.S. utilities and refiners to upgrade aging plants without installing costly new pollution controls, the agency said yesterday.

The EPA said it would take another look at equipment replacement provisions included in the changes to the air pollution rule which affects coal-fired power plants, oil refineries and other industrial facilities.

Last December, a federal appeals court agreed to a request by environmental groups to temporarily block the changes to the EPA's "new source review" rules. The court said the rules could not take effect until the lawsuit challenging their legality was finished.

The EPA said as part of reconsidering the changes, it would allow industry, environmental groups and others to submit suggestions during the next two months. The agency will specifically review the threshold it set for replacement costs in certain industrial units and the procedure for how states should comply with changes in the federal air pollution rules.

Under the EPA's planned rules, a facility, such as a power plant, could replace equipment without installing pollution controls as long as the cost of the replacement did not exceed 20 percent of the cost of the plant.

When Congress wrote the new source review provision of the Clean Air Act in 1977, it assumed most of the aging coal-fired plants would be gradually replaced with new ones. Congress exempted plants operating at the time from stricter pollution controls, unless they launched a major renovation or expansion.

28. MMT Use In Canada Cut Back

As much as 95 percent of the gasoline sold in Canada is now free of MMT, while its use in the U.S. may be spreading, according to recent reports. Earlier this year the controversial gasoline additive was included in most of the supply of Canadian gasoline. The complete reversal comes after at least two of the largest refiners in Canada voluntarily stopped using the gasoline octane enhancer in April pending the outcome of a study to be conducted by an expert panel chosen by the Canadian government.

For automakers, reports that MMT has begun showing up in the Salt Lake City area tempers the news of the huge reduction in use in Canada.

It is alleged that methylcyclopentadienyl manganese tricarbonyl (MMT) damages the anti-pollution systems of motor vehicles. Automakers claim the problem has become much more acute with the introduction, at the beginning of the year, of less polluting vehicles to meet stricter emissions standards. The problem, it is alleged, is that the

manganese clogs the substrate of the catalytic converters. The density of the substrates has doubled or tripled in new vehicles, from 300 cells per square inch to as many as 900 per square inch.

Richmond, VA-based Ethyl Corp., the manufacturer of MMT, denies its product causes harm to catalytic converters. The company blames poorly designed anti-pollution systems for the damage automakers are finding in Canada. The company goes on to claim the use of MMT actually reduces harmful tailpipe emissions. In an earlier attempt by the Canadian government to ban MMT, Ethyl threatened a trade dispute case under the North American Free Trade Agreement dispute resolution process. As a result, Canada dropped its MMT ban and paid Ethyl more than \$10 million.

In a related development, a recent change in corporate structure by MMT producer Ethyl Corp. has reportedly been seen as a way of shielding assets from potential liability arising from the alleged detrimental effects the controversial gasoline additive has on automotive anti-pollution systems. Ethyl converted to a holding company structure with two operating companies, thus protecting the assets of one company from any liabilities arising from MMT.

The new corporate structure establishes a parent company -- named NewMarket -- and two separate operating companies. One operating company will be renamed Afton Chemical Corporation, formerly Ethyl Petroleum Additives, Inc., and will continue to market petroleum additives, including MMT. The other operating company, Ethyl Corporation, will represent "certain manufacturing operations and the tetraethyl lead business."

29. U.S. Energy-Related Carbon Dioxide Emissions Rise

A colder winter in 2003 helped boost the amount of U.S. energy-related carbon dioxide emissions spewed last year by 0.9 percent to 5,788 million metric tons, the government has announced. Broken down by fuel type, petroleum accounted for the largest share of the emissions at 2,500 million metric tons, followed by coal at 2,166 million tons, and natural gas at 1,169 million tons, according to the U.S. Energy Information Administration.

The Energy Department's analytical arm said colder weather last year meant more fuel was used for home heating, thus increasing emissions. In addition, high natural gas prices in 2003 caused industries to switch to cheaper fuel such as coal and petroleum that produce more emissions per unit, the agency said.

Energy-related carbon dioxide emissions account for 82 percent of all U.S. greenhouse gas emissions. The energy sector produced less carbon dioxide emissions last year than 2000, having fallen in 2001 by 1.8 percent and grown by 0.8 percent in 2002, EIA said.

Residential-based carbon dioxide emissions grew by 2.5 percent in 2003 as more houses were built, and emissions from the commercial sector grew 1.3 percent as the economy improved.

For the industrial sector, energy-related carbon dioxide emissions were unchanged, as industrial output grew by only 0.2 percent last year.

Emissions in the transportation sector increased 0.5 percent. While gasoline demand was up 1 percent, a 35 percent jump in the use of ethanol — a corn-based fuel additive — helped to moderate direct emissions, EIA said.

The electric power sector saw a 0.2 percent decline in power generation but a 2 percent rise in emissions as plants switched their fuel from natural gas to coal, which emits more carbon dioxide.

30. British Columbia to Offer Tax Break To Promote Use of Alternative Fuels

The British Columbia government will provide an exemption from the provincial motor fuel tax for alternative fuels that produce fewer emissions than traditional fuels, Finance Minister Gary Collins has announced. The exemption will apply to the ethanol and biodiesel portions of fuels blended with gasoline and diesel, Collins said in a statement. The exemption from the 3.5-cent-per-liter tax, first outlined in the provincial government's 2004 budget, took effect on July 1, 2004.

The statement noted that a number of alternative fuels already had been exempted from the provincial motor fuel tax. The exemption has now been expanded to low-level blends of gasoline and diesel fuel that contain up to 25 percent ethanol or up to 50 percent biodiesel, it said.

Ethanol is made from organic materials, including corn and grain. According to the Canadian Renewable Fuels Association, ethanol use reduces emissions of carbon monoxide 30 percent, carbon dioxide 6 percent to 10 percent, and volatile organic compounds 7 percent.

Biodiesel generally is made from vegetable oils and animal fats, and its use produces lower emissions of carbon dioxide, hydrocarbons, and particulates than regular diesel.

Tax Bulletin SST-085, issued by the Ministry of Provincial Revenue in April 2004, provided an exemption from the motor fuel tax for natural gas, as well as for alcohol-based fuels that contain at least 85 percent ethanol or methanol. The tax bulletin also outlines details of the provincial government's sales tax rebates for vehicles that use alternative fuels, as well as kits for converting motor vehicles to use eligible alternative fuels and services to install, repair, and maintain such equipment.

The 2004 provincial budget also amended the regulations under the Motor Fuel Tax Act governing exemptions for alternative fuels, reducing the number of emissions groups used in evaluating fuels that qualify as "alternative" from six to four. The new criteria groups are greenhouse gases, nitrogen oxides, particulate matter combined with air toxics, and volatile organic compounds.

31. Panel Delays Scientific PM Report As Industry Urges More Changes

An EPA advisory panel has postponed finalizing a scientific review on the impacts of particulate matter (PM), giving industry groups more time to air their concerns with the agency about scientific uncertainty on the possible adverse health effects from the

pollutant. EPA officials say the delay in finishing the document is unrelated to industry concerns, and the agency will soon put the finishing touches on a review that has been six years in the making. But industry groups are already paving the way for a possible lawsuit over the document under a data quality law. They are also requesting a meeting with EPA's air chief to discuss the issue.

A federal court also ruled in EPA's favor in a lawsuit environmentalists filed attempting to force the agency to complete its scientific "criteria document" for PM. A previous consent decree between EPA and the American Lung Association had stipulated the agency should finalize the document by July 30, 2004. In a July 23 decision, the U.S. District Court for the District of Columbia set an Oct. 29 deadline to complete the report.

The agency's Clean Air Scientific Advisory Committee (CASAC) recently met in Research Triangle Park, NC, to consider the latest draft of the document. The report could lead to standards that are even stricter than new limits the agency will implement next spring on fine particles (PM_{2.5}). The criteria document maintains that PM poses significant health risks, while also highlighting some uncertainties about the science.

The panel agreed July 22 to finalize all but the document's final chapter, which summarizes the report's conclusions. The committee will meet via teleconference in September with the goal of approving the entire document.

But EPA is already facing challenges from industry officials who argue the agency has failed to account well enough for scientific uncertainty as it considers stronger PM standards. The U.S. Chamber of Commerce sent a letter July 12 to EPA staff, charging the agency's latest revised chapters of the criteria document do not address a British study that could undermine some of the report's conclusions -- despite previous industry efforts to have EPA consider the study. Conducted by Gary Koop and Lise Tole of the University of Leicester, the study states that available evidence does not show adverse health effects from particulate matter at its current levels.

The Chamber charges in its letter that "despite the fact that the Koop and Tole report has been repeatedly called to the attention of the agency, there is absolutely no mention of, let alone discussion of, the Koop and Tole report in the criteria document. It is as though the Koop and Tole report does not exist. This is a matter of the gravest concern to the Chamber and many other business and industry stakeholders."

EPA is required to evaluate the latest research on PM and other major pollutants every five years, forcing the agency to take into account thousands of new studies. After the agency finalizes the criteria document, EPA officials will complete a "staff paper" that could recommend tighter standards. A draft staff paper issued last year called for stronger PM_{2.5} standards as well as a new standard, PM-Course, which would address particles between 2.5 and 10 microns.

32. DOE Completes Fuel Economy Testing Of Hybrid Vehicles

The U.S. Department of Energy, through its Advanced Vehicle Testing Activity (AVTA), has completed 1 million miles of hybrid electric vehicle fleet testing. The testing includes collecting the energy efficiency (miles-per-gallon fuel use), and vehicle maintenance and repairs data, as well as defining the types of missions the hybrid electric vehicles are

driven in. At testing completion, the vehicles are sold and the total life-cycle costs - including depreciation, fuel, operating, maintenance and repair costs - are calculated and reported.

The number of each type of hybrid electric vehicle tested, the total miles accumulated, and average fuel economy to date include:

- * 4 Honda Civics, 284,000 miles and 38.0 mpg
- * 6 Honda Insights, 347,000 miles and 46.0 mpg
- * 6 Toyota Prius (model years 2002 and 2003) 380,000 miles and 41.1 mpg, and
- * 2 Toyota Prius (model year 2004) 16,000 miles and 44.6 mpg.

Each hybrid electric vehicle model is also dynamometer and track tested.

In addition to testing hybrid electric vehicles, the Idaho National Engineering and Environmental Laboratory (INEEL) manages AVTA activities such as the testing of internal combustion engines operating on 100 percent hydrogen, and various blends of hydrogen and compressed natural gas (CNG). The use of hybrid electric vehicles and hydrogen and hydrogen/CNG fuels reduces the use of petroleum, and offers emissions benefits.

33. Caterpillar Diesel Engines Meet New EPA Off Road Standards

Caterpillar has announced that it has become the first company to have a full line of diesel engines certified by the U.S. Environmental Protection Agency that meet off-road emission standards for 2005 and 2006. The EPA certification of seven Caterpillar engine models allows early production of the cleaner diesel engines, the company said. It also enables Caterpillar to offer customers a full line of engines featuring its ACERT technology in the 175- to 750-horsepower range.

Caterpillar, the world's largest maker of earth-moving equipment, said it will start shipping the cleaner diesel engines to industrial manufacturing customers this month. Machines powered by the engines will reach the market in October.

34. Ex-Worker Charges AEP Violated Pollution Laws

A former employee of American Electric Power Co. Inc. on Tuesday has accused the largest U.S. power producer of violating pollution laws and doing nothing about it, prompting an environmental group to seek a criminal probe over the matter. Three AEP power plants in the Dallas area discharged carbon monoxide emissions at "several thousand percent" over permitted levels and illegally burned truckloads of hazardous chemical waste as fuel, said Bill Wilson, a former AEP air quality engineer. Wilson, who is being backed by the Environmental Integrity Group, also accused AEP of exceeding limits for emitting smog-forming chemicals and misrepresenting data.

AEP denied the allegations and said it had discussed the issues with Wilson earlier this year. The company said it had conducted an internal investigation and reviewed the issues raised by Wilson. It said it found no violations had occurred for the most part and for the remaining claims, AEP had responded quickly and properly reported the incident.

Wilson, however, says he was fired in May for calling attention to the violations at the Welsh, Pirkey and Knox-Lee plants. AEP says his dismissal was not related to the issue.

As a result of Wilson's accusations, the Environmental Integrity Project, which pushes for greater enforcement of environmental laws, said it is formally petitioning the U.S. Department of Justice to investigate the Columbus, Ohio-based company.

The U.S. Environmental Protection Agency and Justice Department have sued AEP and several other electric utilities for upgrading aging coal-fired plants without installing scrubbers or other devices to reduce air pollutants linked with acid rain, smog, soot and health problems like chronic bronchitis and pneumonia.

The case against AEP, filed in December 2000, has yet to go to trial.

35. EPA Staff Mulls Lawsuits Vs 22 Utilities

A total of 22 U.S. electric utilities could be sued for harmful emissions from aging coal-fired plants if the Bush administration pursues cases recommended by Environmental Protection Agency staff, according to an internal EPA list obtained by the press. The EPA has forwarded 14 cases to the U.S. Justice Department, and could send another eight cases within 30 days according to the list.

The Justice Department has not yet committed to pursue the cases, many of which have likely sat idle since 2001, when the Clinton-era department finished filing cases against nine utilities for violating the Clean Air Act. Many of the original cases are still unresolved.

The Justice Department has not filed the cases in court, but the action indicates EPA enforcement staff's intent to pursue the cases.

Environmentalists criticized the Bush administration for failing to date to take action on the EPA staff recommendations.

SOUTH AMERICA

36. Venezuela's Urban Air Quality Improves; Moving Toward Unleaded Fuel

Air quality in Venezuelan cities has improved substantially over the last two decades, with decreases recorded in both airborne lead and particulates as the country moves ahead in phasing out leaded gasoline, the Ministry of the Environment and Natural Resources (MARN) reported June 16. According to the ministry, the average concentration of suspended lead particles dropped from 2.4 micrograms per cubic meter in 1982 to 0.4 micrograms per cubic meter in 2003. The average for the years from 1982 through 2003, excluding 1991 when data was not collected, was 1.2 $\mu\text{g}/\text{m}^3$. Lead concentrations declined steadily for the last three years for which figures were available, dropping from 0.9 $\mu\text{g}/\text{m}^3$ in 2001, to 0.7 $\mu\text{g}/\text{m}^3$ in 2002, and to 0.4 $\mu\text{g}/\text{m}^3$ in 2003.

However, the data was not complete for all cities for all years because of breakdowns of collection apparatus. For example, 2003 data was collected only in Caracas, San

Cristobel, and Valencia, whereas 1995 data included four additional cities: Maracaibo, Guanta, Puerto La Cruz, and Puerto Ordaz. Still, those three cities also showed declines in the number of times that pollution exceeded national air quality standards.

In September 2002, as part of a national campaign to phase out leaded gasoline, Venezuela eliminated 87-octane leaded gasoline, leaving 91-octane leaded gasoline and 95-octane unleaded gasoline. In an earlier measure, Venezuela in 2000 banned the importation of cars that use leaded gasoline.

Venezuela heavily subsidizes gasoline prices. By law, leaded gasoline retails for about 10 cents a gallon, unleaded for about 14 cents. The country has no emissions standards on private vehicles, and there are many decades-old cars which use leaded gasoline and pollute heavily.

Concentrations of suspended particulate matter have also declined, according to MARN. The 2003 national average was 55 micrograms per cubic meter, the second lowest average since 1981. Only the 1997 average was lower, at 54 $\mu\text{g}/\text{m}^3$. The average concentration for the 23 years beginning in 1981 was 74.7 $\mu\text{g}/\text{m}^3$.

Data showed improvement for two of the three cities monitored. For Caracas and Valencia, the number of times that particulate matter concentrations exceeded 75 $\mu\text{g}/\text{m}^2$ declined by 50 percent from 1995 to 2003.

However, in San Cristobal, concentrations exceeded a second limit of 150 micrograms per cubic meter more often in 2003 than in 1995.

37. Argentine Bill Would Use Tax Cuts To Promote Use of Cleaner 'Biofuels'

A group of 50 Argentine senators has presented a bill that would use tax breaks to promote the use of "biofuels," which, as defined by the bill, blend vegetable oil and alcohol with gasoline and diesel to make them burn cleaner.

Argentina is the world's third-largest exporter of soybean and second-largest exporter of corn, both of which can be used to generate biofuel, along with other crops such as sorghum and sugar cane that are also widely planted in Argentina.

The Senate's Energy Committee started discussing the bill the week of Aug. 2. The backing of the 50 senators in addition to Vice President Daniel Scioli should ensure swift passage, according to congressional sources.

The bill envisions tax breaks for at least 15 years on fuels that contain at least 5 percent vegetable oil or ethanol, an alcohol obtained from the fermentation of sugar and starches. The bill would also offer tax breaks to companies that produce biofuels.

The move came as Argentina, traditionally a crude oil and natural gas exporter, was recently forced to import gas and diesel fuel following a major spike in demand when the economy bounced back from a deep recession.

A document accompanying the bill said gasoline with 10 percent ethanol could cut carbon dioxide emissions by 30 percent. "For every ton of biodiesel used instead of

diesel fuel, some three tons of carbon dioxide (output) can be averted," the document said. Argentina is particularly vulnerable to global warming. According to the World Bank, Argentina is among the 14 nations most affected by climate change, primarily from increased flooding. In January the bank extended a \$1.14 million grant to help Argentina develop a greenhouse gas inventory.

Congressional sources said the proposal has garnered unusually strong support in the Senate because most Argentine provinces have more farmlands than oilfields, and the bill is seen to have the potential to simultaneously cut fuel bills and boost demand for grain.

ASIA PACIFIC

38. Australia Assesses Need for Diesahol Standard

The merits of setting a national fuel quality standard for diesel and ethanol blends (diesahol) are discussed in a paper released May 27 by Australia's Department of Environment and Heritage. Diesahol is currently not subject to any formal quality standards. Vehicles running on diesahol emit much lower levels of particulate matter than normal diesel vehicles, the paper says. Options include continuing without any standard, a voluntary industry standard, or a standard prescribed under the Fuel Quality Standards Act 2000. Diesahol is likely to remain a niche fuel suitable for centrally refueled fleets, the paper notes. Public comment closed July 7.

39. China's Geely to Step Up Car Exports, Eyes US

China's Geely Automobile Holdings Ltd. said it plans to step up car exports this year after testing overseas markets in late 2003, with an eye to selling 30 percent of its output abroad by 2010.

Auto makers in China plan billions of dollars worth of new capacity over the next few years, prompting fears of a glut and leading some to look to exports as a growth outlet, analysts have said. Just a tiny fraction of China's car output is now exported.

Geely, based in the eastern province of Zhejiang, plans to export its home-grown sedans this year to South America and North Africa, and is also looking to the U.S. market. Sport utility vehicle maker Great Wall Automobile Holdings Co. Ltd., which exports vehicles to the Middle East and South America, has also indicated it wants to export to the United States. One significant problem is that Geely has yet to meet U.S. emissions standards.

Geely, which makes some of the cheapest cars in China, plans to export 5,000 vehicles to the Middle East, South America and North Africa this year after shipping 1,000 cars to Syria in the fourth quarter of 2003 at US \$4,000-\$6,000 each. Recently, Geely exported 320 cars to Syria, 200 of which were priced at \$10,000 each.

Geely has two car ventures that make low-priced sedans under the brands Maple, Merrie and Uliou, and the Beauty Leopard sports car. It also makes the Haoqing minicar, the cheapest on the Chinese market at just \$3,867.

40. Public Transport To Be Key Focus For China Over Next 5 Years

China will give high priority to the development of the urban public transportation system in the next five years according to remarks made recently by Chinese Vice Minister of Construction Qiu Baoxing at the National Urban Public Transportation Conference in Beijing. Qiu said foreign experiences have proved that giving priorities to the urban public transport development will not only help ease the urban traffic jams, but also improve the urban living environment and realize sustained development in cities.

Qiu said, as an important urban infrastructure serving most people, the urban public transportation system includes public buses, electric buses, subways, taxis, ferries and other public transport vehicles.

The ministry has set an initial five-year goal for developing urban public transport. In the next five years, all local governments will build more public transportation infrastructures and special public transport roadways in the urban areas to ensure public vehicles run on designated roadways or have preference over certain roadways.

At that time, the average speed of the national public transportation system is expected to reach 20 kilometers an hour, and over 90 per cent of public vehicles will run on time. Currently in China's capital Beijing, the average speed of urban buses is lower than 10 kilometers an hour due to the heavy traffic jams caused by the surging number of private cars.

To solve the problem, Beijing will build some parking lots around the urban areas, which will help private car owners change to take public buses to their work places in downtown areas.

Beijing will build 16 kilometers of new special roadways for public buses this year, and by 2010, 75 per cent of Beijing's major roadways and some expressways will open special public traffic roadways, with the total length increasing from the current 93 kilometers to over 300 kilometers.

In the coming five years, all China's megacities like Beijing are expected to increase the proportion of their urban public transport to 30 per cent of the total, while the proportion in other cities is expected to exceed 20 per cent.

Qiu said the Chinese government will also increase investment in urban transport stations construction and other traffic infrastructure making the annual total investment reach about three-to-five per cent of the national urban GDP.

Qiu said China will also speed up reform of the urban public transport enterprises, inviting domestic and foreign investors to join the franchised operation of urban public traffic.

Along with the development of urban transport, Qiu called for all local governments to take steps to develop rural public transport systems. By extending the urban public transport service to the rural areas, more rural people will share the same transport service with urban dwellers, Qiu noted.

41. Eco-Friendly Cars to Qualify for Thai Tax Breaks

The Industry and Finance ministries have agreed to offer tax incentives to encourage the production and sale of energy-efficient vehicles, while carmakers have urged the government to cut tariffs on imported hybrid cars. Industry Minister Phinij Jarusombat said tax incentives would encourage manufacturers to produce vehicles that consume less fuel under the government's "Best Little Car" project, formerly known as "Eco Car". Also, a lower excise tax rate would make the models more affordable for consumers.

"We have reached agreement with the Finance Ministry on a low excise tax on energy-saving models and that would be a part of a reform of the overall tax structure that will be endorsed in the coming months," said Mr. Phinij. "It is a global trend for tax incentives to be provided to energy-efficient models such as hybrid vehicles."

Vachara Panchet, the vice minister for industry, said the availability of energy-saving vehicles would be critical with global oil prices expected to remain high. Automobiles that consume one liter of petrol to a minimum of 18-20 kilometers traveled would qualify for the new tax incentives. He said tax incentives would also be provided for fuel cell or hybrid cars as well as models that use ethanol-blended gasohol.

The incentives are a response to a request by three multinational automakers that have expressed interest in manufacturing energy-efficient cars in Thailand. One of them, Honda, said previously that it would invest six billion baht to produce environmentally friendly small cars locally.

With the incentives, the Industry Ministry expects the environmentally friendly cars to be priced in a range of 300,000 to 400,000 baht.

Meanwhile, Ninnart Chaithirapinyo, the vice-chairman of Toyota Motor Thailand, said the government should look into the possibility of eliminating the import tax on hybrid cars. Currently, high import duties result in a sticker price of up to 2.5 million baht for an imported hybrid, compared with 700,000 baht if the model is produced locally. A 1,500 cc hybrid car consumes a liter of petrol per 30 km, half the amount consumed by a conventional vehicle.

The government has also proposed a tax increase on large passenger cars with engine capacity exceeding 2,500 cc in order to encourage energy conservation. Mr. Ninnart said the move would not have a significant impact on domestic car sales as such large sedans account for just 10 percent of total sales.

42. CSE Criticizes Delhi On Diesel Tax; Gets Positive Response

Disturbed by the fact that the Delhi government is backtracking from its decision to increase the sales tax on diesel and encourage the use of dirty diesel in the transport sector, the Centre for Science and Environment sent a missive to the chief minister in protest. CSE has demanded that diesel cars and diesel fuel in the city be made more expensive to discourage the use in the interest of public health.

In an open letter to Delhi Chief Minister Sheila Dikshit, CSE expressed grave misgivings and stated, "the alarming levels of dieselization of the personal car fleet in Delhi threatens to enhance toxification of the city's air. The enormous effort the city has made to control toxic diesel particulate pollution with the help of the largest-ever CNG program in the world may get lost if immediate steps are not taken to restrict expansion of the personal diesel car fleet that meet only ineffectual emissions standards."

CSE drew attention to the fact that though Delhi has the country's highest per capita income, it still has the lowest diesel prices. The sales tax on diesel is fixed at 12 per cent and Delhi is not even imposing the minimum 20 per cent sales tax on diesel, as is enforced by other states. In Mumbai, for instance, the sales tax on diesel is as high as 34 per cent. If the Delhi government could apply the 'polluter pay principle' and bring the sales tax on diesel at par with, say, Mumbai's rates, then it could net in as much as Rs 700 crore per year.

The Delhi government is concerned that the low taxes in the neighboring state of Haryana will push demand across the border and dampen revenue collection. CSE holds that as sizeable fraction of the public transport fleet is already on CNG, and also because it is possible to encourage the remaining segment of the city commercial fleet to move to CNG, the implication of the cross border shift will be negligible. On the contrary, the higher sales tax on diesel will help check the rapidly rising numbers of diesel passenger cars in the city.

CSE cautioned that Delhi, which has earned a clean city image and worldwide recognition for its efforts to clean up its air, is letting flawed policies undermine its achievements and is intensifying health risks.

In view of this CSE made the following demands:

- Eliminate the price advantage of diesel cars and make diesel vehicles pay for the environmental damages they cause. Increase sales tax on diesel, and additionally, impose emission tax on diesel cars.
- Demand and enforce Euro IV standards for all vehicles from 2005.
- Implement effective in-use vehicle inspection system for on-road diesel vehicles that can test and monitor particulate and nitrogen oxide emissions from diesel vehicles. Visibly smoking vehicles should be immediately taken off the road with strict penalties.

CSE further noted that that despite the enormous efforts and substantial gains made following the implementation of a series of policy measures to combat air pollution, the city's air remains polluted. The average particulate levels, a significant cause of health impacts in cities, are still substantially above the national ambient air quality standards.

In response, the Delhi government moved to impose environment cess on diesel passenger cars and Sports Utility Vehicles (SUVs) and increased the sales tax on diesel in the new Budget. This application of 'polluter pay principle' will not only help to control the harmful trend of the growing number of diesel cars but also help Delhi government to generate revenue that can be spent to improve public transport system, said CSE.

43. South Korea Issues Detailed Emissions Rules

On June 14, South Korea's Ministry of Environment unveiled detailed regulations to implement legislation passed last December aimed at improving air quality in Seoul and the capital city region. The rules would set tougher emissions limits for vehicles and factories in Seoul and 25 surrounding cities. Two pieces of legislation, including a decree and a set of enforcement rules (Notice No. 2004-74 and 2004-75), provide numerical criteria and standards for the enforcement of the Special Act on the Improvement of Air Quality in the Capital Region passed in late 2003.

According to a ministry announcement, the package of rules and regulations now needs parliamentary approval and should go into effect by January 2005. "The state of air pollution in this region requires strong regulatory intervention," said An Se-chang, the program director at the ministry's Air Quality Management Bureau.

From January 2005, carmakers selling at least 3,000 cars every year and large suppliers of commercial vehicles in the region must include low emission vehicles (LEVs) in their sales inventory up to a certain percentage set annually by the ministry. Hyundai Motor Co. and its Kia Motors Corp. subsidiary, GM Daewoo Auto & Technology Co., and two other local automakers fall under the requirement.

These LEVs must pass tailpipe tests and meet the ministry's new LEV emissions standards, which will be toughened further in January 2006. Government agencies and other public institutions operating 10 or more vehicles will be required to meet at least 20 percent of their vehicle purchasing needs with LEVs.

44. South Korea to Consider Bill To Encourage Environment-Friendly Vehicles

Legislation to provide financial and tax incentives for environment-friendly vehicles was approved by South Korea's Cabinet and is now to be reviewed by the National Assembly (parliament), the Ministry of Commerce, Industry, and Energy said June 16.

The bill to enact the "Law on the Promotion of Environment-Friendly Vehicles Development and Diffusion," which will take effect six months after passage by the Legislature, would introduce a range of incentives for manufacturers, distributors, and consumers in the form of financing support and tax breaks. More detailed measures will be contained in subordinate rules and regulations.

The ministry proposed a similar bill in July 2003, but the bill was discarded with the dissolution of the previous National Assembly at the end of its four-year term last May. The second bill contains many of the same provisions including financing support for technology development and tax breaks available for purchasing environment-friendly vehicles. Reductions in highway tolls and parking fees also will be offered for environment-friendly vehicles.

The law defines environment-friendly vehicles as those using solar-powered, hybrid, or fuel-cell engines and meeting prescribed fuel efficiency and emissions standards with government certification.

The law will require the ministry to draw up five-year blueprints and annual action plans for a national environment-friendly vehicle program.

In addition, government agencies and businesses will be required to use environment-friendly vehicles for a certain percentage of their fleet.

45. Indonesian House of Representatives Approves Ratification of Kyoto Protocol

A working committee under Indonesia's House of Representatives June 23 approved a bill to allow the country to ratify the Kyoto Protocol to the United Nations Framework Convention on Climate Change, eliminating the last major hurdle to Indonesia's endorsement of the pact.

Committee Chairman Amris Hasan said in a statement that officials had decided to back the bill "as part of our commitment to reduce global warming."

The ratification of the protocol will come into effect only when endorsed by the House of Representatives' in a plenary session and signed by President Megawati Sukarnoputri, but environmental groups, viewing the committee's approval as the final significant step in the ratification process, praised the announcement.

The bill vetted by the committee notes that industrialized countries have an obligation under the protocol to lower their greenhouse gas emissions, and that it will help developing nations like Indonesia to obtain funding through instruments under the protocol such as the Clean Development Mechanism (CDM).

The Kyoto Protocol's CDM provisions allows parties to the treaty to earn credits toward meeting emissions reduction targets by investing in projects to reduce greenhouse gas emissions in developing countries.

Several foreign companies are investing in geothermal projects in Indonesia in the hopes of obtaining emissions credits under the CDM, including Amoseas, a subsidiary of ChevronTexaco.

With its rich tropical rainforest resources under threat from logging, land conversion, and fires, the country is also prime ground for reforestation initiatives. According to the government, some 23 million hectares (57 million acres) of the country's 140 million hectares (346 million acres) of forest had been destroyed by the end of 2002.

46. India Submits Low Emissions Data To U.N. Body

On June 22, India submitted its "initial national communication" to the secretariat of the United Nations Framework Convention on Climate Change outlining the country's greenhouse gas emissions profile in a step toward meeting UNFCCC obligations for participating in the Kyoto Protocol process as a "non-Annex I" (developing country) party.

India's national communication cites 1994 figures, which indicate that the country's greenhouse gas emissions amounted to about 3 percent of the global total in that year, India's federal Environment and Forests Minister Thiru A. Raja said in releasing the document June 18. By comparison, the contributions of the United States, Japan, Germany, and United Kingdom in 1994 were 20 percent, 5 percent, 4 percent, and 2

percent respectively.

According to a ministry statement, India's greenhouse gas emissions from human activities in 1994 amounted to 793 million tons of carbon dioxide, 18 million tons of methane, and 0.178 million tons of nitrous oxide. In that year, India's per capita CO₂ emissions were 0.87 tons, amounting to 4 percent of U.S. per capita emissions, 8 percent of Germany's, 9 percent of the United Kingdom's, 10 percent of Japan's, and 23 percent of the global average.

India is particularly vulnerable to climate change since more than 650 million people in the country depend on climate-sensitive sectors like agriculture and forestry for their livelihood, the statement said. "Forestry in India seems to be highly vulnerable to the projected change in climate. Coastal areas, natural ecosystems, hydrological cycle, and infrastructure are also vulnerable to climate change in varying degrees," it said.

47. Australia Facing Serious Emissions Issues

A. Study Says Australia Worst Per Capita Greenhouse Gas Emitter

Australians have the highest greenhouse gas emissions per person of all industrialized countries, according to research released June 18 by the Australia Institute, a Canberra-based think tank. On a per capita basis, emissions by Australians are 27 per cent higher than those of U.S. citizens and are more than double the average for industrialized countries, according to the report.

The study takes into account emissions from all sources, not just energy-related emissions. In terms of energy-related emissions alone, Australia's per-capita rate is high but is exceeded by other industrialized countries, including the United States.

The report, *Greenhouse Gas Emissions in Industrialized Countries: Where Does Australia Stand?*, says that Australia's heavy reliance on coal for electricity generation instead of hydro and nuclear power is a key factor contributing to the high per capita emission levels. So too is its large aluminum smelting sector, which is able to buy electricity at heavily discounted prices.

The study says road transport emissions are another key factor that pushes Australia's per capita emissions well above average levels. However, it questions the prevailing view that long distances between population centers are the reason for high levels of emissions from the transport sector. Only a small proportion (5.5 percent) of passenger transportation involves interstate trips, it says. And the average road freight distance traveled is longer in the European Union than in Australia, although on a per capita basis many more road-freight trips are made in Australia, and the loads are much heavier.

"Australia's total emissions exceed those of major European economies such as France and Italy," each of which has around three times Australia's population, "and are only 20 per cent lower than those of the U.K.," according to the report.

While average per-capita emissions in industrialized countries as a whole declined by more than 12 percent between 1990 and 2001, due mainly to changes in Eastern Europe and the former Soviet Union, Australia's per capita emissions declined by just

over 7.5 per cent.

B. Fund For Low Emissions Technology Grants

Australia will offer A\$500 million (\$342 million) in grants for projects to reduce greenhouse gas emissions as part of a new energy policy announced June 15 by Prime Minister John Howard. Also included in the package is a A\$75 million (\$51 million) initiative to demonstrate the benefits of using solar power in urban areas.

The A\$500 million "low emissions technology" fund will support projects that "have the potential to lower Australia's emissions by at least 2 percent in the long term at a realistic uptake rate," the paper says.

Renewable and fossil fuel-based technologies (such as the geo-sequestering of greenhouse gas emissions from coal combustion) will be eligible for funding, as will technologies that improve energy efficiency. Applications for funding will be invited in several funding rounds, the last of which will occur in 2012. Grant recipients will receive one dollar for every two dollars of their own money invested.

The A\$75 million "solar cities" initiative will fund a series of trials to gauge the benefits of combining solar and energy-efficiency technologies with advanced metering systems that give customers better information on their energy use and costs.

Another A\$100 million (\$68 million), comprising A\$50 million in new money and A\$50 million in existing funding, will be directed over seven years to research and commercialization measures for smaller-scale renewable technologies. Measures to remove barriers to the deployment of renewables and to support the development of advanced electricity storage technologies for renewable energy will get up to \$34 million (\$23 million) over five years.

Other elements of the energy white paper include:

- a requirement that firms using more than 0.5 petajoules of energy a year (estimated to be about 250 companies) conduct energy efficiency audits every five years;
- an instruction to the Productivity Commission, the government's key advisory body on economic reform, to inquire into measures to improve the energy efficiency of the Australian economy;
- a revamp of the government's voluntary Greenhouse Challenge program, which encourages signatory organizations to monitor and abate greenhouse gas emissions. The changes will see a range of membership categories introduced, with the aim of highlighting the achievements of members aiming for best practice reporting and abatement. Participation in the program will now be compulsory for proponents of new resource projects that are likely to be large GHG emitters.

The energy statement was welcomed by the Minerals Council of Australia, which has been a strong opponent of Australia ratifying the Kyoto Protocol and whose members stand to gain significantly from the phase out of the excise on diesel. The Energy Supply

Association, which represents the energy supply businesses, was generally supportive of the statement but criticized the prime minister's failure to set a long-term target for abatement.

C. Movement To Drive Cleaner Cars

The Australian government is urging consumers to give up their love affair with large four-wheel drive vehicles and opt instead for more environmentally friendly models. At the launch of a Web site designed to inform consumers about the environmental impact of new cars, Transport Minister John Anderson told potential buyers to consider the environment when choosing a vehicle.

Many Australians depend on four-wheel drive vehicles for transport in remote Outback areas with few or no roads. But in recent years, an increasing number of people are also driving the gas-guzzling vehicles in town.

The Web site ranks about 1,200 new cars available for sale in Australia by fuel efficiency, air pollution, and greenhouse gas emissions. It gives an overall rating for vehicle performance, with specialized cars such as Honda's Insight hybrid scoring five stars.

D. Low Sulfur Fuel Agreed To

The Minister for the Environment and Heritage, Senator Ian Campbell, has announced two new tough fuel standards that will make Australian transport fuels among the cleanest in the world.

Sulfur in premium unleaded petrol will be limited to 50 ppm from 1 January 2008, down from 150 ppm now. Sulfur in diesel currently 500 ppm, will be cut to 50 ppm on 1 January 2006 and capped at 10 ppm from 1 January 2009.

"These reductions are among the final steps of the Government's strategy to dramatically reduce urban air pollution," Senator Campbell said.

"Lower sulfur will mean much better air quality in Australia's cities and towns and help the two million asthmatics and countless other Australians who suffer from breathing problems.

"By 2020, cleaner fuel initiatives taken by this Government will have saved \$3.4 billion in hospital and medical costs.

"These reductions will have an immediate impact on particle emissions from the existing vehicle fleet and, just as importantly, will hasten the introduction of the next generation of cleaner vehicle engines and emission controls.

"Pollution from particulate matter will be immediately reduced by five per cent nationally with the introduction of 10 ppm diesel. Reductions will increase as new vehicle technologies come on stream, designed to run on this virtually sulfur free diesel.

"Access to the latest technology will assist Australia's vehicle manufacturers to remain internationally competitive and open the Australian market to the newest vehicles from

overseas.

"This decision builds on the Howard Government's achievements in mandating cleaner fuels, which include the establishment of the first national fuel standards under the Fuel Quality Standards Act 2000 and the banning of leaded petrol from January 2002.

"By announcing the new standards with a long lead-time, the Government is providing certainty to the Australian petroleum refining and motor vehicle industries in their future investment strategies.

"In May last year, the Government announced incentives to help refiners and importers offset the increased cost of producing cleaner fuels and making lower sulfur fuel available more quickly. The incentives will be provided for a two-year period prior to commencement of the fuel standards."

The standards have been recommended by the Fuel Standards Consultative Committee, which comprises representatives of consumers, industry, environment and state governments.

Regular unleaded petrol will contain maximum 150 ppm sulfur from 1 January 2005, down from the current 500 ppm maximum mandated since 1 January 2002.

The Department of the Environment and Heritage calculates that the reductions between 2002 and 2020 will result in 360,000 tons of sulfur being taken from the atmosphere. This would fill 160 Olympic size swimming pools.

To encourage the move to low sulfur fuels, which has been discussed for some time, the government last year unveiled a plan to lower excise duties to refiners and importers supplying these fuels ahead of schedule.

The move to low sulfur fuels and the general push for cleaner fuels has required most refineries to undertake or plan upgrades, according to the Australian Institute of Petroleum (AIP), which represents Australia's oil industry. AIP member companies expect to invest up to A\$2 billion (\$1.4 billion) in refinery upgrades to meet the fuel standards, according to AIP Executive Director John Tilley.

On July 27, the Lytton refinery owned by Caltex Australia Ltd., which is part-owned by ChevronTexaco Global Energy Inc., announced it had received environmental clearances from Brisbane City Council to proceed with a A\$145 million (\$102 million) upgrade to enable it to produce low-sulfur fuel. The go-ahead means the Lytton refinery will have the capacity from 2006 to meet the 2009 low-sulfur standard for diesel and the 2008 gasoline standard.

48. New South Wales Sets Gasoline Rules, Raises Pollution Fees

The Australian state of New South Wales introduced regulations July 1 requiring gasoline sold in Sydney during summer months to have a lower volatility than fuel sold during the rest of the year. In a separate move aimed at reducing air pollution, the state raised air pollution license fees 20 percent.

The gasoline rule, called the Protection of the Environment Operations (Clean Air) Amendment Regulations, aims to reduce emissions of volatile organic compounds, which are precursors to smog, during vehicle refueling. Importers and refineries must keep records to show the gasoline they supply is below the vapor-pressure limits specified in the regulations and must provide data on a monthly basis to the state government.

The scheme has operated in Sydney on a voluntary basis since 1998-99 but will become mandatory under the new regulations.

The regulation to boost air pollution fees aims to give companies a stronger incentive to reduce air emissions, according to the NSW Department of Environment and Conservation. The Protection of the Environment Operations (General) Amendment (Pollutant Weightings) Regulation 2004 entered into force July 1.

Since 1999, pollution license fees paid by companies in NSW have been strongly tied to the amount of pollution they emit. This linkage is intended to give companies a financial incentive to reduce emissions below maximum permitted levels.

However, the department says that while the fee structure for water pollution has provided this incentive, fees for air pollution were too low to have much impact.

49. China Introduces 'Euro II' Standards Nationwide

China announced it will impose nationwide automobile emission limits based on the European Union's "Euro II" standards, one year after the rules were first piloted in the Beijing and Shanghai metropolitan areas. Wang Jirong, vice director of the State Environmental Protection Administration, told a news conference in Beijing July 1 that manufacturing, importation, and sales of cars that fail to meet the new standards will be banned within one year. China will then move to standards equivalent to the EU's Euro III by 2008, he said.

The Euro II standards went into force in the EU in 1997. China phased out leaded gasoline in 2000 and imposed Euro I standards nationwide in 2001.

China's "Euro II" standards will further reduce pollution limits by 30.4 percent for carbon monoxide and 55.8 percent for nitrogen oxide and hydrocarbon emissions, according to the official Xinhua News Agency.

Shanghai is now considering even stricter emissions controls and financial incentives to encourage use of natural-gas-powered cars and hybrid buses, according to Wang Jue, deputy director for air pollution control at the city's Environmental Protection Bureau. Wang told the International Trade Fair for Environmental Protection July 1 that Shanghai will ban oil-burning motorcycles and scooters from the city's main highways by 2008. The city is increasingly concerned about automobile emissions, since the number of vehicles on the road is increasing by 10 percent to 15 percent each year, Wang said.

Beijing is also looking to tighten standard next year.

Vehicle emissions are an emerging source of air pollution, especially in China's major

cities. The total number of cars in China rose from 5.5 million in 1989 to 14 million in 1999 and 24 million at the end of 2003, and the government forecasts that number to reach 156 million by 2020.

Most major Chinese cities exceed the World Health Organization's acceptable air pollution levels by two to six times, and pulmonary disease is the country's leading cause of death.

50. China Oil Giants Increasingly Profitable

China's top two oil producers enjoyed higher prices in the first half of 2004 and strong performance at their refining and chemical operations as demand driven by a booming economy outstripped domestic supply.

PetroChina Ltd. said its first-half oil prices rose nearly six percent on the back of strong global demand, but output remained flat as production at its ageing Daqing field in northeastern China did not keep up with domestic demand that is expected to rise by 14.5 percent this year.

To meet its thirst for oil, China's imports surged nearly 40 percent in the first half, state media have reported.

Sinopec Corp., Asia's largest refiner, said surging local demand probably pushed its first-half net profit up by more than half. China-listed firms are required to issue a warning if they expect their results to move by 50 percent or more in either direction.

Analysts said future profits at both would rely on oil prices. China's efforts to cool its soaring economy might also crimp demand growth.

PetroChina, one of the most profitable companies in Asia, is expected to post record profits when it reports its first-half results in late August. "The company believes the market conditions as well as the current global and domestic environment are favorable for PetroChina," PetroChina said in a statement.

State-controlled PetroChina said its average oil selling price rose nearly six percent year on year to US\$29.76 per barrel in the first six months. PetroChina uses the majority of its crude output for its own downstream operations. Oil consumption in the United States and China pushed oil prices to record highs in the first half. The average price for benchmark North Sea Brent crude stood near US\$34 per barrel in the first half compared with US\$28.80 a year earlier.

Beijing-based PetroChina said its first half total oil and gas production rose 2.7 percent to 456.7 million barrels of oil equivalent (BOE), driven by a 17.4 percent increase in natural gas production. But oil output inched up just 0.5 percent to 388.3 million barrels in the first six months.

Sinopec, which expects to publish interim results on August 30, said it benefited from the rise in China demand and the continuing boom in the global chemical sector. State-controlled Sinopec posted a 24.8 percent rise in first-quarter profits as its refining and chemical businesses cashed in on China's robust economic growth. Sinopec earned

9.77 billion Yuan (US\$1.2 billion) in the first half of 2003 under mainland accounting standards, or 10.7 billion Yuan under international standards.

China's oil demand is expected to increase by 14.5 percent to 800,000 barrels per day this year, and grow by another 8.1 percent in 2005.

51. China Publicizes Its Most Polluted Cities

China has named its most polluted cities, with the capital Beijing coming 28th out of 113, and told them to clean up their act. The northern coal-mining province of Shanxi stood out, with three cities taking the top three slots on the list - Linfen, Yangquan and Datong, state media said.

"These cities must step up efforts to improve air quality," Wang Jirong, deputy director of the State Environmental Protection Administration, was quoted as saying by the China Daily.

The goal for Beijing, where the skies are known to turn yellow on occasion from construction dust, industrial waste and car fumes, is to have 80 per cent of "fairly good or excellent air-quality days" a year by 2008, up from the current 60 percent.

"The situation is unlikely to improve drastically," Xinhua news agency said.

The top three environmentally friendly cities were Haikou, in southern Hainan province, Zhuhai, in southern Guangdong, and Zhanjiang, also in Guangdong.

52. Japan Considers Stricter Car Fuel Efficiency Rules

Japan is considering stricter fuel efficiency standards for cars as part of sweeping revisions in environmental policy to curb pollution and climate change, according to Transport Ministry official Yuji Matsuzaki. He said the ministry's proposal would force automakers to produce passenger cars and cargo trucks that spew less carbon dioxide and other greenhouse gases.

Under the ministry's current guidelines, automakers must make passenger cars 10 percent more fuel efficient — and less polluting — by 2010, compared to 2000. Trucks are exempt from such standards.

Matsuzaki said no new targets had been set.

But the national Nihon Keizai financial newspaper said revised guidelines would call for a further 5 percent to 10 percent improvement in fuel efficiency by 2015. Automakers would be judged based on the average fuel efficiency of their car lineup.

Curbing automobile pollution is critical to Japan's plans to halt a rise in emissions levels promised under the Kyoto Protocol on climate change. Tokyo has pledged to lower greenhouse gas emissions by 6 percent by 2012, compared with 1990 levels. But Environment Ministry officials have said Tokyo won't meet that target without drastic action.

In the fiscal year ended March 2003, Japan's gas emissions rose 7.6 percent, from 1990.

For Japan, the rising number of cars presents a major policy challenge. Passenger cars now account for nearly 50 percent of emissions from the entire transportation sector, Matsuzaki said.

53. Japanese Environment Ministry Pushing Gasoline Tax

Japanese Ministry of Environment officials Aug. 4 said the ministry will recommend a 1-cent to 2-cent tax per liter of gasoline as part of its fiscal year 2005 tax reforms.

Agencies are preparing for intragovernmental negotiations on the next phase of Japan's greenhouse gas emission reduction program.

Since the late 1990s, the Environment Ministry has floated the idea of collecting taxes on gasoline, natural gas, coal, and other fossil fuels, but its call has been ignored by the Ministry of Economy, Trade, and Industry (METI) and the Ministry of Land, Infrastructure, and Transport (MLIT). This time, the Environment Ministry's proposal is being supported by the government Tax Commission, chaired by Hitotsubashi University President Hiromitsu Ishi, which is debating what Ishi has described as the "most sweeping tax reforms" in recent years.

The Environment Ministry also has begun briefing lawmakers from Prime Minister Junichiro Koizumi's Liberal Democratic Party, seeking support for the gas tax proposal, MOE officials said, as it braces for negotiations with METI, MLIT, and other ministries in addition to industrial groups.

A draft of the next phase of Japan's greenhouse gas emission reduction program is planned for release by the end of March 2005. The next phase would cover the years between fiscal years 2005 and 2008.

Detailing the proposed gas tax, officials said it would be levied on gasoline, electric power, natural gas, and other energy sources at the retail level. To counter adverse effect on industry, the ministry plans special measures including exemptions for some energy-intensive sectors.

Japan's retail gasoline prices currently are about 110 yen (99 cents) per liter for regular and 120 yen (\$1.08) per liter for premium.

Annual revenue from the tax is forecast to be 600 billion yen (\$5.4 billion), according to officials. Proceeds would go to develop energy conservation technologies such as wind and solar power generation and biomass fuels (converting wood chips, cattle manure, leftover food, unsold vegetables, and other materials into pellet form or extracting methane and ethanol from it).

Ministry documents indicated that among countries charging environmental taxes:

- Norway collects 11.8 yen (11 cents) per liter of gasoline and 11.8 yen (11 cents) per cubic meter of natural gas;
- Britain collects 0.9 yen (0.8 cent) per kilowatt of electricity and 0.3 yen (0.3 cent) per cubic meter of natural gas;
- Germany collects 2.7 yen (2.4 cents) per kilowatt of electricity and 11.8 yen (11 cents) per liter of gasoline; and
- Denmark collects 1.8 yen (1.6 cents) per kilowatt of electricity and 3.9 yen (3.5 cents) per cubic meter of natural gas.

Nippon Keidanren (the Japan Business Federation), the Japan Automobile Manufacturers Association, and industries have been lobbying Liberal Democratic Party lawmakers not to endorse any form of environmental taxes and levies on the ground that it would jeopardize Japan's economic recovery.

54. Sinopec Plans \$1.2 Billion Refinery In Hainan

Asia's top refiner, Sinopec Group, reportedly plans to build a \$1.2 billion oil complex in China's southern Hainan province, part of its move to speed up refinery expansion to meet surging demand. Sinopec is said to be confident of winning Beijing's approval soon for the 10 billion Yuan investment, nearly one-seventh of the tropical island's economy, which has attracted interest from cash-rich Chinese banks. It aims to complete the project, which includes an eight million ton-per-year (164,400 barrel-per-day) refinery and a terminal to dock 300,000-ton oil tankers, by the end of 2006.

State refiners, pumping at full tilt this year, are rushing to boost their refining capacities, forecast to expand by nearly a third in the next five years.

Demand growth in the world's second-largest oil consumer, after the United States, is forecast at around 14 percent this year according to the International Energy Agency.

Last month, Beijing gave Sinopec and CNOOC Group the green light to construct two new refineries, at a total cost of \$3.3 billion, by 2008 in Qingdao city in the east and Huizhou in the south.

"We studied the environmental impact very carefully, so the refinery is designed to produce cleaner fuels and will therefore be more expensive," according to a Sinopec official.

The refinery, to be located in the Yangpu economic zone, will process mostly imported crude with a sulphur content of less than one percent, though it is close to China's offshore oilfields in the South China Sea. It aims to feed mainly oil-thirsty southern Guangdong province, China's largest and wealthiest region, as well as southwestern provinces via Sinopec's oil pipeline grid under construction in the Guangdong area.

Sinopec is also looking at exporting refined products to Asian buyers such as Vietnam and Indonesia.

Hainan, with a population of just over eight million and gross domestic product of some \$8.5 billion, is one of China's smallest regional economies, generating its revenue from tourism, fertilizer production and auto making.

55. Yamato Delivery Service Adds Hybrid Vehicles to Further Reduce CO2

Yamato Transport Co., Japan's largest parcel-delivery company, is working to reduce its carbon dioxide (CO2) emissions while sustaining the company's growth. The company drew up the "Yamato Transport Global Warming Prevention Targets" in September 2003, and is taking measures to reduce its CO2 emissions to 99 percent of FY 2002 levels by FY 2012 by cutting CO2 emissions 30 percent per parcel delivered. It aims to achieve this by introducing low-emission vehicles (LEVs), promoting eco-driving and a modal shift to rail and sea transport, and by using hand carts for parcel delivery and collection when addresses are within walking distance.

The first LEVs were introduced in FY 1998, a total of 252 vehicles accounting for 0.87 percent of the company's entire fleet. As a result of efforts to add more LEVs, the total number reached 3,451, or 9.24 percent, by the end of FY 2003. The LEV fleet includes liquefied petroleum gas (LPG) vehicles, compressed natural gas (CNG) vehicles, and hybrid cars.

In FY 2004 the company plans to introduce 791 more LEVs, including 516 hybrid cars, 272 LPG vehicles and 3 CNG vehicles. The aim in introducing mostly hybrid cars is to reduce both exhaust and CO2 emissions. In FY 2003, the company introduced 690 LEVs, including 16 hybrid cars, 665 LPG vehicles, and 9 CNG vehicles.

56. WRI, ADB Announce Sustainable Urban Transport Partnership in Asia

The Asian Development Bank (ADB) and the World Resources Institute (WRI) have announced their cooperation on a comprehensive program aimed at enhancing the environmental sustainability of transport and mobility throughout Asia. The program, called Partnership for Sustainable Urban Transport in Asia (PSUTA), calls upon EMBARQ - The WRI Center for Transport and the Environment to review existing experiences and capacities on sustainable transport in Asia, draw up a set of key indicators for three Asian cities, and develop a strategic framework that can be used to develop medium-term sustainable transport strategies.

Funded by the Swedish International Development Cooperation Agency (SIDA), PSUTA is an important part of the business plan of the whole program of the Clean Air Initiative for Asian Cities for 2004.

Under the auspices of the partnership, EMBARQ will conduct case studies in three representative cities across Asia -- the first two being Hanoi, Vietnam and Xian, China. Discussions are going on for the third city.

The first stage of the project involves the development of key indicators of sustainable urban transport throughout Asia. These indicators will be the foundation of the case studies which will emphasize a quantitative analysis of factors affecting access to

transportation, traffic safety and air quality.

The case studies will consist of a critical review of baseline data as well as recommendations on the institutional arrangements and organizational and technological capacity necessary for sustainable urban transport planning in each city.

In the final stage, the partnership will put forward a strategic framework, to help cities throughout the region to develop an integrated sustainable transport plan for their particular transport situation.

GENERAL

57. Another Study¹ Finds Link Between Traffic and Respiratory Effects in Children

Recent studies, primarily in Europe, have reported associations between respiratory symptoms and residential proximity to traffic; however, few have measured traffic pollutants or provided information about local air quality. The authors conducted a school-based cross-sectional study in the San Francisco Bay Area in 2001. Information on current bronchitis symptoms and asthma, home environment, and demographics were obtained by parental questionnaire (n=1,109). Concentrations of traffic pollutants (particulate matter (PM₁₀, PM_{2.5}), black carbon (BC), and nitrogen oxides (NO_x and NO₂)) were measured at ten school sites during several seasons. Although pollutant concentrations were relatively low, the authors observed differences in concentrations between schools nearby versus those more distant (or upwind) from major roads. Using a two-stage multiple logistic regression model, they found associations between respiratory symptoms and traffic-related pollutants. Among those living at their current residence for at least one year, the adjusted odds ratios (OR) for asthma in relation to an interquartile difference in NO_x were OR = 1.07; (95% confidence interval, 1.00-1.14). Thus, they found spatial variability in traffic pollutants and associated differences in respiratory symptoms in a region with good air quality. The authors concluded that the findings support the hypothesis that traffic-related pollution is associated with respiratory symptoms in children.

58. ARB's 10-Year Children's Health Study Complete

The landmark Children's Health Study, funded by the California Air Resources Board (ARB), is nearing to a close having produced numerous new findings on the effects of air pollution on children's health. This 10-year, \$18 million study produced results showing how air pollution reduces children's lung growth and function, impacts respiratory health in asthmatic children, including new asthma cases, and contributes to increased school absences.

The study, conducted by researchers from the University of Southern California (USC), was the nation's first large-scale effort to study the effects of long-term exposure to outdoor air pollution in children, one of the most sensitive populations.

¹ Am. J. Respir. Crit. Care Med. 2004, Traffic-related Air Pollution Near Busy Roads: The East Bay Children's Respiratory Health Study, Janice J Kim, Svetlana Smorodinsky, Michael Lipsett, Brett C Singer, Alfred T Hodgson, and Bart Ostro

The study followed more than 5500 children at 52 schools in twelve Southern California communities from elementary through high school to track how different outdoor air pollution exposures affect respiratory health. The majority of children enrolled in the program as fourth-graders and were followed through high school.

The major findings of the study were:

- Significant lung function deficits are most closely associated with exposure to nitrogen dioxide, atmospheric acidity, PM 2.5 and PM10. This decreased lung development may have permanent adverse effects in adulthood;
- Children living in high ozone communities, who are especially active, are up to three times more likely to develop asthma;
- Children living near roadways with high traffic experienced an increased risk for having been diagnosed with asthma;
- Short-term exposures to elevated ozone levels are associated with a significant increase (up to 1.3 million per year) in school absences from both upper respiratory illness with symptoms such as runny nose and lower respiratory illnesses such as asthma attacks;
- Children who move to cleaner communities with lower levels of PM have improvements in lung function growth rates. This means that even small reductions in air pollution can have immediate benefits to the long-term respiratory health of children living in polluted communities;
- Bronchitic symptoms are associated with exposure to nitrogen dioxide and the organic carbon fraction of PM2.5 in asthmatic children;
- The strength of the air pollution effects are generally greater in children who spend more time outdoors; and,
- Results from the study suggest that boys in general are more susceptible to adverse respiratory symptoms and asthma outcomes than girls. Girls appear to have greater susceptibility for adverse effects on lung function development. There is limited evidence supporting sex differences in responses to ambient air pollutants; however, children of both sexes appear to have adverse respiratory effects of exposure to current levels of air pollution.

Outdoor pollution monitoring tracked levels of ozone, nitrogen oxide, acid vapor and particulate matter over the 10-year study. In addition, limited indoor pollution measurements were taken at schools and in homes. Each spring, the lung function of each child was tested and annual questionnaires collected information about respiratory symptoms and diseases, physical activity, time spent outdoors, and factors such as parental smoking, and mold and pets in the household.

The 12 communities studied were: Atascadero in San Luis Obispo County; Lompoc and Santa Maria in Santa Barbara County; Lake Arrowhead and Upland in San Bernardino County; Lancaster, Long Beach and San Dimas in Los Angeles County; Lake Elsinore, Mira Loma and Riverside in Riverside County; and, Alpine in San Diego County.

59. Marpol Air Pollution Ship Rules To Enter Into Force In 2005

Regulations for the Prevention of Air Pollution from Ships are set to enter into force on

19 May 2005, following the ratification by the Independent State of Samoa of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).

The 1997 Protocol to the MARPOL Convention, which includes Annex VI, enters into force 12 months after being accepted by 15 States with not less than 50% of world merchant shipping tonnage. Samoa, the fifteenth State to ratify the instrument, deposited its ratification on 18 May 2004. Annex VI has now been ratified by States with 54.57% of world merchant shipping tonnage.

Annex VI sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone-depleting substances.

The Protocol including Annex VI to the MARPOL Convention was adopted at a Conference held in September 1997, in response to IMO Assembly Resolution A.719 (17) on **Prevention of Air Pollution from Ships**, adopted in 1991, which called on IMO's Marine Environment Protection Committee (MEPC) to prepare a new draft Annex to MARPOL 73/78 on prevention of air pollution. The Annex was developed over the next few years.

The regulations include a global cap of 4.5% m/m on the sulphur content of fuel oil and calls on IMO to monitor the worldwide average sulphur content of fuel once the Protocol comes into force.

Annex VI also contains provisions allowing for special "SOx Emission Control Areas" to be established with more stringent controls on sulphur emissions. In these areas, the sulphur content of fuel oil used on board ships must not exceed 1.5% m/m. Alternatively, ships must fit an exhaust gas cleaning system or use any other technological method to limit SOx emissions. The Baltic Sea Area is designated as a SOx Emission Control area in the Protocol.

In March 2000, the MEPC approved a proposed amendment to Annex VI to also include the North Sea as a SOx Emission Control Area. The aim is to adopt the amendment once MARPOL Annex VI enters into force.

Annex VI prohibits deliberate emissions of ozone depleting substances, which include halons and chlorofluorocarbons (CFCs). New installations containing ozone-depleting substances are prohibited on all ships. But new installations containing hydrochlorofluorocarbons (HCFCs) are permitted until 1 January 2020.

Annex VI also sets limits on emissions of nitrogen oxides (NOx) from diesel engines. A mandatory NOx Technical Code, which defines how this shall be done, was adopted by the Conference under the cover of Resolution 2.

The Annex also prohibits the incineration on board ships of certain products, such as contaminated packaging materials and polychlorinated biphenyls (PCBs).

60. Businesses Map Road To Sustainable Transport

International cooperation at all levels of society will be needed to make mobility

sustainable, according to a new report issued on Monday by the World business council for sustainable development (WBCSD). A continuation of current mobility trends would lead to "unacceptably high" social, economic and environmental costs, it stresses.

Developed over four years by 12 global automotive and energy companies, the report attempts to take stock of the current situation and shape future developments, especially in road transport. It concludes that no one country or sector can successfully address the main mobility challenges, and adds that some of them may take up to 50 years to be solved.

Of seven goals identified, four are directly environment-related: ensuring that emissions do not represent a health concern, limiting greenhouse gas emissions, reducing noise and mitigating congestion.

61. Carbon Dioxide Emissions May Harm Ocean Life

The world's oceans have absorbed nearly half of the carbon dioxide emitted by humans during the last 200 years, creating potential long-term challenges for corals and free-swimming algae, according to two recently released studies.

An international team of scientists found that oceans have taken in about 118 billion metric tons of carbon dioxide from human activities between 1800 and 1994, accounting for nearly a third of their long-term carrying capacity.

These findings could pose a long-term risk for marine organisms, such as corals, which have greater difficulty in forming their outer shells as carbon dioxide levels increase, researchers found.

"There is a price to pay in this process, and that is with living organisms," said Richard Feely, a marine chemist with the National Oceanic and Atmospheric Administration, the lead author on one of the studies.

The research was published in the July issue of "Science."

Oceans, which cover about 75 percent of the Earth's surface, have seen the amount of carbon dioxide they absorb fall to 30 percent as trees and plants soak up more of the gas before it reaches the water. Currently, 20 percent is taken in by foliage, with the remaining 50 percent staying in the atmosphere.

The 15-year study, conducted and analyzed with the help of several researchers around the world, looked at nearly 72,000 samples taken in the Atlantic, Pacific and Indian oceans.

Analysis of carbon dioxide since the industrial age has shown that concentration levels in the atmosphere have increased to about 380 parts per million (ppm) from 280 ppm two centuries ago. Without ocean absorption, carbon dioxide levels in the atmosphere would be about 55 ppm higher.

The data found that even though the oceans continue to absorb more carbon dioxide, they are far from being saturated. Currents stir the ocean very slowly by pulling deep

ocean water to the surface, where it is able to absorb more carbon dioxide.

"The oceans have a capacity to continue to take in CO₂ for thousands of years with the slow mixing time," said Christopher Sabine, NOAA oceanographer and lead author of the other study.

The greatest threat to increasing levels of carbon dioxide is to species that live in the upper 10 percent of the ocean.

As ocean surfaces capture and store carbon, the slow circulation of water keeps the gas more highly concentrated where these creatures live.

The change in ocean chemistry reduces the level of carbonate ions needed by corals and other organisms to generate their shells. In areas where the ion level has fallen too low, calcium carbonate shells can begin to dissolve.

Researchers said that while the long-term impact on these creatures and other species that depend on them for food is uncertain, they will closely monitor how carbon dioxide absorption is affecting the food chain.

"We might see the structure of the food web change ... and see shifts in species competition" in the ocean ecosystem, said Victoria Fabry, a biologist at California State University who worked on the research.

62. Acute Effects of Ozone on Mortality from the APHEA2 Project

In the APHEA2 (Air Pollution and Health: a European Approach) project, the effects of ambient ozone concentrations on mortality were investigated.² Data were collected on daily 1 and 8-hour ozone concentrations, on daily total, respiratory and cardiovascular number of deaths and on confounders and potential effect modifiers from 23 cities/areas. Effect estimates were obtained for each city with city-specific models and combined using second stage regression models. No significant effects were observed during the cold half of the year. For the warm season, an increase in 1 hour ozone concentration by 10 ug/m³ was associated with a 0.33% (95% CI: 0.17-0.52%) increase in the total daily number of deaths, 0.45% (95% CI 0.22-0.69) in the number of cardiovascular deaths and 1.13% (95% CI 0.62-1.48) in the number of respiratory deaths. The corresponding

² Published ahead of print on July 28, 2004, Am. J. Respir. Crit. Care Med. 2004, doi:10.1164/rccm.200403-333OC, Alexandros Gryparis¹, Bertil Forsberg², Klea Katsouyanni^{3*}, Antonis Analitis³, Giota Touloumi³, Joel Schwartz⁴, Evi Samoli³, Sylvia Medina⁵, Hugh R Anderson⁶, Emilia M Niciu⁷, Erich Wichmann⁸, Bohumir Kriz⁹, Mitja Kosnik¹⁰, Jiri Skorkovsky¹¹, Judith M Vonk¹², and Zeynep Dortbudak¹³

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figures for 8-hour ozone were: 0.31% (0.17-0.52); 0.46% (0.22-0.73); 1.13 (0.74-1.51). The associations with total mortality were independent of SO₂ and PM₁₀ but somewhat confounded by NO₂ and CO. Individual city estimates were heterogeneous for total (a higher standardized mortality rate was associated with larger effects) and cardiovascular mortality (larger effects were observed in Southern European cities). The dose-response curve of ozone effects on total mortality during the summer did not deviate significantly from linearity.

63. IEA Issues Book: Biofuels for Transport: An International Perspective

“In the absence of strong government policies, we project that the worldwide use of oil in transport will nearly double between 2000 and 2030, leading to a similar increase in greenhouse gas emissions,” said Claude Mandil, Executive Director of the International Energy Agency (IEA) at the launch in Paris of “Biofuels for Transport: An International Perspective”. “Biofuels, such as ethanol, biodiesel and other fuels derived from biomass could help change this picture, by offering an important low-greenhouse-gas alternative to petroleum over this time frame.”

This new IEA publication looks at recent trends in biofuel production and considers how the future may look if recent initiatives in IEA countries and around the world are fully implemented. The report takes a global perspective on the nascent biofuels industry, assessing regional similarities and differences as well as the cost and benefits of the various biofuel options and technologies.

A major finding of the IEA’s analysis is that recent policy initiatives, if fully implemented, could result in up to a 5% displacement of motor gasoline use with biofuel (mainly ethanol) worldwide by 2010. This would represent an important step. However, in OECD regions most of this production will likely be of conventional ethanol using grain feedstocks such as corn and wheat. While this type of biofuels production can provide important benefits, production costs are generally high and reductions in fossil energy use and CO₂ emissions are modest. Further, grain-based ethanol (as well as conventional oil-seed-based biodiesel) must compete for land with crop production for other purposes, such as for food and animal feed, and supplies are likely to be limited.

“Biofuels for Transport: An International Perspective” also reports that countries such as Brazil and India – that can grow and utilize sugar cane as a primary feedstock – are already producing relatively low-cost bio-ethanol with excellent characteristics. The high-yielding sugar cane that these countries use also provides sufficient crop waste to power the conversion of sugar to ethanol, virtually eliminating the need for fossil energy inputs and providing large “well-to-wheel” reductions in CO₂. Since over the next two decades these and other developing countries may be able to produce more sugar cane ethanol than they need domestically, the IEA proposes that a global trade in biofuels be more rigorously pursued and identifies existing obstacles to this trade.

However, for the longer term, research into advanced biofuels production techniques is bearing fruit. It now appears likely that within a few years the first commercial-scale production facilities will be built to produce ethanol from cellulosic feedstocks such as crop wastes, grasses and trees, using far less fossil energy and providing much larger reductions in “well-to-wheel” CO₂ emissions per liter of fuel than the current processes. Use of cellulosic feedstocks would also substantially increase potential biofuels supply.

Advanced biomass conversion to synthetic diesel fuel is also under development, using gasification and other techniques, which could eventually allow commercial production of much higher yielding, low-greenhouse-gas biodiesel fuel.

The book reviews these important developments, but stresses that much greater government attention and support for demonstration and commercialization of this "next generation" of biofuels is needed in order to ensure that they succeed and that the potential benefits of biofuels use in the future are maximized.

Overall, the book finds that the future for biofuels use around the world is bright, though current production practices in IEA countries fall short of maximizing the potential benefits on offer.

64. World Bank Plans to Continue Funding Oil, Mining Projects

The World Bank rejected a recommendation Aug. 3 that it halt new mining, oil, and gas projects by 2008 but said it would increase efforts to address environmental and social concerns associated with those industries. The World Bank's Board of Executive Directors said continued investments in the "extractive industries" offer the best energy alternative for reducing poverty in developing nations.

"The harsh reality is that some 1.6 billion people in the developing nations still do not have electricity, and some 2.3 billion people still depend on biomass fuels that are harmful to their health and the environment," World Bank Chairman James Wolfensohn said in a statement. "That underscores the need for our continued but selective engagement in oil, gas, and coal investments."

The board's findings conclude a three-year review of the World Bank Group's investments in the oil, gas, and mining sectors, which total approximately \$3 billion a year. In 2001, the bank asked a team led by Emil Salim, the former environmental minister of Indonesia, to review energy investment policy. The team's report, *The Extractive Industries Review*, was formally submitted to the bank in January 2004.

"There is still a role for the World Bank Group in the oil, gas, and mining sectors, but only if its interventions allow extractive industries to contribute to poverty alleviation through sustainable development," the report said.

It urged the bank to develop "much more effective social and environmental policies." In what has become the most contentious recommendation, the review said the World Bank "should phase out investments in oil production by 2008" and continue a recent trend of not investing in new coal-mining projects.

Environmental groups support the phase-out of such projects, arguing that they create more environmental and other problems for the countries they are supposed to help. Oil, gas, and mining projects increase air pollution and other health hazards in developing countries and also contribute to climate change, they argue. "The World Bank should set strong clean energy lending priorities, not dirty ones," the World Wildlife Fund said Aug. 3.

In June, the World Bank issued a draft response to *The Extractive Industries Review* in

which it defended its lending practices. It said oil, gas, and coal investment was a critical component of its lending strategy in more than 50 developing nations. "To neglect oil, gas, and mining in those countries and communities where they offer a real chance of generating revenue for poverty alleviation and where bank involvement could make a positive difference would be inconsistent with the bank's basic mission," the bank said.

The World Bank pledged to adopt other recommendations contained in the Extractive Industries Review. The board said Aug. 3. it will take steps to boost lending support for renewable energy and energy-efficiency projects. The bank pledged to:

- commit to a target of at least 20 percent average growth annually in energy efficiency and renewable energy portfolio commitments over the next five years;
- increase investment in natural gas, which produces less harmful emissions than oil or coal;
- require "revenue transparency" for major extractive projects;
- use explicit "good governance indicators" in assessing and designing projects; and
- ensure broad community support for projects prior to an investment decision and to design projects to ensure local communities and poorer segments of the population benefit.

65. List of Occupational Carcinogens Developed

A list of chemicals that might cause workers to get cancer has been developed by European and Canadian researchers. The list consists of 28 agents the researchers say are "definite occupational carcinogens," 27 agents they say are probably occupational carcinogens, and 113 agents the scientists say may cause cancer following workplace exposures. The list "should be useful for regulatory purposes, and for scientific purposes in research priority-setting and in understanding carcinogenesis," Jack Siemiatycki, of the University of Montreal, and colleagues wrote in a study published in *Environmental Health Perspectives*. While other lists of workplace carcinogens exist, the authors say those often fail to provide clear criteria explaining why the agents were classified as occupational carcinogens. The published paper attempts to do that, the authors said. They also say the classification of a chemical as an occupational carcinogen does not mean the agent will always cause cancer. "The particular circumstances of the industrial process, raw materials, impurities, and control measures" can make one type of exposure risky but another not, they said.